

**SECTION 00 0101
PROJECT TITLE PAGE**

**JEFFERSON COUNTY COURTHOUSE AUDIO VIDEO BID PACKAGE
JEFFERSON COUNTY
311 S. CENTER AVENUE
JEFFERSON, WI 53549
DATE: 10-17-2022
PREPARED BY: Professional Audio Designs Inc.**

END OF SECTION

**SECTION 00 0103
PROJECT DIRECTORY**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Identification of project team members and their contact information.

1.02 OWNER:

- A. Name: Jefferson County
- B. Name: Jefferson County
 - 1. Address Line 1: 311 S. Center Ave.
 - 2. City: Jefferson
 - 3. State: WI
 - 4. Zip Code: 53549
 - 5. Telephone: 920-674-7101
- C. Primary Contact: All correspondence from the Contractor to the Engineer will be through the Construction Manager, with copies to this party, unless alternate arrangements are mutually agreed upon at preconstruction meeting.
 - 1. Name: Ben Wehmeier
 - 2. Email: benjaminw@jeffersoncountywi.gov

1.03 CONSULTANTS:

- A. AV Designer: Design Professional of Record. All correspondence from the Contractor regarding construction documents authored by AV consultants will be through Construction Manager with copies to this party, unless alternate arrangements are mutually agreed upon at preconstruction meeting.
 - 1. Company Name: Professional Audio Designs Inc.
 - a. Address Line 1: 11629 Dearbourn Ave.
 - b. City: Wauwatosa
 - c. State: WI
 - d. Zip Code: 53226
 - e. Telephone: 414-476-1011
 - 2. Primary Contact:
 - a. Name: Phil Roeglin
 - b. Email: phil@proaudiodesigns.com

CONSTRUCTION MANAGER:

- B. Company Name: Maas Brothers Construction
 - 1. Address Line 1: 410 Water Tower Ct.
 - 2. City: Watertown
 - 3. State: WI
 - 4. Zip Code: 53094
 - 5. Telephone: 920-261-1682
- C. Primary Contact:
 - 1. Name: Mark Stafford
 - 2. Email: mstafford@maasbros.com.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

**SECTION 00 0110
TABLE OF CONTENTS**

PROCUREMENT AND CONTRACTING REQUIREMENTS

1.01 DIVISION 00 -- PROCUREMENT AND CONTRACTING REQUIREMENTS

- A. 00 0101 - Project Title Page
- B. 00 0103 - Project Directory
- C. 00 0110 - Table of Contents
- D. 00 1113 - Advertisement for Bids
- E. 00 2114 - Instructions to Bidders
- F. 00 4100 - Bid Form
- G. 00 5200 - Agreement Form
- H. 00 6113 - Surety Bonds
- I. 00 7200 - General Conditions
- J. 00 7300 - Supplementary Conditions

2.10 DIVISION 27

- A. 27 4100 – Audio-Visual Systems

2.11 Other Attachments

- A. Project Schedule
- B. Sample Contract
- C. Audio Visual Plans

END OF SECTION

**SECTION 00 1113
ADVERTISEMENT FOR BIDS**

FROM:

THE OWNER (HEREINAFTER REFERRED TO AS OWNER):

A. Jefferson County

DATE: November 4, 2022, at 10:00 AM

TO: POTENTIAL BIDDERS

A. Jefferson County, acting through its Board of Supervisors, hereby gives notice that sealed bids will be received at the Office of the County Clerk for the following work:

BID PACKAGE	DESCRIPTION
BP#1	Audio Visual

201 PROJECT

- A. Jefferson County Courthouse AV Bid Documents – Jefferson, WI
- B. All project questions shall be addressed through Maas Brothers Construction. The main contact for this project is Mark Stafford. All questions shall be emailed to mstafford@maasbros.com
- C. Construction bidding documents (drawings, specifications, and any addenda) may be obtained only as downloadable electronic files (in PDF format) from the Jefferson County Website <https://apps.jeffersoncountywi.gov/jc/rfp>. Because the Owner, Professional Audio Designs., and Maas Bros. Construction Co. have no control over the means of printing of these documents, the Bidding Contractor(s) accept the responsibility of verifying that they have all project bidding documents and that they have been printed correctly.

202 TIME

- A. Sealed bids will be received until 10:00 A.M. local time, on Friday, November 4, 2022. Bids must be physically present in the Jefferson County Administration Trailer (302 S. Center Ave.) by no later than 10:00 A.M. local time, on Friday, November 4, 2022. Bids received after the due date and time will be rejected.

203 BIDS

- A. All bids shall be addressed to; Jefferson County Courthouse, 302 S. Center Avenue, Jefferson, WI 53549. Bids shall be sealed and shall have the name and address of the Bidder.
- B. Respondents are encouraged to mail their responses to the stated address.

204 BID SECURITY

- A. Bid security, in the form of a bank certified check, cashier's check, or Bid Bond, payable to the City in an amount not less than five percent (5%) of the maximum bid must accompany the Bid

205 PROJECT AWARD

- A. Project Award is scheduled for consideration by the Jefferson County Board of Supervisors at their November 15, 2022 meeting
- B. A public bid opening will occur at 10:05 A.M. on November 4, 2022
- C. All proposals received in response to this request will become the property of the County and will not be returned to the respondents.

206 BID REJECTION

- A. The Owner reserves the right to reject any and all bids, waive any informalities in bidding or to accept the bid or bids which best serves the interests of Jefferson County.

207 WITHDRAWAL OF BIDS

- A. No bid shall be withdrawn for a period of 60-days after the scheduled opening without the consent of the OWNER.

208 GOVERNING LAWS & REGULATIONS

- A. The contract letting shall be subject to the provisions of Sections 66.0901, 66.0903 and 779.16 of the Wisconsin Statutes.

Published by the authority of JEFFERSON COUNTY, Wisconsin Jefferson County Clerk

Dates of Publication: October 17, 2022

END OF SECTION

**SECTION 00 2114
INSTRUCTIONS TO BIDDERS**

PART 1 – GENERAL

1.01 Projects are being bid by individual bid packages. Contract(s) will be between successful bid package contractor(s) and construction manager, Maas Bros. Construction co., inc. Bid packages are for all work described in the drawings and specifications. The bid packages are as follows:

Bid package	Description
#01	Audio Video

- 1.02** Applicable provisions of bidding requirements and conditions of the contract, and division one of the technical specification shall apply to all contractors and sub-contractors. Specification sections are used to designate areas of work. All bidders are required to review all specifications and plan documents in order to evaluate the extent of the work.
- 1.03** General specifications and information for bidders are hereby made a part of this entire project manual. When an interpretation is required between the provisions of any of the contract documents, the more restrictive provision shall govern.
- 1.04** General conditions apply with equal force to contractor, sub-contractors' work, extra work and the like that may be specified herein or performed in or about building or site under this contract.
- 1.05** Each bidder shall visit the site to become acquainted with adjacent areas, means of approach to the site, access to the facility, conditions of the actual job site, and facilities for delivering, storing, placing, and handling of materials and equipment.
- 1.06** Bidders shall compare the drawings and specifications with the existing facility, any work in place, and become familiar with all conditions affecting execution of work. Neglect of this requirement will not be acceptable as cause for additional compensation.

PART 2 - INTERPRETATION

- 2.01** No verbal explanation or instructions will be given in regard to the meaning of the bid documents during the bid period. Bidders shall bring inadequacies, omissions or conflicts to the construction manager's attention at least five (5) business days before the date set for bid opening. Clarification will be supplied to all bidders of record by addendum. Addendum shall be acknowledged on the bid form by each bidder. All addenda issued shall become part of the contract documents
- 2.02** Failure to request clarification or interpretation of the contract documents will not relieve a contractor, subcontractor, and/or vendor of its responsibilities. Signing of the proposal/bid form will imply that the contractor has thorough comprehension of full intent and scope of the contract documents
- 2.03** Neither the owner, the architect/engineer, nor Maas Bros. Construction co., inc. Will be responsible for oral instructions.

PART 3 - WITHDRAWAL OF BIDS

- 3.01** Bids may be withdrawn by written request received from bidder or an authorized representative thereof prior to the time fixed for opening of bids, without prejudice to the right of the bidder to file a new bid.
- 3.02** Negligence on the part of the bidder in preparing the bid, or the failure or omission of any bidder to examine any form, instrument, or document shall in no way relieve any bidder from any obligation in respect to its bid.
- 3.03** No bid may be withdrawn for a period of 60 days after the date set for the opening thereof.

PART 4 - TAXES

- 4.01** The owner asserts to be exempt from Wisconsin sales and use taxes and reserves the right to implement the owner's state sales tax exemption procedure.
- 4.02** The bidder shall exclude sales and use tax, pursuant to sec. 77.54 (9m), Wis. Stats., from their bid. A sales and use tax exemption certificate shall be provided to awarded bidders upon contract execution.

PART 5 - EQUIPMENT FURNISHED BY OWNER

- 5.01** Construction manager shall prepare and submit a schedule for delivery and installation of equipment indicated to be owner furnish/owner installed (OFOI) and equipment indicated to be owner furnished/contractor installed (OFCI)
- 5.02** Contractor shall coordinate requirements with the Owner, including scheduling and verification of OFCI equipment locations and services required by said equipment. Contractor is to accept/unload, install and connect OFCI equipment as required. Contractor is to protect OFCI equipment from damage from time of receipt through construction completion and will remove and replace any resulting damaged components or units as required to restore equipment to its original received condition.
- 5.03** The contractor responsible for installing purchased materials as part of their work category shall be fully responsible for submittals, expediting, receiving, inspections, unloading, storage, labor portion of warranties, quantities required, temporary protection and installation of material and/or equipment, and all other requirements of the specifications. In addition, the contractor responsible for installing purchased materials shall be fully responsible for keeping the material or equipment supplier informed, at all times, of any project revisions which could affect the supplier in any way. The contractor installing the purchased materials and equipment is responsible for full coordination of material and equipment deliveries with suppliers.
- 5.04** Contractor is not responsible for warranty obligations on OFCI equipment, except for related work undertaken by contractor for installation and connection of said equipment.

PART 6 - SUBMISSION OF BIDS

- 6.01** Bidders shall submit a single base bid for individual bid packages.
- 6.02** Bids are to be submitted in sealed envelopes addressed to:

Jefferson County
302 S Center Avenue, Jefferson, WI 53549

Bid package number is to be clearly marked on the outside of the sealed envelope.

- 6.03** Bid amounts shall be inserted in words and in figures in spaces provided on the bid form. In case of conflict, written word amounts will govern.
- 6.04** Addenda issued during the time of bidding shall become a part of the contract documents. Bidders shall acknowledge receipt of each addendum in the appropriate space provided on the bid form. Bid will be rejected if receipt of addendum applicable to award of contract has not been acknowledged on bid form.
- 6.05** Submit one copy of the bid form sealed with original signature and stamp.
- 6.06** Submit one copy of bid security, in the form of a bank certified check, cashier's check, or Bid Bond, payable to the City in an amount not less than five percent (5%) of the maximum bid as a guarantee that, if the bid is accepted, the Bidder will execute and file the contract, performance/payment bonds and insurance certification, as required by the contract documents, within ten (10) days after the Notice of Award. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty.

- 6.07** Any amendments to the bid form or appended thereto or any inclusion of any correspondence, written or printed matter, or details of any nature other than that specifically called for may disqualify bid. No telegraphic alterations to the bid will be accepted.

PART 7 – SUBSTITUTION LISTING

- 7.01** Any proposed substitutions must be submitted with the bid. Bidders are to provide pricing for work included in the bid documents. The acceptance of bidder proposed substitutions will be made at the sole discretion of the owner. Response to submitted substitutions listing will be made in writing only.

PART 8 – ALTERNATE BIDS

- 8.01** Each bidder shall carefully read requests for alternate bids, if requested, and thoroughly examine the bidding documents to determine to what extent the various changes and conditions will affect its bid. Base bid may be rejected unless the requested alternate bids are also submitted.
- 8.02** Bidders shall state the amount to be added to, or deducted from, the base bid for making the changes including all incidentals, omissions, additions and adjustments as may be necessary or required by such changes.
- A. Indicate prices for each alternate on bid form; if no change in price is required, indicate “no change”.
- 8.03** Indicate on the bid form the amount to be added or deducted from the base bid, should the alternate be accepted, indicating whether it is an “add” or a “deduct” price change. Include in alternate price all materials, parts, and accessories required for a complete installation, regardless of whether they are mentioned in the alternate description.
- 8.04** Voluntary alternates may be considered in the evaluation of bids.
- 8.05** The owner reserves the right to accept any or all of the alternates in any order or combination.
- 8.06** Accepted alternates will be identified in the agreement.

PART 9 – QUALIFICATIONS

- 9.01** If requested, within three (3) days after notification, the apparent successful bidder shall submit to Maas Bros. Construction co., inc. The names and addresses of all proposed subcontractors and/or vendors within the work category. Subcontractors and/or vendors with contracts of \$5,000 or less need not be listed initially.
- A. The bidder will be required to establish, to the satisfaction of Maas Bros. Construction co., inc., the reliability and responsibility of the proposed sub-subcontractors and/or vendors to provide the work described in the sections of the specifications pertaining to such proposed subcontractor’s respective trades.
- B. If an agreement with sub-subcontractors and/or vendor cannot be reached, Maas Bros. Construction co., inc. Reserves the right to delete that particular portion of work from the subcontract and award a separate subcontract for that work.
- C. If construction conditions necessitate, the subcontractor, at no change in contract price, may make a substitution of a sub-subcontractor and/or vendor, provided such substitution is acceptable to Maas Bros. Construction co., inc.
- 9.02** Before a bid is considered for award, the bidder may be requested by Maas Bros. Construction co., inc. To submit a statement regarding previous experience in performing comparable work, business and technical organization, financial resources, list of proposed subcontractors, and any other criteria Maas Bros. Construction co., inc. Deems relevant to the successful performance of the contract.
- 9.03** Contracts will be awarded on basis of base bid and selected alternates. The owner reserves the right to reject any or all bids or to waive any irregularities in any bid or to accept any bid which will be to the best interests of the owner. The owner also reserves unrestricted privilege to reject any unit prices for additions to, or deductions from, scheduled amount of work as attached to the bid if they are considered excessive or unreasonable, or to accept, by including same in contract. Any or

all, of such unit prices included in the contract shall be considered fair and reasonable. The application of unit prices to add to, or deduct from, scheduled amount of work shall apply without limit.

PART 10 - PAY REQUESTS

10.01 The successful bidder shall submit to the construction manager an itemized schedule of values for all work of awarded bid package(s) which is to include, but not necessarily limited to, material, product, and equipment breakdown, labor breakdown, taxes, equipment use/rental and permits/fees.

10.02 The construction manager will review the breakdown for the schedule of values and respond accordingly with corrections and comments.

10.03 Approved schedule of values will be the basis for which payment requests are to be submitted.

PART 11 - COMMENCEMENT AND COMPLETION

11.01 Bids Due Date: November 4, 2022, at 10:00 a.m.

11.02 Project Award by Jefferson County Board of Supervisors: November 15, 2022

11.03 Commencement of Construction: See Phasing/Project Schedule

11.04 Substantial Completion of Construction: See Phasing/Project Schedule

11.05 Final Completion/Owner Occupancy: See Phasing/Project Schedule

END OF SECTION

SECTION 00 41 00
BID FORM
JEFFERSON COUNTY COURTHOUSE AV BID PACKAGE

1.01 BID TIME/DATE: 10:00 AM – November 4, 2022

1.02 DELIVERED TO:

Jefferson County Courthouse
302 S Center Avenue
Jefferson, WI 53549

1.03 SUBMITTED BY: (BIDDER TO ENTER NAME AND ADDRESS)

- A. Bidder's Full Name _____
1. Address _____
2. City, State, Zip _____
3. Phone _____
3. E-Mail _____

1.04 OFFER

- A. Bid Package Number(s) _____ Description: _____.
- B. Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Bid Documents prepared by Professional Audio Designs Inc., for the above-mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work listed in the Bid Documents for the Sum of:
- C. _____ dollars
- (\$ _____), in lawful money of the United States of America.
- D. The bidder shall not include sales taxes in the bid. Include all other consumer, use and other similar taxes required by law.

1.05 ACCEPTANCE

- A. This offer shall be open to acceptance for sixty days from the bid closing date.
- B. If this bid is accepted by Owner within the time period stated above, we will:
1. Execute the Agreement within seven days of receipt of Notice of Award.
 2. Furnish the required payment & performance bonds within seven days of receipt of the signed Agreement
 3. Commence work within seven days after written Notice to Proceed of this bid.
- C. If this bid is accepted within the time stated, and we fail to commence the Work or we fail to provide the required Bond(s), the security deposit shall be forfeited as damages to Owner by reason of our failure, limited in amount to the lesser of the face value of the security

depositor the difference between this bid and the bid upon which a Contract is signed.

- D. In the event our bid is not accepted within the time stated above, the required security deposit shall be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

1.06 CONTRACT TIME

- A. If this Bid is accepted, Contractor will comply with the Project Schedule included in these documents.

1.07 ADDENDA

- A. The following Addenda have been received. The modifications to the Bid Documents noted below have been considered and all costs are included in the Bid Sum.

- 1. Addendum # _____ Dated _____.
- 2. Addendum # _____ Dated _____.

1.08 BID FORM SUPPLEMENTS

- A. Alternates

The Offices and Conference Rooms are identified as add alternates. Specific Rooms may be included with the contract a la carte.

- **ADD – ALTERNATE #1**
 - A. Provide a per unit price for Office Type 1 – Single 55” Display subsystem
 - B. Pricing to include all equipment and installation
 - C. The drawings include a total of (13) of these spaces
 - D. _____ dollars (\$ _____)
- **ADD – ALTERNATE #2**
 - A. Provide a per unit price for Office Type 1 – Two 55” Displays subsystem
 - B. Pricing to include all equipment and installation
 - C. The drawings include a total of (2) of these spaces
 - D. _____ dollars (\$ _____)
- **ADD – ALTERNATE #3**
 - A. Provide a per unit price for Office Type 1 – Two 43” Displays subsystem
 - B. Pricing to include all equipment and installation
 - C. The drawings include a total of (1) of these spaces
 - D. _____ dollars (\$ _____)
- **ADD – ALTERNATE #4**
 - A. Provide a per unit price for Office Type 1 – Eight 43” Displays subsystem
 - B. Pricing to include all equipment and installation
 - C. The drawings include a total of (1) of these spaces
 - D. _____ dollars (\$ _____)

- **ADD – ALTERNATE #5**
 - A. Provide a per unit price for Office Type 2 – Single 55” Display subsystem
 - B. Pricing to include all equipment and installation
 - C. The drawings include a total of (20) of these spaces
 - D. _____ dollars (\$ _____)

- **ADD – ALTERNATE #6**
 - A. Provide a per unit price for Office Type 2 – Two 55” Displays subsystem
 - B. Pricing to include all equipment and installation
 - C. The drawings include a total of (1) of these spaces
 - D. _____ dollars (\$ _____)

- **ADD – ALTERNATE #7**
 - A. Provide a per unit price for Office Type 2 – Single 65” Display subsystem
 - B. Pricing to include all equipment and installation
 - C. The drawings include a total of (6) of these spaces
 - D. _____ dollars (\$ _____)

- **ADD – ALTERNATE #8**
 - A. Provide a per unit price for Conference Room Type 1 – Single 55” Display subsystem
 - B. Pricing to include all equipment and installation
 - C. The drawings include a total of (3) of these spaces
 - D. _____ dollars (\$ _____)

- **ADD – ALTERNATE #9**
 - A. Provide a per unit price for Conference Room Type 1 – Single 65” Display subsystem
 - B. Pricing to include all equipment and installation
 - C. The drawings include a total of (5) of these spaces
 - D. _____ dollars (\$ _____)

- **ADD – ALTERNATE #10**
 - A. Provide a per unit price for Conference Room Type 1 – Single 75” Display subsystem
 - B. Pricing to include all equipment and installation
 - C. The drawings include a total of (1) of these spaces
 - D. _____ dollars (\$ _____)

- **ADD – ALTERNATE #11**
 - A. Provide a per unit price for Conference Room Type 1 – Single 85” Display subsystem
 - B. Pricing to include all equipment and installation
 - C. The drawings include a total of (1) of these spaces
 - D. _____ dollars (\$ _____)

- **ADD – ALTERNATE #12**
 - A. Provide a per unit price for Conference Room Type 2 – Single 65’ Display subsystem
 - B. Pricing to include all equipment and installation
 - C. The drawings include a total of (2) of these spaces
 - D. _____ dollars (\$ _____)

- **ADD – ALTERNATE #13**
 - A. Provide a per unit price for Conference Room Type 2 – Single 75” Display subsystem
 - B. Pricing to include all equipment and installation
 - C. The drawings include a total of (1) of these spaces
 - D. _____ dollars (\$ _____)

- **ADD – ALTERNATE #14**
 - A. Provide a per unit price for Conference Room Type 2 – Single 85” Display subsystem
 - B. Pricing to include all equipment and installation
 - C. The drawings include a total of (1) of these spaces
 - D. _____ dollars (\$ _____)

- **ADD – ALTERNATE #15**
 - A. Provide a per unit price for Conference Room Type 3 – Single 65” Display subsystem
 - B. Pricing to include all equipment and installation
 - C. The drawings include a total of (3) of these spaces
 - D. _____ dollars (\$ _____)

- **ADD – ALTERNATE #16**
 - A. Provide a per unit price for Conference Room Type 3 – Single 75” Display subsystem
 - B. Pricing to include all equipment and installation
 - C. The drawings include a total of (4) of these spaces
 - D. _____ dollars (\$ _____)

- **ADD – ALTERNATE #17**
 - A. Provide a per unit price for Conference Room Type 3 – Single 85” Display subsystem
 - B. Pricing to include all equipment and installation
 - C. The drawings include a total of (1) of these spaces
 - D. _____ dollars (\$ _____)

- **ADD – ALTERNATE #18**
 - A. Provide a per unit price for Conference Room Type 4 – Single 85” Display subsystem
 - B. Pricing to include all equipment and installation
 - C. The drawings include a total of (1) of these spaces
 - D. _____ dollars (\$ _____)

- **ADD – ALTERNATE #19**
 - A. Provide a total lump sum price for all 10” Conference Room Scheduling displays
 - B. This sum does not include Courtroom and Hearing Room scheduling displays as these are to be included in the base bid.
 - C. Pricing to include all equipment and installation
 - D. _____ dollars (\$ _____)

- **ADD – ALTERNATE #20**
 - A. Provide Pricing for extended service contract
 - B. Extended service period covers up to three (3) years after substantial completion of AV project installation.
 - C. Extended service contract to include all service, repair, or replacement of all AV equipment installed by awarded bidder beyond the Standard Warranty period.
 - D. Extended service includes troubleshooting, phone support, and an annual block of hours for on-site service.
 - E. _____ dollars (\$ _____)

1.09 Contractor shall submit Bid Security with Bid.

1.10 BID FORM SIGNATURE(S)

- A. The Corporate Seal of
- B. _____
- C. (Bidder - print the full name of your firm)
- D. was hereunto affixed in the presence of:
- E. _____
- F. (Authorized signing officer, Title)
- G. (Seal)

END OF BID FORM

**SECTION 00 5200
AGREEMENT FORM**

PART 1 GENERAL

1.01 FORM OF AGREEMENT

1.02 THE AGREEMENT TO BE EXECUTED IS ATTACHED.

- A. See attached draft AIA Document A401, Standard Form of Agreement Between Contractor and Subcontractor to be executed between Construction Manager and awarded Bid Packages.

1.03 RELATED REQUIREMENTS

- A. Section 00 7200 - General Conditions.
- B. Section 00 7300 - Supplementary Conditions.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 00 6113

SURETY BONDS

FORM OF BOND SHALL BE "PUBLIC IMPROVEMENT PERFORMANCE/LABOR AND MATERIAL PAYMENT BOND," PURSUANT TO SECTION 779.14 WISCONSIN STATUTES, AND WIS. AIA DOCUMENT WIS A312, PUBLISHED BY THE WISCONSIN CHAPTER OF THE AMERICAN INSTITUTE OF ARCHITECTS.

ALL BONDS SHALL BE SIGNED BY AN AGENT OR OFFICIAL OF THE SURETY COMPANY AND SHALL INCLUDE THE CERTIFIED POWER OF ATTORNEY PROVIDED BY THE SURETY COMPANY SHOWING THAT THE PERSON WHO SIGNS THE BONDS HAS THE POWER OF ATTORNEY TO SO SIGN FOR THE SURETY COMPANY. SUCH CERTIFICATION SHALL BE SIGNED BY THE SECRETARY OR ASSISTANT SECRETARY OF THE COMPANY AND NOT BY AN ATTORNEY-IN-FACT. THIS CERTIFICATION SHALL BEAR THE SAME OR EARLIER DATE AS THE BONDS.

SURETY COMPANY SHALL HAVE A B, OR BETTER, RATING BY THE "BEST GUIDE", LICENSED TO DO BUSINESS IN THE STATE OF WISCONSIN.

PROVIDE THREE COPIES EACH OF THE BONDS AND THE POWER OF ATTORNEY FOR ATTACHMENT TO EACH COPY OF THE AGREEMENT.

CONTRACTOR SHALL PAY THE PREMIUMS FOR THE SURETY BONDS.

DATE OF AGREEMENT AND SURETY BONDS SHALL BE THE SAME.

CONTRACTOR SHALL SIGN THE BONDS, CONSISTENT WITH THE FOLLOWING, AS APPLICABLE:

UNDER A PARTNERSHIP OR A JOINT VENTURE, THE AGREEMENT MAY BE SIGNED BY ONE PARTNER OF THE PARTNERSHIP, OR ONE PARTNER OF EACH FIRM COMPRISING THE JOINT VENTURE, BUT THE SURETY BONDS SHALL BE SIGNED BY ALL PARTNERS.

UNDER A CORPORATION, THE BONDS SHALL BE SIGNED BY THE OFFICIAL SIGNING THE AGREEMENT AND THE CORPORATE SEAL AFFIXED TO THE AGREEMENT AND THE SURETY BONDS. IF THE CORPORATION HAS NO SEAL, INCLUDE A STATEMENT TO THE EFFECT THAT THE CORPORATION HAS NO SEAL.

END OF SECTION

**SECTION 00 7200
GENERAL CONDITIONS**

FORM OF GENERAL CONDITIONS

THE OWNER WILL USE AIA DOCUMENT A201, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, CURRENT EDITION, AS THE GENERAL CONDITIONS BETWEEN THE OWNER AND CONTRACTOR.

RELATED REQUIREMENTS

SECTION 00 7300 - SUPPLEMENTARY CONDITIONS.

SUPPLEMENTARY CONDITIONS

REFER TO DOCUMENT 00 7300 - SUPPLEMENTARY CONDITIONS FOR AMENDMENTS TO THESE GENERAL CONDITIONS.

END OF SECTION

**SECTION 00 7300
SUPPLEMENTARY CONDITIONS**

PART 1 GENERAL

1.01 SUMMARY

- A. These Supplementary Conditions amend and supplement the General Conditions defined in Document 00 7200 - General Conditions and other provisions of Contract Documents as indicated below. Provisions that are not so amended or supplemented remain in full force and effect.
- B. The terms used in these Supplementary Conditions that are defined in the General Conditions have the meanings assigned to them in the General Conditions.
- C. The General Conditions of the Contract for Construction, AIA Document 201, 2017, Articles 1 through 15 inclusive, is part of the contract between the awarded Bid Package contractors and Maas Brothers Construction Co., Inc. and is included by reference as if bound in these Specifications. Copies of this document may be made available upon request.
- D. The following Supplementary Conditions modify or add to the General Conditions. Where any part of the General Conditions is modified by these articles, the unaltered provisions of that part shall remain in full effect.
- E. In the event of any conflict of meaning between the Supplementary Conditions and the said General Conditions of the Contract for Construction, provisions of the Supplementary Conditions shall control.

1.02 MODIFICATIONS TO GENERAL CONDITIONS

A. ARTICLE 1 GENERAL PROVISIONS

- 1. Subarticle 1.2 Correlation and Intent of the Contract Documents, add the following subparagraphs:
 - a. "1.2.4 The General Conditions, Supplementary General Conditions, Special Conditions and the General Requirements along with other Division 0 and 1 sections shall apply to all sections of the Specifications. Section of Division 1 – General Requirements govern the execution of the work of all sections of the specifications."
 - b. "1.2.5 In the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following priorities:
 - 1) The Agreement
 - 2) Addenda, with those of later date having precedence over those of earlier date
 - 3) The Supplementary Conditions
 - 4) The General Conditions of the Contract for Construction
 - 5) The General Requirements of Division 0 and 1
 - 6) The Specifications
 - 7) The Drawings"
 - c. "1.2.5.1 In the case of an inconsistency between Drawings and Specifications or within either document not clarified by Addenda, the better quality or greater quantity of Work shall be provided by the Subcontractor or vendor in accordance with Maas Brothers Construction Co., Inc.'s interpretation."
 - d. "1.2.5.2 In the case work or materials are specified and/or shown on drawings to be done or provided by more than one Contractor, each such Contractor shall be deemed to have figured the item with Maas Brothers Construction Co., Inc. determining who shall provide work and who shall submit a credit for work."
 - e. "1.2.5.3 Each Contractor must provide all work and materials which any sections or part of the plans, drawings, specifications and conditions require it to provide regardless of whether or not such requirement is faithfully repeated in other parts or sections thereof to which the provision might be appropriate."

B. ARTICLE 3 CONTRACTOR

- 1. Subarticle 3.1.1, add the following subparagraph:

- a. "3.1.1.1 Where the word Contractor occurs in this article, each contractor, subcontractor or material supplier shall be considered a contractor and shall meet the same obligations"
- b. "3.1.1.2 Where word Contractor occurs in sections of specifications, same shall mean Contractor, subcontractor or material supplier for that particular section."
- 2. Subarticle Labor and Materials, add the following subparagraph:
 - a. "3.4.4 Each Contractor must supply its own supervision and other staff to properly execute the work under its Contract as necessary."
 - b. "3.4.5 Contractors and subcontractors employed upon work shall be required to conform to the local and state labor laws and various acts amendatory and supplementary thereto and to other laws, ordinance and legal requirements applicable thereto."
 - c. "3.4.6 Employee of the Subcontractor whose work is unsatisfactory to the Owner, Architect, or Maas Brothers Construction Co., Inc. or who is considered to be careless, disrespectful, incompetent, unskilled or otherwise objectionable, shall be dismissed from the work immediately upon notice form Maas Brothers Construction Co., Inc. Superintendents and/or Foreman will not be removed from this project unless approved in writing by Maas Brothers Construction Co., Inc."
- C. ARTICLE 7 CHANGES IN THE WORK
 - 1. Subarticle 7.2 Change Orders, add the following subparagraphs:
 - a. 7.2.2 Any change order request from a Subcontractor or Vendor for a project change of any kind, initiated by the Owner, Architect, Contractor, or another Subcontractor or Vendor must be submitted no later than five (5) working days after the notification of such change. A Subcontractor or Vendor failing to meet this time constraint will waive any rights for a later claim.
 - b. 7.2.4 Change Orders will be based on actual costs, including materials and trucking directly attributable to the change plus any tax and delivery, cost of labor directly attributable to the change (Base pay plus employee fringes, payroll taxes, and insurance only), cost of equipment and tools directly attributable to the change, and cost of subcontracts directly attributable to the change, plus a maximum of ten percent (10%) for overhead and profit on directly provided labor, material and equipment and sub-contracts. Overhead and profit, as stated above, shall include all general administrative expenses, project management, engineering, general supervision, and other labor, materials, and equipment not directly related to the change. When the value of a change order exceeds \$30,000, a declining scale will be used to negotiate the allowable combined overhead and profit. When the value of deductive change order exceeds \$30,000 a reasonable allowance for overhead and profit will be negotiated and included as part of the change order. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net change to the contract sum.
- D. ARTICLE 8 TIME
 - 1. Subarticle 8.2 Progress and Completion, add the following subparagraphs:
 - a. "8.2.4 General Sequence of Construction Operations: The sequence of operations or the place of commencement shall be determined by Maas Brothers Construction Co., Inc. as deemed to best serve the needs and convenience of the Owner or as necessity of occasion requires. The progress schedule is not intended to limit the progress of any one or more Contracts but rather establishes a general guide for all Contractors, based upon priorities established by the Owner so as to promote insofar as possible the best harmony between Owner's priorities and construction schedules."
 - b. "8.2.5 Contractors agree that said work shall be prosecuted regularly, diligently and uninterruptedly at such rate of progress as will ensure the completion of the project by the dates listed. It is expressly understood and agreed by and between Contractors and Owner, that time for completion of work described herein is reasonable time for completion of same."
- E. ARTICLE 9 PAYMENTS AND COMPLETION

1. Subarticle 9.6.2, add the following subparagraphs:
 - a. "9.6.2.1 Lien waiver, corresponding to requested amount, must be submitted with each request for payment."
 - b. "9.6.2.2 Lien waivers from Sub-subcontractors and materials suppliers are required to be submitted monthly to Maas Brothers Construction Co., Inc."
 - c. "9.6.2.3 Amounts to be retained will be as follows: Amounts to be retained will be as follows: "Pursuant to Wis. Stat. §66.0901(9), the retainage shall be 5 percent of the estimate of the amount and proportional value of the work done until 50 percent of the work has been completed. At 50 percent completion, further partial payments shall be made in full and no additional amounts may be retained unless the Owner or Architect certifies that the job is not proceeding satisfactorily, but amounts previously retained shall not be paid. At 50 percent completion or any time after 50 percent completion when the progress of the work is not satisfactory, additional funds may be retained as determined appropriate by the Owner, but the total retained will not exceed 10 percent of the value of the work completed."
- F. ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY
1. Subarticle 10.2.3, add the following subparagraphs:
 - a. 10.2.3.1 Subcontractors shall take care to prevent damage to their staged materials and work in place that may be impacted by weather or onsite operations. Where a Subcontractor's operations may impact work in place by others, the Subcontractor shall provide temporary protections as necessary for the prevention of damage.
 2. Subarticle 10.2.5, add the following subparagraphs:
 - a. 10.2.5.1 Where a Subcontractor's operations damage staged materials or work in place, repair, and any associated costs, shall be the responsibility of the Subcontractor causing damage. If responsibility cannot be determined, the cost of repair or replacement shall be prorated among the Subcontractors present on the project site at the time the damage occurred.
 3. Subarticle 10.3 Hazardous Materials and Substances, add the following paragraphs:
 - a. 10.3.7 In the event the Subcontractor encounters any material on the site reasonably believed to be hazardous, the Subcontractor shall immediately report the condition to Maas Brothers.
 - b. 10.3.8 As stated in the outline of the OSHA Standard, a copy of the Subcontractor's Hazard Communication Program must be located on site prior to starting work. The filing of this program is required whenever workers are physically working on the project. The Safety Data Sheets will be required on any and all materials purchased and used on the project.
- G. ARTICLE 11 INSURANCE AND BONDS
1. Subarticle 11.1 Contractors Liability Insurance, see sample Maas Brothers Construction Co., Inc., AIA A401-2017 Subcontract Agreement for specific insurance amounts. Add the following paragraphs:
 - a. "11.1.1.1 The Architect/Engineer, Maas Brothers Construction Co., Inc., and Owner assume no responsibility in the event that limits such as above are not adequate."

END OF SECTION

SECTION 27 41 00

AUDIO-VISUAL SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and other Division 01 specification sections apply to the work of this section.
- B. Applicable Division 26 and Division 27 sections including:
 - 1. 26 05 26 Grounding and Bonding for Electrical Systems
 - 2. 26 05 33 Raceway and Boxes for Electrical Systems
 - 3. 27 05 53 Identification for Communication Systems
 - 4. 27 10 00 Structured Cable

1.2 DEFINITIONS

- A. Unless otherwise noted, the following definitions shall govern the specifications herein.
 - 1. "Owner" and "Campus" refers to both owner of the project and the owner's authorized representative from Jefferson County.
 - 2. "Construction Manager" refers to the primary contact and shall have complete responsibility and final authority for this project.
 - 3. "Control System Programmer" refers to the Control System and Audio DSP programmer.
 - 4. "Architect" refers to the project architect.
 - 5. "AV Consultant" refers to Professional Audio Designs, Inc.
 - 6. "Bidder" refers to the entity generating the bid response.
 - 7. "Electrical Contractor" refers to contractor responsible for all Division 26 work.
 - 8. "Telecom System Installer" or "Telecommunications System Installer" refers to the contractor responsible for Division 27 work that does NOT include the AV systems as described in this 27 41 00 specification.
 - 9. "AV System Installer" or "AV System Contractor" refers to the contractor responsible for implementation of 27 41 00 specifications, AV series drawings, and co-ordination of related infrastructure by other disciplines.
 - 10. "Shall" is defined as a mandatory requirement of the project.
 - 11. "Will" is defined as a future requirement.
 - 12. "Should" or "May" are defined as strongly encouraged, non-mandatory provisions.
 - 13. "OFE" refers to owner furnished equipment.
 - 14. "OFCl" refers to owner furnished contractor installed.
 - 15. "OFOl" refers to owner furnished owner installed.
 - 16. "CFCl" refers to contractor furnished contractor installed. Contractor may include AV System Installer, Division 26 Contractor, or Telecommunications System Installer and shall be detailed in drawings, descriptions, or equipment list.

1.3 SCOPE OF WORK

- A. This section covers general requirements associated with the installation of audiovisual systems within:

1. Jefferson County Courthouse and Sheriff's Building Renovations & Additions
- B. Refer to sections listed below for more specific system requirements. Multiple spaces with multiple systems are covered under this section.
- C. Provide all materials, labor, and drawings, for a complete and professionally installed systems in working order. Provide any and all connectors, hardware, transformers, power supplies, rack panels, interfaces, fasteners, wire harnessing materials, bushings and any other incidentals required for complete and proper functioning of this system whether specifically listed or not.
- D. Specifically, the work includes, but is not limited to:
 1. Coordination
 - a. Communicate and coordinate with the AV Consultant, Owner, Architect and other trades complying with all requirements as defined under this Scope of Work and elsewhere, to fulfill the requirements of this specification.
 - b. Coordinate schedule installation activities with other trades.
 - c. Coordinate installation of equipment to provide accessibility for future maintenance.
 - d. Verify required cable lengths with installed cable pathways for all multi-pair and/or preterminated cables before ordering.
 - e. If provided, master quote numbers are provided as a convenience for bidding purposes. Verify the accuracy of quotation numbers prior to ordering. A quotation list may include every element of a fully functioning system.
 2. Documentation
 - a. Develop and submit Shop Drawings as specified for approval.
 - b. Develop and submit As-Built Drawings detailing the installed systems as specified for approval.
 3. Installation
 - a. Furnish and install cable labels as specified.
 - b. Ensure that all cabling, equipment, and terminations are installed in accordance with accepted industry standards, approved Shop Drawings, manufacturer's recommendations and as specified.
 - c. Furnish and install cable management hardware as required including areas internal to rack cabinets, areas between pieces of equipment not housed in rack cabinets, and area that extend cabling from rack cabinets and equipment to the greater facility cabling infrastructure.
 - d. Furnish and install custom cover plates, wall plates, I/O connection plates, floor box insert plates as required. Coordinate with the Architect and/or Owner on the final selection of finishes.
 - e. Coordinate with the Architect and Owner on final color selection, and/or the painting of any exposed loudspeakers and any/all exposed system components to match the room's aesthetics and finishes.
 - f. Furnish all lifts, ladders, scaffolding or other resources as needed for safe installation. Coordinating with other trades as needed.
 - g. Furnish and install all equipment as specified.
 - h. Ensure that all equipment, with the exception of portable equipment, is firmly fastened or attached in place. A safety factor of at least five shall be utilized for all brackets, fasteners and attachments.

- i. Provide safety retention cables for overhead equipment such as loudspeakers, microphone arrays, etc.
 - j. Ensure that all equipment mounting styles and locations comply with the 2010 ADA Standards for Accessible Design.
 - k. Install Owner furnished equipment as specified.
 - l. Furnish and install cables for connection of AV equipment to the Building/Facility LAN where required (including OFCI equipment).
 - m. Provide patching, caulking, fire stopping, and painting required to restore damaged finishes during installation.
 - n. Ensure that all equipment mounting styles and locations comply with the 2010 ADA Standards for Accessible Design.
 - o. Select final channels for all wireless devices and resolve conflicts where they may occur.
 - p. Upon completion, turn over to the Owner all accessories included with the manufacturer's equipment but not used for the physical installation of the device. This includes but is not limited to, all user manuals, remote controls, batteries, tools, installation hardware, cases, covers, software, etc.
4. Coordination with Owner's Network
- a. Where AV equipment is connected to Owner's network, acquire the following from the Owner for each AV device on the Owner's network (not limited to):
 - (1) IP address (DHCP or static)
 - (2) Subnet information
 - (3) VLAN setup and authorization.
 - b. Do not connect any device to the Owner's network without written permission from the Owner.
5. Programming
- a. Provide Control System design submittals as specified.
 - b. Develop, install, and debug all custom control programming code as required and/or as specified.
 - c. Provide low voltage control system interfaces to facility lighting and/or shades where specified.
 - d. Provide the uncompiled programming control code as specified.
6. Testing, Commissioning, Training and Warranty
- a. Verify that all individual components as well as the system as whole function as intended by the AV documents and specifications.
 - b. Test and adjust systems and components for optimal performance.
 - c. Provide initial test and measurement verification reports to the AV Consultant as specified.
 - d. Coordinate and participate in a Commissioning with the AV Consultant and Owner.
 - e. Coordinate and conduct an acceptance walk-through and sign-off session with the Owner and/or AV Consultant.
 - f. Provide "sign-off" documents for each space and/or space type as defined herein.
 - g. Conduct training in systems operation with the Owner's designated representative(s).
 - h. Provide a warranty as specified.

7. Work Excluded: Work not included under this contract shall be:
 - a. Provide conduit, power receptacles, junction boxes, cable raceways, electrical back-boxes, and floor boxes – with the exception of those boxes noted as “specialty” on the drawings.
 - b. Provide blocking as required to support wall-mounted AV components.
 - c. Provide millwork except where otherwise specified.
 - d. Provide lighting fixtures, lighting dimming systems, and lighting controllers.
 - e. Provide window shades, drapes or controllers.
 - f. Provide telecommunications structured cabling systems, including horizontal and backbone cabling and termination, voice and data face plates, associated racks and cabinets, raceway, and cable management required for facility telecommunications systems separate from Audio-Video networks.
- E. Information concerning the design intent is contained both within this document and on AV system drawings. Where conflicts exist between drawings and specifications, the Bidder must bring the discrepancies to the project's Construction Manager and AV Consultant's attention BEFORE the bid due date. If the Bidder fails to bring any particular discrepancy to the attention of the AV Consultant before bids are due then refer to general conditions of the general prime contractor contract, article 4 - conflicting conditions.
- F. Any schedule of major equipment included as part of this spec is provided as a courtesy and as a basis of design to illustrate the required performance. It is the responsibility of the AV System Installer to verify the completeness of all drawings, specifications and schedules and the suitability of devices to meet the intent of the specifications.
- G. It is understood that a requirement to hold on purchasing equipment until a window of 2-3 months prior to installation is unreasonable due to the current supply chain challenges. Delivery schedules are unpredictable for some equipment and lead times may be too long to meet the project schedule. The AV System Installer may order/purchase long lead time items as soon as submittals are approved. The AV System Installer is responsible for storage of these items until they can be installed on site. Any changes made to the equipment specification after bidding that result in increased cost will be considered changes to the contract and will be processed accordingly. Warranties are to be in full effect for a minimum of one year from substantial completion of the AV phase.
- H. If this project includes owner furnished equipment (OFE), it will be indicated in the Systems Descriptions Summary section and in Part 2 of this document and within drawings. Owner shall have owner furnished equipment delivered to AV System Installers shop or to jobsite. AV System Installer coordinate with Owner for receipt of equipment. Record the serial numbers of each item, manufacturer, and model onto a spreadsheet. A form with all the information of the equipment being turned over is required for the AV System Installer to sign. AV System Installer shall not accept equipment without this form. Upon receipt of Owner furnished equipment, the AV System Installer will take possession and responsibility of equipment. AV System Installer will be fully responsible for Owner furnished equipment until substantial completion of AV phase or first beneficial use of system by Owner or whichever comes first. Therefore, unless AV System Installer has signed the Owner's form agreeing to take control of equipment, the AV System Installer shall not be held responsible for damage or loss of owner furnished equipment.
- I. AV System Installer is responsible for compliance with the current published edition of the National Electrical Code and with all of the legal regulations that may apply to this installation, including OSHA safety regulations, regulations of municipal, city, local, and other government agencies. Obtain all necessary permits for the work. AV System Installer is responsible for any violations of the law within the scope of work.

1.4 SYSTEMS DESCRIPTIONS SUMMARY

- A. The following systems' descriptions are a summary of system types throughout project.
1. The project will be implemented in three phases. Refer to Sheets AV010 and AV011 to identify the locations included with each phase.
 2. Courtrooms
 - a. There are four (4) Branch Courtrooms. The two courtrooms on the first floor are renovated during Phase 2. The two courtrooms on the second floor are renovated during Phase 3.
 - b. Branch A Courtroom C1220 is the Ceremonial Courtroom. It has the largest seating area. This space has three large video displays where all other courtrooms have two displays. The ceiling over the well is replaced as part of the renovation so the location of loudspeakers, antennas, microphones, etc. is flexible.
 - c. Branch B Courtroom C1200 is different in that the gallery is separate from the rest of the courtroom at the bar with a full acrylic/Lexan wall. The two spaces are acoustically separated but visually connected. The existing wood ceiling above the well will remain so loudspeaker locations must reuse existing positions. Loudspeakers not used in the new layout are abandoned in place. Coordinate the loudspeaker hole sizes and any required modifications with the GC.
 - d. Branch C Courtroom C2260 and Branch D Courtroom C2230 have similar ceiling conditions as Branch B, however these spaces have a traditional bar and open space.
 - e. Each courtroom has an associate Jury Deliberation Room. Audio and video can be fed from the courtroom to the deliberation room (described below).
 - f. Each courtroom has the following features/capabilities, organized by location:
 - (1) Judge
 - (a) Speech reinforcement is provided to the room speakers & recording to the For the Record system (FTR provided by others). A desktop gooseneck microphone is OFCI (provided by CCAP).
 - (b) Local audio monitoring via desktop powered speaker with local volume control on the front of the speaker is provided.
 - (c) Video input to the room displays is provided for one output of the Judge's CCAP computer is provided. The loop out of the video encoder feeds the CCAP desktop monitor (CCAP computers and monitors utilize DisplayPort).
 - (d) Video output to a separate desktop monitor for the purpose of previewing image/video evidence prior to publishing to the room displays. This display may also be used to preview a media/press camera feed to the press pool.
 - (e) Cabling is provided for future USB extension for annotation. Annotation over video is not currently part of the scope of this project.
 - (f) A cable pathway is provided between the Judge and the Reporter for a realtime CCAP connection. This cabling/integration is provided by others. Coordination for plate/grommet size is required by the AV Contractor.
 - (g) A 10" touch screen is provided located at the bench allowing the Judge to have full control over the AV system in the space. This includes AV system on/off, microphone volume within the room, masking noise on/off for sidebar conversations, video source routing (both in the room and to the jury deliberation room), preview/publish of video content, muting of press pool audio and video feeds, control of video conferencing and PTZ cameras, etc.

The judge has the capability to control all aspects of the system, but it is not expected that the judge provides all of the AV system operation.

- (h) All AV cabling at the Judge's bench shall be concealed and secured to the extent possible.

(2) Witness

- (a) Speech reinforcement is provided to the room speakers & recording to the For the Record system (FTR provided by others). A desktop gooseneck microphone is OFCI (provided by CCAP).
- (b) Local audio monitoring via desktop powered speaker with local volume control on the front of the speaker is provided.
- (c) A 24" touch monitor is provided on the witness desktop for viewing image and video evidence. The witness has the capability to annotate over the content. The annotations can be captured by the Clerk.
- (d) All AV cabling at the Witness position shall be concealed and secured to the extent possible.

(3) Court Reporter

- (a) Speech reinforcement is provided to the room speakers & recording to the For the Record system (FTR provided by others). A desktop gooseneck microphone is OFCI (provided by CCAP).
- (b) Local audio monitoring via desktop powered speaker with local volume control on the front of the speaker. The reporter also has a separate headphone amplifier that can be used for transcribing sidebar conversations where other speakers are muted or playing masking noise
- (c) A cable pathway is provided between the Judge and the Reporter for a realtime CCAP connection. This cabling/integration is provided by others. Coordination for plate/grommet size is required by the AV Contractor.
- (d) There are no video inputs or outputs at the Reporter's position. A spare cable is pulled to this location so that a video network encoder can be added in the future if needed.

(4) Clerk

- (a) Speech reinforcement is provided to the room speakers & recording to the For the Record system (FTR provided by others). A desktop gooseneck microphone is OFCI (provided by CCAP).
- (b) Local audio monitoring via desktop powered speaker with local volume control on the front of the speaker is provided.
- (c) Video input to the room displays is provided for one output of the Clerk's CCAP computer. The loop out of the video encoder feeds the CCAP desktop monitor (CCAP computers and monitors utilize DisplayPort). A USB connection to this computer provides room microphone audio and PTZ camera video for web conferencing applications. All web conferences into the courtroom are initiated by the Clerk.
- (d) USB extension to the Clerk's position is provided so that the Clerk can capture annotated images from the witness position.
- (e) A 10" touch screen is provided located at the Clerk's position to provide full control over the AV system in the space. This includes AV system on/off, microphone volume within the room, masking noise on/off for sidebar conversations, video source routing (both in the room and to the jury

deliberation room), muting of press pool audio and video feeds, control of video conferencing and PTZ cameras, etc.

(5) Attorney Tables

- (a) Each of the four courtrooms has two positions for prosecution tables and two positions for defense tables. Each table has identical capabilities.
- (b) Speech reinforcement is provided to the room speakers & recording to the For the Record system (FTR provided by others). A desktop gooseneck microphone is OFCI (provided by CCAP).
- (c) Ceiling speakers above the well provide speech reinforcement and audio playback to the attorney tables.
- (d) Two (2) HDMI inputs are provided for each Attorney table.
- (e) Cabling is provided for a future video decoder output and future USB extension for annotation. Annotation over video is not currently part of the scope of this project.

(6) Jury

- (a) A microphone input is provided for a gooseneck microphone (provided by CCAP) for recording speech from the jury.
- (b) Ceiling speakers above the jury provide speech reinforcement and audio playback to the members of the jury. The Judge can initiate noise masking audio to this speaker zone during a sidebar conversation.
- (c) One (1) HDMI output is provided on a plate for connection of a portable video cart or future distribution to multiple jury displays. Additional jury displays are not in the scope of this project.

(7) Gallery

- (a) Ceiling speaker above the gallery seating provide speech reinforcement and audio playback. The Judge can initiate noise masking audio to this speaker zone during a sidebar conversation.
- (b) HDMI outputs along the bar are provided so that portable video carts may be rolled in so that people seated in the gallery can better see presented content.

(8) Wireless Microphones

- (a) Two (2) wireless microphone transmitters are provided for each courtroom.
- (b) One Handheld microphone can be used on a portable lectern, when presenter needs to move around, or if desired for the jury foreperson.
- (c) One Combo system with both a Handheld and a Bodypack transmitter is included. Only one of these transmitters can be used at a time. The Bodypack transmitter is intended to be used for simultaneous translation (described below).

(9) Room Video Displays

- (a) In courtrooms with two displays, one large flat panel display is located behind the witness stand for viewing from the jury box. The other display is located on the front wall of the courtroom for viewing by the witness, attorney tables, and gallery.
- (b) The Branch A Courtroom has three main displays. One is located to the left of the Judge which can be viewed by the jury. A second is adjacent to the attorney tables for viewing by the attorney tables and the jury, the third is just beyond the jury box for gallery viewing.

(10) Video Sources

- (a) A portable document camera is provided for each courtroom. No evidence cart will be furnished. When needed, the document camera will be placed on an attorney table.
- (b) HDMI sources at the attorney tables assume that presenters will bring their own device to connect. They will be required to bring their own adapters/converters for any sources with other output formats.
- (c) A wireless Network Presentation Gateway will be provided allowing devices connected to the facility Wi-Fi network to present directly to the room displays. Care should be taken to test the presentation devices prior to court to ensure that the device displays properly.
- (d) Web conferencing via the Clerk's computer
- (e) Hardware video codec (Poly) for remote connections to the jail.

(11) Cameras for Conferencing

- (a) Four (4) Pan-Tilt-Zoom cameras are located in each conference room. These cameras are configured to capture the Prosecution tables, Defense tables, Judge, and Witness.
- (b) Cameras can be sent to conferencing as individually switched sources, additionally, each camera feeds a 4-window video processor to provide a composite of all four cameras. This is a requirement for remote court sessions to the jail.
- (c) The For the Record system does not currently record video. It is configured for audio only. No video feed to FTR is required.

(12) Assistive Listening System (ALS)

- (a) Each courtroom utilizes a two-channel Infrared Assisted Listening System. Emitters are located in the front and rear corners of the space.
- (b) The intent is for the receivers to be shared throughout the entire facility
- (c) The second ALS is used for the simultaneous translation system (described below).

(13) Simultaneous Translation

- (a) The interpreter uses the bodypack wireless microphone transmitter (described above) to broadcast through the main sound reinforcement system or to send the interpretation through the infrared ALS only. Interpretation audio is also sent to the For the Record system. An RF wireless controller with two buttons provides the ability for the interpreter to control the audio routing. (Route to speakers On/Off, Route to IR ALS On/Off).

(14) Jury Deliberation Room

- (a) The Jury Deliberation Rooms can be used like a normal conference room. They have a flat panel display on the wall and an HDMI input on the wall below the display and a wireless presentation gateway.
- (b) For jury deliberations when the jury requests to see video evidence displayed during the trial, a feed from the courtroom is provided. The attorney will connect their device in the courtroom and the Judge will route the video to the deliberation room. Audio will be provided via the display's internal speakers.

- (c) A 7" touch screen within the deliberation room provides local control of the TV and source selection when the space is not being used for courtroom jury deliberations (conference room mode).

(15)Media/Press Connections

- (a) A media interface plate is located in each courtroom between the jury box and the bar. An audio line output of the courtroom audio as well as an HDMI output which mirrors the content shown on the courtroom displays.
- (b) There is an SDI input which is intended for a single media camera to be connected within the courtroom. The Judge has the ability to preview this camera feed and decide whether or not it can be routed to the media pool. The default routing is off/not routed and the Judge chooses to enable the feed.
- (c) There are two audio tie lines and two Cat6A connections on the media plate which are tie lines to the media pool panel.
- (d) Conf/ Law Library C2201 is identified as the Media Pool space. A panel in this space contains the SDI outputs from each courtroom as well as the tie lines to each courtroom. It is assumed that the media will bring in all electronics required to distribute the feeds from the courtrooms.
- (e) The PTZ camera feeds within the courtroom are not intended to be fed to the media pool.

(16)Equipment Racks

- (a) The equipment racks supporting the Courtrooms are located in the following spaces:
 - (b) Branch A Courtroom – Courts IT Closet C1236 (Pivoting Wall Rack)
 - (c) Branch B Courtroom – C-CAP Server C1181 (Pivoting Wall Rack)
 - (d) Branch C Courtroom – Conf C2204 (Free-standing Rack)
 - (e) Branch D Courtroom – Conf C2204 (Free-standing Rack)

3. Hearing Rooms

- a. There are two (2) Hearing Rooms. The two hearing rooms are on the first floor and are renovated during Phase 1.
- b. Functionally, the hearing rooms are similar to the Courtrooms with a few exceptions. There is no jury or reporter and there is not a media panel with feeds to the media pool room.
- c. Each hearing room has the following features/capabilities, organized by location:
 - (1) Commissioner
 - (a) Speech reinforcement is provided to the room speakers & recording to the For the Record system (FTR provided by others). A desktop gooseneck microphone is OFCI (provided by CCAP).
 - (b) Local audio monitoring via desktop powered speaker with local volume control on the front of the speaker is provided.
 - (c) Video input to the room displays is provided for one output of the Commissioner's CCAP computer is provided. The loop out of the video encoder feeds the CCAP desktop monitor (CCAP computers and monitors utilize DisplayPort).
 - (d) Video output to a separate desktop monitor for the purpose of previewing image/video evidence prior to publishing to the room displays.

- (e) Cabling is provided for future USB extension for annotation. Annotation over video is not currently part of the scope of this project.
 - (f) A 10" touch screen is provided located at the bench allowing the Commissioner to have full control over the AV system in the space. This includes AV system on/off, microphone volume within the room, video source routing, preview/publish of video content, control of video conferencing and PTZ cameras, etc. The Commissioner has the capability to control all aspects of the system, but it is not expected that the Commissioner provides all of the system operation.
 - (g) All AV cabling at the Commissioner's bench shall be concealed and secured to the extent possible.
- (2) Witness
- (a) Speech reinforcement is provided to the room speakers & recording to the For the Record system (FTR provided by others). A desktop gooseneck microphone is OFCI (provided by CCAP).
 - (b) Local audio monitoring via desktop powered speaker with local volume control on the front of the speaker is provided.
 - (c) The witness position does not have any local video monitoring or annotation capabilities as part of this project, however, wiring is in place so that it may be easily added in the future.
 - (d) All AV cabling at the Witness position shall be concealed and secured to the extent possible.
- (3) Clerk
- (a) Speech reinforcement is provided to the room speakers & recording to the For the Record system (FTR provided by others). A desktop gooseneck microphone is OFCI (provided by CCAP).
 - (b) Local audio monitoring via desktop powered speaker with local volume control on the front of the speaker is provided.
 - (c) Video input to the room displays is provided for one output of the Clerk's CCAP computer. The loop out of the video encoder feeds the CCAP desktop monitor (CCAP computers and monitors utilize DisplayPort). A USB connection to this computer provides room microphone audio and PTZ camera video for web conferencing applications. All web conferences into the courtroom are initiated by the Clerk.
 - (d) A 10" touch screen is provided located at the Clerk's position to provide full control over the AV system in the space. This includes AV system on/off, microphone volume within the room, video source routing, control of video conferencing and PTZ cameras, etc.
- (4) Attorney Tables
- (a) Each of the two hearing rooms has two positions for prosecution tables and two positions for defense tables. Each table has identical capabilities.
 - (b) Speech reinforcement is provided to the room speakers & recording to the For the Record system (FTR provided by others). A desktop gooseneck microphone is OFCI (provided by CCAP).
 - (c) Ceiling speakers above the well provide speech reinforcement and audio playback to the attorney tables.
 - (d) Two (2) HDMI inputs are provided for each Attorney table.

- (e) Cabling is provided for a future video decoder output and future USB extension for annotation. Annotation over video is not currently part of the scope of this project.
- (5) Gallery
- (a) Ceiling speakers above the gallery seating provide speech reinforcement and audio playback.
 - (b) An HDMI output along the bar is provided so that a portable video cart may be rolled in so that people seated in the gallery can better see presented content.
- (6) Wireless Microphones
- (a) Two (2) wireless microphone transmitters are provided for each hearing room.
 - (b) One Handheld microphone can be used on a portable lectern, when presenter needs to move around.
 - (c) One Combo system with both a Handheld and a Bodypack transmitter is included. Only one of these transmitters can be used at a time. The Bodypack transmitter is intended to be used for simultaneous translation (described below).
- (7) Room Video Displays
- (a) The hearing rooms each have two displays. One large flat panel display is located behind the witness stand for viewing from the attorney tables and gallery. The other display is located on the side wall of the hearing room for viewing by the witness, attorney tables, and gallery.
- (8) Video Sources
- (a) A portable document camera is provided for each hearing room. No evidence cart will be furnished. When needed the document camera will be placed on an attorney table.
 - (b) HDMI sources at the attorney tables assume that presenters will bring their own device to connect. They will be required to bring their own adapters/converters for any sources with other output formats.
 - (c) A wireless network Presentation Gateway will be provided allowing devices connected to the facility Wi-Fi network to present directly to the room displays. Care should be taken to test the presentation devices prior to court to ensure that the device displays properly.
 - (d) Web conferencing via the Clerk's computer
 - (e) Hardware video codec (Poly) for remote connections to the jail.
- (9) Cameras for Conferencing
- (a) Four (4) Pan-Tilt-Zoom cameras are located in each conference room. These cameras are configured to capture the Prosecution tables, Defense tables, Commissioner, and Witness.
 - (b) Cameras can be sent to conferencing as individual switched sources, additionally, each camera feeds a 4-window video processor to provide a composite of all four cameras. This is a requirement for remote court sessions to the jail.
 - (c) The For the Record system does not currently record video. It is configured for audio only. No video feed to FTR is required.
- (10) Assistive Listening System (ALS)

- (a) Each courtroom utilizes a two-channel Infrared Assisted Listening System. Emitters are located in the front and rear corners of the space.
- (b) The intent is for the receivers to be shared throughout the entire facility
- (c) The second ALS is used for the simultaneous translation system (described below).

(11) Simultaneous Translation

- (a) The interpreter uses the bodypack wireless microphone transmitter (described above) to broadcast through the main sound reinforcement system or to send the interpretation through the infrared ALS only. Interpretation audio is also sent to the For the Record system. An RF wireless controller with two buttons provides the ability for the interpreter to control the audio routing. (Route to speakers On/Off, Route to IR ALS On/Off).

(12) Equipment Racks

- (a) The equipment racks supporting the Hearing Rooms are both located in C-CAP Server C1191. Space is limited within the room so pivoting wall racks are used.

4. County Board Room

- a. The County Board Room is used for County meetings as well as educational training sessions. The space consists of the large meeting room along with a divisible space at the rear of the room that can be used as a seating gallery for county meetings as well as two independent conference rooms. Additionally, there are two nearby stand-alone conference rooms that can be used as overflow spaces receiving video content and audio from the board room.
- b. The board room is configured with a six seat dais at the front of the room. There is a lectern presentation position and then the supervisor seating consists of four rows of eight seats each.
- c. The system has the following features/capabilities:
 - (1) Microphone Inputs
 - (a) A gooseneck microphone is provided at each seating position. When speaking, each individual is required to stand. Microphones shall be oriented towards a standing position. A gooseneck microphone is also provided at the lectern.
 - (b) Wireless microphones are also available for use within the space. Two bodypack transmitters with lavalier microphones and two handheld transmitters are included.
 - (2) Ceiling loudspeakers
 - (a) Flush ceiling loudspeakers above the dais and supervisor desk are all fed from discrete amplifier outputs to provide a mix-minus system to reduce the risk of feedback within the space.
 - (3) Assistive Listening System (ALS)
 - (a) The County Board Room utilizes an Infrared Assisted Listening System. Emitters are located in the front and rear corners of the space.
 - (b) The intent is for the receivers to be shared throughout the entire facility
 - (4) Audio Integration with Open Meeting System

- (a) The Owner furnished Open Meeting system communicates the Audio DSP with request to talk information as well as microphone mute/unmute commands. Programming time and coordination with this system is required.
- (5) Video presentation inputs:
 - (a) One (1) HDMI input at the Lectern for presenters
 - (b) One (1) HDMI input at the Dais for connection the Open Meeting computer. This input is intended to show the meeting agenda, voting information, etc.
 - (c) One (1) wireless Presentation Gateway is available for users connected to the county network to present content via the network. A wired HDMI input can also route through this gateway allowing an additional wired input at the Dais.
- (6) Video Outputs (all displays are intended to show the same content):
 - (a) Two large flat screen displays (85") are located on the wall at the front of the room above the dais.
 - (b) Two additional large flat screen displays (85") are located on the side walls flanking the supervisor desk/seating area.
 - (c) Two (2) small displays (27") are located at the dais. These monitors are located on the desktop so that the individuals at the dais can see presented content without needing to turn around and look at the displays behind them.
 - (d) Board Room presentation content may also be displayed on the two divisible conference room displays at the back of the board room. This is not a primary function of these displays, however, as they are located behind the gallery seating. These two conference rooms are described below.
- (7) Pan-tilt-zoom (PTZ) Cameras
 - (a) Three PTZ cameras are located in the ceiling of the board room. Two are located at the front of the room and are intended to capture the supervisors seated in four rows. The third camera is near the rear of the room and captures the dais and the lectern.
 - (b) The commands sent by the Owner furnished Open Meeting system to the Audio DSP for mic mute/unmute as part of the request to talk feature shall also be used to trigger camera presets to the seating location associated with the active microphone.
- (8) Video Production & Streaming
 - (a) The Owner has an existing recording & streaming setup that will be reused. Space is provided in the AV rack for the owners computer running VMix software and any necessary interface/capture devices.
 - (b) Room audio, camera content and presentation video content is fed to the production system and the produced content is recorded and streamed.
- (9) AV System Control
 - (a) A 10" desktop touch screen is located at the dais. This touch screen provides volume control for microphones, display video source selection, and video source volume control.
 - (b) Room combining and separating of the conference rooms at the back of the board room is provided from the touch screen. There are no operable partition sensors included for automatic combining/separating.
- (10)AV Equipment Rack

- (a) A free-standing floor rack is located in IT/AV C2064 at the rear of the board room / conference rooms. This rack supports all AV functions for the County Board Room and overflow spaces.

(11) Conference Rooms / Gallery

- (a) As already described, the two conference rooms at the rear of the County Board Room can be opened up and used as gallery seating for the board room. In this configuration, the displays will both display the same content as the board room displays and the ceiling speakers will produce the board room content.
- (b) When separated from the board room, the conference rooms act as local presentation systems. There is an HDMI input on a wall plate below the display and an HDMI input at the poke-thru in the middle of the room. The ceiling speakers produce the content from the connected video source. A button panel on the wall near the display provides control of the source selection and room volume. The button panel is disabled when the room is combined with the board room.

(12) Overflow Conference Rooms

- (a) Conference C2003 and Conference C2056 are typical conference rooms that are located near the County Board Room. These conference rooms have been identified as overflow spaces for meetings with a large public attendance.
- (b) Ceiling speakers with a local volume control provide board room audio to these conference rooms. An overflow mute/unmute button should be provided on the board room touch screen so that these speakers only produce audio when in overflow mode.
- (c) A video decoder is placed at the conference room display to display produced content from the Owner's video production equipment.

5. Jury Assembly / Training C2190

- a. The Jury Assembly / Training room is used for meeting to educate jurors on trial requirements as well as internal training sessions for other groups. The ability to do web conferencing or distance learning within this space is provided.
- b. The system has the following features/capabilities:
 - (1) Video Inputs
 - (a) An HDMI input is located on the front wall of the room
 - (b) A wireless network presentation gateway is available for connection of devices to the displays via the facility Wi-Fi network.
 - (2) Video Displays
 - (a) Two large flat screen displays (75") are located on the wall at the front of the room. Both displays show the same content.
 - (3) Ceiling loudspeakers
 - (a) Flush ceiling loudspeakers above the seating area. Loudspeakers produce the audio of the video content.
 - (4) Pan-tilt-zoom (PTZ) Cameras
 - (a) Two (2) PTZ cameras are installed within the space. One is located on the rear wall to capture the presenter. One is located on the front wall for capturing the seating area. Camera selection for the feed to the web

conference is selectable from the touch screen in the room (described below).

(5) Ceiling Microphone

- (a) A ceiling microphone array is mounted at the ceiling to pick up audio in the room for use in web conferencing. The microphone has multiple lobes that are configured to pick up the seating areas as well as presentation area.

(6) Wireless Microphone

- (a) A bodypack transmitter with a lavalier microphone is provided for local speech reinforcement

(7) Assistive Listening System

- (a) An infrared assistive listening system will be installed. The receivers will be shared from the building-wide pool of ALS receivers.

(8) Web Conferencing

- (a) The PTZ camera video and the ceiling microphone audio is provided as a single USB connection for connection to a presenter's laptop. Additional drivers are not required.

(9) AV System Control

- (a) A 7" touch screen is wall mounted at the front of the room. This touch screen provides system on/off, source selection, volume controls, PTZ Camera control and camera selection for web conferencing.

6. Individual Offices

- a. Various offices throughout the facility are identified to have a flat panel display on the wall with one or two local inputs so that the office's occupant can display content.
- b. Video Display
 - (1) A 55" or 65" flat panel display is wall mounted. Refer to drawings for display size.
 - (2) The display is controlled by its included IR remote control.
- c. HDMI Inputs
 - (1) Offices identified as Type 1 have a single HDMI input on a wall plate
 - (2) Offices identified as Type 2 have two HDMI inputs on wall plates
- d. The offices have been identified as Add Alternates. Owner will select which spaces get installed as part of this contract a la carte.
- e. Alternates are identified by room type and display size:
 - (1) Add Alt #1 – Office Type 1 – Single 55" Display
 - (2) Add Alt #2 – Office Type 1 – Two 55" Displays
 - (3) Add Alt #3 – Office Type 1 – Two 43" Displays
 - (4) Add Alt #4 – Office Type 1 – Eight 43" Displays
 - (5) Add Alt #5 – Office Type 2 – Single 55" Display
 - (6) Add Alt #6 – Office Type 2 – Two 55" Displays
 - (7) Add Alt #7 – Office Type 2 – Single 65" Display

7. Conference Rooms

- a. Conference rooms throughout the facility are identified to have a flat panel display on the wall with one, two, or three local inputs.
- b. Video Display

- (1) A 55", 65", 75", or 85" flat panel display is wall mounted. Refer to drawings for display size.
- (2) The display is controlled by its included IR remote control.
- c. HDMI Inputs
 - (1) Conference Rooms identified as Type 1 have a single HDMI input on a wall plate
 - (2) Conference Rooms identified as Type 2 have a single HDMI input at a poke-thru under the table
 - (3) Conference Rooms identified as Type 3 have an HDMI input on a wall plate and an HDMI input at a poke-thru under the table
 - (4) Conference Rooms identified as Type 4 have two HDMI inputs on separate wall plates and one HDMI input at a poke-thru under the table
- d. Web conferencing
 - (1) A soundbar with integrated camera and microphone array is provided for web conferencing. The USB connection to this device will be extended to one of the HDMI input locations in each space.
- e. The conference rooms have been identified as Add Alternates. Owner will select which spaces get installed as part of this contract a la carte.
- f. Alternates are identified by room type and display size:
 - (1) Add Alt #8 – Conference Room Type 1 – Single 55" Display
 - (2) Add Alt #9 – Conference Room Type 1 – Single 65" Display
 - (3) Add Alt #10 – Conference Room Type 1 – Single 75" Display
 - (4) Add Alt #11 – Conference Room Type 1 – Single 85" Display
 - (5) Add Alt #12 – Conference Room Type 2 – Single 65" Display
 - (6) Add Alt #13 – Conference Room Type 2 – Single 75" Display
 - (7) Add Alt #14 – Conference Room Type 2 – Single 85" Display
 - (8) Add Alt #15 – Conference Room Type 3 – Single 65" Display
 - (9) Add Alt #16 – Conference Room Type 3 – Single 75" Display
 - (10) Add Alt #17 – Conference Room Type 3 – Single 85" Display
 - (11) Add Alt #18 – Conference Room Type 4 – Single 85" Display
- 8. Waiting Rooms
 - a. Select waiting rooms will have a 55" display with an Owner furnished CATV tuner (set top box) for entertainment of people sitting in the waiting area.
- 9. Emergency Operations L0091
 - a. The Emergency Operations Center serves the Police, Fire, EMS, Emergency Management, Utility Companies, Public Health, etc. In addition, the space is used as a training room or a roll call room when not in use as an EOC.
 - b. The system has the following features/capabilities:
 - (1) Video Inputs
 - (a) HDMI inputs are provided at the seating area. One input for every two seats (total of 18). The inputs are brought up from the floor boxes under the tables to table mounted HDMI plates mounted under the rear lip of the tables.
 - (b) A wireless network presentation gateway is available for connection of devices to the displays via the facility Wi-Fi network.

- (2) Video Displays
 - (a) Five (5) large flat panel displays (98") are mounted around the front of the room. These displays are individually assignable so that any source can be routed to any display.
- (3) Audio Inputs
 - (a) Audio from any of the displays can be individually selected as the active audio source to be heard within the space.
 - (b) One (1) wireless handheld microphone transmitter and one (1) wireless bodyback transmitter with a lavalier microphone is provided for speech reinforcement within the space.
- (4) Ceiling Loudspeakers
 - (a) Flush ceiling loudspeakers above the seating area. Loudspeakers produce the audio of the video content and wireless microphones.
- (5) Assistive Listening System (ALS)
 - (a) The EOC utilizes an Infrared Assisted Listening System. An emitter is located in the front corner of the space.
 - (b) The intent is for the receivers to be shared throughout the entire facility.
- (6) Pan-tilt-zoom (PTZ) Cameras
 - (a) Two (2) PTZ cameras are installed within the space. One is located on the rear wall to capture the presenter. One is located on the front wall for capturing the seating area. Camera selection for the feed to the web conference is selectable from the touch screen in the room (described below).
- (7) Ceiling Microphone
 - (a) Two (2) ceiling microphone arrays are mounted at the ceiling to pick up audio in the room for use in web conferencing. The microphones have multiple lobes that are configured to pick up the seating areas as well as presentation area.
- (8) Web Conferencing
 - (a) The PTZ camera video and the ceiling microphone audio is provided as a single USB connection for connection to a presenter's laptop. Additional drivers are not required. A portable USB AV Bridge is provided that can be connected to any of the six floor boxes in the space. This bridge provides the USB connection for the PTZ cameras and the microphones in the space. It connects to an Owner furnished computer running the web conferencing application.
- (9) AV System Control
 - (a) A 22" touch monitor with an associated control graphics processor is provided for system control. The touch screen location is flexible and can be connected to any of the six floor boxes under the tables.
 - (b) The touch screen provides the following controls:
 - (i) System on/off
 - (ii) Video source routing to each display
 - (iii) Video source selection and volume control
 - (iv) Wireless microphone volume control
 - (v) PTZ camera control (presets and manual)

(vi) Camera selection to send to web conference

(10)AV Equipment Rack

- (a) A wall mounted equipment rack houses all rack mounted components supporting the EOC AV system. The rack is located in the adjacent Radio/Elec. L0094 room.

10. Dispatch L1078

- a. The AV equipment in the Dispatch supports displaying CATV as well as PC inputs for displaying security camera video.
- b. Video Displays
- (1) Five (5) large flat panel displays (75") are mounted around the front of the room.
- (2) All displays are capable of displaying CATV for weather & news. Only two of the displays will actively display CATV content.
- (3) Three displays are identified to display HDMI content from a wall plate with three HDMI inputs. The intent is for an Owner furnished PC to output security camera video so that Dispatchers can monitor the area outside the entry to the room. Coordinate with the Owner for which display locations will display this content.
- c. Video Inputs
- (1) One plate will have three (3) HDMI inputs on it to feed video to three of the five displays in the room.

11. Briefing L1033

- a. The Briefing Room is a presentation and training space.
- b. The system has the following features/capabilities:
- (1) Video Inputs
- (a) One HDMI input is located at the poke-thru for the Lectern
- (b) One HDMI input is located on a wall plate at the rear wall
- (c) A wireless network presentation gateway is available for connection of devices to the displays via the facility Wi-Fi network.
- (2) Video Displays
- (a) Two (2) flat panel displays (75") are mounted around the front of the room
- (3) Audio Inputs
- (a) The space is relatively small and there is no speech reinforcement
- (b) Audio from the video sources are the only audio inputs
- (4) Ceiling Loudspeakers
- (a) Flush ceiling loudspeakers above the seating area. Loudspeakers produce the audio of the video content
- (b) Separate ceiling speakers with a local volume control are installed to provide "overhead radio" (content from the dispatch radio system)
- (5) Pan-tilt-zoom (PTZ) Cameras
- (a) Two (2) PTZ cameras are installed within the space. One is located on the rear wall to capture the presenter. One is located on the front wall for capturing the seating area. Camera selection for the feed to the web conference is selectable from the touch screen in the room (described below).
- (6) Ceiling Microphone

- (a) One (1) ceiling microphone array is mounted at the ceiling to pick up audio in the room for use in web conferencing. The microphone has multiple lobes that are configured to pick up the seating areas as well as presentation area.
- (7) Web Conferencing
 - (a) The PTZ camera video and the ceiling microphone audio is provided as a single USB connection for connection to a presenter's laptop. Additional drivers are not required.
- (8) AV System Control
 - (a) A wall mounted 7" touch screen is provided for system control.
 - (b) The touch screen provides the following controls:
 - (i) System on/off
 - (ii) Video source selection and volume control
 - (iii) PTZ camera control (presets and manual)
 - (iv) Camera selection to send to web conference
- (9) AV Equipment Rack
 - (a) A small equipment rack is located in the furniture at the front of the room.
- 12. Squad Room L1087
 - a. The Squad Room is a variation on a Conference Room.
 - b. The system has the following features/capabilities:
 - (1) Video Inputs
 - (a) One HDMI input is located on a wall plate below the display
 - (b) One HDMI input is located in the poke-thru below the table
 - (2) Video Display
 - (a) One (1) flat panel display (75") mounted on the wall
 - (3) Ceiling Loudspeakers
 - (a) Ceiling speakers with a local volume control are installed to provide "overhead radio" (content from the dispatch radio system)
 - (b) A ceiling speaker with a local volume control is installed in Break L1066to provide "overhead radio" (content from the dispatch radio system)
 - c. Web conferencing
 - (1) A soundbar with integrated camera and microphone array is provided for web conferencing. The USB connection to this device will be extended to the poke-thru below the table.
 - d. AV Equipment Rack
 - (1) A small tilt-down rack is mounted on the wall within the room to house and amplifier for the "overhead radio" distribution system.
- 13. Video Conf. (Probation Patrol) L0032
 - a. The space serves as a video conferencing room with remote connection to the courtrooms via a hardware conferencing codec (Poly).
 - b. The system has the following features/capabilities:
 - (1) Video Inputs
 - (a) One HDMI input is located on a wall plate below the display for shared content

- (2) Video Display
 - (a) One (1) flat panel display (55") mounted on the wall
 - c. Video conferencing
 - (1) An "all-in-one" video conference codec (Poly) is mounted at the display. This device includes an integrated camera, microphone array and speaker soundbar.
14. Room Scheduling
- a. Courtrooms, Hearing Rooms, and select Conference Rooms have room scheduling displays outside the entrance to the space.
 - b. 15" displays with integrated players connect to the facility network for the courtrooms and hearing rooms. These displays integrate with the CCAP system for judicial scheduling. Displays/players must be compatible with the Owner's preferred platform (Adgators).
 - c. 10" displays are located outside select conference rooms. These scheduling displays integrate with the Owner's Microsoft Outlook/Teams system for scheduling the conference rooms
 - (1) The Conference Room Scheduling displays have been identified as an Add Alternate (Alternate #19). Owner will select if these displays get installed as part of this contract.
15. Extended Service Contract
- a. Add Alternate #20 consists of an extended service contract
 - (1) Extended service period covers up to three (3) years after substantial completion of AV project installation.
 - (2) Extended service contract includes all service, repair, or replacement of all AV equipment installed by awarded bidder beyond the Standard Warranty period.
 - (3) Extended service includes troubleshooting, phone support, and an annual block of hours for on-site service.

1.5 BIDDER QUALIFICATIONS

- A. Furnish a list of two (2) projects whose size, value, scope, and complexity is similar to that being bid or (4) projects of at least half the size. The minimum period of operation for each shall be twelve (12) months. Each project shall include the following:
 - 1. Name and location of installation
 - 2. Date of occupancy by Owner
 - 3. Owner's representative to contact with corresponding telephone number and email address.
 - 4. Construction Manager and Architect's project manager's telephone numbers and email addresses.
- B. A single AV System Installer shall perform the entire work of the 27 41 00 specification, unless otherwise noted. Bidder must meet the following qualifications:
 - 1. Bidder is capable of providing all systems within full and strict compliance to the provisions included in this specification.
 - 2. Bidder has, at minimum, five (5) active years engaged in installing similar systems included under specification section 27 41 00.
 - 3. Bidder has access to all necessary equipment and has the organizational capacity and technical competency to perform work properly and expeditiously.

4. Bidder maintains a manufacturer certified programmer on staff for the control systems included in this bid.
 5. Bidder shall include with their Bid Response, proof of their qualifications as listed above and shall include a list of staff who will be actively involved in this project including their specific roles.
 6. Bidder employs competent personnel capable of generating necessary drawings outlined under the Submittals section, in a timely fashion and according to project standards.
 7. Bidder employs an adequate number of skilled workers who are thoroughly trained and experienced in the necessary crafts. They are also familiar with the specified requirements and methods standard for proper performance of work in this section.
 8. Bidder shall provide a designated supervisor on the project site during all phases of installation and testing of the system. This designated supervisor is the primary contact during all phases. Provide secondary contact information in instances that the designated supervisor is unreachable.
 9. Bidder shows satisfactory evidence, upon request, that it maintains a fully equipped local service organization capable of furnishing adequate inspection and service to systems, including replacement parts. The service organization is capable of a minimum 24 hour on site response time. Bidder is prepared to offer a service contract for the maintenance of the systems after the guarantee period.
 10. Bidder is a factory-authorized dealer for all major components specified including, but not limited to, digital signal processors, audio amplifiers, loudspeakers, video switching and signal transport, flat panel displays, and control systems.
 11. The Owner may request a Bidder to provide additional information as desired for review by the Owner, Architect and AV Consultant to determine the Bidder's acceptability.
- C. Bidder is responsible for equipment testing and therefore should meet the following qualifications:
1. The Bidder shall furnish a list of equipment for servicing, calibration, and alignment of AV systems upon request of the AV Consultant.
 2. Bidder's test equipment must:
 - a. Test all cable types installed over the frequency ranges used.
 - b. Generate test signals and/or patterns for all signal types and/or resolutions used.
 - c. Analyze all signals produced by or displayed by the AV system.
- D. The AV Consultant reserves the right to request and have furnished to them any additional information required to determine the Bidder's ability to complete the work outlined in this section. Supply additional information with no additional cost incurred by the Owner.

1.6 SITE CONDITIONS

- A. Prior to submitting a bid response, examine the site of the proposed work and verify the conditions associated with the Scope of Work as defined by this specification section. Include reasonable allowances for site visits and site conditions in the submitted bid response. Clearly note any impacts on cost and/or schedule in the bid response.
- B. Investigate any potential conflicts with site-related or union-related issues regarding use of personnel, scheduling, access to the site, storage of tools and equipment on site, and other areas of potential conflict. Clearly note any impacts on cost and/or schedule in the bid response.

- C. Architectural drawings provided to the Bidder for bidding purposes may not reflect actual construction site as-built conditions. Field-verify all site conditions relevant to the work.
- D. Identify any condition where the recommended electrical or environmental operating parameters for specified equipment cannot be assured. If any such conditions are identified notify the Architect and AV Consultant.

1.7 QUALITY ASSURANCE

- A. All equipment installed shall be new and in proper operating condition, less than one year from date of manufacture. The equipment shall be the manufacturer's latest standard designs current at the time of delivery, modified only to the extent necessary to comply with the requirements of these specifications. Where two or more units of the same class of equipment are required, such units shall be the standard product of a single manufacturer, but individual classes of compatible equipment may be the products of different manufacturers. Manufacturers shall be established in the industry so that prompt and continued service and delivery of spare parts may be assured.
- B. If a product is discontinued after submittals and prior to installation, the AV System Installer shall submit a substitution request. Refer to Substitutions sections for requirements.
- C. If any equipment, brackets, or mounts require custom fabrication by the AV System Installer, fabricate components with the quality of workmanship comparable to professional equipment produced by specialized manufacturers of the trade involved.
- D. Furnish all required equipment whether or not specifically mentioned in these specifications or on the drawings. Such devices include but not be limited to hardware, fasteners, rack screws, rack brackets, power supplies, fan guards, grill covers, floor box covers, impedance matching devices, transformers, line pads, line amplifiers, EDID emulators, twisted pair repeaters, DVI/HDMI cable equalizers, DVI/HDMI or SDI repeaters, relay and LED power supplies, and other devices as necessary to interface, control, or balance the AV systems.

1.8 SUBMITTALS

- A. Create Submittals and Shop Drawings based on the requirements this Specification. The AV Consultant's review and approval of the AV System Installer's Submittal does not constitute a certification of accuracy or completeness in regards any work which is the responsibility of the AV System Installer (such as quantities, equipment, installation techniques, software programming, equipment interoperability, safety factors, etc.).
- B. Required Submittals – Pre-Construction:
 - 1. AV-Submittal-01 – Shop Drawings
 - a. Provide completed shop drawings in electronic form (PDF) for the Owner and AV Consultant's approval. Files submitted in PDF format shall be files saved as or printed to PDF format, NOT scanned, so that they are searchable. DO NOT PROCURE EQUIPMENT OR BEGIN WORK ON THIS PROJECT UNTIL SHOP DRAWINGS HAVE BEEN SUBMITTED AND APPROVED.
 - b. Reproductions of Consultant's drawings are NOT acceptable. Confirm that AV systems are fully understood by providing original shop drawings. Providing original drawings demonstrates that the AV System Installer has reviewed AV equipment locations and connections.
 - c. Provide Shop Drawing Submittals within sixty (60) days of award of contract, or sooner if necessary to comply with construction schedule. AV System Installer is solely responsible for all costs resulting from delay in providing shop drawings in a timely manner.

- d. If reviewed shop drawings require resubmission, include revision dates that indicate when changes from previous reviews were performed for resubmitted Shop Drawing Submittals. Cloud all revisions made to submittal documents and all clouds must be identified by the corresponding line item number on the review roster. Include a list of changes to re-submittal documents.
- e. Shop Drawing submittals that are not submitted complete and in full will be returned without review.
- f. The Shop Drawing Submittals shall be submitted as a single package and shall be made on 30" x 42" reproducible media or match the project drawing size if larger than 30" x 42". Shop Drawing Submittals shall include the following items:
 - (1) Floor Plan Drawings: Provide drawings with locations of all required raceway, AV power, AV data, equipment racks, and TV displays. Indicate locations of pull-boxes, wall boxes, and floor boxes. The AV Consultant reserves the right to adjust pull-box locations to accommodate access for maintenance.
 - (2) Reflected Ceiling Plans: Provide drawings with ceiling coordinated device locations such as ceiling boxes, ceiling microphones, projectors, projection screens, and loudspeakers.
 - (3) Room Sections & Wall Elevations Drawings: Provide drawings with room sections and wall elevations showing coordinated device locations such as input/output boxes, display backboxes, displays, projection screens, surface mounted loudspeakers, touch screens, etc.
 - (4) Equipment List: Provide a complete list of all components used for the project in an electronic spreadsheet or a searchable PDF. The spreadsheet shall include installation location, quantity, manufacturer, and model number.
 - (5) Product Data: Provide specification or cut sheets for all components with model numbers highlighted to indicate specific items proposed.
 - (6) Cable Run Schedule: Provide a complete list of all cable runs used for the project in an electronic spreadsheet or searchable PDF. The spreadsheet shall include termination locations and identification nomenclature.
 - (7) Schematic Drawings: Provide wiring diagrams showing terminal connections between equipment with consistent terminal numbering, circuit designations, and equipment designations on all drawings. Terminal connections in the equipment shall be numbered to correspond to the diagrams for use in making connections. Coordinate wiring diagrams so that terminal numbering, circuit designation, and equipment or device designations are the same on all drawings. All drawings must be submitted and approved by the AV Consultant before fabrication starts, but such approval will not waive any specification requirements unless so specifically stated. Final approval will be made after checking the equipment when operated in the field.
 - (8) Panel/Plate and Rack Elevation Drawings: Provide elevation drawings of all custom panels and plates as well as equipment racks showing locations of AV equipment being mounted in these racks. Include cable layouts, locations for terminal blocks, transformers, relays, power supplies, etc.
 - (9) Mounting Details: Provide drawings of mounting details for all speakers, TV displays, projector screens, and projectors. Provide structural calculations, drawings and details for the anchorage of loudspeaker rigging hardware, projector and/or projection screen rigging, and all other mounts that attach to structure.
 - (10) Custom Millwork Details: If technical furniture or millwork is specified to be provided by the AV System Installer, provide scaled drawings of all technical

furniture indicating dimensions, material, finishes, equipment locations and orientation, cable management, and all other details needed to show the functional and physical aspects of the technical furniture.

(11) Summary of Coordination Efforts: Write a description of plan to coordinate with other trades. Include name(s) of person(s) responsible for project management, lead installer, control & dsp programming, etc.

(12) Listing of Purchase Dates: As part of the contract for this work, submit a listing of the estimated date or dates for purchasing the audiovisual equipment. Date(s) submitted shall be coordinated with the project schedule presented by the Construction Manager.

(13) Update the shop drawing package throughout the duration of the project to document and changes, whether Owner-requested, changes due to field conditions, approved change orders, etc.

C. Required Submittals – During Construction:

1. AV-Submittal-02 – Equipment Rack Digital Photos
 - a. Submit digital photographs of completed equipment racks for approval prior to delivering the racks to the project site.
 - b. All photographs shall clearly show the front and rear of each equipment rack. The front photos must show all visible components. The rear photos must clearly show any components mounted in the rear, AC Power distribution, internal rack cabling, terminations, and cable management. Photos shall be properly focused. Use multiple images to show taller racks if necessary.
 - c. Label image files appropriately to convey the rack or location they are associated with.
 - d. Submit all digital images in JPEG or PNG file format.
2. AV-Submittal-03 – Software Submittals
 - a. Submit Software Submittals no later than 30 days prior to deployment of control and DSP programs.
 - (1) Follow the procedures outlined in Part 3, AV Control Systems and Audio Digital Signal Processor (DSP) System to develop the programming prior to submission.
 - (2) Base programming on system types to minimize the number of control programs.
 - b. The Control System Programming Submittal shall include:
 - (1) Un-compiled control source code, and programming files. All control source code shall become the property of the Owner upon completion of the project.
 - (2) Screen Layouts and Flowcharts: Provide full size drawings demonstrating touch panel through screen shots as a flow chart
 - c. Audio Digital Signal Processing (DSP) Programming Submittal shall include:
 - (1) Audio DSP configuration file to demonstrate the AV System Installer's basis of design for the internal workings & routing audio through the DSP.
3. AV-Submittal-04 – Verification Test Report Submittal
 - a. Generate and submit a test report documenting and certifying compliance with any and all provisions of this specification. Test report shall be made available to AV Consultant a minimum of seven (7) days prior to commissioning.
 - b. Refer to Part 3, AV System Installer's Preliminary Tests & Measurements section for details regarding the requirements of the test report.

- c. Submit an electronic PDF of a written report detailing the results of Initial Adjustments and Verification tests including all relevant drawings, charts, test instrument data, and photographs.
- d. Submit a written letter of certification along with a written report stating that the installation conforms to the requirements stated herein, is complete in all respects and ready for inspection.

D. Required Submittals – Post Construction Final Documentation

- 1. AV-Submittal-05 – As-Built Construction Drawings
 - a. Modify drawings to denote as-built conditions, and include updated drawings as part of the as-built documentation. As-built documentation shall include a complete list of all cable runs including termination locations, numbers/identification, and test data as required under the section on preliminary tests and measurements.
 - b. The drawings shall include:
 - (1) Plans/RCP/Sections/Elevations with cable routes.
 - (2) Rack elevations and panel details. Numbering, icons, and drawing conventions used shall be consistent throughout all documentation provided.
 - (3) Final schematics with wire numbers.
 - c. Modify the documents accordingly to denote as-built information as defined above and submit to the AV Consultant for acceptance. Supply this information no later than four (4) weeks prior to the scheduled occupancy of the affected spaces.
 - d. Annotate the base drawings and return to the Owner and AV Consultant in hard copy (same plot size as originals) and electronic (AutoCAD or Revit) form.
 - e. Identify each drawing submitted as part of the Project Documentation as an “As-built” drawing and include the following information: (1) The AV System Installer name and/or logo and (2) the date of the drawing.
 - f. Maintain all fonts, color, layer, Model Space/Paper Space conventions established in the base drawings in preparation of the As-built drawings.
 - g. Prior to generation of the drawings, provide a sample file and test plot to the AV Consultant for review and approval.
 - h. All documentation, including hard copy and electronic forms shall become the property of the Owner.
- 2. AV-Submittal-06 – Maintenance and Operating Manuals
 - a. Provide an electronic .PDF, of maintenance and operating instructions for this system. These manuals shall include the following:
 - (1) A table of contents.
 - (2) Owner’s manuals for all provided equipment.
 - (3) Simplified operational procedures with diagrams depicting the actual equipment front panels showing the nominal level settings for the controls.
 - (4) FAQ: Question and answer type trouble-shooting guides.
 - (5) IP and MAC address schedule of Ethernet enabled AV devices.
 - (6) Materials list with Manufacturer, Model number and Serial number.
 - (7) CD or USB memory stick with all software furnished for the project.
 - (8) As-Built Drawings One copy of as built drawings.
 - (9) Warranty Schedule: list of dates within four (4) month increments for return visit in compliance with warranty specifications. See section Warranty.

- b. Submit the O&M manuals for review by the AV Consultant.
- c. The AV System Installer shall maintain, in their office, a record of all original manual information to be able to issue as a replacement copy, at the Owner's expense, during the time the equipment is in actual service.

PART 2 - PRODUCTS

2.1 EQUIPMENT STANDARDS

- A. Complete AV systems consisting of all the individual system components and peripherals as shown or listed shall be provided to fulfill design intent. Equivalent manufacturers and products shall be in strict accordance with this specification.
- B. It is the responsibility of the AV System Installer to verify the completeness of the drawings, specifications, and schedules and the suitability of devices to meet the design intent of the specifications. The AV System Installer shall provide any additional equipment, accessories, or incidentals required, whether or not specifically mentioned herein, without claim for additional payment, it being understood that a complete operational system is required.
- C. All equipment quantities listed in audiovisual specification sections are for reference only and may vary depending on the type of manufacturer equipment provided. Refer to schematic drawings to provide AV Consultant-approved quantities to meet design intent.
- D. All components that comprise the various systems shall be UL listed where a UL listing exists for that component.

2.2 SUBSTITUTIONS

- A. Manufacturers' names and model numbers are used in this Section to establish a performance standard or basis of design. They are not intended to exclude other equipment of equal or greater performance. Other qualified manufacturers or equipment will be considered subject to review by the Owner and AV Consultant.
- B. Should the Bidder choose to offer a substitution for any equipment, the proposed substitution must meet all specifications of the specified equipment and any operational notes listed on the Schematic drawings in the AV-series sheets. After award of bid, the AV System Installer selected shall include, as a portion of the shop drawings, technical data sheets for all products submitted that differ from the basis of design products.
- C. If a substitution replaces multiple pieces of gear, all components to be replaced shall be identified with the bid submission and shop drawings.

2.3 EQUIPMENT SPECIFICATIONS

- A. Owner Furnished Equipment (List of owner furnished equipment included in this specification is for reference only. If any items in this list are contradicted by the AV-series drawings, the drawings shall rule.)
 - 1. Gooseneck microphones and boundary microphones in the Courtrooms and Hearing Rooms are furnished by CCAP.
 - 2. CCAP computers and monitors in the courtrooms and hearing rooms
 - 3. Video production VMIX Computer for the County Board Room
 - 4. Zoom PC and Open Meeting PC and associated monitors in the County Board Room
- B. The system is designed using specific equipment as a basis of design. Due to the unique nature of AV system components, an exact part-for-part substitution may not be possible. Multiple devices may be required to substitute in order to maintain the same functionality. If

substituting for a basis of design device, the function of the system as a whole must be maintained. Substitute a complete solution for the basis of design device.

C. Audio Digital Signal Processors

1. All Audio Digital Signal Processor components shall be furnished from a single manufacturer
2. AUDIO DSP – 8X8X8F
 - a. Audio Digital Signal Processor (DSP)
 - b. Open Architecture
 - c. Eight (8) mic/line inputs
 - d. Eight (8) mic/line outputs
 - e. Eight (8) flex I/O (can be configured as inputs or outputs)
 - f. On board GPIO
 - g. Audio routing via LAN (AES67/Dante and proprietary network protocol)
 - h. RS-232 or LAN control
 - i. Basis of Design: QSC Core 110f (include scripting license and UCI licenses as needed), or equal
3. AUDIO DSP – 8CARD
 - a. Audio Digital Signal Processor (DSP)
 - b. Open Architecture
 - c. Eight (8) card slots for 4-channel I/O cards
 - d. On board GPIO
 - e. Audio routing via LAN (AES67/Dante and proprietary network protocol)
 - f. RS-232 or LAN control
 - g. USB AV Bridging (8x8 audio + video support)
 - h. Basis of Design: QSC Core 510i KIT (include scripting license and UCI license as needed), or equal
4. AUDIO DSP – 8F
 - a. Audio Digital Signal Processor (DSP)
 - b. Open Architecture
 - c. Eight (8) flex I/O (can be configured as inputs or outputs)
 - d. On board GPIO
 - e. Audio routing via LAN (AES67/Dante or proprietary network protocol)
 - f. RS-232 or LAN control
 - g. USB AV Bridging (8x8 audio + video support)
 - h. Basis of Design: QSC Core 8 Flex (include scripting license and UCI license as needed), or equal
5. DSP LINE INPUT CARD
 - a. DSP Four-channel analog input card
 - b. Switchable between microphone and line-level on a per-channel basis
 - c. 48V phantom power
 - d. 105 dB Dynamic Range unweighted

- e. Basis of Design: QSC CIML4, or equal
 - 6. DSP LINE OUTPUT CARD
 - a. DSP Four-channel analog line-level output card
 - b. Basis of Design: QSC COL4, or equal
 - 7. NETWORK AUDIO I/O
 - a. DSP two-channel analog mic/line input by two-channel analog line-level
 - b. Network audio utilizing Audio DSP's network protocol
 - c. Powered via PoE or local power supply
 - d. Basis of Design: QSC QIO-ML2x2, or equal
 - 8. NETWORK AUDIO INPUT
 - a. DSP four-channel analog mic/line input
 - b. Network audio utilizing Audio DSP's network protocol
 - c. Powered via PoE or local power supply
 - d. Basis of Design: QSC QIO-ML4i, or equal
 - 9. NETWORK AUDIO OUTPUT
 - a. DSP four-channel analog line output
 - b. Network audio utilizing Audio DSP's network protocol
 - c. Powered via PoE or local power supply
 - d. Basis of Design: QSC QIO-L4o, or equal
 - 10. NETWORK SERIAL I/O
 - a. DSP four RS-232 com ports
 - b. Communication to AV system utilizing Audio DSP's network protocol
 - c. Powered via PoE or local power supply
 - d. Basis of Design: QSC QIO-S4, or equal
- D. Audio Sources
- 1. STEREO-TO-MONO CABLE
 - a. Unbalanced audio summing device
 - b. Transformer balanced output
 - c. Basis of Design: Extron ASA 141, or equal
 - 2. 18" GOOSENECK MIC
 - a. Gooseneck microphone
 - b. Cardioid pickup pattern
 - c. Condenser microphone
 - d. Minimum 18" long gooseneck
 - e. Basis of Design: Shure MX418C, or equal
 - 3. 24" GOOSENECK MIC
 - a. Gooseneck microphone
 - b. Cardioid pickup pattern
 - c. Condenser microphone

- d. Minimum 24" long gooseneck
- e. Basis of Design: Shure MX424C, or equal
- 4. GOOSENECK SHOCKMOUNT
 - a. Desktop installation mount for fixed gooseneck microphone location
 - b. Decouples microphone from table surface to reduce noise transmission of surface noise to microphone
 - c. Mount installs in table surface allowing microphone to connect below surface
 - d. Basis of Design: Shure A400SM, or equal
- 5. MICROPHONE DESKTOP BASE
 - a. Desktop gooseneck mounting base that does not permanently attach to desktop or require holes to be drilled in surface
 - b. XLR input on base allows any gooseneck microphone with an XLR connection to mount to base
 - c. Bumpers on bottom of base prevents scratching table surface
 - d. Includes 10' cable to connect microphone to AV system
 - e. Basis of Design: Shure A412B, or equal
- 6. CEILING ARRAY MIC
 - a. Up to eight (8) adjustable coverage lobes
 - b. Dante audio network integration
 - c. Powered via PoE
 - d. Basis of Design: Shure MXA-920W-S with mounting hardware for the intended application, or equal
- E. Wireless Microphone Systems
 - 1. All Wireless Microphone components shall be furnished from a single manufacturer
 - 2. ANTENNA DISTRO
 - a. Four-way Active Antenna Splitter
 - b. Wideband UHF (470-952 MHz)
 - c. Distributes DC power to connected receivers
 - d. Non-powered cascade connection
 - e. External power supply
 - f. Basis of Design: Shure UA844+SWB or equal
 - 3. WIDEBAND ANTENNA
 - a. Wall- or ceiling-mounted Wideband Antenna (470-698 MHz)
 - b. 100 degree coverage pattern
 - c. 4-position selectable gain switch to provide boost and attenuation (-20, -10, 0, +10 dB)
 - d. Active antenna powered over antenna cable
 - e. Paint housing to match wall surface (do not use metallic paint)
 - f. Housing form factor resembles Wi-Fi access point
 - g. Basis of Design: Shure UA864US or equal
 - 4. LAVALIER MICROPHONE

- a. Cardioid condenser lavalier microphone
 - b. Includes clip to attach microphone to clothing
 - c. Connector matches to wireless bodypack transmitter
 - d. Basis of Design: Shure WL185 or equal
5. WIRELESS RECEIVER
- a. Single channel diversity wireless receiver
 - b. Digital wireless reception system
 - c. Removable 1/2-wave antennas
 - d. XLR output
 - e. UHF
 - f. IP control, configuration (no network audio output)
 - g. 1/2-RU
 - h. Audio meter, RF meter, and battery fuel gauge
 - i. Frequency and volume lockout
 - j. <200kHz occupied bandwidth
 - k. Allows for use with rechargeable batteries
 - l. Switchable between 1mW and 10mW RF output power
 - m. Basis of Design: Shure QLXD4 or equal
6. BODYPACK TRANSMITTER
- a. Over 120 dB of dynamic range: no transmitter gain adjustments needed
 - b. AES 256-bit encryption for secure transmission
 - c. Optional lithium ion rechargeable battery reports remaining runtime in hours and minutes
 - d. External charging contacts for docked charging
 - e. Backlit LCD with easy to navigate menu and controls
 - f. Selectable display mode showing group/channel, frequency, or battery runtime
 - g. 4-Pin male mini connector (TA4M)
 - h. Rugged metal construction
 - i. Detachable ¼ wave antenna
 - j. Frequency and power lockout
 - k. Headworn microphone
 - l. Include rechargeable battery (WLS-BATTERY)
 - m. Basis of Design: Shure QLXD1 or equal
7. HANDHELD TRANSMITTER
- a. 24-Bit digital audio quality
 - b. Clear, uninterrupted signal over the entire operating range
 - c. AES 256-bit encryption for secure transmission
 - d. Over 120 dB of dynamic range: no transmitter gain adjustment needed
 - e. 1 mW or 10 mW selectable RF output power
 - f. Optional lithium ion rechargeable battery reports remaining runtime in hours and minutes

- g. External charging contacts for docked charging
 - h. Backlit LCD with navigation menu and controls
 - i. Selectable display mode showing group/channel, frequency, or battery runtime
 - j. Rugged metal construction
 - k. Frequency and power lockout
 - l. Include rechargeable battery (WLS-BATTERY)
 - m. Basis of Design: Shure QLXD24/SM58-Black or equal
8. RECHARGEABLE BATTERY PACK
 - a. Lithium-Ion Rechargeable Battery
 - b. Include one battery pack for each transmitter
 - c. Basis of Design: Shure SB900A or equal
 9. DUAL DOCKING CHARGER WITH POWER SUPPLY
 - a. Holds up to two wireless transmitters
 - b. Can dock with other chargers
 - c. Power supply can serve a total of four docking chargers
 - d. Basis of Design: Shure SBC200-US or equal
 10. DUAL DOCKING CHARGER WITH NO POWER SUPPLY
 - a. Holds up to two wireless transmitters
 - b. Can dock with other chargers
 - c. Basis of Design: Shure SBC200 or equal
- F. Audio Controls
1. VOLUME CONTROL
 - a. Constant voltage volume control
 - b. 35W max load
 - c. Stepped attenuator
 - d. Basis of Design: Atlas AT-35, or equal
- G. Audio Amplifiers
1. AMPLIFIER – 1CH 250W
 - a. 1-Channel Audio Power Amplifier
 - b. Capable of a single constant voltage output when the outputs are bridged together (250W at 70V)
 - c. Basis of Design: QSC SPA2-60, or equal
 2. AMPLIFIER – 2CH 100W
 - a. 2-Channel Audio Power Amplifier
 - b. 100 W/ch continuous power at 70V (constant voltage)
 - c. EnergyStar qualified device – automatically goes into stand-by mode after 25 minutes of inactivity
 - d. 1/2 Rack space mounting
 - e. Basis of Design: Extron XPA 1002-70V, or equal
 3. AMPLIFIER – 1CH 350W

- a. 1-Channel Audio Power Amplifier
 - b. Capable of a single constant voltage output when the outputs are bridged together (350W at 70V)
 - c. Basis of Design: QSC SPA2-200, or equal
4. AMPLIFIER – 2CH 200W
- a. 2-Channel Audio Power Amplifier
 - b. 200W per channel into an 8Ω / 4Ω / 70V / 100V load
 - c. Capable of a single constant voltage output when the outputs are bridged together (400W)
 - d. Basis of Design: QSC MP-A20V, or equal
5. AMPLIFIER – 4CH DSP
- a. 4-Channel Networked Audio Power Amplifier
 - b. Dante capable
 - c. Built in Audio DSP for stand-alone audio processing
 - d. 100W per channel into at constant voltage
 - e. Half-rack width design
 - f. Basis of Design: Extron NetPA U 1004-70V, or equal
6. AMPLIFIER – 4CH 200W
- a. 4-Channel Audio Power Amplifier
 - b. 200W per channel into an 8Ω / 4Ω / 70V / 100V load
 - c. Capable of a single constant voltage output when the outputs are bridged together (400W)
 - d. Basis of Design: QSC MP-A40V, or equal
7. AMPLIFIER – 8CH 35W
- a. 8-Channel Audio Power Amplifier
 - b. 35W per channel into an 8Ω / 4Ω load
 - c. Convection cooled, fanless operation
 - d. Power stand-by via contact closure
 - e. Basis of Design: Extron XPA U 358, or equal
8. HEADPHONE AMP – 1G DECORA
- a. Audio headphone amplifier
 - b. 1-gang device
 - c. Decora opening
 - d. Include power supply
 - e. Include desktop mounting chassis
 - f. Basis of Design: RDL D-SH-1 with DC-1B Mount Chassis and RS-24AS, or equal
- H. Loudspeakers
1. ACTIVE MONITOR SPEAKER
- a. Powered monitor speaker
 - b. 4" Full range driver

- c. 20W amplifier
 - d. 70Hz – 15kHz
 - e. Basis of Design: Fostex 6301NX, or equal
2. CEILING LOUDSPEAKER – TYPE 1
 - a. Ceiling Loudspeaker
 - b. 6.5" Woofer
 - c. 1" tweeter
 - d. 55Hz – 20kHz
 - e. Integrated constant voltage transformer with the following taps: 60W, 30W, 15W, 7.5W
 - f. 120-degree conical coverage pattern
 - g. All ceiling speakers shall be white unless noted otherwise on drawings
 - h. Basis of Design: JBL Control 47C/T, or equal
 3. CEILING LOUDSPEAKER – TYPE 2
 - a. Ceiling Loudspeaker
 - b. 6.5" Woofer
 - c. 3/4" tweeter
 - d. 80Hz – 20kHz
 - e. Integrated constant voltage transformer with the following taps: 30W, 15W, 7.5W, 3.7W
 - f. 130-degree conical coverage pattern
 - g. All ceiling speakers shall be white unless noted otherwise on drawings
 - h. Basis of Design: JBL Control 24CT, or equal
 4. CEILING LOUDSPEAKER – TYPE 3
 - a. Ceiling Loudspeaker
 - b. 4" Woofer
 - c. 3/4" tweeter
 - d. 75Hz – 20kHz
 - e. Integrated constant voltage transformer with the following taps: 60W, 30W, 15W, 7.5W
 - f. 110-degree conical coverage pattern
 - g. All ceiling speakers shall be white unless noted otherwise on drawings
 - h. Basis of Design: JBL Control 26CT, or equal
- I. Assistive Listening System
 1. All Assistive Listening System components shall be furnished from a single manufacturer
 2. ALS IR EMITTER
 - a. Infrared transmitter/radiator combo
 - b. Two-channel
 - c. Analog microphone and line level inputs
 - d. Powered by 12VDC

- e. Expansion port for an additional radiator
 - f. Wall mount
 - g. Basis of Design: Listen Tech LT-84, or equal
3. ALS IR EXPANSION
- a. Infrared expansion radiator
 - b. Compatible with expansion port on ALS IR EMITTER
 - c. Powered by ALS IR EMITTER
 - d. Wall mount
 - e. Basis of Design: Listen Tech LA-141, or equal
4. ALS IR PSU
- a. 12V DC power supply
 - b. 4 Amp, 48W
 - c. 100-240VAC input
 - d. 2.5mm ID barrel connector, center positive
 - e. Basis of Design: Listen Tech LA-210, or equal (Note: if power supply is mounted remotely, contractor shall verify cable distance and wire gauge to calculate voltage drop over the cable run. If voltage drop is found to be outside the operating range of the ALS IR EMITTER, the AV Contractor shall furnish a power supply with similar ratings and a higher voltage to account for the voltage drop.)
5. ALS IR RECEIVER
- a. Infrared Audio Receiver
 - b. 3.5mm connector for mono or stereo headset, also accepts neck loop lanyard
 - c. Channel up/down selection on front of receiver
 - d. OLED display on front of receiver shows selected channel
 - e. Rechargeable lithium ion battery pack
 - f. Battery charged via USB connection or in a charging tray or case
 - g. Clip on back of receiver for temporarily attaching receiver to clothing
 - h. Basis of Design: Listen Tech LR-4200-IR, or equal
6. ALS UNIVERSAL EAR SPEAKER
- a. Small speaker fits over the ear
 - b. Can be worn on the left or right ear
 - c. Allows outside sounds to be heard as well
 - d. Can be used with hearing aids
 - e. Compatible with neck loop lanyard
 - f. 3.5 mm connector attaches to receiver or neck loop lanyard
 - g. Basis of Design: Listen Tech LA-401, or equal
7. ALS EARPHONE/NECK LOOP LANYARD
- a. Provide a personal inductive loop for T-coil type hearing aids
 - b. Worn around the user's neck
 - c. Attaches to receiver via 3.5 mm connectors
 - d. Provides 3.5 mm jack for connection of ear phones or ear speaker

- e. Basis of Design: Listen Tech LA-430, or equal
- 8. ALS IR CHARGING TRAY
 - a. Charging station charges up to 12 receiver simultaneously
 - b. Receivers drop in to individual charging slots
 - c. Basis of Design: Listen Tech LA-381, or equal
- 9. ALS NOTIFICATION SIGNAGE KIT
 - a. Signage Kit informing visitors of the availability of the Assistive Listening System
 - b. Includes languages in English, French and Spanish
 - c. Basis of Design: Listen LA-303, or equal
- J. Video Sources & Recorders
 - 1. AAP MOUNTING FRAME
 - a. Compact under table mounting frame for Extron AAP plates and devices
 - b. Two AAP spaces
 - c. Basis of Design: Extron TMK 120 AAP (70-1031-01), or equal
 - 2. AAP BLANK
 - a. Architectural Adapter Plate
 - b. Blank Plate – single space
 - c. Basis of Design: Extron 70-090-11, or equal
 - 3. AAP HDMI
 - a. Architectural Adapter Plate
 - b. One HDMI Female to Female barrel connector – single space
 - c. Basis of Design: Extron 70-616-02, or equal
 - 4. AV USB BRIDGE
 - a. Audio and video USB computer interface
 - b. HDMI input
 - c. Balanced audio input
 - d. Balanced audio output
 - e. RS-232 or LAN control
 - f. USB 3.0 connection for bridged A/V connection
 - g. Network streaming output
 - h. PoE powered (PoE Injector included)
 - i. Basis of Design: Vaddio AV Bridge Mini, or equal
 - 5. DOCUMENT CAMERA
 - a. Desktop Document Camera
 - b. 2160p30 video
 - c. HDMI input pass-thru (passes audio)
 - d. HDMI output
 - e. Minimum 6x Optical Zoom, 2x Digital Zoom
 - f. H.264 streaming network output (up to 1080p30)
 - g. LED light source illuminates recording/pick-up area

- h. LCD display shows camera preview
 - i. Powered via local power supply
 - j. Basis of Design: Wolfvision VZ-3neo.UHD, or equal
6. HDMI PLATE
- a. HDMI Decora interface plate
 - b. HDMI input on front of plate
 - c. HDMI connection on back side of plate
 - d. Coordinate color with owner, architect and consultant
 - e. Basis of Design: Crestron MP-WP152, or equal
7. HDMI & USB PLATE
- a. Single gang decora plate
 - b. One HDMI pass-thru connection
 - c. One USB-C pass-thru connection
 - d. Basis of Design: Comprehensive WPD-HD-U3C-AW, or equal
8. PRESENTATION GATEWAY
- a. Network Presentation Gateway
 - b. Compatible with Windows, Apple macOS, Chromebook, Apple iOS and limited support for Android devices
 - c. Dual Network Interface Cards to allow separate networks for control system and user interface
 - d. Screen sharing without an app via Miracast or browser sharing
 - e. Displays at least two (2) presentation sources simultaneously
 - f. HDMI input (pass-thru to output)
 - g. HDMI output resolution up to 1080p60
 - h. HDCP Compliant
 - i. Powered via local power supply or PoE+
 - j. Basis of Design: Crestron AirMedia AM-3200-WF, or equal
 - k. Note: Although Crestron has not released the AirMedia Connect Presentation Adaptor (AM-TX3-100) at the time of writing this specification. The intent is that the County Board Room System as well as the Emergency Operation Center both have a presentation gateway located such that these "puck" type transmitters can be added in the future.
9. PTZ CAMERA 4K 24X
- a. Pan-Tilt-Zoom Camera
 - b. 2160p60 video
 - c. 3G-SDI output
 - d. HDMI output
 - e. 24x Optical Zoom
 - f. 74.1-degree minimum horizontal field of view
 - g. Control via IP or RS-422
 - h. Powered via PoE+ or local power supply

- i. Include appropriate wall or ceiling mount
 - j. Basis of Design: Panasonic AW-UE50W, or equal
10. PTZ CAMERA 20X
- a. Pan-Tilt-Zoom Camera for AV-to-USB bridging
 - b. 1080p video
 - c. 20x Optical Zoom
 - d. 60-degree horizontal field of view at widest setting
 - e. Video fed to LAN, HDMI and 3G-SDI outputs
 - f. Powered via PoE
 - g. Include wall-mount bracket
 - h. Basis of Design: QSC NC-20x60, or equal
11. SDI REFERENCE GENERATOR
- a. SDI HD Tri-Sync or SD Blackburst reference generator
 - b. Six (6) reference outputs
 - c. Basis of Design: Blackmagic Design Mini Converter Sync Generator, or equal
12. SOUND BAR W/ CAMERA & MIC
- a. Audio sound bar for flat panel displays
 - b. Integrated camera (120-degrees horizontal FOV)
 - c. Integrated microphone array (approximately 15' pickup area)
 - d. Stereo audio input
 - e. USB 3.0 interface
 - f. Basis of Design: Crestron UC-SB1-CAM, or equal
13. USB 3.2 EXTENDER LOCAL & USB 3.2 EXTENDER REMOTE
- a. USB 3.2 Extender System
 - b. Extends USB 3.2 data (up to 5Gbps) via Cat 6A or Cat 7 cable
 - c. Four port hub built in
 - d. DC power supply
 - e. Basis of Design: Icron USB 3-2-1 Raven 3104 Pro system, or equal
14. VTC CODEC
- a. Video conferencing hardware codec
 - b. HDMI input for local content (accepts up to 3840x2160)
 - c. Camera content inputs via HDCI and USB
 - d. HDMI output for displaying far end camera/content
 - e. Audio inputs and outputs
 - f. Controlled via RS232 or IP
 - g. Network/IP standards based conferencing (H.323 and SIP)
 - h. Must be able to connect to existing state and county courtroom systems for remote court appearances.
 - i. Basis of Design: Poly G7500. Include one year premier services, or equal
15. HDMI to HDCI Adapter

- a. Converts HDMI and RS-232 to HDCI
- b. Basis of Design: Poly 7200-68524-125, or equal

16. ALL-IN-ONE CODEC

- a. Video conferencing hardware codec
- b. Integrated camera (120-degree FOV)
- c. Integrated microphone (approximately 15' pickup area)
- d. Integrated speaker (mono output)
- e. HDMI input for content from local device (accepts up to 3840x2160)
- f. USB connection
- g. Built-in capability for standards based (H.323 and SIP) conferencing without connecting another device.
- h. Built-in capability for Zoom and Teams.
- i. Controlled from handheld remote control
- j. Basis of Design: Poly Studio X30 with Bluetooth remote control. Include one year premier services, or equal

K. Video Conversion

1. HDMI TO DISPLAYPORT

- a. Converts HDMI to DisplayPort
- b. Supports a maximum resolution of 4K30 (4:4:4)
- c. HDMI input
- d. DisplayPort output
- e. Basis of Design: Decimator Extron HDP 101 4K, or equal

2. BI-DIRECTIONAL CONVERTER

- a. Converts SDI to HDMI or HDMI to SDI
- b. Supports a maximum resolution of 1080p60
- c. HDMI and SDI input
- d. HDMI and SDI output
- e. Basis of Design: Decimator MD-LX, or equal

3. SCALING CROSS CONVERTER

- a. Cross converts between HDMI and SDI
- b. Supports a maximum resolution of 1080p60
- c. Internal scaler/frame rate converter
- d. HDMI input
- e. SDI output
- f. Basis of Design: Decimator MD-HX, or equal

4. SDI MULTIVIEWER CONVERTER

- a. Four SDI inputs
- b. One SDI and One HDMI output
- c. Composites inputs together to make a multi-view output
- d. Supports a maximum resolution of 1080p60

- e. Basis of Design: Blackmagic Design Multiview 4 HD, or equal
- L. Video Switching & Extension
1. Systems shall be furnished from a single manufacturer. Transmitters and receivers from different manufacturers are not compatible.
 2. 4X2 AV SWITCHER
 - a. Digital Video Switcher
 - b. Minimum of four (4) HDMI inputs
 - c. Minimum of two (2) outputs on twisted pair video
 - d. Supports resolutions of at least 4096x2160 at 30Hz
 - e. Stereo Audio program outputs
 - f. HDMI 2.0 and HDCP 2.2 compliant
 - g. Minimum of one (2) bidirectional RS-232 Com port
 - h. Minimum of two (2) Relay ports
 - i. Minimum of one (1) IR output port
 - j. LAN control port
 - k. Maximum of three (3) 19" rack spaces
 - l. Basis of Design: Crestron HD-MD401 (DM Lite), or equal
 3. SWITCHER/CONTROLLER
 - a. Digital Video Presentation Switching System with Integrated Control System Processor
 - b. Minimum of four (4) HDMI inputs
 - c. Minimum of two (2) Twisted pair video inputs
 - d. Minimum of two (2) output on HDMI and two (2) outputs on twisted pair video
 - e. Integrated video scaling
 - f. Supports resolutions of at least 4096x2160 at 60Hz
 - g. Audio de-embedding to stereo audio output
 - h. HDCP 2.2 compliant
 - i. LAN control port
 - j. Basis of Design: Crestron DMPS3-4K-350-C (DigitalMedia 8G), or equal
 4. PODM SUPPLY
 - a. Power over twisted pair supply
 - b. Connects to SWITCHER/CONTROLLER to power twisted pair endpoints (transmitters and receivers)
 - c. Provides a maximum of 120W
 - d. Basis of Design: Crestron PW-5430DUS, or equal
 5. DIGITAL VIDEO RECEIVER
 - a. Twisted pair receiver, 4K/60, audio extractor, and display controller
 - b. Provides one HDMI output
 - c. HDCP 2.2 compliant
 - d. Supports cable lengths up to 330 ft (100 m) for UHD and 4K

- e. Enables device control via CEC, IR, RS-232, and Ethernet
 - f. Provides RS-232 port
 - g. Powered via the twisted pair connection or local power pack
 - h. Low-profile surface mount design
 - i. Basis of Design: Crestron DM-RMC-4KZ-100-C, or equal
6. HDMI RECEIVER 1G
- a. Twisted pair receiver, 4K/60, audio extractor, and display controller
 - b. Provides one HDMI output
 - c. HDCP 2.2 compliant
 - d. Supports cable lengths up to 330 ft (100 m) for UHD and 4K
 - e. Enables device control via CEC, IR, RS-232, and Ethernet
 - f. Provides RS-232 port
 - g. Powered via the twisted pair connection or local power pack
 - h. 1 Gang wall plate
 - i. Basis of Design: Crestron DM-RMC-4K-100-C-1G, or equal
7. HDMI TRANSMITTER
- a. Twisted Pair and HDBaseT Transmitter
 - b. HDMI input
 - c. Supports resolutions up to 4K and UHD
 - d. HDMI 2.0 and HDCP 2.2 compliant
 - e. Supports cable lengths up to 330 ft (100 m) for all resolutions up to UHD and 4K
 - f. Powered over the twisted pair connection or local power pack
 - g. Basis of Design: Crestron DM-TX-4KZ-100-C-1G-B-T, or equal
8. HDMI-DM DA
- a. Twisted Pair Distribution Transmitter
 - b. HDMI input
 - c. Four (4) Twisted pair video outputs
 - d. Supports resolutions up to 4K and UHD
 - e. HDMI 2.0 and HDCP 2.2 compliant
 - f. Supports cable lengths up to 330 ft (100 m) for all resolutions up to UHD and 4K
 - g. Powered over the twisted pair connection or local power pack
 - h. Basis of Design: Crestron DM-DA4-4K-C, or equal
9. PODM++ INJECTOR
- a. Power over DigitalMedia injector
 - b. Inserted midspan to remotely power twisted pair video receivers
 - c. Basis of Design: Crestron DM-PSU-ULTRA-MIDSPAN, or equal
10. HDMI EXTENDER RX
- a. Digital video over shielded twisted pair structured cable - Receiver
 - b. Surface mount form factor
 - c. One (1) HDMI output

- d. Extends HDMI signals up to UHD
 - e. Max cable distance of 130 feet (40m) for UHD
 - f. Basis of Design: Crestron HD-RX-4KZ-101, or equal
11. HDMI EXTENDER TX 1G
- a. Digital video over shielded twisted pair structured cable – Transmitter
 - b. 1-gang decora wall plate form factor
 - c. One (1) HDMI input
 - d. Extends HDMI signals up to UHD
 - e. Max cable distance of 130 feet (40m) for UHD
 - f. Basis of Design: Crestron HD-TX-4KZ-101-1G-x, or equal
12. HDMI EXTENDER TX
- a. Digital video over shielded twisted pair structured cable – Transmitter
 - b. Surface mount form factor
 - c. One (1) HDMI input
 - d. Extends HDMI signals up to UHD
 - e. Max cable distance of 130 feet (40m) for UHD
 - f. Basis of Design: Crestron HD-TX-4KZ-101, or equal
13. MEDIA ENCODER/DECODER
- a. Video over IP Media Encoder/Decoder
 - b. Multicasts or decodes up to UHD content over the network at less than 1 Gbps
 - c. One HDMI input
 - d. HDMI local output
 - e. Built-in video scaler
 - f. Analog Stereo Audio (configurable as inputs or outputs)
 - g. HDMI 2.0 and HDCP 2.2 compliant
 - h. Endpoint can be configured as a video input or video output
 - i. Powered via PoE+ or local power supply
 - j. Basis of Design: Crestron DM-NVX-360, or equal
14. MEDIA ENCODER/DECODER CARD
- a. Video over IP Media Encoder/Decoder card
 - b. Card mounts in dedicated rack mounted card frame
 - c. Multicasts or decodes up to UHD content over the network at less than 1 Gbps
 - d. Two HDMI inputs with internal switcher
 - e. HDMI local output
 - f. Built-in video scaler
 - g. Analog Stereo Audio (configurable as inputs or outputs)
 - h. HDMI 2.0 and HDCP 2.2 compliant
 - i. Endpoint can be configured as a video input or video output
 - j. Basis of Design: Crestron DM-NVX-360C, or equal
15. MEDIA ENCODER/DECODER 2IN

- a. Video over IP Media Encoder/Decoder with 7.1 multi-channel audio down-mixing
- b. Multicasts or decodes up to UHD content over the network at less than 1 Gbps
- c. Two HDMI inputs with internal switcher
- d. HDMI local output
- e. Built-in video scaler
- f. Analog Stereo Audio (configurable as inputs or outputs)
- g. Encodes audio streams as both 2-channel and 7.1 multi-channel (other endpoints can subscribe to either stream)
- h. Endpoint can be configured as a video input or video output
- i. Basis of Design: Crestron DM-NVX-351, or equal

16. MEDIA DECODER

- a. Video over IP Media Decoder only
- b. Multicasts up to UHD content over the network at less than 1 Gbps
- c. One HDMI output
- d. HDMI 2.0 and HDCP 2.2 compliant
- e. Basis of Design: Crestron DM-NVX-D30, or equal

17. MEDIA ENCODER CARD

- a. Video over IP Media Encoder only card
- b. Card mounts in dedicated rack mounted card frame
- c. Multicasts up to UHD content over the network at less than 1 Gbps
- d. One HDMI input
- e. HDMI 2.0 and HDCP 2.2 compliant
- f. Basis of Design: Crestron DM-NVX-E30C, or equal

18. DIGITAL VIDEO CARD CHASSIS

- a. Video over IP Encoder/Decoder Card Frame
- b. Holds up to eight (8) endpoint cards
- c. Two rack spaces (2 RU)
- d. Basis of Design: Crestron DMF-CI-8, or equal

19. SDI SWITCH

- a. 3G-SDI Matrix Router/Switcher
- b. Four (4) SDI inputs
- c. Four (4) SDI outputs
- d. RS-232 control
- e. 1 RU
- f. Basis of Design: KRAMER VS-44HDxl, or equal

M. Video Displays

1. 10" ROOM SCHEDULE DISPLAY

- a. 15" All-In-One Room Signage Display
- b. Integrated processor capable of running Adgators software
- c. Integrates with digital signage system and facility calendar applications

- d. Minimum display resolution of 1024x768
 - e. Powered via PoE (PoE+)
 - f. Basis of Design: Adgators Basic 4:3, or equal
2. 15" ROOM SCHEDULE DISPLAY
 - a. 15" All-In-One Room Signage Display
 - b. Integrated processor capable of running Adgators software
 - c. Integrates with digital signage system and facility calendar applications
 - d. Minimum display resolution of 1024x768
 - e. Powered via PoE (PoE+)
 - f. Basis of Design: Adgators Basic 4:3, or equal
 3. 22" TOUCH MONITOR
 - a. 22" Flat Panel touch sensitive Monitor
 - b. 1920x1080 native resolution
 - c. Minimum 250 nit
 - d. HDMI input
 - e. USB connection
 - f. Kickstand type mount
 - g. Basis of Design: Planar Helium PCT2235, or equal
 4. 24" TOUCH MONITOR
 - a. 24" Flat Panel touch sensitive Monitor
 - b. 3840x2160 native resolution (matching other courtroom displays)
 - c. Minimum 300 nit
 - d. HDMI input
 - e. USB connection
 - f. VESA 75x75 or 100x100 mount holes
 - g. Basis of Design: One World Touch WM-2440-49, or equal
 5. 24" MONITOR 4K/UHD
 - a. 24" Flat Panel Monitor
 - b. 3840x2160 native resolution
 - c. Minimum 250 nit
 - d. HDMI input
 - e. VESA 75x75 or 100x100 mount holes
 - f. Basis of Design: LG 24UD58-B, or equal
 6. 27" MONITOR
 - a. 27" Flat Panel Monitor
 - b. 3840x2160 native resolution
 - c. Minimum 300 nit
 - d. HDMI input
 - e. Basis of Design: Samsung LS27A700NWNXZA, or equal
 7. 43" DISPLAY

- a. 43" Flat Panel Display
 - b. 3840x2160 native resolution
 - c. Minimum 350 nit
 - d. Minimum 16/7 Operation
 - e. Built in speakers
 - f. HDMI input
 - g. RS-232 Control
 - h. Where display is located in a circulation space thickness of display plus associated mount shall not exceed 4"
 - i. Basis of Design: Samsung QB43R-B, or equal
8. 55" DISPLAY – 2H
- a. 55" Flat Panel Display
 - b. 3840x2160 native resolution
 - c. Minimum 350 nit
 - d. Minimum 16/7 Operation
 - e. Built in speakers
 - f. Minimum of 2 HDMI inputs
 - g. RS-232 Control
 - h. Where display is located in a circulation space thickness of display plus associated mount shall not exceed 4"
 - i. Basis of Design: Samsung QB55R-B, or equal
9. 55" DISPLAY – 3H
- a. 55" Flat Panel Display
 - b. 3840x2160 native resolution
 - c. Minimum 350 nit
 - d. Minimum 16/7 Operation
 - e. Built in speakers
 - f. Minimum of 2 HDMI inputs
 - g. RS-232 Control
 - h. Where display is located in a circulation space thickness of display plus associated mount shall not exceed 4"
 - i. Basis of Design: NEC PN-HY551, or equal
10. 65" DISPLAY – 2H
- a. 65" Flat Panel Display
 - b. 3840x2160 native resolution
 - c. Minimum 350 nit
 - d. Minimum 16/7 Operation
 - e. Built in speakers
 - f. Minimum of 2 HDMI inputs
 - g. RS-232 Control

- h. Where display is located in a circulation space thickness of display plus associated mount shall not exceed 4"
 - i. Basis of Design: Samsung QB65R-B, or equal
- 11. 65" DISPLAY – 3H
 - a. 65" Flat Panel Display
 - b. 3840x2160 native resolution
 - c. Minimum 350 nit
 - d. Minimum 16/7 Operation
 - e. Built in speakers
 - f. Minimum of 3 HDMI inputs
 - g. RS-232 Control
 - h. Where display is located in a circulation space thickness of display plus associated mount shall not exceed 4"
 - i. Basis of Design: NEC PN-HC651, or equal
- 12. 75" DISPLAY – 2H
 - a. 75" Flat Panel Display
 - b. 3840x2160 native resolution
 - c. Minimum 350 nit
 - d. Minimum 16/7 Operation
 - e. Built in speakers
 - f. Minimum of 2 HDMI inputs
 - g. RS-232 Control
 - h. Where display is located in a circulation space thickness of display plus associated mount shall not exceed 4"
 - i. Basis of Design: Samsung QB75R-B, or equal
- 13. 75" DISPLAY – 247
 - a. 75" Flat Panel Display
 - b. 3840x2160 native resolution
 - c. Minimum 350 nit
 - d. 24/7 Operation
 - e. Built in speakers
 - f. Minimum of 2 HDMI inputs
 - g. RS-232 Control
 - h. Where display is located in a circulation space thickness of display plus associated mount shall not exceed 4"
 - i. Basis of Design: Samsung QM75R-B, or equal
- 14. 75" DISPLAY – 3H
 - a. 75" Flat Panel Display
 - b. 3840x2160 native resolution
 - c. Minimum 350 nit
 - d. Minimum 16/7 Operation

- e. Built in speakers
 - f. Minimum of 3 HDMI inputs
 - g. RS-232 Control
 - h. Where display is located in a circulation space thickness of display plus associated mount shall not exceed 4"
 - i. Basis of Design: NEC PN-HC751, or equal
15. 85" DISPLAY – 2H
- a. 85" Flat Panel Display
 - b. 3840x2160 native resolution
 - c. Minimum 350 nit
 - d. Minimum 16/7 Operation
 - e. Built in speakers
 - f. Minimum of 2 HDMI inputs
 - g. RS-232 Control
 - h. Where display is located in a circulation space thickness of display plus associated mount shall not exceed 4"
 - i. Basis of Design: Samsung QB85R-B, or equal
16. 86" DISPLAY – 3H
- a. 86" Flat Panel Display
 - b. 3840x2160 native resolution
 - c. Minimum 350 nit
 - d. Minimum 16/7 Operation
 - e. Built in speakers
 - f. Minimum of 3 HDMI inputs
 - g. RS-232 Control
 - h. Where display is located in a circulation space thickness of display plus associated mount shall not exceed 4"
 - i. Basis of Design: NEC PN-HC861, or equal
17. 98" DISPLAY – 2H
- a. 98" Flat Panel Display
 - b. 3840x2160 native resolution
 - c. Minimum 350 nit minimum
 - d. Minimum 16/7 Operation
 - e. Built in speakers
 - f. Minimum of 2 HDMI inputs
 - g. RS-232 Control
 - h. Basis of Design: Samsung QB98T, or equal

N. Video Mounts

- 1. LARGE TILT WALL MOUNT
 - a. Large flat panel display wall mount
 - b. +2-degrees to -12-degrees tilt range

- c. Universal VESA mount
 - d. Supports typical screen sizes of 42" to 86"
 - e. Basis of Design: Chief LTM1U, or equal
2. MEDIUM TILT WALL MOUNT
 - a. Medium flat panel display wall mount
 - b. +2-degrees to -12-degrees tilt range
 - c. Universal VESA mount: 100x100 to 650x400mm
 - d. Supports typical screen sizes of 32" to 65"
 - e. Basis of Design: Chief MTM1U, or equal
 3. EXTRA LARGE TILT WALL MOUNT
 - a. Extra-large tilt wall mount for flat panel displays
 - b. Universal VESA mount
 - c. Landscape orientation
 - d. Basis of Design: Chief XTM1U, or equal
 4. LARGE FLAT PANEL MOBILE DISPLAY CART
 - a. Display cart on casters
 - b. Weight capacity up to 200 lbs.
 - c. Universal VESA mount
 - d. Basis of Design: Chief PFCUB, or equal
 5. LARGE TILT ARM WALL MOUNT
 - a. Large flat panel display wall mount
 - b. Dual swing arm mount
 - c. Universal VESA mount: 100x100 to 800x400mm
 - d. Supports up to 125lbs.
 - e. Basis of Design: Chief TS525T or equal
 6. LOW PROFILE TABLE MOUNT
 - a. Small display mount for computer monitor display
 - b. Tilt mount
 - c. Universal VESA mount
 - d. Landscape orientation
 - e. Basis of Design: Chief FSB018BLK, or equal
- O. AV Control Systems and Control Interfaces
1. BUTTON CONTROLLER
 - a. Single-gang button controller
 - b. Ethernet interface only
 - c. Powered via PoE
 - d. Basis of Design: Crestron MPC3-101-B with custom button engraving, or equal
 2. CONTROL MASTER
 - a. Control System Processor

- b. Provides a minimum of three RS-232 control ports, eight relay ports, a proprietary control bus and Ethernet control
 - c. One Rack Unit (1 RU)
 - d. Basis of Design: Crestron CP4, or equal
3. 2-COM PORT MODULE
- a. Control expansion module
 - b. Provides a minimum of two RS-232 control ports
 - c. LAN interface to control processor
 - d. Basis of Design: Crestron CEN-IO-COM-102, or equal
4. ROOM CONTROLLER
- a. Control System Processor – room controller
 - b. Provides Ethernet control
 - c. One (1) RS-232 control port
 - d. Two (2) Relay control ports
 - e. Powered via PoE
 - f. Basis of Design: Crestron RMC4, or equal
5. GRAPHICS ENGINE
- a. HDMI input
 - b. USB input
 - c. HDMI output
 - d. Provides graphical user interface from a control system to an associated touch monitor for larger touch screen applications.
 - e. LAN interface to control system processor
 - f. Basis of Design: Crestron DGE-100, or equal
6. 7" TOUCH SCREEN - WALL
- a. 7" Touch Screen
 - b. Powered via PoE/PoE+
 - c. Surface mounts over standard 2-gang or 3-gang box
 - d. Furnish product from same manufacturer as control system
 - e. Coordinate color with owner/architect approval
 - f. Basis of Design: Crestron TSW-770-_-S, or equal
7. 10.1" TOUCH SCREEN
- a. 10" Tabletop Touch Screen
 - b. Powered via PoE/PoE+
 - c. Coordinate color with owner / architect approval
 - d. Furnish product from same manufacturer as control system
 - e. Basis of Design: Crestron TS-1070-_-S, or equal
8. WIRELESS CTRL GATEWAY
- a. RF Transceiver for proprietary wireless control protocol
 - b. 2.4 GHz

- c. Local antenna
 - d. LAN interface for control processor
 - e. Basis of Design: Crestron CEN-GWEXER, or equal
9. WIRELESS 2-BUTTON KEYPAD
- a. RF wireless keypad
 - b. Two-buttons
 - c. 2.4 GHz
 - d. Custom Engrave buttons for the required usage
 - e. Basis of Design: Crestron HTT-B2EX-BATT-W-T_ENGRAVED, or equal
- P. AV Network Switches
1. NETWORK SWITCH 8P
- a. Layer 2 & Layer 3 Network Switch
 - b. Non-blocking backplane
 - c. (8) 10/100/1000 Ethernet ports with PoE/PoE+
 - d. (2) 10/100/1000 Ethernet ports
 - e. (2) 1 Gigabit SFP slots
 - f. Minimum PoE+ power budget: 125W
 - g. Ability to create VLAN's
 - h. Supports DiffServ (DSCP)
 - i. QoS with up to four (4) queues per port
 - j. IGMP querier enabled
 - k. IGMP snooping enabled
 - l. AVB Support
 - m. Energy Efficient Ethernet disabled
 - n. 24 Gbps switching fabric
 - o. Follow these requirements for purposes of bidding, also refer to requirements in 27 41 00 section 3.10 for requirement to coordinate with Owner for facility network standards prior to ordering network switches.
 - p. Basis of Design: Netgear M4250-10G2F-PoE+ (GSM4212P) or equal
2. NETWORK SWITCH 8P HP
- a. Layer 2 & Layer 3 Network Switch
 - b. Non-blocking backplane
 - c. (8) 10/100/1000 Ethernet ports with PoE/PoE+
 - d. (2) 10/100/1000 Ethernet ports
 - e. (2) 1 Gigabit/10 Gigabit SFP+ slots
 - f. Minimum PoE+ power budget: 240W
 - g. Ability to create VLAN's
 - h. Supports DiffServ (DSCP)
 - i. QoS with up to four (4) queues per port
 - j. IGMP querier enabled

- k. IGMP snooping enabled
 - l. AVB Support
 - m. Energy Efficient Ethernet disabled
 - n. 60 Gbps switching fabric
 - o. Follow these requirements for purposes of bidding, also refer to requirements in 27 41 00 section 3.10 for requirement to coordinate with Owner for facility network standards prior to ordering network switches.
 - p. Basis of Design: Netgear M4250-10G2XF-PoE+ (GSM4212PX) or equal
3. NETWORK SWITCH 24P
- a. Layer 2 & Layer 3 Network Switch
 - b. Non-blocking backplane
 - c. (24) 10/100/1000 Ethernet ports with PoE/PoE+
 - d. (2) 10/100/1000 Ethernet ports
 - e. (4) 1 Gigabit SFP slots
 - f. Minimum PoE+ power budget: 300W
 - g. Ability to create VLAN's
 - h. Supports DiffServ (DSCP)
 - i. QoS with up to four (4) queues per port
 - j. IGMP querier enabled
 - k. IGMP snooping enabled
 - l. AVB Support
 - m. Energy Efficient Ethernet disabled
 - n. 60 Gbps switching fabric
 - o. Follow these requirements for purposes of bidding, also refer to requirements in 27 41 00 section 3.10 for requirement to coordinate with Owner for facility network standards prior to ordering network switches.
 - p. Basis of Design: Netgear M4250-26G4XF-PoE+ (GSM4230PX) or equal
4. NETWORK SWITCH 24P HP
- a. Layer 2 & Layer 3 Network Switch
 - b. Non-blocking backplane
 - c. (24) 10/100/1000 Ethernet ports with PoE/PoE+
 - d. (2) 10/100/1000 Ethernet ports
 - e. (4) 1 Gigabit/10 Gigabit SFP+ slots
 - f. Minimum PoE+ power budget: 480W
 - g. Ability to create VLAN's
 - h. Supports DiffServ (DSCP)
 - i. QoS with up to four (4) queues per port
 - j. IGMP querier enabled
 - k. IGMP snooping enabled
 - l. AVB Support
 - m. Energy Efficient Ethernet disabled

- n. 132 Gbps switching fabric
 - o. Follow these requirements for purposes of bidding, also refer to requirements in 27 41 00 section 3.10 for requirement to coordinate with Owner for facility network standards prior to ordering network switches.
 - p. Basis of Design: Netgear M4250-26G4XF-PoE+ (GSM4230PX) or equal
5. NETWORK SWITCH 40P
- a. Layer 3 Network Switch
 - b. Non-blocking backplane
 - c. (40) 10/100/1000 Ethernet ports with PoE/PoE+
 - d. (8) 1 Gigabit SFP slots
 - e. Minimum PoE+ power budget: 480W
 - f. Ability to create VLAN's
 - g. Supports DiffServ (DSCP)
 - h. QoS with up to four (4) queues per port
 - i. IGMP querier enabled
 - j. IGMP snooping enabled
 - k. AVB Support
 - l. Energy Efficient Ethernet disabled
 - m. 96 Gbps switching fabric
 - n. Follow these requirements for purposes of bidding, also refer to requirements in 27 41 00 section 3.10 for requirement to coordinate with Owner for facility network standards prior to ordering network switches.
 - o. Basis of Design: Netgear M4250-40G8F-PoE+ (GSM4248P) or equal
6. NETWORK SWITCH 40P HP
- a. Layer 2 & Layer 3 Network Switch
 - b. Non-blocking backplane
 - c. (40) 10/100/1000 Ethernet ports with PoE/PoE+
 - d. (8) 1 Gigabit/10 Gigabit SFP+ slots
 - e. Minimum PoE+ power budget: 960W
 - f. Ability to create VLAN's
 - g. Supports DiffServ (DSCP)
 - h. QoS with up to four (4) queues per port
 - i. IGMP querier enabled
 - j. IGMP snooping enabled
 - k. AVB support
 - l. Energy Efficient Ethernet disabled
 - m. 240 Gbps switching fabric
 - n. Follow these requirements for purposes of bidding, also refer to requirements in 27 41 00 section 3.10 for requirement to coordinate with Owner for facility network standards prior to ordering network switches.
 - o. Basis of Design: Netgear M4250-40G8XF-PoE+ (GSM4248PX-100NAS) or equal

Q. Equipment Racks

1. CABINET FRAME RACK

- a. Minimum useable depth of 18"
- b. 14 RU rack
- c. Open Frame rack to put into pre-built cabinetry
- d. Basis of Design: Middle Atlantic CFR-14-18 with 5-RS18 Runner Kit, or equal (AV Contractor coordinate with Owner for furniture shop drawings within the room. If a deeper rack (20"+) will fit, provide deeper rack to better accommodate AV cable and power cable bends

2. FAN

- a. 10" racktop fan
- b. Includes racktop
- c. Includes thermostatic controller
- d. Basis of Design: Middle Atlantic MW-10FT-FC or equal

3. FAN 2RU

- a. 2 RU Fan Panel
- b. Includes thermostatic controller
- c. Basis of Design: Middle Atlantic UQFP-4RT or equal

4. FREE-STANDING FLOOR RACK

- a. 44 space Multi-bay wide equipment rack
- b. 32" Deep
- c. 24-1/4" overall width
- d. Fully welded construction
- e. Basis of Design: Middle Atlantic WRK-44-32, or equal

5. ISOLATING LEVELING FEET

- a. Leveling Feet for Equipment racks
- b. Includes protective rubber cover for electrical isolation
- c. Adjustment range: 1"
- d. Basis of Design: Middle Atlantic LF-ISO, or equal

6. LARGE PIVOTING WALL RACK

- a. Wall mount rack with floor base
- b. 46 Space
- c. Useable depth: 26" and shall extend into the back pan
- d. Center section and back pan: 16-gauge steel, phosphate pre-treated and finished in a black textured powder coat.
- e. Rack shall be constructed to swing open for component cabling access,
- f. Rack section shall pivot for either left or right opening.
- g. Basis of Design: Middle Atlantic SR-46-28, or equal

7. SIDE PANELS

- a. 44 space equipment rack side panels
- b. (1) pair

- c. Black
 - d. Basis of Design: Middle Atlantic SPN-44-312, or equal
8. TILT-OUT WALL RACK
- a. EIA compliant 19" equipment rack
 - b. Minimum of 2 useable rack spaces
 - c. 20" useable depth
 - d. Surface-mounted on wall allows equipment to be mounted vertically and tilt-down for service
 - e. Basis of Design: Middle Atlantic: TOR-2-20SP, or equal
9. WALL RACK
- a. Wall mount rack
 - b. 24 Space
 - c. Useable depth: 26" and shall extend into the back pan 3.5"
 - d. Center section and back pan: 16-gauge steel, phosphate pre-treated and finished in a black textured powder coat.
 - e. Rack shall be constructed to swing open for component cabling access,
 - f. Center section shall pivot for either left or right opening.
 - g. Basis of Design: Middle Atlantic DWR-24-26, or equal
10. VENT BLOCK KIT
- a. Magnetic panels for blocking vents on equipment rack
 - b. Prevents cooling air from short circuiting fans
 - c. Sized for front and side vents without trimming
 - d. Basis of Design: Middle Atlantic VBK-S28, or equal
11. ZERO CLEARANCE LATCH
- a. Rack latch allows for close mounting of DWR or SR series racks
 - b. Basis of Design: Middle Atlantic DWRSR-ZL, or equal
- R. AV Power Distribution
1. PWR-CABLE-IEC
- a. AC Power Cord
 - b. Minimum 14 AWG
 - c. Terminated on one end with an IEC connector and a NEMA 5-15P plug on the other end
 - d. Plug shall either be straight or low profile with right or left orientation (application dependent)
 - e. Cord length as required for rack mounting applications (6" increments)
 - f. UL Listed in the US and Canada
 - g. Cable conductors are tightly twisted within cord to minimize disruptive AC magnetic fields
 - h. Basis of Design: Middle Atlantic Products SignalSAFE IEC power cords, or equal
2. POWER DISTRO 9-OUT
- a. Rackmount Power

- b. 8 Outlets on Rear
 - c. 1 Outlet on Front
 - d. Power switch on the front
 - e. 15A
 - f. Includes surge and Spike Protection and EMI filtering
 - g. 1/4" Ground stud
 - h. Basis of Design: Middle Atlantic PD-915R, or equal
3. POWER MODULE – CONSTANT POWER – ONE DUPLEX
 - a. Single Duplex Power Module
 - b. 20 Amp
 - c. Basis of Design: Middle Atlantic Products M-20A or equal
 - d. Include jumper and tail cables as required by the application
 4. POWER MODULE – CONSTANT POWER – TWO DUPLEX
 - a. Dual Duplex Power Module
 - b. 20 Amp
 - c. Basis of Design: Middle Atlantic Products M-2x20A or equal
 - d. Include jumper and tail cables as required by the application
 5. POWER MODULE – SWITCHED POWER – ONE DUPLEX
 - a. Switchable Single Duplex Power Module
 - b. 20 Amp
 - c. Contact Closure Control
 - d. LED status
 - e. Basis of Design: Middle Atlantic Products RLM-20A or equal
 - f. Include jumper and tail cables as required by the application
 6. POWER VERTICAL RACEWAY
 - a. Modular AC power raceway
 - b. 72" height
 - c. Accepts up to 8 power modules
 - d. Include necessary jumper wires
 - e. Include Blanks for unfilled spaces
 - f. Basis of Design: Middle Atlantic MPR-8A, or equal
 7. UPS 500VA
 - a. UPS Backup power,
 - b. 1RU
 - c. 500VA
 - d. Automatic Voltage Regulation
 - e. Load Shedding
 - f. Basis of Design: APC SCL500RM1UC or equal
 8. UPS 1000VA
 - a. Premium Series UPS Backup power,

- b. 2RU
 - c. 1000VA
 - d. Automatic Voltage Regulation
 - e. Load Shedding
 - f. Basis of Design: Middle Atlantic UPS-1000R or equal
9. UPS 2150VA
- a. UPS Backup power
 - b. 2RU
 - c. 2200VA
 - d. Automatic Voltage Regulation
 - e. Load Shedding
 - f. Basis of Design: Middle Atlantic UPS-2200R or equal
10. VERTICAL POWER DISTRO
- a. Vertical Power Distribution
 - b. 16 Outlets
 - c. Individual IP control of 8 outlets
 - d. 15A
 - e. MOV Surge and Spike Protection
 - f. Basis of Design: Middle Atlantic RLNK-1615V, or equal
- S. Panel & Plate Connectors
1. 3-Pin XLR Female
- a. Panel mounted – D-shape housing
 - b. Metal shell
 - c. Solder cups
 - d. Basis of Design: Neutrik NC3FD-L-BAG-1, or equal
2. 4-Pin XLR Female
- a. Panel mounted – D-shape housing
 - b. Metal shell
 - c. Solder cups
 - d. Basis of Design: Neutrik NC4FD-L-BAG-1, or equal
3. 3-Pin XLR Male
- a. Panel mounted – D-shape housing
 - b. Metal shell
 - c. Solder cups
 - d. Basis of Design: Neutrik NC3MD-L-BAG-1, or equal
4. 4-Pin Loudspeaker Connector (Speakon)
- a. Panel mounted – D-shape housing
 - b. Twist lock latching system
 - c. Metal insert locking area
 - d. Basis of Design: Neutrik NL4MPXX-UC, or equal

5. Cat6A Connector (Ethercon)
 - a. Panel mounted – D-shape housing
 - b. Metal shell
 - c. Shielded system
 - d. Latching connector
 - e. PoE++ compliant
 - f. Basis of Design: Neutrik NE8FDX-Y6-B, or equal
 6. 75-Ohm BNC Connector
 - a. Panel mounted – D-shape housing
 - b. Connections isolated from panel
 - c. Locking bulkhead connector
 - d. 75-Ohm
 - e. Basis of Design: Neutrik NBB75DFIB-P, or equal
 7. 50-Ohm BNC Connector
 - a. Panel mounted
 - b. Connections isolated from panel
 - c. Locking bulkhead connector
 - d. 50-Ohm
 - e. Basis of Design: Pomona 3846, or equal
 8. Blank Connector Insert
 - a. Panel mounted blank
 - b. Covers panel hole for D-shape connector
 - c. Basis of Design: Neutrik DBA-BL, or equal
 9. Sealing / Isolating Connector Gasket
 - a. Panel mounted gasket for D-shape connector
 - b. Color coded for connector function, refer to drawings for colors required
 - c. Basis of Design: Neutrik SCDP-#, or equal
- T. Cable
1. CABLE–8G
 - a. 23 AWG solid copper shielded twisted pair (STP) with overall foil shield and jacket (Cat6A)
 - b. Individual cable runs shall not exceed 295'
 - c. Riser rated
 - d. Basis of Design: Windy City Wire CAT6AS-BLK
 - e. Acceptable:
 - f. Crestron DM-CBL-ULTRA-NP
 - g. West Penn Wire 4246AF
 2. CABLE–8G (Plenum)
 - a. 23 AWG solid copper shielded twisted pair (STP) with overall foil shield and jacket (Cat6A)

- b. Individual cable runs shall not exceed 295'
 - c. Plenum rated
 - d. Basis of Design: Wind City Wire CAT6ASP-BLK
 - e. Acceptable:
 - f. Crestron DM-CBL-ULTRA-P
 - g. West Penn Wire 254246AF
3. CABLE-ANT
- a. RG-58, 20-AWG 50-OHM Coax minimum
 - b. Riser rated
 - c. Basis of Design: Windy City Wire RG8X-BLK
 - d. Acceptable:
 - e. Belden 8240
 - f. West Penn Wire 812
4. CABLE-ANT (Plenum)
- a. RG-58, 20-AWG 50-OHM Coax
 - b. Plenum Rated
 - c. Basis of Design: Windy City Wire RG8P-BLK
 - d. Acceptable:
 - e. Belden 82240
 - f. West Penn Wire 25812
5. CABLE-ANT-50
- a. RG-8/RG-213, 11-13-AWG 50-OHM Coax
 - b. Riser rated
 - c. Basis of Design: West Penn 98G8
 - d. Acceptable:
 - e. Belden 8214
6. CABLE-ANT-50 (Plenum)
- a. RG-8/RG-213, 11-13-AWG 50-OHM Coax
 - b. Plenum Rated
 - c. Basis of Design: West Penn 2598G8
 - d. Acceptable:
 - e. Belden 7733A
7. CABLE-STP
- a. 23 AWG solid copper twisted pairs with overall foil shield and jacket (Cat6A)
 - b. Riser rated
 - c. Basis of Design: Windy City Wire CAT6AS-BLK
 - d. Acceptable:
 - e. Belden 10GX52F
 - f. West Penn Wire 4246AF
8. CABLE-STP (Plenum)

- a. 23 AWG solid copper twisted pairs with overall foil shield and jacket (Cat6A)
 - b. Plenum Rated
 - c. Basis of Design: Windy City Wire CAT6ASP-BLK
 - d. Acceptable:
 - e. Belden 10GX53F
 - f. West Penn Wire 254246AF
9. CABLE–CTRL
- a. 22/2 stranded tinned copper conductors, shielded with an overall jacket
 - b. Basis of Design: Windy City Wire 22-1PREZ-BLK
 - c. Acceptable:
 - d. Belden 9451
 - e. West Penn Wire 454
10. CABLE–CTRL (Plenum)
- a. 22/2 stranded tinned copper conductors, shielded with an overall jacket
 - b. Basis of Design: Windy City Wire 22-1PREZP-BLK
 - c. Acceptable:
 - d. Belden 9451P
 - e. West Penn Wire D25454
11. CABLE–DPORT
- a. DisplayPort Cable
 - b. Basis of Design: C2G #544__ series
 - c. Acceptable:
 - d. StarTech DP14MM__ series
 - e. Tripp Lite P580-____-V4 series
12. CABLE–HDMI
- a. High speed HDMI cable
 - b. Basis of Design: Crestron CBL-HD-__ series
 - c. Acceptable:
 - d. C2G Select High Speed series
 - e. Extron HDMI Ultra series
13. CABLE–LINE
- a. 22/2 stranded tinned copper conductors, shielded with an overall jacket
 - b. Basis of Design: Windy City Wire 22-1PREZ-BLK
 - c. Acceptable:
 - d. Belden 9451
 - e. West Penn Wire 454
14. CABLE–LINE (Plenum)
- a. 22/2 stranded tinned copper conductors, shielded with an overall jacket
 - b. Basis of Design:
 - c. Acceptable: Windy City Wire 22-1PREZP-BLK

- d. Belden 9451P
 - e. West Penn Wire D25454
15. CABLE–MIC
- a. 22/2 stranded tinned copper conductors, shielded with an overall jacket
 - b. Basis of Design: Windy City Wire 22-1PREZ-BLK
 - c. Acceptable:
 - d. Belden 9451
 - e. West Penn Wire 454
16. CABLE–MIC (Plenum)
- a. 22/2 stranded tinned copper conductors, shielded with an overall jacket
 - b. Basis of Design: Windy City Wire 22-1PREZP-BLK
 - c. Acceptable:
 - d. Belden 9451P
 - e. West Penn Wire D25454
17. CABLE–RS232
- a. 24 AWG stranded, 8 conductors, overall shield
 - b. Basis of Design: Belden 9538
 - c. Acceptable:
 - d. West Penn Wire D2404
18. CABLE–SDI
- a. RG-6 18 AWG 75 Ohm Coax
 - b. Basis of Design: Windy City Wire RG6HD
 - c. Acceptable:
 - d. Belden 1694A
 - e. West Penn Wire 6350
19. CABLE–SPK14
- a. 14 AWG Twisted Pair, stranded
 - b. Riser rated
 - c. Basis of Design: Windy City Wire 14-02-BLK
 - d. Acceptable:
 - e. Belden 1309A or 5100UE
 - f. West Penn Wire 226
20. CABLE–SPK14 (Plenum)
- a. 14 AWG Twisted Pair, stranded
 - b. Plenum rated
 - c. Basis of Design: Windy City Wire 14-02P-BLK
 - d. Acceptable:
 - e. Belden 6100UE
 - f. West Penn Wire 25226B
21. CABLE–SPK16

- a. 16 AWG Twisted Pair, stranded
 - b. Riser rated
 - c. Basis of Design: Windy City Wire 16-02-BLK
 - d. Acceptable:
 - e. Belden 1307A
 - f. West Penn Wire 225
22. CABLE–SPK16 (Plenum)
- a. 16 AWG Twisted Pair
 - b. Plenum Rated
 - c. Basis of Design: Windy City Wire 16-02P-BLK
 - d. Acceptable:
 - e. Belden 6200UE
 - f. West Penn Wire 25225B
23. CABLE–USB
- a. USB-B to USB-A
 - b. USB 3.0 cable
 - c. Length as needed for application
 - d. Basis of Design: C2G #54173 (3'), #54174 (6'), #54175 (10')
 - e. Acceptable:
 - f. Tripp Lite U322-003-BK (3'), U322-006-BK (6'), U322-10-BK (10')
 - g. Windy City Wire QRK-54173 (1m), QRK-54174 (2m), QRK-54175 (3m)

PART 3- EXECUTION

3.1 GENERAL

- A. Verify all dimensions and conditions at the project site. Submit any conflicts in a timely manner for resolution and coordinate their efforts with Construction Manager to ensure timely completion of work and to avoid conflicts over scheduling, access, and locations of their work.
- B. Materials to be furnished by the AV System Installer may include all back boxes noted as "Specialty" on Sheet AV901 and all low voltage wire and cable. The Construction Manager shall be responsible for ensuring all floor boxes and back boxes noted as Standard, if applicable, are furnished for the project. The demarcation table on Sheet AV002 is a suggested scope of work.
- C. Division 26 Contractor ensure all power connections are installed as noted on the drawings. AV System Installer is responsible for providing a schedule of completion of each system or space to the Division 26 Contractor to ensure timely completion of AV installation.
- D. Furnish all mounting brackets, raceways, sleeves, rack rails, termination plugs, jacks, faceplate mounting hardware, and other unique components as necessary to securely mount equipment and panels.
- E. Facilitate the integration of other room systems including lighting control systems, motorized shades, motorized projection lifts, motorized projection screens, etc, where noted on drawings.

- F. Furnish painting and finishing as may be required to match components, cabinetry, and room décor. Coordinate the color and finish of any visible element of the system with Construction Manager approval.
- G. Do not mount any projector, camera, or other AV device to any structure that is not sufficiently supportive and free of vibration or shake. If there is vibration or shake in the building structure that causes any degradation of the video image, Modify the mounting method so the projector, camera, or other AV device is isolated from this vibration or shake.
- H. Provide power control for any and all equipment racks and AV devices including but not limited to what is shown on the bid documents. All devices should be capable of being shut down or placed in stand-by with the exception of the control system, audio digital signal processor, and AV network switches.
- I. Provide a full list of MAC addresses and serial numbers to Owner, AV Consultant, and Control System Programmer sixty (60) days prior to scheduled completion of installation.
- J. Update all the firmware for devices within one (1) week prior to the commissioning.

3.2 SITE CONDITIONS

- A. Coordination:
 - 1. Coordinate all work with other trades.
- B. Equipment Delivery & Storage:
 - 1. Make appropriate arrangements and coordinate with job site personnel for the proper receiving, handling, and secure storage of equipment delivered.
- C. Site Clean-up:
 - 1. Keep the site free of all debris generated by the AV System Installer's work, to the satisfaction of the Owner or Construction Manager. Remove waste and debris related to the specified work from the site daily and shall leave the relevant areas and equipment clean and in an operational state. Repair any damage caused to the premises by the AV System Installer's installation activities, at no cost to the Owner.
 - 2. At the completion of work, remove all remaining waste materials, tools belonging to the AV System Installer, construction equipment, machinery and surplus materials.
 - 3. If the AV System Installer fails to clean up as provided in the contract documents, the Owner may do so and the cost of clean up shall be charged to the AV System Installer.
- D. Use of Site:
 - 1. Adhere to the Construction Manager's or Owner's instructions regarding non-smoking, noise, signs, advertisements and fires.
 - 2. Confine operations at the site to the areas permitted in the Contract Documents and do not unreasonably encumber the site with materials or equipment.
- E. Access to Work:
 - 1. Provide the Owner and the AV Consultant access to the Work in preparation and progress wherever located.

3.3 WIRING & TERMINATIONS

- A. Follow all applicable provisions of NEC and local codes.
- B. Employ true 75-ohm or 50-ohm connectors based on component manufacturer specifications on all BNC type connections.

- C. All cabling shall be in accordance with manufacturer's recommendations. If the manufacturer's recommended cabling for equipment proposed cannot be accommodated in the conduit indicated in the contract documents without exceeding normal fill or code requirements, the Contractor shall furnish and install the additional required conduit without cost to the Owner.
- D. Do not exceed manufacturer's recommendations for cable pulling tension. Where cable-pulling lubricant is used, the lubricant must not damage the conduit and cable sleeve materials and must not harden over time to prevent future pulls.
- E. Install a nylon pull string in every conduit. If additional cables are pulled in after the initial cable pull, pull a nylon pull string with the added cable. Coordinate installation of pull strings with the Electrical Contractor.
- F. Color-code all systems wiring with labeling and coding as submitted and approved by shop drawing. Cabling shall be continuous and shall not be spliced between equipment. Maintain color coding and tagging throughout the system at all accessible locations to the cabling.
- G. Communication cables passing through any plenum space and not encased in steel conduits, must be plenum rated for their entire length.
- H. Provide or maintain through penetration fire stop systems to prevent the spread of fire through openings made in fire-rated walls or floors to accommodate conduits, cables or other pathways.
- I. Fire stops shall restore floor and wall to the original fire rated integrity and shall be waterproof. The fire stop systems and products shall be UL tested and material shall be UL classified as materials for use in through-penetration fire stops.
- J. The fire stop system shall comply with the latest editions of NEC and with NFPA 101-Life Safety Code and shall be made available for inspection by the local Authority Having Jurisdiction. AV System Installer is responsible for verifying the fire rating of all walls and floors affected by their work.
- K. AV system cabling is divided into classes that may not be intermixed within a conduit or raceway. In certain cases, AV system cabling of different classes may pass through or terminate in a common enclosure provided that proper separation is maintained within the enclosure. Do not intermix AV system cabling with AC wiring within a conduit, raceway, or enclosure. Additionally do not intermix AV system cabling with wiring related to any other trades or discipline including but not limited to; fire protection, HVAC, CATV, alarm, intercom, master clock, access control or other similar systems within a conduit, raceway or enclosure. Wiring classifications, type and minimum separations are listed on Sheet AV910.
- L. Use crimp-on terminal lugs for all screw on terminals.
- M. Cover wire ends and shield drain wires with shrink tubing.
- N. Attach all mechanical solder-on connectors to cable ends using rosin core solder. Check all solder connections for cold solder joints. Resolder any cold solder joints.
- O. Install any floor-mounted connectors so that release buttons (for both receptacles and cable connectors) are easily accessible when cable connectors are installed.
- P. Harness/dress all cables in racks and custom panels with suitable nylon tie wraps or Velcro straps in a vertical and horizontal configuration. Provide an adequate amount of slack for cables that break out from harnesses. Provide a service loop for access to equipment for servicing and adjustment. Provide cable support.

- Q. Use balanced lines for all audio signal wiring. Provide balancing kit or install suitable transformers for all unbalanced equipment.

3.4 LABELING

- A. Clearly label all racks, rack-mounted equipment, switches, controls, and panels unless noted otherwise.
 - 1. Equipment Racks & Rack-mounted Equipment:
 - a. Label rack-mounted equipment with engraved and filled plastic laminate. Other methods of labeling rack-mounted equipment may be accepted pending prior approval by the AV Consultant and/or Owner.
 - b. Label all equipment racks on both the front and the rear.
 - c. Use labels of contrasting color for rack-mounted equipment.
 - d. Label the plug end of each AC power cable for all rack mounted devices. Label shall clearly identify the equipment associated with the plug.
 - 2. Panels & Plates:
 - a. Panels and plates shall be a minimum of 1/8" thick anodized aluminum etched and epoxy filled unless noted otherwise.
 - b. Room numbering on drawings may not match the final facility room numbering. Match all labels for input/output plates, touch panels, and other panels to the final room numbering for the facility.
- B. Coordinate with the Electrical Contractor to make sure that all AC power receptacles within each rack and at remote equipment locations are labeled and match to the appropriate panel and circuit breaker.
- C. Logically, legibly and permanently label all cables and wiring for easy identification. Permanently mark each wire with a number at each end. This applies to wire within a rack assembly as well as wire running in conduit. Use adhesive strip type covered labels with clear heat-shrink tubing. Factory stamped heat shrink tubing may be used in lieu of the adhesive strip style label. Labels must be printed. Do not use adhesive wire labels from wire from books. Hand-written labels are not acceptable.
- D. Designate wiring with an alphanumeric code that is unique for each cable. Locate the cable designation at the start and end of each cable run and within 1-3 inches of the point of termination or connection. Print label in three lines so that the designator is visible from all angles. For cable runs that have intermediate splice points, use the same designation throughout with an additional suffix to indicate each segment of the run. AV System Installer determine and designate cable assignments. Use a uniform system of wire designators throughout the entire project from sub-system to sub-system. Designator shall include information on the device name where it is from, the signal type, and the device name where it is going. Add cable designation codes to system schematic drawings included with project As-built Drawings.
- E. Label each terminal strip with a unique identification code in addition to a numerical label for each terminal. Show terminal strip codes on system schematic drawings included with project As-built Drawings.
- F. Provide adhesive labels on the rear of equipment where cables attach to indicate the designation of the cable connected at that point.
- G. Install identification panel with 1/8"-high engraved characters on front of bank of equipment racks serving each space. Clearly identify the Project, AV System Installer, Architect, System Designer, and System Programmer in the following format:

SYSTEM DESIGNER: Professional Audio Designs
11629 W. Dearbourn Ave.
Wauwatosa, WI 53226
414-476-1011

AV SYSTEM INSTALLER: AV System Installer Name
AV System Installer Address
City, State, Zip Code
AV System Installer Phone Number

- H. Final design of identification panel shall be approved by AV Consultant and Owner before manufacturing.

3.5 RACWAYS AND PATHWAYS

- A. Conduit requirements for AV systems cabling may differ from those of other trades. Coordinate requirements with Division 26 Contractor.
- B. All AV systems cabling shall be enclosed within metallic conduit or raceway for floor boxes and Standard back boxes. All AV systems conduit, raceway and standard enclosures shall be furnished and installed by Division 26 Contractor according to drawings provided and in accordance with applicable provisions of Division 26 Contractor.
- C. Conduits for different AV cabling classifications must maintain minimum separations from each other and from other services. Conduits sizes and quantities shown on bid documents are minimums. Separate conduit runs specified in bid documents may not be combined for any purpose unless noted.
- D. Enclose exposed cables with surface raceway.
- E. Electrically isolate conduit runs entering or exiting equipment racks from the equipment rack. Use non-metallic bushings, a short run of non-metallic raceway, or other suitable means.
- F. All raceway shown on the AV drawings is for AV cable, and is in addition to any conduit shown on any other drawings. (Example: conduits for facility LAN or AC power)
- G. Routing of conduit shown on AV drawings is for design intent only. Coordinate exact route based on field conditions.
- H. The minimum size for all AV conduits shall be 0.75" diameter unless otherwise noted. All exposed conduit shall be routed parallel or perpendicular to structure above.
- I. All conduits shall be (EMT) Electrical Metal Tubing unless project standards specify something different or is required by code.
- J. All Back box locations and connection for design intent only.
- K. Follow good practice related to conduit installation. This includes allowable bend angle, pull distances, number of 90-degree bends, and assurance that the pathways are clear of debris and do not have sharp edges.

3.6 EQUIPMENT RACKS

- A. Equipment racks shall be assembled, wired, and tested in the AV System Installer's shop. No rack assembly will be allowed on site without being completely wired except for terminations of field wiring to the rack. The consultant reserves the right to review the racks at the AV System Installer's shop.

- B. All equipment racks are to be grounded.
- C. AV System Installer ensure that all equipment is installed with proper cooling and ventilation.
- D. Do not deliver assembled racks to the construction site until necessary. Protect racks from dust, construction debris and other job site hazards during the entire duration of the installation.
- E. Thoroughly clean all racks and equipment contained therein upon completion of the project and just prior to turn over.
- F. Security covers designed to limit tampering of preset levels shall conceal all rack-mounted equipment not requiring frequent adjustment. Install blank and or vented panels as needed to fill unused spaces in racks.

3.7 RIGGING

- A. AV System Installer is responsible for the installation and mounting of all equipment specified herein.
- B. AV System Installer is responsible for assuring all structure is suitable for mounting.
- C. Coordinate with all applicable trades and with the project's structural engineer
- D. Identify all components and their load ratings on detail drawings.
- E. Provide a minimum safety factor for all mounting and rigging of 5:1
- F. Provide drawings detailing mounting methods as well as attachment points to building structure. If required by AV Consultant, a structural engineer should stamp the drawings.
- G. AV devices shall not share or utilize supporting structures intended for other systems.
- H. Where devices are mounting overhead, hardware rated for overhead lifting must be used.
- I. Provide safety wire of sufficient strength to anything suspended over audience areas excepting those that have three or more suspension points.

3.8 AV CONTROL SYSTEM

- A. Fire Alarm Note: AV System Installer consultant with Fire Alarm Contractor on standards for project concerning audio system control during emergencies.
- B. General: The description of the control system programming given here serves as a basis for the control system programming. Touch screen layouts and function shall not be limited to the operations outlined in this description.
 1. The AV Consultant and Owner or Owner's Representative shall approve the touch screen layouts and programming flow before programming of the system begins. AV System Installer may want to schedule a conference call between AV Consultant and Owner to discuss touch screen operation prior to developing page layouts. Submit the touch screen page layouts and page relationship diagram, with a written button-by-button description of the function of each button, for review by the AV Consultant and Owner or Owner's Representative. It is expected that this approval meeting could take up to a minimum of one day. AV System Installer coordinate this meeting.
 2. AV System Installer provide a real-time demonstration to the AV Consultant and Owner or Owner's Representative, with the touch screens specified in this project or equivalent approved by the AV Consultant. This demonstration may occur during the initial approval meeting or can be scheduled, by the AV System Installer, for a later date. Within one week of the approval meeting, the customer may deem that additional operations, whether manual or automated, may be necessary for the proper functioning of the system

Address
Telephone

9. Final layout of project information page must be approved by Owner.
 10. Only Owner graphics and Owner information are allowed on welcome page (splash page).
 11. AV System Installer provide memory expansion for control processors as required to support system operation.
 12. AV System Installer determine with the Owner and AV Consultant any control pages and/or functions that require passwords.
- C. Room Combining Functionality
1. Where specified and components permit, a room combining page must be provided that visually shows the floor layout and allows the user to insert and remove divider walls that mimic the spaces various combinations.
 2. If so requested by the Owner, the room-combining page may require a pass code to access.
- D. Audio Control
1. A volume control icon or physical button shall be available to any user at any time there is an audio enabled system (i.e. powered speakers, ceiling speakers, display speakers, etc).
 2. A clearly visible mute button with positive feedback to an on/off indicated on the touch screen shall also be included.
 3. A system's master gain shall be set with a reasonable user range of audio level, but the maximum level shall be set below a threshold level that could cause damage to system components or feedback.
 4. The control system shall automatically reset the audio levels to an indexed preset level each time the system is shut down or restarted (unless the Owner requests that the system holds the last state used at shutdown).
 5. Video source's audio shall be routed to the audio reinforcement system upon routing video source to room display(s)
 6. A system with room combining requirements shall utilize Room Combiner block in DSP or recall presets with required configurations if Room Combiner block is not available.
- E. Controlled Devices
1. Wherever possible, the Control System shall provide positive feedback of individual component control-state conditions to the touch screen.
 2. Where specified, the AV System Installer shall provide a Control System interface to mechanical or electronic devices such as screens, window shades, or room lighting. Wherever such operation is available at the mechanical device, a stop or halt button shall always be provided on touch screen. Where interfacing with systems installed by other trades, coordinate exact interface location with the appropriate contractor.
 3. Remote power relays, wherever possible, shall be used to switch AV power to those devices whose power on/off function is otherwise not controllable. Where audio amplifiers are installed, the AV System Installer shall program system control to power amplifier on last during power up, and the first device to turn off during power down. Using a device's "stand-by" mode is an acceptable form of power down.

4. System components, which are infrared control based, shall include an external sensor as part of the infrared control system; the sensor shall provide positive feedback to the control system to indicate whether the device is in a power on or power off state.
5. If so requested by the Owner, all or select control system processors shall be programmed with an Auto Shutdown feature. Power off schedule shall be consulted with Owner prior to programming.
6. Owner furnished computers shall be connected to constant power source and never part of the power down process.
7. Wherever devices that require keypad-style dialing, such as audio or video conferencing, mimic a telephone keypad display to allow dialing from the touch screen. Provide a display above the keypad to display the number being dialed. The AV System Installer shall provide a backspace key to modify dialed numbers.

F. Video Conferencing Codecs and Cameras

1. Control videoconferencing units via RS-232 interface or LAN interface from the control system touch screen in each room. In addition to dialing control, a touch screen layout similar in look to the manufacturer handheld remote shall be provided. Minimum features shall include local camera control, far end camera control, phone-add, and privacy function. The privacy function shall mute the near end audio and the control system shall provide a large icon to indicate that privacy is enabled.
2. AV System Installer assign four (4) to six (6) camera location presets for each camera and design a simple scheme whereby the user may easily recall these presets. Determine camera presets in consultation with the Owner.
3. Pan-Tilt-Zoom camera controls include zoom, pan, and tilt. Controls shall also include focus and iris, if available.
4. AV System Installer provide additional IR and LAN Control as required.

G. Voice-Over-IP (VOIP) or Session Initiation Protocol (SIP) systems

1. Where specified and components permit, control system shall be able to initiate calls via VOIP, SIP, or analog telephone. Provide a touch screen layout similar in look to standard touch tone phone. Minimum features shall included standard phone dial pad, four (4) to six (6) programmed phone numbers or extensions, feedback field above dial pad to display pressed numbers, and privacy function. The privacy function shall mute near end audio and the control system shall provide a large icon to indicate that privacy is enabled.
2. Touch screens specified with SIP/RAVA functionality with built-in speaker and microphone, shall initiate calls via VOIP, SIP, or standard telephone. Determine a separate touch screen layout in consultation with Owner as the page may be used as a phone, intercom, or help desk.
3. Before audio connections are made, a dial tone shall be preset in the audio system or intercom.
4. Where possible, key tones shall be preset in the audio system to provide the User audible feedback.

3.9 AUDIO DIGITAL SIGNAL PROCESSOR (DSP) SYSTEM

A. Audio Input Channels

1. Include the following processing blocks for Microphone input channels: high-pass filter, parametric equalizer, compressor, and gain/volume control. If processor permits, each microphone channel shall also include a feedback eliminator.

2. Line input channels for program audio (i.e. audio player, computer audio, etc) do not require processing blocks prior to mixers.
 3. Include a meter on all input channels. If input channel blocks do not already have one, a meter block shall be added.
- B. Audio Mixers
1. Include labels on matrix mixer block inputs and outputs. Matrix mixers are not a proper substitution for controlling audio room combining, but are acceptable if DSP will only allow matrix mixers to room combining. Use a room combining block instead. See Room Combining section.
 2. Automatic mixer blocks should use gain sharing, if DSP permits, where numerous duplicate microphones will be used, such as ceiling microphones or table top microphones. Audio or video conference audio typically requires this kind of configuration post-acoustic echo cancellation blocks. See section Acoustic Echo Cancellation.
- C. Audio Outputs
1. Include the following processing blocks for speaker outputs: high-pass filter, parametric equalizer, and peak limiter.
 2. Outputs to phone lines/sip phones/VOIP shall include the following blocks; parametric equalizer, compressor, and gain/volume control.
 3. All output channels shall have a meter. If output channel blocks do not already have one, a meter block shall be added.
- D. Audio Component Blocks
1. Parametric Equalizer: use at minimum, three bands of parametric equalizer.
 2. High-Pass Filter: never set lower than 40Hz or higher than 250Hz.
 3. Acoustic Echo Cancellation (AEC)
 - a. Use AEC when an analog phone line/Session Initiation Protocol (SIP)/VOIP is connected to DSP.
 - b. Include audio that will be played through room sound reinforcement system in the reference input for the AEC.
- E. VOIP/Telephone Control
1. Make the following phone block control pins available for control system; Call Details, Call Progress, CID Name, CID Number, Connect, Off Hook, Ring (trigger), Ringing (state), Phone Status.
 2. Other control pins may be used as each DSP system may call them something different.
- F. Router and Room Combining
1. When space can be combined or separated, use a Room Combining block in the DSP. A Matrix mixer is not a proper substitution.
 2. Routing, via matrix mixers, may be employed if various outputs require different combinations of the inputs. The User may require individual volume control for input channels for the individual outputs. The AV System Installer shall confirm this before programming the DSP.

3.10 AV NETWORK SWITCHES

A. General

1. AV System Installer coordinate with Owner on Owner network standards prior to purchasing switches. Owner may require managed switches even though unmanaged switches allow portions of the AV systems to function. Owner may also have campus standards of manufacturer and model.
 2. AV System Installer is responsible for providing AV network switches that comply with protocol standards of the devices the switches are intended to support. Not all AV protocols are detailed here and it is the AV System Installer's responsibility to ensure switch selection meets manufacturer's specifications for specified or substituted equipment (e.g. AVB or Cobranet).
- B. Switches for Digital Video Systems and Control Systems
1. Provide managed switches with gigabit (1Gbps) Base-T Ethernet ports and non-blocking layer-2 functionality. Ports must provide a maximum of 34.2 Watts PoE.
 2. Where specified, switches requiring PoE shall support Type 1 PoE, Class 0-3 power sourcing on Ethernet ports and Type 2 PoE+, Class 4 power sourcing on Ethernet ports. AV System Installer refer to the schematics for the number of ports that require PoE and shall be responsible for verifying switch will be capable of power sourcing the number of ports simultaneously.
 3. AV System Installer provide a brush grommet panel above or below switch, if Ethernet ports connected on the front face of network switch when mounted in an equipment rack.
- C. Dante Network Switch
1. Dante Network Switches, where specified, shall have Ethernet Ports with gigabit (1Gbps) and 1.488Mpps packet forwarding rate at minimum. Dante Switches shall be non-blocking layer-2 managed switches supporting DiffServe (DSCP) Quality of Service (QoS) with strict priority and four (4) queues per port.
 2. AV System Installer is responsible for confirming that all ports are capable of simultaneous gigabit transfer and capable of switching off Energy Efficient Ethernet (EEE) and other power-saving features.
 3. AV System Installer configure DiffServe (DSCP) QoS to give top priority to the Dante clock synchronization and audio data the next highest priority.
 4. VLAN's shall be used to separate virtual networks for audio and non-Dante data over same network. Multicast transmissions may be required for audio sent to multiple Dante devices. To minimize unnecessary duplication of audio streams in multicast, Internet Group Management Protocol (IGMP) shall be enabled in the Dante Controller software.
 5. Where specified, for switches located over long distances, a switch shall be capable of supporting optical modules.
 6. Refer to Audinate support documents for full setup details.
- D. Q-Lan Network Switch
1. Q-Lan is a specific network protocol for QSC Q-Sys products. Where such products are specified, Q-Lan Network Switches shall have Ethernet Ports with gigabit (1Gbps) at minimum with packet forwarding decision time of 10 ms or less. Switches shall be non-blocking layer-3 manage switches supporting DiffServe (DSCP) Quality of Service (QoS) with four (4) queues per port.
 2. AV System Installer supply a Q-Lan Network switch from the list of certified switches provided by QSC (<https://www.qsc.com/in/products/systems/q-sys-platform/products-peripherals-accessories/network-switches/additional-switch-documents/>). The AV System Installer is responsible for complying with QSC's guidelines if a non-listed substitution is provided.

3. Refer to QSC's support documents for full setup details.

3.11 EQUIPMENT GROUNDING

- A. Refer to 27 05 26 GROUND AND BONDING FOR COMMUNICATIONS.

3.12 WORK IN OTHER SECTIONS

- A. The division of responsibility regarding work to be done by the Division 26 contractor, Owner, and work to be done by the AV System Installer is outlined on the table on Sheet AV002.
- B. In coordinating the AV work with the Division 26 contractor, the AV System Installer shall bear in mind that the wiring and conduit requirements called for in the construction documents are based on the requirements of a single manufacturer and may or may not be adequate for the equipment actually being furnished. The conduit and wiring indicated on the drawings or in the specifications shall be considered minimum requirements. If the AV System Installer proposes to bid acceptable alternate equipment that requires a conduit topology different from what is shown on the bid documents, they shall factor this change in conduit required in their bid.

3.13 SPECIFIC TECHNICAL REQUIREMENTS

- A. Amplifiers
 1. Install manufacturer-provided security covers over all amplifier gain knobs.
 2. Label each amplifier with which speaker zones each amp channel is driving.
 3. Set gain levels for appropriate gain structure and maximum range of system volume.
 4. Sequence power so amplifier is last device to turn on and first device to turn off.
- B. Assistive Listening System
 1. Provide receivers with Ear Speakers, and Rechargeable Batteries for required percentage of seating per ADA 2010.
 2. Provide Neck loops for required percentage of receivers per ADA 2010.
 3. Provide charging case or tray.
- C. Ceiling Speakers, Pendant Speakers, Wall-Mounted Speakers, and Suspended Speakers
 1. Include custom painting in bid.
 2. Coordinate color with Architect prior to installation of speaker grills.
 3. Coordinate color with Architect prior to purchase and installation of suspended speakers, wall mounted speakers, and pendant speakers.
 4. Provide all required rigging hardware.
 5. Provide all required mounting hardware including safety cabling.
 6. Provide free air cable support.
 7. Carefully coordinate speaker placement with other trades.
- D. Digital Video System
 1. Provide Test reports for each system.
 2. Adjust transmitters and receivers, or encoders and decoders for proper EDID tables and resolutions confirmed with owner devices.
 3. Receivers and Decoders shall be set to maintain aspect ratio.
 4. Transmitters and Encoders shall be set to auto switch between Digital and Analog inputs.

5. Provide Owner with complete list of all IP address.
 6. Adherence to Crestron HD-DTDS specifications.
 7. Coordinate V-LAN'S and IP schemes with owner.
- E. Equipment Racks
1. Provide mounting hardware as required.
 2. Provide power distribution for all equipment located within rack.
 3. Provide rack screws as required.
 4. AV System Installer shall be responsible for coordinating all equipment to be mounted in equipment racks.
 5. Replace IEC power cords for all devices with Middle Atlantic SignalSAFE IEC power cables.
 6. Cables shall have AC conductors tightly wound to reduce magnetic interference.
 7. Cables shall be ordered in the appropriate lengths to connect the device to the rack power distribution. Do NOT create power cord loops within the rack.
 8. Provide appropriate ventilation to ensure internal temperature stays below 85 degrees Fahrenheit (assuming 70 degrees ambient temperature) during system operation. Provide rack fans if required.
 9. Provide blank panels for all unused rack spaces.
 10. Provide locking front and rear doors.
- F. Equipment Racks in Casework
1. Locate in architectural millwork or case work section.
 2. Provide proper ventilation.
- G. Equipment racks and Conference Tables
1. Coordinate all equipment to be mounted in equipment racks and conference tables.
 2. Provide appropriate ventilation to ensure internal temperature stays below 85 degrees Fahrenheit during system operation. Provide rack fans if required.
 3. Provide a USB cable through cable pass thru for connection to OFE fixed computer (if applicable).
 4. Sequence power to all equipment to appropriately turn on/off system components.
 5. Ensure Owner furnished fixed computers are accessible when the system is not turned on and computer monitor is visible at all times to avoid the need to power on the AV system for access.
- H. Fire Alarm
1. System is connected to building fire alarm system and all audio shall be muted when fire alarm is activated.
 2. AV System Installer pull cable to fire alarm relay.
 3. AV System Installer make connection to relay input on control system master.
- I. Flat-Panel Video Display Monitors
1. Division 26 Contractor provide and install outlets for AV back boxes. Telecommunications System Installer provide and install Building Data connections and CCTV. AV System Installer provide and install AV Network Connections and Digital Video connections.

2. Supply appropriate wall mount bracket and specified back box.
 3. Install, terminate, and test the Flat-Panel Video Monitors.
 4. Monitor installation shall meet ADA guidelines.
 5. Confirm final mounting height and mounting locations with Owner prior to installing displays.
 6. Confirm display size with Owner prior to ordering display.
 7. Touch screen control
 - a. Provide individual control of each display
 - (1) Volume.
 - (2) On/Off.
 - (3) Input select.
- J. Floor Boxes and Poke-Thru
1. Include floor-box cover with bid.
 2. Include all insert panels and mounting brackets.
 3. Verify fit of all panels to be installed in floor boxes prior to installation.
 4. Screw all plates into floor pocket.
 5. Provide blank plates for any unused gangs.
 6. Coordinate color with Architect prior to purchase and installation of input plates, blank plates, and cover plate for floor boxes or poke-thru.
 7. Provide connect cables for all inputs (minimum 6' length).
 8. Provide "on-grade" version if floorbox is to be installed on-grade.
- K. HDMI / DVI Extenders
1. All extenders must be HDMI 2.0 and HDCP 2.2 compliant.
- L. Input/Output Panels
1. Mount at standard outlet height unless otherwise indicated in plans.
 2. Coordinate color with Architect prior to purchase or installation of input/output panels.
 3. Confirm nomenclature of engraved labels with AV Consultant and Owner prior to ordering by submitting panel layouts with submittal package. See section on Submittals in Part I.
 4. Confirm number sequence of inputs and outputs with AV Consultant and Owner prior to ordering.
- M. Interconnect Cables
1. Provide input interconnect cables for all inputs AV inputs into system.
- N. Loudspeakers
1. Provide all required mounting hardware including safety cabling.
 2. Carefully coordinate speaker placement with other trades (HVAC, lighting, fire protection, etc.).
 3. Coordinate Color with Owner / Architect Approval.
 4. Provide additional speaker cable support as required.
- O. Touch screens and Button Panel Controllers

1. Must meet ADA guidelines.
2. Coordinate color with Owner / Architect approval.
3. Locate to avoid and conflicts with monitor.
4. Assign buttons to control.
5. Touch Screen Control
 - a. Provide welcome page.
 - (1) Provide owner representative approved graphic for welcome page.
 - (2) All touch screen pages and popup pages must be approved by Owner representative and AV Consultant before control code is written.
 - (3) Provide Help button on touch screen that displays help pages and Owner contact information for help calls.
 - (4) Develop help pages that provide a button by button graphic representation of panel functionality.
 - (5) Provide PDF printout of all help file pages.
 - (6) Touch screen at equipment rack shall control system power.
 - (7) Touch screen at equipment rack shall function as mater panel and shall control all system functions.
 - (8) Touch screen layout and graphics shall be user friendly, intuitive, and consist of high quality graphics and buttons that reflect a high-end technology system.

P. Wireless Microphone Systems

1. Wireless Microphone systems must be in bands below 560 MHz.
2. Mount antennas at 90 degrees relative to one another if using half-wave antennas.
3. Provide frequency coordination with all other wireless systems in project and local TV stations.
4. Include Lithium-ion rechargeable battery with each transmitter
5. Include dual docking Battery charger.

3.14 MAINTENANCE AND OTHER MANUALS

- A. AV System Installer maintain a file specific to this project that shall include all AV maintenance manuals, approved shop drawings and other pertinent information. This file shall be maintained for a period of time consistent with the length of time the equipment provided is in actual service. Documents shall be of such a nature, preferably electronically stored, that they may be reproduced to replace similar documents in possession of the Owner at Owner's expense.

3.15 AV SYSTEM INSTALLER'S PRELIMINARY TESTS & MEASUREMENTS

- A. AV System Installer certify, a minimum five (5) days prior to commissioning, that the installation is complete as outlined in bid, and is in compliance with the specification in its entirety. Include, as a part of the Certification, a test report as described in the next paragraph. Submit items listed in the test report prior to commissioning as it may delay the process. Any delays due to missing information or incorrect test reports are the responsibility of the AV System Installer.
- B. Include the following items in the Test Report:
1. Wire List: Confirm that each individual wire and cable run (whether in a rack or in conduit) is identified with a unique number. These numbers are affixed at both ends and are

clearly visible. Provide a complete list of these numbers including their termination location, their signal classification, and relevant test data. Wire list shall be considered part of as built documents and must be provided to consultant prior to system commissioning.

- a. For all mic lines, tie lines, return lines and speaker lines confirm and document the following relevant test data:
 - (1) Proper circuit appearing at each termination location.
 - (2) Continuity of all conductors.
 - (3) Proper polarity is maintained.
 - (4) Absence of shorts between conductors.
 - (5) Absence of shorts between conductors and raceway and ground.
 - b. For all video lines confirm and document the following relevant test data:
 - (1) Continuity of all conductors.
 - (2) Absence of shorts between conductors.
 - (3) Absence of shorts between conductors and conduit and ground.
 - (4) HDCP passes on digital video connections, including HDMI cables.
 - (5) HDMI cables pass signal at all resolutions used on the project.
 - c. For all digital audio and video lines, including data or fiber optic cable, document the following relevant test data:
 - (1) Continuity of all conductors for each line.
 - (2) Absence of cable faults or breaks.
 - (3) Adequate bandwidth for signal, per manufacturer source signal.
 - d. Documentation shall include a spread sheet with applicable data.
2. Digital Video Report: For all digital video or IP video systems deployed in this project, the AV System Installer shall provide a full System Report for each AV System.
 3. Loudspeaker Impedance:
 - a. Prior to the termination of audio amplifiers to speakers, the AV System Installer shall test for short circuits to ground by measuring the resistance of the speaker line with reference to ground.
 - b. With the loudspeakers connected and the amplifiers disconnected, the AV System Installer shall measure and record the impedance of each speaker line using a 1kHz signal applied to the line.
 - c. With the loudspeakers connected and the amplifiers disconnected, the AV System Installer shall measure and record the impedance sweep of the speaker and speaker line from 20Hz to 20kHz.
 4. Verification Checklist: Provide a verification checklist for each space or system:
 - a. Provide notification to consultant prior to punch-out of any equipment that is malfunctioning.
 - b. Verify that all AV system cables are identified by a unique ID as defined in the project documentation. Verify that this unique ID is displayed permanently at both ends of the cable, is legible, and is positioned where it can be seen without undue disturbance.
 - c. Verify that loudspeaker zones are wired as defined in the project documentation.

- d. Verify that all loudspeakers and mountings are free of buzzes and rattles when swept with sine wave tones throughout its rated bandwidth at normal levels. Listen to all audio systems to verify that they are free of any obvious hum, buzz, feedback, interference, spurious oscillations, digital artifacts, or extraneous noises of any kind.
- e. Verify that all audio routes are tested from endpoint to endpoint via the appropriate midpoint (s) for operation and routing as defined in the project documentation.
- f. Verify that correct wiring polarity is maintained throughout the entire signal path.
- g. Verify that all loudspeakers in the same acoustic space are wired to produce consistent polarity with a mono input signal. They shall be polarized such that a positive acoustic pressure on a microphone results in a positive acoustic pressure at all loudspeakers.
- h. Verify that phantom power is provided at correct voltage and correct locations as defined in the project documentation.
- i. Verify the loudspeaker transformer tap setting in constant voltage systems is as defined in the project documentation.
- j. Perform system rough equalization, cross-over and delay settings. The AV Consultant reserves the right to make final adjustments if necessary. Perform all video system set up and calibration.
- k. Verify EDID settings reflect the native resolution for each projector, display, video codec, or other sinks. Record the EDID table for each source and sink for Owner's record.
- l. Verify that the combined installation of projector and screen provides a displayed image that is correctly aligned to the active projection screen surface without misalignment.
- m. Verify that all displayed images are correctly focused, have the correct image geometry and are free from distortion.
- n. Verify brightness and correct color balance of each newly installed projected image and display image using a display analyzer system. Record settings of each device adjusted for Owner's records.
- o. Verify that the system(s) accurately display all resolutions required by project documentation on all displays within the system (i.e. no pixel shift, no geometric distortion, no artifacts from scaling, letter-boxing, pillar-boxing, or window-boxing).
- p. Verify that all video routes are tested from endpoint to endpoint via the appropriate midpoint (s) for operation and routing required by the project documentation.
- q. Verify that cameras, lenses, and pan/tilt systems operate as defined in the project documentation. Inspect the camera image through the full lens operation.
- r. Verify that all audio and video signals are being routed to the recording device(s) and that the recording device(s) is operating correctly.
- s. Verify that cables are not bent beyond their minimum bend radius as specified on sheet AV002.
- t. Verify that all AV connector plate inputs and outputs are labeled as defined in the project documentation.
- u. Verify that all AV connectors are correctly keyed, seated, and latched to respective connection points as defined in the project documentation.
- v. Verify that all AV cable terminations are made securely and meet the recommendations of the connector and cable manufacturer(s), published standards, and requirements defined in the project documentation.

- w. Verify that all AV equipment power cables are managed as defined in the project documentation. Verify that cables are managed in a uniform and acceptable manner so as not to compromise safety / OEM warranty, AV signal quality, and/or future field service.
- x. Verify that all AV equipment is powered from the designated power circuit and outlet as defined in the project documentation. No additional (non-AV equipment should be connected unless permitted in the project documentation.
- y. Verify proper operation of all controls. Verify operation of control system and reliable communication with each device controlled. Each touch screen control should do what it is supposed to do and function as it is indicated on touch screen submittal. Verifications include (but are not limited to) the following:
 - (1) Confirm volume buttons on the touch screen raise and lower the volume appropriately without skipping, jumping, or ramping out of control
 - (2) Conform the proper switching of inputs. Verify that when a particular input is selected the appropriate input is routed.
- z. For each installed data network cable, HDBaseT cable, 8G+ cable, DTP cable, or fiber optic cable terminated by the AV System Installer, verify conformity to TIA/EIA performance standards.
- aa. Verify and document that all network-connected equipment has the correct IP address, subnet mask, hostname, gateway, and VLAN configuration as defined in the project documentation.
- bb. Verify that PoE devices are supplied with correct power required from normal device operation. Verify under normal operations that the switch providing PoE has the capacity to power all of the devices that are connected to it.
- cc. For each controllable device, verify discrete on/off commands and device feedback (where available).

3.16 COMMISSIONING

- A. AV System Installer is responsible for conducting tests to determine systems conformance to requirements of the specifications. TESTS SHALL BE CONDUCTED PRIOR TO THE ARRIVAL OF THE CONSULTANT FOR COMMISSIONING. AV System Installer shall pay the AV Consultant at consultant's normal rate plus expenses for any additional time required due to the AV System Installer's failure to demonstrate compliance with any part of the specification.
- B. AV System Installer provide at least one qualified technician, familiar with all aspects of the project, for a minimum of sixteen (16) work hours, or as long as may be needed to verify compliance with all provisions of the specification on the day of commissioning. AV SYSTEM INSTALLER IS RESPONSIBLE FOR ARRANGING A DATE MUTUALLY ACCEPTABLE TO AV CONSULTANT AND OWNER FOR COMMISSIONING. Arrangements include access to all necessary areas, parking within reasonable walking distance, and a minimum of eight (8) hours of un-interrupted quiet time. Make arrangements for testing with the Owner and AV Consultant at least two (2) weeks before the proposed testing date. The AV Consultant may at their sole discretion, suspend commissioning at any time the project has been determined that it is not made ready for commissioning, until such time as compliance can be demonstrated.
- C. AV System Installer be prepared to make adjustments to system components at AV Consultant's direction during commissioning, without additional charge.

3.17 FUNCTION PERFORMANCE VERIFICATION

- A. AV System Installer provide Owner and AV Consultant with verification checklist confirming that everything on the test plan has been completed. AV System Installer demonstrate functional performance verification during training (see section Training), where complete, to verify compliance. This includes everything listed in articles Systems Descriptions, AV Control Systems, Digital Signal Processor Systems, and Specific Technical Requirements and all other content in Parts 2 and 3.

3.18 TRAINING

- A. The AV System Installer and Control System Programmer shall conduct group and/or individual training sessions for the proper operation and maintenance of the complete system. The AV System Installer should, to their benefit, coordinate training sessions with Control System Programmer.
- B. Provide all labor and materials required for on-site training as defined in the previous section. Training shall be conducted at the project site using the project equipment for each unique system.
- C. Training must cover, at minimum, the following items:
 - 1. User Manual: AV System Installer go over the manual outlined in Part 1, Maintenance and Operating Manuals, detailing the system functions. Control Systems Programmer review control system operations for each AV system.
 - 2. Technical User: Control System Programmer provide configuration training on equipment and software to Owner's Technical Users.
 - 3. Maintenance User: AV System Installer provide training on all physical maintenance of systems, including cleaning of displays, bulb changes, filter cleaning, and filter changing.
- D. Minimum on-site training times shall be:
 - 1. User Manual: Four (4) hours
 - 2. Technical User: Three (3) hours
 - 3. Maintenance User: One (1) hours

3.19 EVENT SUPPORT

- A. In addition to the training listed above, AV System Installer provide a total of up to eight (8) hours of on-site technical assistance for an Owner requested event. Control System Programmer shall be on hand for any assistance required that may result from software design. The event is expected to occur within the first sixty (60) days after system has been commissioned.

3.20 WARRANTY

- A. AV System Installer provide on-the-premises service, parts and labor during normal working hours at no cost to the Owner, for a period of 12 months from the date of final acceptance. This shall not supersede any manufacturer's equipment warranties still in effect after 1 year. Warranty period shall commence at substantial completion as declared by Construction Manager.
 - 1. During the warranty period:
 - a. Furnish on site diagnostic and repair service to installed AV systems free of charge to Owner.
 - b. Respond to service requests within 24 hours.
 - c. Provide onsite diagnostic and repair service within two (2) business days of trouble report.

- d. Make available after hours or weekend service at a premium rate not to exceed 1.5 times normal hourly rates minus normal hourly rates.
 - e. Provide technical support via telephone at no charge during the warranty period.
 - f. Maintain engineering and service departments capable of rendering advice regarding installation and final adjustment of the systems.
 - g. Provide for three (3) non-emergency service and maintenance calls by technically qualified personnel without additional charge. Calls shall be at least two hours at the site and shall be prearranged at least two weeks prior with the Owner.
 - (1) These service and maintenance calls shall be in addition to any warranty required service calls and shall commence every four (4) months after the date of final acceptance by the Owner. See sub-section Maintenance and Operating Manuals under section Submittals.
- B. Make all tests, adjustments, or replacements in the presence of Owner's technician, or other person designated by the Owner's Representative. Upon completion of each call provide a report to clearly indicate any replacements or adjustments and any evidence of tampering.
- C. This project includes Owner provided equipment. Owner provided equipment is indicated in the Equipment Specification section of this document. AV System Installer provide the same warranty for Owner provided/AV System Installer installed equipment as for equipment provided directly from AV System Installer. Refer to Part I, section Scope, concerning how the AV System Installer shall receive Owner provided equipment. AV System Installer is not responsible for hardware failures of owner furnished equipment, only installation-related issues.
- D. All service calls pertaining to control system (e.g. alteration of buttons, non-responsive commands, etc) shall fall under the purview of the Control System Programmer.


END OF SECTION

THIS PAGE INTENTIONALLY LEFT BLANK

ID	Task Name	Duration	Start	Finish	Predecessors
1	Phase One - Additions (Per Phasing Plan)	316 days	Fri 7/22/22	Wed 10/18/23	
2	Bidding & Contract Award (Including County Meetings)	27 days	Fri 7/22/22	Mon 8/29/22	
3	Mobilization	5 days	Tue 8/30/22	Tue 9/6/22	2
4	Selective Demolition at Building Additions	13 days	Wed 9/7/22	Fri 9/23/22	3
5	Site Clearing/Earthwork/Site Utilities	25 days	Mon 9/19/22	Fri 10/21/22	4FS-5 days
6	Footings/Foundations/Backfill	45 days	Mon 9/26/22	Tue 11/29/22	5FS-20 days
7	Structural Steel (16 Week Lead Time)	45 days	Thu 12/8/22	Fri 2/10/23	
8	Temporary Enclosures/Heat	35 days	Mon 1/2/23	Fri 2/17/23	7FS-30 days
9	Concrete Topping	40 days	Mon 1/9/23	Fri 3/3/23	8FS-30 days
10	Steel Studs/Dens Glass/Insulation (Exterior Perimeter)	45 days	Mon 1/23/23	Fri 3/24/23	9FS-30 days
11	Roofing	20 days	Mon 3/6/23	Fri 3/31/23	10FS-15 days
12	AL Windows	15 days	Mon 4/3/23	Fri 4/21/23	11
13	Exterior Masonry/Siding	30 days	Mon 4/24/23	Mon 6/5/23	12
14	Interior Partition Walls	35 days	Mon 4/24/23	Mon 6/12/23	12
15	MEP Rough In	45 days	Mon 4/24/23	Mon 6/26/23	12
16	Drywall/Painting	25 days	Tue 6/27/23	Tue 8/1/23	15
17	Finishes (ACT Ceiling, Flooring, Cabinets)	25 days	Wed 8/2/23	Wed 9/6/23	16
18	MEP Finish/Temp	15 days	Thu 9/7/23	Wed 9/27/23	17
19	Owner Move-In	15 days	Thu 9/28/23	Wed 10/18/23	18
20					
21	****AHU/Electrical Panels Delivery****	1 day	Tue 8/15/23	Tue 8/15/23	4FS+225 days
22					
23					
24	Phase One - Renovation of Existing (Per Phasing Plan)	265 days	Tue 10/4/22	Wed 10/18/23	
25	Asbestos Abatement (Preliminary Estimate)	25 days	Tue 10/4/22	Mon 11/7/22	19FS-265 days
26	Selective Demolition	50 days	Tue 11/8/22	Fri 1/20/23	19FS-240 days
27	MEP Rough-In	70 days	Tue 11/22/22	Fri 3/3/23	26FS-40 days
28	Interior Partition Walls (Steel Studs/Masonry)	50 days	Thu 12/8/22	Fri 2/17/23	26FS-30 days
29	Drywall/Painting	50 days	Mon 2/20/23	Fri 4/28/23	27FS-10 days
30	Finishes (ACT Ceiling, Flooring, Cabinets)	55 days	Mon 4/24/23	Tue 7/11/23	29FS-5 days
31	MEP Finish/Temp	45 days	Wed 7/12/23	Wed 9/13/23	30
32	Owner Move-In	25 days	Thu 9/14/23	Wed 10/18/23	31

Task		Milestone		External Tasks	
Split		Summary		External Milestone	
Progress		Project Summary		Deadline	

ID	Task Name	Duration	Start	Finish	Predecessors
33					
34					
35	Phase Two (Courts/Admin Side) - Remodel of Existing Facility (Per Phasing Plan)	100 days	Thu 10/19/23	Tue 3/12/24	19
36	Asbestos Abatement (Preliminary Estimate)	10 days	Thu 10/19/23	Wed 11/1/23	32
37	Selective Demolition	15 days	Thu 11/2/23	Wed 11/22/23	36
38	MEP Rough-In	25 days	Thu 11/16/23	Fri 12/22/23	37FS-5 days
39	Interior Partition Walls Steel Studs/Masonry	15 days	Thu 11/16/23	Fri 12/8/23	37FS-5 days
40	Drywall/Painting	20 days	Mon 12/11/23	Tue 1/9/24	39
41	Finishes (ACT Ceiling, Flooring, Cabinets)	25 days	Wed 1/3/24	Tue 2/6/24	40FS-5 days
42	MEP Finish/Temp	15 days	Wed 2/7/24	Tue 2/27/24	41
43	Owner Move-In	10 days	Wed 2/28/24	Tue 3/12/24	42
44					
45					
46	Phase Two (Jail/LEC) Remodel of Existing Facility (Per Phasing Plan)	240 days	Thu 10/19/23	Fri 9/27/24	
47	Asbestos Abatement (Preliminary Estimate)	10 days	Thu 10/19/23	Wed 11/1/23	32
48	Selective Demolition	50 days	Thu 11/2/23	Tue 1/16/24	47
49	MEP Rough-In	70 days	Thu 11/16/23	Tue 2/27/24	48FS-40 days
50	Interior Partition Walls Steel Studs/Masonry	50 days	Mon 12/4/23	Tue 2/13/24	48FS-30 days
51	Drywall/Painting	50 days	Wed 2/14/24	Tue 4/23/24	50
52	Finishes (ACT Ceiling, Flooring, Cabinets)	55 days	Wed 4/17/24	Wed 7/3/24	51FS-5 days
53	MEP Finish	40 days	Fri 7/5/24	Thu 8/29/24	52
54	Owner Move-In	20 days	Fri 8/30/24	Fri 9/27/24	53
55					
56					
57	Phase Three (Courts/Admin 2nd Floor) Remodel of Existing Facility (Per Phasing Plan)	125 days	Wed 3/13/24	Fri 9/6/24	
58	Asbestos Abatement (Preliminary Estimate)	10 days	Wed 3/13/24	Tue 3/26/24	43
59	Selective Demolition	20 days	Wed 3/27/24	Tue 4/23/24	58
60	MEP Rough-In	30 days	Wed 4/17/24	Wed 5/29/24	59FS-5 days
61	Interior Partition Walls Steel Studs/Masonry	20 days	Wed 4/17/24	Tue 5/14/24	59FS-5 days
62	Drywall/Painting	25 days	Wed 5/15/24	Wed 6/19/24	61
63	Finishes (ACT Ceiling, Flooring, Cabinets)	30 days	Thu 6/13/24	Thu 7/25/24	62FS-5 days
64	MEP Finish/Temp	20 days	Fri 7/26/24	Thu 8/22/24	63

Task		Milestone		External Tasks	
Split		Summary		External Milestone	
Progress		Project Summary		Deadline	

ID	Task Name	Duration	Start	Finish	Predecessors
65	Owner Move-In	10 days	Fri 8/23/24	Fri 9/6/24	64
66					
67					
68	Site Repair 311 Center Ave. - East Parking Lot	24 days	Mon 5/15/23	Fri 6/16/23	
69	Asphalt Demo	2 days	Mon 5/15/23	Tue 5/16/23	
70	Storm Sewer	10 days	Wed 5/17/23	Wed 5/31/23	69
71	Backfill/Grading	5 days	Thu 6/1/23	Wed 6/7/23	70
72	Curb/Gutter	3 days	Thu 6/8/23	Mon 6/12/23	71
73	Asphalt Paving/Striping	4 days	Tue 6/13/23	Fri 6/16/23	72
74					
75	MIS Building Demo/Parking Lot	25 days	Mon 9/9/24	Fri 10/11/24	65
76	Asbestos Abatement/Building Demolition	10 days	Mon 9/9/24	Fri 9/20/24	
77	Storm Sewer/Grading	5 days	Mon 9/23/24	Fri 9/27/24	76
78	Fine Grade/Pave/Stripe	5 days	Mon 9/30/24	Fri 10/4/24	77
79	Landscape Repiars	5 days	Mon 10/7/24	Fri 10/11/24	78

Task		Milestone		External Tasks	
Split		Summary		External Milestone	
Progress		Project Summary		Deadline	

DRAFT AIA® Document A401™ – 2017

Standard Form of Agreement Between Contractor and Subcontractor

AGREEMENT made as of the « » day of « » in the year « »
(In words, indicate day, month and year.)

BETWEEN the Contractor:
(Name, legal status, address and other information)

« Maas Bros. Construction Co., »« Inc. »
« 410 Water Tower Court »
« Watertown, WI 53094 »
« »

and the Subcontractor:
(Name, legal status, address and other information)

« »« »
« »
« »
« »

The Contractor has made a contract for construction (hereinafter, the Prime Contract) dated: « March 8, 2022 »

with the Owner:
(Name, legal status, address and other information)

« Jefferson County »« »
« 311 South Center Avenue »
« Jefferson, WI 53549 »
« »

for the following Project:
(Name, location and detailed description)

« Jefferson County – Courthouse/Sheriff’s Building Renovation and Additions »
« 311 South Center Ave, Jefferson, WI 53549 »
« »

The Prime Contract provides for the furnishing of labor, materials, equipment and services in connection with the construction of the Project. A copy of the Prime Contract, consisting of the Agreement Between Owner and Contractor (from which compensation amounts may be deleted) and the other Contract Documents enumerated therein, has been made available to the Subcontractor.

The Architect for the Project:
(Name, legal status, address and other information)

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

AIA Document A201™-2017, General Conditions of the Contract for Construction, is adopted in this document by reference.



ELECTRONIC COPYING of any portion of this AIA® Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

The Contractor and the Subcontractor agree as follows.



TABLE OF ARTICLES

- 1 THE SUBCONTRACT DOCUMENTS
- 2 MUTUAL RIGHTS AND RESPONSIBILITIES
- 3 CONTRACTOR
- 4 SUBCONTRACTOR
- 5 CHANGES IN THE WORK
- 6 CLAIMS AND DISPUTES
- 7 TERMINATION, SUSPENSION OR ASSIGNMENT OF THE SUBCONTRACT
- 8 THE WORK OF THIS SUBCONTRACT
- 9 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
- 10 SUBCONTRACT SUM
- 11 PAYMENTS
- 12 INSURANCE AND BONDS
- 13 TEMPORARY FACILITIES, SERVICES, EQUIPMENT AND WORKING CONDITIONS
- 14 MISCELLANEOUS PROVISIONS
- 15 ENUMERATION OF SUBCONTRACT DOCUMENTS

ARTICLE 1 THE SUBCONTRACT DOCUMENTS

§ 1.1 The Subcontract Documents consist of (1) this Agreement; (2) the Prime Contract, consisting of the Agreement between the Owner and Contractor and the other Contract Documents enumerated therein; (3) Modifications to the Prime Contract, whether issued before or after the execution of this Agreement, in accordance with the provisions of Article 5; (4) other documents listed in Article 15 of this Agreement; and (5) Modifications to this Subcontract issued after execution of this Agreement, in accordance with the provisions of Article 5. These form the Subcontract, and are as fully a part of the Subcontract as if attached to this Agreement or repeated herein.

§ 1.2 The Subcontract Documents form the Subcontract for Construction. The Subcontract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Subcontract Documents, other than Modifications to the Prime Contract or Modifications to this Subcontract issued subsequent to the execution of this Agreement, appears in Article 15.

§ 1.3 The Subcontract may be amended or modified only by a Modification to this Subcontract. A Modification to this Subcontract is a written amendment to this Agreement signed by both parties, or as otherwise described in, and in accordance with the provisions of, Article 5.

§ 1.4 The Subcontract Documents shall not be construed to create a contractual relationship of any kind (1) between the Architect and the Subcontractor, (2) between the Owner and the Subcontractor, or (3) between any persons or entities other than the Contractor and Subcontractor.

§ 1.5 The Contractor shall make the Subcontract Documents available to the Subcontractor prior to execution of this Agreement, and thereafter, upon request. The Contractor may charge the Subcontractor for the reasonable cost to reproduce the Subcontract Documents provided to the Subcontractor. The Subcontractor, by signing this Agreement, acknowledges that it has independently assured itself that the Prime Contract has been made available to it and

confirms that it has had the opportunity to examine all documents comprising the Prime Contract. The Contractor, in its sole discretion, may withhold any portion of the Prime Contract which contains proprietary and/or pricing information.

ARTICLE 2 MUTUAL RIGHTS AND RESPONSIBILITIES

The Subcontractor shall assume toward the Contractor all obligations and responsibilities that the Contractor, under the Prime Contract, assumes toward the Owner with respect to the Work, unless more stringent requirement in the performance of the Work is provided in this Agreement, in which case this Agreement shall control. The Contractor shall have the benefit of all rights, remedies, and redress against the Subcontractor that the Owner, under the Prime Contract, has against the Contractor insofar as applicable to this Subcontract. Where a provision of such documents is inconsistent with a provision of this Agreement, this Agreement shall govern.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in this Agreement and is referred to throughout the Subcontract Documents as if singular in number. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all Project matters requiring the Contractor's approval or authorization. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall render decisions in a timely manner and in accordance with the Contractor's construction schedule.

§ 3.2 Services Provided by the Contractor

§ 3.2.1 The Contractor shall cooperate with the Subcontractor, subject to Section 4.2, in scheduling and performing the Contractor's Work to avoid conflicts or interference in the Subcontractor's Work and shall review, and expedite written responses to, submittals made by the Subcontractor in accordance with Section 4.2. and Article 5. The Contractor shall provide the Subcontractor with copies of the Contractor's construction schedule and schedule of submittals. The Contractor shall promptly notify the Subcontractor of subsequent changes in the construction and submittal schedules. The Subcontractor shall perform the Work in accordance with such schedules and revisions thereto.

§ 3.2.2 The Contractor shall provide suitable areas for storage of the Subcontractor's materials and equipment during the course of the Work.

§ 3.3 Communications

§ 3.3.1 The Contractor shall make available to the Subcontractor information received from the Owner that affects the performance of this Subcontract and that becomes available to the Contractor subsequent to execution of this Subcontract.

§ 3.3.2 The Contractor shall not give instructions or orders directly to the Subcontractor's employees or to the Subcontractor's Sub-subcontractors or suppliers unless such persons are authorized representatives of the Subcontractor.

§ 3.3.3 If hazardous materials or substances are being used on the site by the Contractor, a subcontractor, or anyone directly or indirectly employed by them (other than the Subcontractor), and they are a type of hazardous material or substance of which an employer is required by law to notify its employees, the Contractor shall, prior to delivery to the Project site or exposure of the Subcontractor's employees to such material or substance, give notice of the chemical composition thereof to the Subcontractor in sufficient detail and time to permit the Subcontractor's compliance with such laws.

§ 3.3.4 The Contractor shall promptly notify the Subcontractor of any fault or defect in the Work under this Subcontract or nonconformity with the Subcontract Documents.

§ 3.4 Claims by the Contractor

§ 3.4.1 Liquidated damages, or any other delay damages for which Contractor is liable to the Owner, if provided for in this Agreement or the Prime Contract, shall be assessed against the Subcontractor to the extent attributable or caused by the Subcontractor or any person or entity for whose acts the Subcontractor may be liable.

§ 3.5 Contractor's Remedies

§ 3.5.1 If the Subcontractor defaults or neglects to carry out the Work in accordance with this Agreement and fails within three (3) days after receipt of written notice from the Contractor to commence and continue correction of such default or neglect with diligence and promptness, the Contractor may, by appropriate Modification, and without prejudice to other remedies the Contractor may have, make good such deficiencies and/or terminate this Subcontract for cause and finish the Work by such means as the Contractor sees fit. The Contractor may deduct the reasonable cost of curing the default, or completing the Work, and any other damages caused thereby, from the payments then or thereafter due the Subcontractor. If the cost to cure the default, complete the Work and/or offset other damages caused thereby exceeds the unpaid balance, then the Subcontractor shall immediately pay the difference to the Contractor.

§ 3.5.2 If reasonable grounds exist indicating the Subcontractor will be in breach of the Subcontract and the Subcontractor fails to give the Contractor evidence satisfactory to the Contractor that the Subcontractor will be able to perform and/or otherwise fulfill its obligations under the Subcontract within three (3) days' notice of the Contractor's demand for such assurances, failure to deliver such assurance shall constitute a default entitling the Contractor to the remedies set forth in this Subcontract.

ARTICLE 4 SUBCONTRACTOR

§ 4.1 General

The Subcontractor is the person or entity identified as such in this Agreement and is referred to throughout the Subcontract Documents as if singular in number. The Subcontractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Subcontractor shall designate in writing a representative who shall have express authority to act on the Subcontractor's behalf with respect to the Project. The term "Subcontractor" means the Subcontractor or the Subcontractor's authorized representative.

§ 4.2 Execution and Progress of the Work

§ 4.2.1 For all Work the Subcontractor intends to subcontract, the Subcontractor shall enter into written agreements with Sub-subcontractors performing portions of the Work. Any written agreement between the Subcontractor and the Sub-subcontractor shall require that; (i) the Sub-subcontractor be bound to the Subcontractor to the same extent the Subcontractor is bound to the Contractor under this Agreement with respect to the work performed by the Sub-subcontractor under the subcontract (e.g. requirements of the Prime Contract and this Agreement with respect to the work of the Sub-subcontractor are incorporated into the subcontract between the Subcontractor and the Sub-subcontractor), (ii) Sub-subcontractor and Subcontractor assume toward the other all obligations and responsibilities that the Contractor and Subcontractor assume toward each other and, Sub-subcontractor and Subcontractor have the benefit of all rights, remedies and redress each against the other that the Contractor and Subcontractor have by virtue of the provisions of this Agreement.

§ 4.2.2 The Subcontractor shall supervise and direct the Subcontractor's Work to avoid conflict, delay in, or interference with the Work of the Contractor, other subcontractors, the Owner, or Separate Contractors. The Subcontractor is responsible for the acts, omissions and performance of any portion of the Work by any sub-subcontractor, material supplier, laborer or other consultant of the Subcontractor of any tier ("Sub-subcontractor").

§ 4.2.3 Submittals

§ 4.2.3.1 The Subcontractor shall submit Shop Drawings, Product Data, Samples, and similar submittals required by the Subcontract Documents or otherwise as requested by the Contractor with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Contractor or other subcontractors.

§ 4.2.3.2 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Subcontractor represents to the Contractor that the Subcontractor has (1) reviewed and approved them; (2) determined and verified materials, field measurements, and field construction criteria related thereto, or will do so; and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Subcontract Documents.

§ 4.2.4 The Subcontractor shall furnish to the Contractor periodic progress reports on the Work of this Subcontract as required by the Contractor, including information on the status of materials and equipment that may be in the course of preparation, manufacture, or transit.

§ 4.2.5 The Subcontractor agrees that the Contractor and the Architect each have the authority to reject Work of the Subcontractor that does not conform to the Prime Contract or the Subcontract Documents. The Architect's decisions on matters relating to aesthetic effect shall be final and binding on the Subcontractor if consistent with the intent expressed in the Prime Contract.

§ 4.2.6 The Subcontractor shall pay for all materials, equipment, and labor used in connection with the performance of this Subcontract, and shall furnish satisfactory evidence, when requested by the Contractor, to verify compliance with the above requirements, including, but not limited to, lien waivers.

§ 4.2.7 The Subcontractor shall take necessary precautions to properly protect the work of the Contractor, Separate Contractors, and other subcontractors from damage caused by operations under this Subcontract.

§ 4.2.8 The Subcontractor shall cooperate with the Contractor, other subcontractors, the Owner, and Separate Contractors whose work might affect the Subcontractor's Work and shall promptly notify the Contractor of any such interference. The Subcontractor shall participate in the preparation of coordinated drawings in areas of congestion, if required by the Contractor or Prime Contract, specifically noting and advising the Contractor of potential conflicts between the Work of the Subcontractor and that of the Contractor, other subcontractors, the Owner, or Separate Contractors.

§ 4.2.9 By executing this Agreement, the Subcontractor represents and warrants that it has made a thorough examination of the Project Site, it is aware of the physical conditions of the Project Site as well as local available labor, weather, transportation, utilities, and storage conditions, and it has located and allowed for all conditions, including concealed or subsurface conditions that may be encountered in the performance of the Work. The Subcontractor further represents and warrants that it has not relied upon any representations made or implied by the Contractor regarding conditions at or affecting the Project Site. The Subcontractor has taken all such conditions into account in arriving at the Subcontract Price. No additional compensation or extension of time shall be allowed because of physical, subsurface, concealed, abnormal, unknown, unforeseen or other conditions at or affecting the Project Site.

§ 4.3 Permits, Fees, Notices, and Compliance with Laws

§ 4.3.1 The Subcontractor shall give notices and comply with applicable laws, statutes, ordinances, codes, rules and regulations, permits and lawful orders of public authorities bearing on performance of the Work of this Subcontract. The Subcontractor shall secure and pay for permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Subcontractor's Work. The Subcontractor represents and warrants that it holds all licenses and approvals required to perform the Work, including municipal and state licenses and contractor registration.

§ 4.3.2 The Subcontractor shall comply with all codes, permits, rules, regulations, laws and ordinances, including those relating to safety, taxes, social security, unemployment compensation, workers' compensation and the environment, applicable to the Work or the Project ("Laws" or "laws").

§ 4.4 Safety Precautions and Procedures

§ 4.4.1 The Subcontractor shall take appropriate safety precautions with respect to performance of this Subcontract. The Subcontractor shall comply with safety measures initiated by the Contractor and the Owner and comply with applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, for the safety of persons and property, in accordance with the requirements of the Prime Contract. The Subcontractor shall notify the Contractor within one (1) day of an injury to an employee or agent of the Subcontractor or property damage which occurred at the site. The Subcontractor shall remedy any damages to the Work or damages to other property caused by or arising from the Work.

§ 4.4.2 If hazardous materials or substances are being used on the site by the Subcontractor, the Subcontractor's Sub-subcontractors, or anyone directly or indirectly employed by them, and they are a type of hazardous material or substance of which an employer is required by law to notify its employees, the Subcontractor shall, prior to delivery to the Project site or exposure of the Contractor, other subcontractors, and other employers on the site to such material or substance, give notice of the chemical composition thereof to the Contractor in sufficient detail and time to permit compliance with the laws by the Contractor, other subcontractors, and other employers on the site.

§ 4.4.3 If reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a hazardous material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Subcontractor, the Subcontractor shall, upon recognizing the condition, immediately stop Work in the affected area and promptly report the condition to the Contractor in writing. When the material or substance has been rendered harmless, the Subcontractor's Work in the affected area shall resume upon written agreement of the Contractor and Subcontractor. The Subcontract Time shall be extended appropriately, and the Subcontract Sum shall be increased in the amount of the Subcontractor's reasonable additional costs of demobilization, delay, and remobilization, which adjustments shall be accomplished as provided in Article 5 of this Agreement.

§ 4.4.4 The Subcontractor shall reimburse the Contractor for the cost and expense the Contractor incurs (1) for remediation of a hazardous material or substance brought to the site and negligently handled by the Subcontractor or (2) where the Subcontractor fails to perform its obligations under Section 4.4.3, except to the extent that the cost and expense are due to the Contractor's fault or negligence.

§ 4.4.5 The Subcontractor shall be solely responsible for the protection, safety, and occupational health of its and its subcontractor's employees, including, but not limited to, maintaining safety equipment, implementing safe work practices, completed required reports and records, inspecting work areas and employee safety equipment, providing necessary personal protective equipment, and instructing its and its subcontractor's employees on all safety and health standards applicable to its work.

§ 4.4.6 The Subcontractor shall provide a properly trained "competent person" as defined by the Occupational Safety & Health Administration (OSHA), whose responsibilities shall be the prevention of accidents. Such competent person shall be the Subcontractor's superintendents or foreman unless the Subcontractor notified the Contractor otherwise, and that person shall be on the Project Site during the performance of the Subcontract Work as required by OSHA regulations.

§ 4.4.7 Training on equipment or related to specific work tasks of the Subcontractor's employees, as required by OSHA, must be documented and made available upon request.

§ 4.4.8 The Subcontractor's responsibilities and indemnifications obligations to the Contractor apply without exception to all claims arising out of or in connection with the Subcontractor's responsibilities under this Article, regardless of whether the Contractor assisted or advised the Subcontractor in fulfilling such responsibilities. The Contractor reserves the right to stop any part of the Work which the Contractor deems unsafe until corrective measures have been taken. Corrective measures initiated by the Contractor do not absolve the Subcontractor of responsibility and costs incurred.

§ 4.5 Cleaning Up

§ 4.5.1 The Subcontractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations performed under this Subcontract. The Subcontractor shall not be held responsible for conditions caused by other contractors or subcontractors. The Subcontractor shall be responsible for the containment and legal disposal of debris resulting from the Subcontract Work from the Worksite as necessary or as directed by the Contractor. In the event the Subcontractor utilizes dumpsters supplied to the Worksite by the Contractor, the Contractor may charge the Subcontractor for the Subcontractor's proportionate share of the dumpster use.

§ 4.5.2 If the Subcontractor fails to clean up as provided in the Subcontract Documents, the Contractor may, after forty-eight (48) hours' notice to the Subcontractor, charge the Subcontractor for the Subcontractor's appropriate share of cleanup costs.

§ 4.6 Warranty

§ 4.6.1 The Subcontractor warrants to the Owner, Architect, and Contractor that materials and equipment furnished under this Subcontract will be of good quality and new unless the Subcontract Documents require or permit otherwise. The Subcontractor further warrants that the Work will conform to the requirements of the Subcontract Documents and will be free from defects, except for those inherent in the quality of the Work the Subcontract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Subcontractor will guarantee the Work for longer of the warranty time period prescribed in the Prime Contract or one (1) year after final completion of the Project and acceptance of all work by the Owner.

The Subcontractor shall repair and/or replace, at the Contractor's sole option, any defective Work and any damages caused thereby promptly upon notice from the Contractor. Said warranty period will be extended for one (1) year from the date of any repair or replacement of the Work within the warranty period. The Subcontractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Subcontractor, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage. If required by the Architect and Contractor, the Subcontractor shall provide satisfactory evidence as to the kind and quality of materials and equipment furnished or to be furnished.

§ 4.6.2 All material, equipment, or other special warranties required by the Subcontract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with the Subcontract Documents.

§ 4.7 Indemnification

§ 4.7.1 To the fullest extent permitted by law, the Subcontractor shall defend, indemnify and hold harmless the Owner, Contractor, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorney's fees, arising out of or resulting from performance of the Subcontractor's Work under this Subcontract (collectively, a "Claim") but only to the extent caused by the Subcontractor's breach of a term or condition of the Subcontract Documents or by the negligent acts or omissions of the Subcontractor, the Subcontractor's Sub-subcontractors, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section 4.7.

§ 4.7.2 In claims against any person or entity indemnified under this Section 4.7 by an employee of the Subcontractor, the Subcontractor's Sub-subcontractors, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 4.7.1 shall not be limited by a limitation on the amount or type of damages, compensation or benefits payable by or for the Subcontractor, or the Subcontractor's Sub-subcontractors under workers' compensation acts, disability benefit acts, or other employee benefit acts.

§ 4.7.3 The Contractor, in its sole discretion, reserves the right to retain, at the Subcontractor's cost and expense, its own attorney to defend it, the Owner, and/or other indemnified parties under the Prime Contractor or this Agreement, against a claim covered by Section 4.7. The Contractor's reservation of such election to defend itself with attorneys of its choice shall not limit the Subcontractor's obligations under Section 4.7.

§ 4.8 Remedies for Nonpayment

If the Contractor does not pay the Subcontractor through no fault of the Subcontractor, within seven days from the time payment should be made as provided in this Agreement, the Subcontractor may, without prejudice to any other available remedies, upon seven additional days' notice to the Contractor, stop the Work of this Subcontract until payment of the amount owing has been received. The Subcontract Sum shall, by appropriate Modification, be increased by the amount of the Subcontractor's reasonable and direct costs of demobilization, delay, and remobilization if permitted under Section 5.4.

§ 4.9 Professional Services Provided by Subcontractor

§ 4.9.1 The Subcontractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Subcontract Documents or unless the Subcontractor is required to provide such services in order to carry out the Subcontractor's responsibilities for its own construction means, methods, techniques, sequences, and procedures. The Subcontractor shall not be required to provide professional services in violation of applicable law.

§ 4.9.2 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Subcontractor by the Subcontract Documents, the Contractor will provide all performance and design criteria that such services must satisfy to the extent the Contractor has received such performance and design criteria from the Owner and Architect under the terms of the Prime Contract.

§ 4.9.3 If professional design services or certifications by a design professional are required because of means, methods, techniques, sequences, or procedures required by the Contractor and related to the Work of the Subcontractor, the Contractor will provide all performance and design criteria that such services must satisfy.

§ 4.9.4 The Subcontractor shall be entitled to rely upon the adequacy, accuracy, and completeness of the performance and design criteria received from the Contractor under this Section 4.9.

§ 4.9.5 The Subcontractor shall cause the professional services performed under this Section 4.9 to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop drawings and other submittals related to the Work designed by such design professional shall bear the professional's written approval when submitted to the Contractor. The Contractor shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals, provided the Contractor has provided to the Subcontractor all performance and design criteria required by this Section 4.9.

ARTICLE 5 CHANGES IN THE WORK

§ 5.1 The Owner may make changes in the Work by issuing Modifications to the Prime Contract. Upon receipt of a Modification to the Prime Contract issued subsequent to the execution of this Agreement, the Contractor shall promptly notify the Subcontractor of such Modification. Unless otherwise directed by the Contractor, the Subcontractor shall not thereafter order materials or perform Work that would be inconsistent with the changes made by the Modification to the Prime Contract.

§ 5.2 The Subcontractor may be ordered in writing by the Contractor, without invalidating this Subcontract, to make changes in the Work within the general scope of this Subcontract consisting of additions, deletions, or other revisions, including those required by Modifications to the Prime Contract issued subsequent to the execution of this Agreement, with the Subcontract Sum and the Subcontract Time adjusted accordingly. The Subcontractor, prior to the commencement of such changed or revised Work, shall submit promptly to the Contractor written copies of a Claim for adjustment to the Subcontract Sum and Subcontract Time for such revised Work in a manner consistent with requirements of the Subcontract Documents. The Subcontractor agrees that the rates it may charge the Contractor shall be similarly limited in accordance with any limitations contained in the Prime Contract on the material or labor rates, overhead and profit that the Contractor may charge the Owner for work performed under a change order or change directive. The Contractor reserves the right to audit the Subcontractor's accounting, cost and all other records relating to the performance and cost of the Work.

§ 5.3 The Subcontractor shall make all Claims promptly to the Contractor for additional cost within seven (7) days of the event giving rise to the claim. Any untimely claim shall be deemed a waiver of that claim. A claim, however, which will affect or become part of a Claim which the Contractor is required to make under the Prime Contract within a specified time period or in a specified manner shall be made in sufficient time to permit the Contractor to satisfy the requirements of the Prime Contract. Such Claims shall be received by the Contractor not less than two working days preceding the time by which the Contractor's Claim must be made. Failure of the Subcontractor to make such a timely Claim shall bind the Subcontractor to the same consequences as those to which the Contractor is bound.

§ 5.4 Notwithstanding anything to the contrary in the Subcontract Documents, the Subcontractor shall not be entitled to damages or increased costs ("Damages") resulting from any delay, suspension, disruption, scheduling, rescheduling or coordination of the Work under the Subcontract or any other work under the Prime Contract (the "Delay"), however caused, unless such Delay was (i) not caused by the Subcontractor and (ii) the Contractor receives Damages for the Delay from the Owner. In such circumstances, however, the Subcontractor shall only be entitled to receive that portion of its Damages for a Delay that the Contractor receives from the Owner. The Contractor is under no obligation to prosecute or otherwise assert or bring a claim against the Owner for a Delay on behalf of the Subcontractor or otherwise.

§ 5.5 If there is a dispute regarding the performance or scope of the Work, or the entitlement to or the amount of any directed or requested change, or any other claim, the Subcontractor shall nevertheless diligently proceed with the performance of the Work, including that portion that may be in dispute, as directed by the Contractor.

ARTICLE 6 CLAIMS AND DISPUTES

§ 6.1 Mediation

§ 6.1.1 Claims, disputes, or other matters in controversy arising out of or related to this Subcontract, except those waived as provided for in Sections 6.4 and 11.3.2, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 6.1.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to this Subcontract and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 6.1.2, the parties may nonetheless proceed to the selection of the arbitrators(s) and agree upon a schedule for later proceedings.

§ 6.1.3 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by mediation pursuant to Section 6.1, the method of binding dispute resolution shall be as follows:

(Check the appropriate box.)

Arbitration pursuant to Section 6.3 of this Agreement

Litigation in a court of competent jurisdiction

Other: *(Specify)*

If the Contractor and Subcontractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.

§ 6.3 Arbitration

§ 6.3.1 If the Contractor and Subcontractor have selected arbitration as the method of binding dispute resolution in Section 6.2, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of this Agreement. The arbitration should be conducted in the place where the Project is located unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Subcontract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 6.3.2 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred under the Prime Contract or by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 6.3.3 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 6.3.4 The foregoing agreement to arbitrate, and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 6.3.5 Consolidation or Joinder

§ 6.3.5.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation; (2) the arbitrations to be consolidated substantially involve common questions of law or fact; and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 6.3.5.2 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of a Claim, dispute, or other matter in question not described in the written consent.

§ 6.3.5.3 The Contractor and Subcontractor grant to any person or entity made a party to an arbitration conducted under this Section 6.3, whether by joinder or consolidation, the same rights of joinder and consolidation as the Contractor and Subcontractor under this Agreement.

§ 6.4 Waiver of Claims for Consequential Damages

The Subcontractor waives claims against the Contractor for consequential damages arising out of or relating to this Subcontract, including without limitation, any consequential damages due to either party's termination in accordance with Article 7. Nothing contained herein shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of this Agreement.

ARTICLE 7 TERMINATION, SUSPENSION OR ASSIGNMENT OF THE SUBCONTRACT

§ 7.1 Termination by the Subcontractor

The Subcontractor may terminate the Subcontract for (1) nonpayment of undisputed amounts due under this Subcontract for 60 days or longer for which the Contractor has received payment, or (2) a material breach by the Contractor. In the event of such termination by the Subcontractor for any reason which is not the fault of the Subcontractor, the Subcontractor's Sub-subcontractors, or their agents or employees or other persons or entities performing portions of the Work under contract with the Subcontractor, the Subcontractor shall be entitled to recover from the Contractor payment for Work executed and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, but no other damages, including consequential damages or overhead and profit on work not executed and costs incurred by reason of such termination.

§ 7.2 Termination by the Contractor

§ 7.2.1 Termination for Cause

If the Subcontractor repeatedly fails or neglects to carry out the Work in accordance with the Subcontract Documents or otherwise to perform in accordance with this Subcontract and fails within a three-day period after receipt of notice to commence and continue correction of such default or neglect with diligence and promptness, the Contractor may, without prejudice to any other remedy the Contractor may have, terminate the Subcontract and finish the Subcontractor's Work by whatever method the Contractor may deem expedient. If the unpaid balance of the Subcontract Sum exceeds the expense of finishing the Subcontractor's Work and other damages incurred by the Contractor and not expressly waived, such excess shall be paid to the Subcontractor. If such expense and damages exceed the unpaid balance of the Subcontract Sum, the Subcontractor shall pay the difference to the Contractor. Upon determination by a court of competent jurisdiction or by an arbitrator that termination of this Agreement was wrongful, then such termination will be deemed converted to a termination for convenience.

§ 7.2.2 Termination for Convenience

§ 7.2.2.1 The Contractor may terminate the Subcontract without cause and for its convenience upon seven (7) days written notice to the Subcontractor. If the Owner terminates the Prime Contract or the Subcontract for the Owner's convenience, the Contractor shall promptly deliver notice to the Subcontractor.

§ 7.2.2.2 In case of such termination for the Owner's or Contractor's convenience, the Subcontractor shall be entitled to receive payment for Work properly executed and proven loss with respect to materials, equipment, tools

and construction equipment and machinery, but no other damages, including overhead, profit, and consequential damages.

§ 7.2.2.3 Upon receipt of notice of termination, the Subcontractor shall

- .1 cease operations as directed by the Contractor in the notice;
- .2 take actions necessary, or that the Contractor may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing Sub-subcontracts and purchase orders and enter into no further Sub-subcontracts and purchase orders.

§ 7.2.2.4 Termination of this Subcontract by the Contractor shall not relieve the Subcontractor from its obligations in connection with the Work performed prior to the termination nor will such termination abrogate any obligations of the Subcontractor under, or rights or remedies afforded to the Contractor by this Subcontract or the Subcontract Documents included without limitation, the Subcontractor's insurance and indemnity obligations.

§ 7.3 Suspension by the Contractor for Convenience

§ 7.3.1 The Contractor may, without cause, order the Subcontractor in writing to suspend, delay, or interrupt the Work of this Subcontract in whole or in part for such period of time as the Contractor may determine. In the event of suspension ordered by the Contractor, the Subcontractor shall be entitled to an equitable adjustment of the Subcontract Time and, if permitted under Section 5.4, the Subcontract Sum.

§ 7.3.2 The Subcontract Time and Subcontract Sum shall be adjusted for increases in accordance with Section 5.4 for cost and time caused by suspension, delay or interruption as described in Section 7.3.1. No adjustment shall be made to the extent that

- .1 performance is, was or would have been so suspended, delayed, or interrupted by another cause for which the Subcontractor is responsible; or
- .2 an equitable adjustment is made or denied under another provision of this Subcontract.

§ 7.4 Assignment of the Subcontract

§ 7.4.1 The Contractor may assign the Subcontract, in whole or in part. Further, in the event the Owner terminates the Prime Contract for cause, this Subcontract may be assigned the Owner if permitted by the Prime Contract and provided the Owner accepts the assignment by notifying the Contractor and Subcontractor.

§ 7.4.2 Without the Contractor's written consent, the Subcontractor shall not assign the Subcontract or Work of this Subcontract, subcontract the whole of this Subcontract, or subcontract portions of this Subcontract.

ARTICLE 8 THE WORK OF THIS SUBCONTRACT

§ 8.1 The Subcontractor shall execute the following portion of the Work described in the Subcontract Documents, including all labor, materials, equipment, services and other items required to complete such portion of the Work, except to the extent specifically indicated in the Subcontract Documents to be the responsibility of others. *(Insert a precise description of the Work of this Subcontract, referring where appropriate to numbers of Drawings, sections of Specifications and pages of Addenda, Modifications, and accepted alternates.)*

§ 8.2 The Subcontractor shall perform the Work in accordance with the Subcontract Documents, the details of which are of the essence. The Subcontractor hereby assumes the entire responsibility and liability for all Work until completion and final acceptance of the Work by the Owner. In the event of any loss, damage or destruction thereof from any cause, the Subcontractor shall be liable thereof, and shall repair, rebuild and make good said loss, damage or destruction at the Subcontractor's cost.

§ 8.3 If the Subcontractor is performing design/build services, the Subcontractor shall coordinate its drawings and other instruments of service with those of the Project Architect and other appropriate or applicable design professionals and shall advise the architects or design professionals and the Contractor of any potential conflict. The Subcontractor grants to the Contractor a license to use and reproduce the Subcontractor's design/build documents for purposes of completing, constructing, using, maintaining and operating the Project. The Contractor has the authority to grant or assign similar licenses to the Owner, the architects and/or design professionals. The

Subcontractor's design/build document shall comply with any requirements of the Project Architect and/or other design professionals and with all applicable Laws.

ARTICLE 9 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 9.1 The date of commencement of the Subcontractor's Work, shall be:

(Check one of the following boxes.)

- [] The date of this Agreement.
- [] A date set forth in a notice to proceed issued by the Contractor.
- [] Established as follows:
(Insert a date or a means to determine the date of commencement of the Subcontractor's Work.)
- []

If a date of commencement of the Subcontractor's Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 9.2 Subcontract Time

§ 9.2.1 The Subcontract Time is the period of time, including authorized adjustments, allotted in the Subcontract Documents for Substantial Completion of the Work described in the Subcontract Documents. The Subcontract Time shall be measured from the date of commencement of the Subcontractor's Work.

§ 9.2.2 Subject to adjustments of the Subcontract Time as provided in the Subcontract Documents, the Subcontractor shall achieve substantial completion of the Subcontractor's Work:

(Check one of the following boxes and complete the necessary information.)

- [] Not later than [] ([]) calendar days from the date of commencement of the Subcontractor's Work.
- [] By the following date: []

§ 9.2.3 Subject to adjustments of the Subcontract Time as provided in the Subcontract Documents, if portions of the Subcontractor's Work are to be completed prior to substantial completion of the Subcontractor's Work, then the Subcontractor shall achieve earlier substantial completion of such portions by the following dates.

(List all portions of the Subcontractor's Work required to achieve substantial completion of the Subcontractor's Portion of the Work.)

Portion of Work

Substantial Completion

§ 9.2.4 If the Subcontractor fails to achieve substantial completion as provided in this Section 9.2, liquidated damages, if any, shall be assessed as set forth in Section 3.4.

§ 9.3 With respect to the obligations of both the Contractor and the Subcontractor, time is of the essence of this Subcontract. The Subcontractor shall, at its own cost and expense, increase its labor or otherwise accelerate performance if directed by the Contractor or otherwise required to maintain the scheduled progress of the Work or to achieve Project milestones/completion dates. Any Work necessary to be performed after regular working hours, on Sundays or Legal Holidays, for which the Subcontractor is responsible shall be performed without additional expense to the Contractor or Owner.

§ 9.4 No extension of time will be valid without the Contractor's written consent..

ARTICLE 10 SUBCONTRACT SUM

§ 10.1 The Contractor shall pay the Subcontractor the Subcontract Sum in current funds for the Subcontractor’s performance of the Subcontract. The Subcontract Sum shall be « » (\$ « »), subject to additions and deductions as provided in the Subcontract Documents.

§ 10.2 Alternates

§ 10.2.1 Alternates, if any, included in the Subcontract Sum:

Item	Price

§ 10.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Contractor following execution of this Agreement. Upon acceptance, the Contractor shall issue a Modification to this Subcontract: *(Insert below each alternate and the conditions that must be met for the Contractor to accept the alternate.)*

Item	Price	Conditions for Acceptance

§ 10.3 Unit prices, if any:

(Identify and state the unit price, and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price Per Unit (\$0.00)

§ 10.4 Allowances, if any, included in the Subcontract Sum:

(Identify allowance and state exclusions, if any, from the allowance price.)

Item	Price

ARTICLE 11 PAYMENTS

§ 11.1 Progress Payments

§ 11.1.1 Based upon Applications for Payment submitted to the Contractor by the Subcontractor, corresponding to Applications for Payment submitted by the Contractor to the Architect, and Certificates for Payment issued by the Architect, the Contractor shall make progress payments on account of the Subcontract Sum to the Subcontractor as provided below and elsewhere in the Subcontract Documents.

§ 11.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

« »

§ 11.1.3 Provided an Application for Payment is received by the Contractor not later than the twenty-fifth « 25th » day of a month, the Contractor shall include the Subcontractor’s Work covered by that application in the next Application for Payment which the Contractor is entitled to submit to the Architect. The Contractor may delay payment to the Subcontractor until the Contractor receives payment from the Owner for the Work for which the Subcontractor seeks payment. The Contractor shall pay the Subcontractor each progress payment no later than seven calendar days after the Contractor receives payment from the Owner for that portion of the Subcontract Work for which payment is sought. The Subcontractor shall not be entitled to any interest for any delay of payment resulting from failure of the Owner to timely pay the Contractor for that portion of the Subcontract Work for which payment is sought.

§ 11.1.4 If the Subcontractor’s Application for Payment is received by the Contractor after the application date fixed above, the Subcontractor’s Work covered by it shall be included by the Contractor in the next Application for Payment submitted to the Architect.

§ 11.1.5 The Subcontractor shall submit to the Contractor a schedule of values prior to submitting the Subcontractor’s first Application for Payment. Each subsequent Application for Payment shall be based upon the

most recent schedule of values submitted by the Subcontractor in accordance with the Subcontract Documents. The schedule of values shall allocate the entire Subcontract Sum among the various portions of the Subcontractor's Work and be prepared in such form and supported by such data to substantiate its accuracy as the Contractor may require, and unless objected to by the Contractor, shall be used as a basis for reviewing the Subcontractor's Applications for Payment.

§ 11.1.6 Applications for Payment submitted by the Subcontractor shall indicate the percentage of completion of each portion of the Subcontractor's Work as of the end of the period covered by the Application for Payment. In addition, notwithstanding anything in the Subcontract Documents to the contrary, in exchange for payment, the Subcontractor shall provide (i) all documents requested by the Owner or the Contractor with respect to such payments; (ii) releases and lien waivers from the Subcontractor and its Sub-Subcontractors for all Work through the date of the payment request; and (iii) a sworn statement identifying all Sub-subcontractors, the contract amounts and balances under the subcontracts with each and which Sub-subcontractors are to be paid from the funds being requested in the application for payment, and any other documents requested by the Contractor to substantiate the sworn statement.

§ 11.1.6.1 Notwithstanding anything in the Subcontract Documents to the contrary, the Contractor may withhold any payment in whole or in part because of (i) the Subcontractor's failure to comply with a term or condition of the Subcontract Documents; (ii) defective, incomplete or untimely Work; (iii) withholding of payments from the Contractor by the Owner due to an act, omission or breach of the Subcontractor; (iv) third party claims, including, but not limited to, threatened or actual lien or bond claims by a Sub-subcontractor; (v) discrepancies in Subcontractor's sworn statements; or (vi) the Subcontractor's failure upon demand to provide the Contractor with evidence satisfactory to the Contractor of the Subcontractor's compliance with its payment obligations under the Subcontract Documents. The Contractor shall have the right to use any withheld money to cure the reason for the withholding and any damages caused thereby.

§ 11.1.6.2 Notwithstanding anything in the Subcontract Documents to the contrary, the Subcontractor shall have the obligation to promptly pay its Sub-subcontractors and, with respect to lower tier Sub-subcontractors, to ensure that such Sub-subcontractors are paid. Should a lien be placed on the Project by a Sub-subcontractor of any tier, then the Subcontractor shall, at the Subcontractor's cost and expense, discharge the lien of record within seven (7) days of the Contractor's demand.

§ 11.1.7 Subject to the provisions of the Subcontract Documents, the amount of each progress payment shall be computed as follows:

§ 11.1.7.1 The amount of each progress payment shall first include:

- .1 That portion of the Subcontract Sum properly allocable to completed Work;
- .2 That portion of the Subcontract Sum properly allocable to materials and equipment delivered and suitably stored at the site by the Subcontractor for subsequent incorporation in the Subcontractor's Work or, if approved by the Contractor, suitably stored off the site at a location agreed upon in writing; and
- .3 The amount, if any, for changes in the Work that are not in dispute and have been properly authorized by the Contractor, to the same extent provided in the Prime Contract, pending a final determination by the Contractor of the cost of changes in the Subcontractor's Work, even though the Subcontract Sum has not yet been adjusted.

§ 11.1.7.2 The amount of each progress payment shall then be reduced by:

- .1 The aggregate of previous payments made by the Contractor;
- .2 The amount, if any, for Work that remains uncorrected and for which the Contractor has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201-2017 for a cause that is the fault of the Subcontractor;
- .3 For Work performed or defects discovered since the last payment application, any amount for which the Contractor may withhold payment in whole or in part, as provided in Article 9 of AIA Document A201-2017, for a cause that is the fault of the Subcontractor; and
- .4 Retainage withheld pursuant to Section 11.1.8 of this Agreement.

§ 11.1.8 Retainage

§ 11.1.8.1 For each progress payment made prior to substantial completion of the Subcontractor's Work, the Contractor may withhold the following amounts as retainage from the payment otherwise due:
(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

« 5% »

§ 11.1.8.1.1 The following items are not subject to retainage:
(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

« »

§ 11.1.8.2 Reduction or limitation of retainage, if any, shall be as follows:
(If the retainage established in Section 11.1.8.1 is to be modified prior to substantial completion of the entire Work, including modifications for substantial completion of portions of the Subcontractor's Work as provided in Section 9.2.3, insert provisions for such modification.)

« »

§ 11.1.9 Upon the partial or entire disapproval by the Contractor of the Subcontractor's Application for Payment, the Contractor shall provide notice to the Subcontractor. If the Subcontractor disputes the Contractor's decision regarding a Subcontractor's Application for Payment in whole or in part, the Subcontractor may submit a Claim in accordance with Article 6. If the basis for the disapproval has been remedied, the Subcontractor shall be paid the amounts withheld. The Subcontractor shall timely proceed with the Work pending resolution of the reason for or amount of the withholding and the Contractor shall continue to perform its obligations under the Subcontract.

§ 11.1.10 Provided the Contractor has fulfilled its payment obligations under the Subcontract Documents, the Subcontractor shall defend and indemnify the Contractor and Owner from all loss, liability, damage, or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any of the Subcontractor's subcontractors, suppliers, or vendors of any tier. Upon receipt of notice of such lien claim or other claim for payment, the Contractor shall notify the Subcontractor. If approved by the applicable court, when required, the Subcontractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 11.1.11 No partial or final payment to the Subcontractor shall constitute approval or acceptance of the Work. The Subcontractor's receipt of payments from the Contractor shall not be a condition precedent to the Subcontractor's payment to its subcontractors and material suppliers. The Subcontractor is responsible to the Contractor for the acts or omissions of the Subcontractor's subcontractors and suppliers of any tier.

§ 11.1.12 With respect to any portion of the Subcontract Sum, the Contractor has the right, but no obligation, to issue joint checks to the Subcontractor and any supplier or subcontractor of the Subcontractor or make payment directly to a supplier or subcontractor of the Subcontractor. Any such payments shall be deducted from the Subcontract Sum. The Subcontractor shall pay the Contractor those portions of the Contractor payments under this section that are more than the Subcontract Sum. The Contractor has the right to make direct contact with a Sub-subcontractor or any other person or entity regarding claims/demands of that Sub-subcontractor or other person or entity.

§ 11.2 Substantial Completion

When the Subcontractor's Work or a designated portion thereof is substantially complete and in accordance with the requirements of the Prime Contract, the Contractor shall, upon application by the Subcontractor, make prompt Application for Payment for such Work. Within 30 days following issuance by the Architect of the Certificate for Payment covering such substantially completed Work, the Contractor shall, to the full extent allowed in the Prime Contract, make payment to the Subcontractor, deducting any portion of the funds for the Subcontractor's Work withheld in accordance with the certificate to cover costs of items to be completed or corrected by the Subcontractor. Such payment to the Subcontractor shall be the entire unpaid balance of the Subcontract Sum if a full release of retainage is allowed under the Prime Contract for the Subcontractor's Work prior to the completion of the entire Project. If the Prime Contract does not allow for a full release of retainage, then such payment shall be an amount which, when added to previous payments to the Subcontractor, will reduce the retainage on the Subcontractor's

substantially completed Work to the same percentage of retainage as that on the Contractor's Work covered by the certificate.

§ 11.3 Final Payment

§ 11.3.1 Final payment, constituting the entire unpaid balance of the Subcontract Sum, shall be made by the Contractor to the Subcontractor when the Subcontractor's Work is fully performed in accordance with the requirements of the Subcontract Documents, the Architect has issued a Certificate for Payment covering the Subcontractor's completed Work and the Contractor has received final payment for such Work from the Owner. If, for any cause which is not the fault of the Subcontractor, the Contractor does not pay the Subcontractor within seven days after receipt of payment from the Owner, final payment to the Subcontractor shall be made upon demand. Notwithstanding the foregoing, if retainage is withheld by the Owner from the Contractor for any portion of the Work, the final payment to the Subcontractor shall be reduced by the amount of the retainage allocable to the Subcontractor's portion of the Work, which amount shall not be due until three (3) working days after the Contractor's receipt of such retainage from the Owner.

(Insert provisions for earlier final payment to the Subcontractor, if applicable.)

« »

§ 11.3.2 In exchange for final payment, the Subcontractor shall submit evidence satisfactory to the Contractor that all payrolls, bills for materials and equipment, and all known indebtedness connected with the Subcontractor's Work have been satisfied, including, but not limited to, final lien waivers. Acceptance of final payment by the Subcontractor shall constitute a waiver of claims by the Subcontractor, except those previously made in writing and identified by the Subcontractor as unsettled at the time of final Application for Payment.

§ 11.4 Interest

Payments due and unpaid under this Subcontract shall bear interest from the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

(Insert rate of interest agreed upon, if any.)

« » % « »

ARTICLE 12 INSURANCE AND BONDS

§ 12.1 Subcontractor's Required Insurance Coverage

§ 12.1.1 The Subcontractor shall purchase and maintain the following types and limits of insurance, from a company or companies lawfully authorized to issue insurance in the jurisdiction where the Project is located, as will protect the Subcontractor from claims that may arise out of, or result from, the Subcontractor's operations and completed operations under the Subcontract. If the Prime Contract requires larger limits or additional coverages, the Contractor reserves the right to require the Subcontractor to comply, at the Subcontractor's expense, with such larger limits. *(Specify each type of insurance, such as commercial general liability, automobile, worker's compensation, employers' liability, professional liability, and pollution, required to be carried by the Subcontractor, the limits of coverage for each type of insurance, and any other pertinent requirements.)*

Type of Insurance	Limits	Other Pertinent Requirements
Commercial General Liability	· \$1,000,000 Per Occurrence · \$2,000,000 Annual or General Aggregate · \$2,000,000 Products/Completed Operations Aggregate	· "Per Project" Aggregate Endorsement · Waiver of Subrogation · Maintained on an Occurrence Basis
Automobile Insurance	\$1,000,000 Per Occurrence	· Coverage Applies to "Any Auto" or to "Owned/Non-Owned/Hired Autos" · Waiver of Subrogation · Maintained on an Occurrence Basis

Workers Compensation & Employers Liability	Statutory Limits	<ul style="list-style-type: none"> ·Waiver of Subrogation ·Stop Gap Coverage (if working in Monopolistic states) ·Broad Form All States Endorsement (if working outside Wisconsin) ·Maintained on an Occurrence Basis
Excess/Umbrella Liability	\$5,000,000 Per Occurrence and Aggregate	<ul style="list-style-type: none"> ·Maintained two (2) years after final completion of the Project ·Follow Form terms and conditions to the underlying policies: (1) Commercial General Liability (2) Business Auto (3) Employers Liability ·Maintained on an Occurrence Basis
Professional Liability (if Subcontractor is performing professional services)	\$1,000,000 Per Occurrence and Aggregate	Includes contractual liability retroactive to the earlier date of the Subcontract or the Commencement of Work Shall provide “errors and omissions” coverage covering negligent acts, errors and omissions in Subcontractors and its Subcontractors’ professional obligations under this Subcontract

§ 12.1.2 Coverages, written on an occurrence basis, shall be maintained without interruption from the date of commencement of the Subcontractor’s Work until the date of final payment and termination of any coverage required to be maintained after final payment to the Subcontractor, and, with respect to the Subcontractor’s completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Prime Contract.

§ 12.1.3 If professional services are required under Section 4.9, the Subcontractor shall provide the professional liability insurance coverage required under this Section 12.1 for the following period after completion of the Work:

« Two (2) years »

§ 12.1.4 **Certificates of Insurance.** The Subcontractor shall provide certificates of insurance acceptable to the Contractor evidencing compliance with the requirements in this Article 12 at the following times: (1) prior to commencement of the Subcontractor’s Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Contractor’s written request. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the time required in this Article 12. The certificates shall show the Contractor and the Owner as additional insureds on the Subcontractor’s Commercial General Liability and any excess or umbrella liability policy. Failure of the Contractor to demand such certificates or other evidence of the Subcontractor’s full compliance with required insurance coverages and limits, or failure of the Contractor to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of the Subcontractor’s obligation to maintain insurance required by this Agreement.

§ 12.1.5 **Deductibles and Self-Insured Retentions.** The Subcontractor shall disclose to the Contractor any deductible or self-insured retentions applicable to any insurance required to be provided by the Subcontractor.

§ 12.1.6 Additional Insured Obligations. To the fullest extent permitted by law, the Subcontractor shall cause its commercial general liability coverage to include: (1) the Contractor, the Owner, the Architect, and the Architect's consultants as additional insureds for claims caused in whole or in part by the Subcontractor's negligent acts or omissions during the Subcontractor's operations; and (2) the Contractor and Owner as additional insureds for claims caused in whole or in part by the Subcontractor's negligent acts or omissions for which loss occurs during the Subcontractor's completed operations. The additional insured coverage shall be primary and non-contributory to any of the Contractor's and Owner's general liability insurance policies and shall apply to both ongoing and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's consultants, CG 20 32 07 04.

§ 12.1.7 Notice of Cancellation or Change in Coverage. Within thirty (30) days of the date the Subcontractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Subcontract Documents, the Subcontractor shall provide notice to the Contractor of such impending or actual cancellation or expiration. Upon receipt of notice from the Subcontractor, the Contractor shall, unless the lapse in coverage arises from an act or omission of the Contractor, have the right to suspend the Work in accordance with this Agreement until the lapse in coverage has been cured by the procurement of replacement coverage by the Subcontractor. The furnishing of notice by the Subcontractor shall not relieve the Subcontractor of any contractual obligation to provide any required coverage.

§ 12.2 Subcontractor's Required Performance Bond and Payment Bond

§ 12.2.1 The Subcontractor shall provide surety bonds, from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located, as follows:
(Specify type and penal sum of bonds.)

Type	Penal Sum
Payment Bond	If selected at the Contractor's option, the Subcontractor will be required to provide a Payment Bond for 100% of the Subcontract Sum. Should the Subcontract Sum change during the project, the bonded amount will change to reflect the Subcontract Sum.
Performance Bond	If selected at the Contractor's option, the Subcontractor will be required to provide a Performance Bond for 100% of the Subcontract Sum. Should the Subcontract Sum change during the project, the bonded amount will change to reflect the Subcontract Sum.

Payment and Performance Bonds shall be AIA Document A312™, Payment Bond and Performance Bond, or contain provisions identical to AIA Document A312™, current as of the date of this Agreement.

§ 12.2.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations under this Agreement, the Subcontractor shall promptly furnish a copy of the bonds or shall permit a copy to be made.

§ 12.3 Contractor's Insurance and Bond Obligations

§ 12.3.1 The Contractor shall promptly, upon request of the Subcontractor, furnish a copy or permit a copy to be made of any bond covering payment of obligations arising under the Subcontract.

§ 12.4 Property Insurance

§ 12.4.1 When requested in writing, the Contractor shall provide the Subcontractor with copies of the property and equipment policies in effect for the Project, to the extent copies of the policies are available to the Contractor.

§ 12.5 Waivers of Subrogation

The Contractor and Subcontractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other, and (2) the Owner, the Architect, the Architect's consultants, and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and

employees for damages caused by fire or other causes of loss to the extent those losses are covered by property insurance provided under the Prime Contract or other property insurance applicable to the Work or to property at or adjacent to the Project site, except such rights as they may have to proceeds of such insurance held by the Owner as a fiduciary. The Subcontractor shall require similar written waivers in favor of the individuals and entities enumerated herein from the Subcontractor's Sub-subcontractors, agents, and employees. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this Section 12.5 shall not prohibit this waiver of subrogation, which shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the property damaged. This waiver of subrogation is only applicable to the amount covered by insurance. Any deductibles or non-insurable costs are not subject to a waiver of subrogation and is open for litigation or arbitration to determine who should pay that portion not covered by insurance.

ARTICLE 13 TEMPORARY FACILITIES, SERVICES, EQUIPMENT AND WORKING CONDITIONS

§ 13.1 The Contractor shall furnish and make the Contractor's temporary facilities and services available to the Subcontractor at no cost, except as noted below:

« »

§ 13.2 The Contractor's equipment will be available to the Subcontractor only at the Contractor's discretion and on mutually satisfactory terms, except as noted below:

« In the event the Subcontractor or Sub-subcontractor, by rental, loan or otherwise, makes use of any of the Owner's or Contractor's equipment, scaffolding, or other appliances, Subcontractor shall be deemed to agree, by signing this Subcontract, that, prior to such use, it will ensure that the persons using such items are properly trained and, if necessary, licensed to use such items and that it (i) accepts such items in their "as is" conditions; and (ii) will use such items at the sole risk of the person using such items. Subcontractor shall defend, hold harmless and indemnify the Contractor and its officers, directors, employees, insurers, agents, successors and assigns from and against all claims, fines, penalties, damages, losses and expenses, including attorneys' fees, of every nature and of every kind arising from or incidental to Subcontractor's or its Sub-subcontractors' use thereof, regardless of the cause of the claim, fine, penalty, damage or loss. »

§ 13.3 Specific working conditions as noted below:

(Insert any specific arrangements or requirements concerning working conditions and labor matters applicable to the Subcontractor's Work.)

« The Subcontractor agrees that any OSHA or other governmental agency fines, fees or assessments imposed on the Contractor due to negligence or code violations of the Subcontractor or its subcontractors shall be reimbursed by the Subcontractor to the Contractor in full. »

ARTICLE 14 MISCELLANEOUS PROVISIONS

§ 14.1 Where reference is made in this Subcontract to a provision of another Subcontract Document, the reference refers to that provision as amended or supplemented by other provisions of the Subcontract Documents.

§ 14.2 The Contractor's representative:

(Name, address, email address and other information)

« »

« »

« »

« »

« »

« »

§ 14.3 The Subcontractor's representative:

(Name, address, email address and other information)

« »

<< >>
<< >>
<< >>
<< >>
<< >>

§ 14.4 Notice

§ 14.4.1 Except as otherwise provided in Section 14.4.2, where the Subcontract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic notice is set forth in Section 14.4.3.

§ 14.4.2 Notice of Claims shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 14.4.3 Notice in electronic format, pursuant to Section 14.4.1, may be given in accordance with AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

(If other than in accordance with AIA Document E203™–2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

<< >>

§ 14.5 Neither the Contractor's nor the Subcontractor's representative shall be changed without ten days' prior notice to the other party.

§ 14.6 The invalidity of any provision of the Subcontract Documents shall not invalidate the Subcontract or its remaining provisions. If it is determined that any provision of the Subcontract violates any law or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case, the Subcontract shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Subcontract.

§ 14.7 The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 14.7.1 Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

§ 14.8 The Contractor and/or Owner shall be permitted to occupy and/or use any portion of the Work that has been either partially or fully completed by the Subcontractor before final inspection or final acceptance thereof by the Owner and the Contractor. Such use and/or occupation shall not relieve the Subcontractor of its responsibility under the Subcontract Documents for that portion of the Work nor of its obligation to make good, at its own expense, any defect in materials and/or workmanship of the Work.

§ 14.9 The Subcontractor shall pay all attorney fees and costs the Contractor may incur in (i) enforcing any term or condition of this Agreement in connection with any demand or action commenced by or involving any creditor of the Subcontractor, including any sub-subcontractor or material supplier that contributed labor or materials for the Work (ii) enforcing any term or condition of this Agreement in connection with the defense or settlement of any claim or demand of the Subcontractor or its subcontractor or arising from the Subcontractor's breach of the Subcontract or, (iii) in connection with the successful defense or settlement of any claim or demand of the

Subcontractor.

§ 14.10 This Agreement shall be binding upon and inure to the benefit of both parties and their respective heirs, successors and assigns. This Agreement represents the full and final agreement of the parties and supersedes all prior written and oral communications between the parties. The terms of this Agreement are to be interpreted and applied to the fullest extent permitted by law. The partial or complete invalidity of one or more provisions or portion of this Agreement shall not affect the validity or continuing force and effect of any other provision or portion thereof. The failure of the Contractor, in any one or more instances, to insist upon the performances of any of the terms, covenants or conditions of this Agreement, or to exercise any right granted herein, shall not be construed as a waiver or relinquishment of such term, covenant, condition or right.

§ 14.11 In no event shall the Contractor be liable to the Subcontractor for, and the Subcontractor waives claims for, any consequential or incidental damages, including but not limited to, lost profits on Work not executed, lost profits/opportunity costs and inefficiencies in the performance of the Work, arising from, relating to or incidental to the performance, coordination, or suspension of the Work or the Subcontract, including a breach or the termination thereof, or the Project.

ARTICLE 15 ENUMERATION OF SUBCONTRACT DOCUMENTS

§ 15.1 This Agreement is comprised of the following documents:

- .1 AIA Document A401™–2017, Standard Form Agreement Between Contractor and Subcontractor, as modified by the parties;
- .2 Prime Agreement between the Owner and Contractor, including all exhibits thereto;
- .3 AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, if not included in the Prime Agreement, dated as indicated below:
(Insert the date of the E203–2013 incorporated into this Agreement.)

« »

- .4 Other Exhibits incorporated into this Agreement:
(Clearly identify any other exhibits incorporated into this Agreement.)

« Exhibit A – Subcontract Agreement – Insurance Requirements
Exhibit B – Safety & Health Orientation »

- .5 Other documents:
(List other documents, if any, forming part of the Agreement.)

« »

This Agreement entered into as of the day and year first written above.

CONTRACTOR *(Signature)*

« »« »

(Printed name and title)

SUBCONTRACTOR *(Signature)*

« »« »

(Printed name and title)

Subcontractor Agreement – Insurance Requirements

Exhibit A Insurance Requirements

Subcontractors must comply with the following minimum insurance limits, coverages and requirements as shown below or, if higher, the requirements set forth by the Owner.

Limits	
Commercial General Liability	<ul style="list-style-type: none"> • Coverage Limits of : <ul style="list-style-type: none"> \$ 1,000,000 Per Occurrence \$ 2,000,000 Annual or General Aggregate \$ 2,000,000 Products/ Completed Operations Aggregate
Business Auto	<ul style="list-style-type: none"> • Liability Coverage Limits: <ul style="list-style-type: none"> \$ 1,000,000 Combined Single Limit
Umbrella	<ul style="list-style-type: none"> • Coverage Limits of \$ 5,000,000
Workers Compensation & Employers Liability	<ul style="list-style-type: none"> • Employer Liability Limits: <ul style="list-style-type: none"> \$ 100,000 Bodily Injury by Accident/Each Accident \$ 500,000 Bodily Injury by Disease/Policy Limit \$ 100,000 Bodily Injury by Disease/Each Employee
Professional Liability <i>*If providing professional services</i>	<ul style="list-style-type: none"> • Coverage Limits of: <ul style="list-style-type: none"> \$1,000,000 Per Occurrence \$1,000,000 General Aggregate

Coverage	
Commercial General Liability	<ul style="list-style-type: none"> • Maas Brothers, Owner, and any other person or entity required under the Prime Contract named Additional Insured – including Ongoing & Completed Operations (CG 2010 07 04 and CG 2037 07 04 or equivalent) • Primary & Non-contributory wording with respects to Additional Insured status • “Per Project” Aggregate Endorsement • Waiver of Subrogation
Business Auto	<ul style="list-style-type: none"> • Coverage Applies to “Any Auto” or to “Owned/Non-Owned/Hired Autos” • Waiver of Subrogation
Workers Compensation & Employers Liability	<ul style="list-style-type: none"> • Waiver of Subrogation • Stop Gap Coverage (if working in Monopolistic states) • Broad Form All States Endorsement (if working outside of Wisconsin)
Professional Liability	<ul style="list-style-type: none"> • Required when performing professional services as determined by Owner and Contractor • Maintained for a period of two (2) years after Substantial Completion • Errors & Omissions Coverage
Umbrella	<ul style="list-style-type: none"> • Follow Form terms and conditions to the underlying policies: <ol style="list-style-type: none"> 1. Commercial General Liability 2. Business Auto 3. Employers Liability
Carrier Best Rating	<ul style="list-style-type: none"> • Best Rating of not less than “A”
Notice of Cancellation	<ul style="list-style-type: none"> • 30 Day Notice of Cancellation, Non-Renewal or Material Change except for non-payment of premium (10 Days)

Certificates of Insurance, or copies of policies if required by Contractor, shall be furnished to the Contractor before performance of any work and/or release of any funds from Contractor in connection with the work. If additional limits or coverage’s are required by the agreement between Owner and Contractor, Subcontractor will obtain such coverage at no additional cost.

This form provides a basis for the safety requirements on Maas Brothers Construction Co., Inc. jobsites. This information should not be considered all-inclusive, and along with these requirements, all governing safety codes and project policies must be followed. All personnel onsite need to cooperate to ensure everyone goes home in a safe and healthy manner.

- **Overall Safety Responsibility:** All unsafe acts, conditions, or behaviors must be immediately reported first to the individuals involved and then to the Maas Brothers superintendent
- **Competent Person:** Each contractor must designate a Competent Person (as defined by OSHA) that must be onsite when its employees are working.
- **Training:** Equipment or hazard-specific training must be documented and made available upon request, per OSHA requirements
- **Hazard Elimination:** If you create a hazard, it is your responsibility to safeguard that hazard. If you take down, remove, or bypass another contractor's safety control measures, it is your responsibility to protect yourself and/or others at that time.
- **Hazardous Areas:** Must be properly barricaded and maintained, by the contractor creating the hazard, to restrict access by others not involved in the work.
- **Site Access/Work Hours:** General work hours and personnel sign-in requirements will be on a per-project basis. Coordinate after work hours with the Maas Brothers superintendent. At no time shall there be solo work onsite.
- **Parking Restrictions:** Parking is allowed in designated areas only. Parking may change as the job progresses.
- **Emergency Procedures:** The Maas Brothers field office is the emergency meeting area unless designated otherwise. Employees are reminded to "keep stairs and pathways clean" for emergency egress. Storm shelters will be designated by the Maas Brothers superintendent.
- **Incident Reporting:** Any incident, near hit, or property damage must be reported to the Maas Brothers superintendent, regardless of its perceived severity.
- **Maas Brothers Tools/Equipment:** No equipment, tools, or supplies owned by Maas Brothers are to be used without authorization of the Maas Brothers superintendent
- **Security:** Site security will be developed on a per-project basis. Security of tools, equipment, and supplies will be the responsibility of each contractor.
- **Deliveries/Storage:** Must be kept clean, orderly and coordinated with the Maas Brothers superintendent.
- **Flammable and Combustible Material:** Must be stored in proper containers and in designated areas, not throughout the building.
- **Safety Data Sheets (SDS):** The contractor providing materials to the jobsite is responsible for providing SDS upon request.
- **Personal Conduct:** Sexual or other forms of harassment, horseplay, intimidation, violence, and/or threats will not be tolerated. This includes towards the general public and to those working on site.
- **Drugs and Alcohol:** Will not be tolerated. No one under the influence of any amounts of alcohol or illegal drugs is allowed on site.
- **Excavations:** Excavations are to be protected based on soil type per OSHA requirements. Inspections must be completed as necessary by the responsible contractor.
- **Fall Protection:** All work requiring fall protection must comply with by OSHA regulations. A *Roof Access Permit* is to be completed by the contractor performing work requiring fall protection, except for work on scaffold, scissor lifts, or aerial lifts.
- **Floor Holes:** The contractor creating floor holes $\geq 2"$ are responsible for covering, securing and labeling the hole.
- **Aerial & Scissor Lifts:** A full personal fall arrest system must be utilized at all times while in boom lifts and available for use in scissor lifts.
- **Forklifts (PIT) & Other Heavy Equipment:** All personnel must have appropriate training. **Seat belts must be worn at all times.**
- **Head Protection:** Hard hats shall be worn 100% of the time.
- **Eye Protection:** ANSI Z87.1 eyewear with side shield must be worn 100% of the time. Dark eyewear shall not be worn when working indoors.
- **Hearing Protection:** Hearing protection must be used when sound levels are at or above 85 dBA.
- **Hi-Visibility Apparel:** Hi-Visibility apparel must be worn during period of high vehicle traffic – up to the discretion of the Maas Brothers superintendent. Appropriate apparel includes safety green or orange tops or any apparel where reflective tape is present.
- **Work Shirts:** T-shirt with a minimum 4-inch sleeve shall be worn
- **Work Pants:** All workers must wear long pants that are in good condition. Shorts or cut-offs will not be allowed.
- **Work Shoes:** Sturdy work shoes should be worn at all times. Tennis shoes are not allowed.

- **Confined Space:** Each contractor must evaluate their work area to determine if it meets the definition of a confined space. Permits are required where deemed necessary. Personnel must be trained in confined space entry per OSHA requirements.
- **Cranes:** Contractors requiring crane use for their work must complete a *Crane Lift Plan* prior to performing any lifts onsite. Proper crane setup, load weight, crane capacity, rigging, signaling, and swing area must be reviewed.
- **Airborne Contaminants/Respiratory Protection:** Each contractor is responsible for determining appropriate controls of airborne contaminants they may produce or appropriate respiratory protection for their employees where necessary per OSHA regulations. Airborne contaminants must not affect other contractors working in vicinity.
- **Entertainment Devices:** Media or personal entertainment devices are prohibited. If you have a personal cell phone or camera on site, it may be subject to search. Radio use will be subject to the Maas Brothers superintendent discretion.
- **Tobacco Products:** Absolutely no tobacco products in existing buildings or once interior finishes have started. Use of tobacco, including smokeless or vaping is up to owner or the Maas Brothers superintendent discretion.
- **Housekeeping:** Clean as you go. This includes food scraps, soda bottles or cans, and food packages, etc.
- **Dumpster Use:** Only those contractors designated may use Maas Brothers dumpsters. Unauthorized personnel using jobsite dumpsters will reimburse Maas Brothers.
- **Electrical Sources:** Electrical rooms and panels are to be accessed by qualified and authorized electricians only. Live work must be approved by Maas Brothers superintendent. NFPA 70E must be followed.
- **Scaffolding:** Must be set up according to OSHA regulations. Rolling scaffolding must have the casters locked when in use.
- **Electrical Equipment:** Electric power extension cords and tools must be inspected and marked with appropriate assured grounding code. (Jan.-Mar. =White; Apr.-June = Green; July-Sept. =Red; Oct.- Dec. =Orange) Assured grounding is to be used in combination with GFCI protection.
- **Ladders:** Must be set up and used per OSHA regulations: secured from displacement and extend 3-ft. past the landing point if being used to access an upper level, items shall not be carried by hand up access ladder, do not stand or sit on top 2 steps, step ladders must be used in open position.
- **Fire Extinguishers and a "Fire Watch":** Fire Watch person, where required, and fire extinguisher shall be supplied by the contractor performing "hot work" activities. Do not take building fire extinguishers for hot work use.
- **"Hot Work" Permits:** A hot work permit may be issued by the Maas Brothers superintendent as required by the task and/or project.
- **Safety Meetings:** Must be conducted at least weekly and made available for review by the Maas Brothers superintendent upon request.
- **Media Correspondence:** All media contacts, interviews or other communications must be channeled through the Maas Brothers superintendent.
- **Repeat Violations:** Will not be tolerated and are subject to disciplinary actions up to and including immediate removal from the project.

I have read, understand, and agree to comply with the safety and health orientation on the above items. I also understand that this list is not all-inclusive and agree to follow all governing safety codes and project policies to ensure safety on this jobsite.

Company Name (Print): _____

Employee Name (Print): _____

Employee Signature: _____

Emergency Contact Name: _____

Phone: _____

Maas Brothers Representative: _____ Date: _____

JEFFERSON COUNTY COURTHOUSE

AV BID DOCUMENTS R1



WAUWATOSA, WI
www.proaudiodesigns.com

AUDIOVISUAL SERIES SHEET INDEX

SHEET	SHEET NAME
AV000	INDEX SHEET
AV001	LEGENDS, SYMBOLS, ABBREVIATIONS
AV002	GENERAL AUDIOVISUAL INFORMATION
AV010	FACILITYWIDE REFERENCE PLANS
AV011	FACILITYWIDE REFERENCE PLANS
AV100A	LOWER LEVEL FLOOR PLAN - AREA A
AV100C	LOWER LEVEL FLOOR PLAN - AREA C
AV101A	FIRST FLOOR PLAN - AREA A
AV101B	FIRST FLOOR PLAN - AREA B
AV101C	FIRST FLOOR PLAN - AREA C
AV102A	SECOND FLOOR PLAN - AREA A
AV102B	SECOND FLOOR PLAN - AREA B
AV110A	LOWER LEVEL REFLECTED CEILING PLAN - AREA A
AV110C	LOWER LEVEL REFLECTED CEILING PLAN - AREA C
AV111A	FIRST FLOOR REFLECTED CEILING PLAN - AREA A
AV111B	FIRST FLOOR REFLECTED CEILING PLAN - AREA B
AV111C	FIRST FLOOR REFLECTED CEILING PLAN - AREA C
AV112A	SECOND FLOOR REFLECTED CEILING PLAN - AREA A
AV112B	SECOND FLOOR REFLECTED CEILING PLAN - AREA B
AV401	BRANCH A COURTROOM SECTIONS & ELEVATIONS
AV402	BRANCH B COURTROOM SECTIONS & ELEVATIONS
AV403	BRANCH C COURTROOM SECTIONS & ELEVATIONS
AV404	BRANCH D COURTROOM SECTIONS & ELEVATIONS
AV405	HEARING ROOM 1 SECTIONS & ELEVATIONS
AV406	HEARING ROOM 2 SECTIONS AND ELEVATIONS
AV407	COURTROOM & HEARING ROOM EQUIPMENT RACK ENLARGED PLANS
AV408	COURTROOM & HEARING ROOM TYPICAL DEVICE LAYOUTS
AV411	COUNTY BOARDROOM SECTIONS & ELEVATIONS
AV412	COUNTY BOARD ROOM TYPICAL DEVICE LAYOUT
AV421	TYPICAL OFFICE & CONFERENCE ROOM SECTIONS & ELEVATIONS
AV431	SHERIFF'S DEPARTMENT - SECTIONS & ELEVATIONS
AV491	STANDARD AV DETAILS
AV492	ADA DETAILS
AV501	EQUIPMENT RACK ELEVATIONS
AV502	EQUIPMENT RACK ELEVATIONS
AV503	EQUIPMENT RACK ELEVATIONS
AV601	BRANCH COURTROOM - TYPICAL PANEL & PLATE DETAILS
AV602	HEARING ROOM - TYPICAL PANEL & PLATE DETAILS
AV603	COUNTY BOARD ROOM C2063 - PANEL & PLATE DETAILS
AV604	OFFICE, CONF. ROOM & JURY ROOM - PANEL & PLATE DETAILS
AV605	EOC, DISPATCH, BRIEFING, & SQUAD - PANEL & PLATE DETAILS
AV700	AUDIO TERMINATIONS WIRING
AV701	BRANCH COURTROOM - TYPICAL AV SCHEMATICS
AV702	BRANCH COURTROOM - TYPICAL AV SCHEMATICS
AV703	BRANCH COURTROOM - TYPICAL AV SCHEMATICS
AV704	BRANCH COURTROOM - TYPICAL AV SCHEMATICS
AV705	BRANCH COURTROOM - TYPICAL AV SCHEMATICS
AV706	BRANCH COURTROOM - TYPICAL AV SCHEMATICS
AV707	BRANCH COURTROOM - TYPICAL AV SCHEMATICS
AV708	BRANCH COURTROOM - TYPICAL AV SCHEMATICS
AV709	JURY ASSEMBLY - TRAINING C2190 - AV SCHEMATICS
AV711	HEARING ROOM - TYPICAL AV SCHEMATICS
AV712	HEARING ROOM - TYPICAL AV SCHEMATICS
AV713	HEARING ROOM - TYPICAL AV SCHEMATICS
AV714	HEARING ROOM - TYPICAL AV SCHEMATICS
AV715	HEARING ROOM - TYPICAL AV SCHEMATICS
AV716	HEARING ROOM - TYPICAL AV SCHEMATICS
AV717	HEARING ROOM - TYPICAL AV SCHEMATICS
AV718	HEARING ROOM - TYPICAL AV SCHEMATICS
AV721	COUNTY BOARD ROOM C2063 - AV SCHEMATICS
AV722	COUNTY BOARD ROOM C2063 - AV SCHEMATICS
AV723	COUNTY BOARD ROOM C2063 - AV SCHEMATICS
AV724	COUNTY BOARD ROOM C2063 - AV SCHEMATICS
AV725	COUNTY BOARD ROOM C2063 - AV SCHEMATICS
AV726	COUNTY BOARD ROOM C2063 - AV SCHEMATICS
AV727	COUNTY BOARD ROOM C2063 - AV SCHEMATICS
AV728	COUNTY BOARD ROOM C2063 - AV SCHEMATICS
AV731	OFFICE & ROOM SCHEDULING - TYPICAL AV SCHEMATICS
AV732	CONFERENCE ROOMS - TYPICAL AV SCHEMATICS
AV741	EMERGENCY OPERATIONS L0091 - AV SCHEMATICS
AV742	EMERGENCY OPERATIONS L0091 - AV SCHEMATICS
AV743	EMERGENCY OPERATIONS L0091 - AV SCHEMATICS
AV744	DISPATCH L1078 - AV SCHEMATICS
AV745	BRIEFING L1033 - AV SCHEMATICS
AV746	SQUAD ROOM L1087 & VID CONF L0032 - AV SCHEMATICS
AV901	AV POWER & BOX SCHEDULES
AV902	AV DATA SCHEDULES
AV910	AV CONDUIT SPECIFICATIONS & DETAILS
AV911	AV CONDUIT RISER
AV912	AV CONDUIT RISER
AV913	AV CONDUIT RISER
AV914	AV CONDUIT RISER
AV915	AV CONDUIT RISER
AV916	AV CONDUIT RISER

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: NTS	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502

DOCUMENT SET: AV BID DOCUMENTS R1
REVISIONS:
REV. DATE DESCRIPTION
1 07-20-2022 AV INFRASTRUCTURE SET
1 09-30-2022 AV SYSTEM BID DOCUMENTS

SHEET TITLE:
INDEX SHEET

SHEET NUMBER: AV000	REV: 1
---------------------	--------

NOTE: THIS TABLE IS FOR REFERENCE ONLY AND PROVIDES ONE EXAMPLE OF HOW ELECTRICAL CONTRACTOR MAY APPORTION WORK.

AV SYSTEM TYPE SCHEDULE		
ROOM NUMBER	ROOM NAME	AV SYSTEM TYPE
C0021A	MAINTENANCE OFFICE	OFFICE - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
C0022	M.I.S. TRAINING ROOM	CONFERENCE ROOM - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
C0033	CONF.	CONFERENCE ROOM - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
C0050A	COLLABORATION/ MEETING SPACE	CONFERENCE ROOM - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
C0050B	COMP. HARDWARE TECH WORK AREA	OFFICE - TYPE 1 (DISPLAY W/ (1) WALL INPUT) *(8) LOCATIONS WITHIN ROOM
C0051	OPEN OFFICE	CONFERENCE ROOM - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
C0053	I.T. DIR.	OFFICE - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
C0054	SEN. NTWK. SPEC. SUPER.	OFFICE - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
C0055	NTWK. SPEC.	OFFICE - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
C0056	SEN. SYST. ANALYSIS SUPER.	OFFICE - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
C1013	STAFF BREAK	CONFERENCE ROOM - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
C1021	CONF.	CONFERENCE ROOM - TYPE 2 (DISPLAY W/ (1) FLOOR INPUT)
C1023	TREASURER OFFICE	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
C1034	R.O.D. OFFICE	OFFICE - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
C1047	ZONING DIRECTOR OFFICE	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
C1049	CONFERENCE	CONFERENCE ROOM - TYPE 2 (DISPLAY W/ (1) FLOOR INPUT)
C1057	L + W DIR. OFFICE	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
C1062	PARKS DIR. OFFICE	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
C1086	CLERK OF COURTS	OFFICE - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
C1091	CONF.	CONFERENCE ROOM - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
C1092	CONF.	CONFERENCE ROOM - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
C1102	OFFICE	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
C1111	R.I.P. OFFICE/ CONF.	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
C1114	CONF.	CONFERENCE ROOM - TYPE 3 (DISPLAY W/ (1) WALL AND (1) FLOOR INPUT)
C1121	M.E. OFFICE	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
C1140	HEARING ROOM 2 (FAMILY COURT)	HEARING ROOM
C1150	HEARING ROOM 1	HEARING ROOM
C1164	JURY ASSEMBLY	CONFERENCE ROOM - TYPE 2 (DISPLAY W/ (1) FLOOR INPUT)
C1166	SECURITY	OFFICE - TYPE 1 (DISPLAY W/ (1) WALL INPUT) *(2) LOCATIONS WITHIN ROOM
C1190A	JUDICIAL OPEN OFFICE	OFFICE - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
C1190B	COURT COMM. OPEN OFFICE	OFFICE - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
C1198	CONF.	CONFERENCE ROOM - TYPE 2 (DISPLAY W/ (1) FLOOR INPUT)
C1200	BRANCH B COURTROOM	BRANCH COURTROOM
C1220	BRANCH A COURTROOM	BRANCH COURTROOM
C2003	CONFERENCE	CONFERENCE ROOM - TYPE 3 (DISPLAY W/ (1) WALL AND (1) FLOOR INPUT)
C2023	CORP. COUNSEL	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
C2032	ADMIN OFFICE	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
C2034	HR OFFICE	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
C2044	CONFERENCE	CONFERENCE ROOM - TYPE 3 (DISPLAY W/ (1) WALL AND (1) FLOOR INPUT)
C2045	FIN. DIRECTOR	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
C2053	COUNTY CLERK	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
C2056	CONFERENCE	CONFERENCE ROOM - TYPE 3 (DISPLAY W/ (1) WALL AND (1) FLOOR INPUT)
C2057	COUNTY BOARD CHAIR	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
C2063	COUNTY BOARD ROOM	COUNTY BOARD ROOM
C2070	WAIT	WAITING ROOM
C2071	CONF.	CONFERENCE ROOM - TYPE 3 (DISPLAY W/ (1) WALL AND (1) FLOOR INPUT)
C2077	C.S. DIRECTOR	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
C2120	WAITING	OFFICE - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
C2121	OPEN OFFICE	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
C2124	VET SERV. OFFICE	OFFICE - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
C2125	CONF.	CONFERENCE ROOM - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
C2141	STATE PATROL	OFFICE - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
C2142	SECURITY	OFFICE - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
C2156	V. WIT. WAIT	WAITING ROOM *(2) LOCATIONS WITHIN ROOM
C2159	CONF.	CONFERENCE ROOM - TYPE 4 (DISPLAY W/ (2) WALL AND (1) FLOOR INPUT)
C2171	DA OFFICE	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
C2190	JURY ASSEMBLY/ TRAINING	JURY ASSEMBLY / TRAINING
C2220	ADMIN	OFFICE - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
C2224	JUDGES CONF.	CONFERENCE ROOM - TYPE 3 (DISPLAY W/ (1) WALL AND (1) FLOOR INPUT)
C2225	JUDGES CONF.	CONFERENCE ROOM - TYPE 3 (DISPLAY W/ (1) WALL AND (1) FLOOR INPUT)
C2230	BRANCH D COURTROOM	BRANCH COURTROOM
C2260	BRANCH C COURTROOM	BRANCH COURTROOM
L0032	VIDEO CONF. (PROBATION (PATROL))	VIDEO CONFERENCE ROOM
L0061	SGT. OFFICE	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
L0063	SGT. OFFICE	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
L0064	MENTAL HEALTH	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
L0065	SGT. OFFICE	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
L0068	NURSE	OFFICE - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
L0073	JAIL CAPTAIN OFFICE	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
L0091	EMERGENCY OPERATIONS	EMERGENCY OPERATIONS
L0096	CALL CENTER	CONFERENCE ROOM - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
L0098	E.M. DIR.	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
L0101	CONF. ROOM	CONFERENCE ROOM - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
L1017	ADMIN. CAPTAIN	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
L1027	CHIEF DEPUTY	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
L1028	CONF.	CONFERENCE ROOM - TYPE 3 (DISPLAY W/ (1) WALL AND (1) FLOOR INPUT)
L1033	BRIEFING	BRIEFING ROOM
L1067	M.A.I.T. OFFICE	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
L1072	SHERIFF	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
L1078	DISPATCH	DISPATCH
L1082	PATROL CAPTAIN	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
L1087	SQUAD ROOM	SQUAD ROOM

AV SYSTEM TYPE QUANTITIES	
QUANTITY	AV SYSTEM TYPE
4	BRANCH COURTROOM
1	BRIEFING ROOM
10	CONFERENCE ROOM - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
4	CONFERENCE ROOM - TYPE 2 (DISPLAY W/ (1) FLOOR INPUT)
8	CONFERENCE ROOM - TYPE 3 (DISPLAY W/ (1) WALL AND (1) FLOOR INPUT)
1	CONFERENCE ROOM - TYPE 4 (DISPLAY W/ (2) WALL AND (1) FLOOR INPUT)
1	COUNTY BOARD ROOM
1	DISPATCH
1	EMERGENCY OPERATIONS
2	HEARING ROOM
1	JURY ASSEMBLY / TRAINING
17	OFFICE - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
27	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
1	SQUAD ROOM
1	VIDEO CONFERENCE ROOM
2	WAITING ROOM

AV DEVICE TYPE KEY	
DEVICE TYPE	DESCRIPTION
ALS	ALS EMITTER
ANT	WIRELESS ANTENNA
AV	AV I/O PANEL
BP	CONTROL PANEL
CAM	CAMERA
ER	EQUIPMENT RACK
FB	FLOOR BOX
MEDIA	AV I/O PANEL
MIC	CEILING MIC
MIC	MIC INPUT
RS	ROOM SCHEDULE
SPK	CEILING SPEAKER
TS	TOUCH SCREEN
TV	43" DISPLAY
VC	VOLUME CONTROL
VD	VIDEO DISPLAY

SCOPE OF WORK	GENERAL PRIME CONTRACTOR			DIVISION 26 INSTALLER			AV INSTALLER			OWNER		
	FURNISHES	INSTALLS	WIRES	FURNISHES	INSTALLS	WIRES	FURNISHES	INSTALLS	WIRES	FURNISHES	INSTALLS	WIRES
POWER DISTRIBUTION SYSTEMS												
MAIN POWER SERVICE, CIRCUIT BREAKERS				X	X	X						
STANDARD PANELBOARDS, CIRCUIT BREAKERS				X	X	X						
STANDARD LOAD CENTERS, CIRCUIT BREAKERS				X	X	X						
COMPANY SWITCH, CIRCUIT BREAKERS				X	X	X						
CUSTOM SEQUENCING PANELBOARD, BREAKERS					X†	X	X					
ISOLATION TRANSFORMERS				X	X	X						
AC ELECTRICAL WIRING INFRASTRUCTURE												
WIRING				X	X	X						
CONDUIT				X	X	X						
TERMINATIONS					X	X						
TERMINATIONS OF AC ELECTRICAL TO WHIPS FOR EQUIPMENT RACKS					X†	X						
AC ELECTRICAL DISTRIBUTION WITHIN EQUIPMENT RACKS					X	X	X					
WALL RECEPTACLES				X	X	X						
AUDIO-VIDEO SYSTEMS WIRING INFRASTRUCTURE												
WIRING							X	X	X			
CONDUIT				X	X							
CONDUIT RISER DRAWING							X					
PULL LINES IN ALL EMPTY CONDUITS				X	X							
TERMINATIONS								X	X			
WALL PLATES							X	X	X			
PULL BOXES				X	X†							
BUILDING DATA												
WIRING FROM BUILDING DATA TO CONNECTION IN PROXIMITY TO AUDIO-VIDEO EQUIPMENT					X†Δ		X					
TERMINATION OF BUILDING DATA CONNECTION AT AUDIO-VIDEO EQUIPMENT					X†Δ	X						
BUILDING FIRE ALARM												
WIRING FROM BUILDING FIRE ALARM TO AUDIO-VIDEO EQUIPMENT					X†							
TERMINATION OF BUILDING FIRE ALARM CONNECTION TO AUDIO-VIDEO EQUIPMENT								X				
AUDIO-VIDEO SYSTEMS EQUIPMENT, DEVICES												
AUDIO-VIDEO EQUIPMENT							X	X	X			
EQUIPMENT RACKS							X	X	X			
STANDARD ELECTRICAL BACK BOXES				X	X	X						
SPECIALTY FLOOR, WALL, CEILING BOXES					X		X		X			
OWNER FURNISHED, CONTRACTOR INSTALLED EQUIPMENT								X	X	X		
OWNER FURNISHED, OWNER INSTALLED EQUIPMENT										X	X	X

† INSTALLATION PER DIRECTION OF AUDIO-VIDEO CONTRACTOR.
Δ OR BY RELEVANT CONTRACTOR.

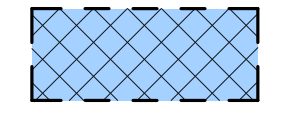
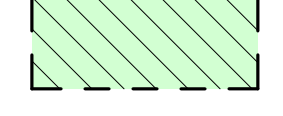
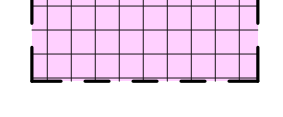
AV CABLE SCHEDULE									
SIGNAL GROUP	CABLE TYPE	MANUFACTURER	PART NUMBER	PLENUM PART NUMBER	DESCRIPTION	OUTSIDE DIAMETER (in)	MINIMUM BEND RADIUS (in)	MINIMUM CONDUIT SIZE*	COMMENTS
A	MIC	WINDY CITY WIRE	22-1PREZ-BLK	22-1PREZ-BLK	22 AWG TWISTED PAIR TINNED COPPER, SHIELDED	0.134	1.5	3/4"	
B	ICOM	WINDY CITY WIRE	1802S-GRY	1802SP-GRY	18 AWG 2-CONDUCTOR, BARE COPPER, SHIELDED	0.168	2.5	3/4"	
B	LINE	WINDY CITY WIRE	22-1PREZ-BLK	22-1PREZ-BLK	22 AWG TWISTED PAIR TINNED COPPER, SHIELDED	0.134	1.5	3/4"	
B	LINE-AES	WINDY CITY WIRE	22-1PS-BRD-BLK	22-1PSP-BRD-BLK	22 AWG TWISTED PAIR, TINNED COPPER	0.235	2.5	3/4"	
C	SPK10	WINDY CITY WIRE	10-02-BLK	10-02P-BLK	10 AWG TWISTED PAIR, NON-SHIELDED	0.34	4.5	1"	
C	SPK10-NJ	WINDY CITY WIRE	NJ10-02		10 AWG TWISTED PAIR STRANDED THHN, NO JACKET	0.326	4.5	1"	
C	SPK12	WINDY CITY WIRE	12-02-BLK	12-02P-BLK	12 AWG 2-CONDUCTOR BARE COPPER, NON-SHIELDED, JACKET	0.266	3.5	3/4"	
C	SPK14	WINDY CITY WIRE	14-02-BLK	14-02P-BLK	14 AWG 2-CONDUCTOR OXYGEN FREE COPPER, NON-SHIELDED	0.21	2.7	3/4"	
C	SPK16	WINDY CITY WIRE	16-02-BLK	16-02P-BLK	16 AWG 2-CONDUCTOR COPPER, NON-SHIELDED	0.184	1.64	3/4"	
C	SPK16-4	WINDY CITY WIRE	16-04-GRY	16-04P-WHT	16 AWG 4-CONDUCTOR COPPER, NON-SHIELDED	0.215	1.95	3/4"	
D	8G	WINDY CITY WIRE	CAT6AS-BLK	CAT6ASP-BLK	ANSI/TIA 568-C.2 CATEGORY 6A, 4-TWISTED PAIR CABLE, SHIELDED	0.29	2.75	1"	CABLE LENGTH SHALL NOT EXCEED 295'
D	CTRL	WINDY CITY WIRE	22-1PREZ-BLK	22-1PREZ-BLK	22 AWG TWISTED PAIR TINNED COPPER, SHIELDED	0.134	1.5	3/4"	
D	IR	WINDY CITY WIRE	22-1PREZ-BLK	22-1PREZ-BLK	22 AWG TWISTED PAIR TINNED COPPER, SHIELDED	0.134	1.5	3/4"	
D	NET	WINDY CITY WIRE	CRESKOM	CRESCOMP	18 AWG, 1 PAIR BARE COPPER, NON-SHIELDED WITH 22 AWG 1 PAIR BARE COPPER SHIELDED	0.228	2.5	1"	
D	STP	WINDY CITY WIRE	CAT6AS-BLK	CAT6ASP-BLK	ANSI/TIA 568-C.2 CATEGORY 6A, 4-TWISTED PAIR CABLE, SHIELDED	0.29	2.75	1"	CABLE LENGTH SHALL NOT EXCEED 295'
D	USB	C2G	VARIES		USB 3.0 CABLE	0.3	1.4	1"	
D	UTP	WINDY CITY WIRE	CAT6A-BLU	CAT6AP-BLU	ANSI/TIA 568-C.2 CATEGORY 6A, 4-TWISTED PAIR CABLE, NON-SHIELDED	0.315	2.75	1"	CABLE LENGTH SHALL NOT EXCEED 295'
E	DPORT	C2G	554402		DISPLAYPORT CABLE	0.236	2.8	1"	CABLE ORDERED BY LENGTH AS NEEDED
E	HDMI	C2G	VARIES		HIGH SPEED HDMI CABLE	0.39	4.1	1"	NOTE: CABLE DIAMETER = 0.39", CONNECTOR DIAMETER = 0.82"
E	SDI	WINDY CITY WIRE	RG6HD-BLK	RG6HDP-BLK	RG-6/U 75-OHM COAX CABLE, 18 AWG, SHIELDED, JACKET	0.274	5.36	1"	
E	VGA	EXTRON	VGA M-M MD/xx		MALE-MALE VGA CABLE WITH MOLDED CONNECTORS	0.36	2.25	1"	VGA 100' OR UNDER, 1-1/2" MINIMUM CONDUIT SIZE REQUIRED TO PASS MOLDED VGA CONNECTOR
F	MMF-02	BELDEN	F14B002RB	F14B002PB	OM4 MULTIMODE FIBER, 2 STRAND, 50/125µm, 2mm SUB-UNIT	0.26	3.9	1"	
F	MMF-04	BELDEN	F14B004RB	F14B004PB	OM4 MULTIMODE FIBER, 4 STRAND, 50/125µm, 2mm SUB-UNIT	0.32	4.8	1"	
F	MMF-06	BELDEN	F14B006RB	F14B006PB	OM4 MULTIMODE FIBER, 6 STRAND, 50/125µm, 2mm SUB-UNIT	0.36	5.4	1-1/4"	
F	MMF-12	BELDEN	F14B012RB	F14B012PB	OM4 MULTIMODE FIBER, 12 STRAND, 50/125µm, 2mm SUB-UNIT	0.51	7.65	2"	
F	SMF-02	BELDEN	F15B002RB	F15B002PB	OS2 SINGLEMODE FIBER, 2 STRAND, 9/125 µm, 2mm SUB-UNIT	0.26	3.9	1"	
F	SMF-04	BELDEN	F15B004RB	F15B004PB	OS2 SINGLEMODE FIBER, 4 STRAND, 9/125 µm, 2mm SUB-UNIT	0.32	4.8	1"	
F	SMF-06	BELDEN	F15B006RB	F15B006PB	OS2 SINGLEMODE FIBER, 6 STRAND, 9/125 µm, 2mm SUB-UNIT	0.36	5.4	1-1/4"	
F	SMF-12	BELDEN	F15B012RB	F15B012PB	OS2 SINGLEMODE FIBER, 12 STRAND, 9/125 µm, 2mm SUB-UNIT	0.51	7.65	2"	
G	LOOP	WILLIAMS	PLW F500		INDUCTION LOOP ALS CABLE - FLAT COPPER	0.87		3/4"	
R	ANT	WINDY CITY WIRE	RG8X-BLK	RG8P-BLK	RG-8X MINI COAXIAL CABLE, 17 AWG, 50-OHM, JACKET	0.242	2.42	1"	USE FOR ANTENNA RUNS OF 50' OR LESS. USE AMP-112533 CRIMP BNC CONNECTORS.
R	ANT-50	WEST PENN	98G8	2598G8	RG8/U COAXIAL CABLE, 10 AWG, 50-OHM, JACKET	0.405	4.05	1"	USE FOR ANTENNA RUNS OF MORE THAN 50'. USE CN-BM98G8 CRIMP BNC CONNECTORS.

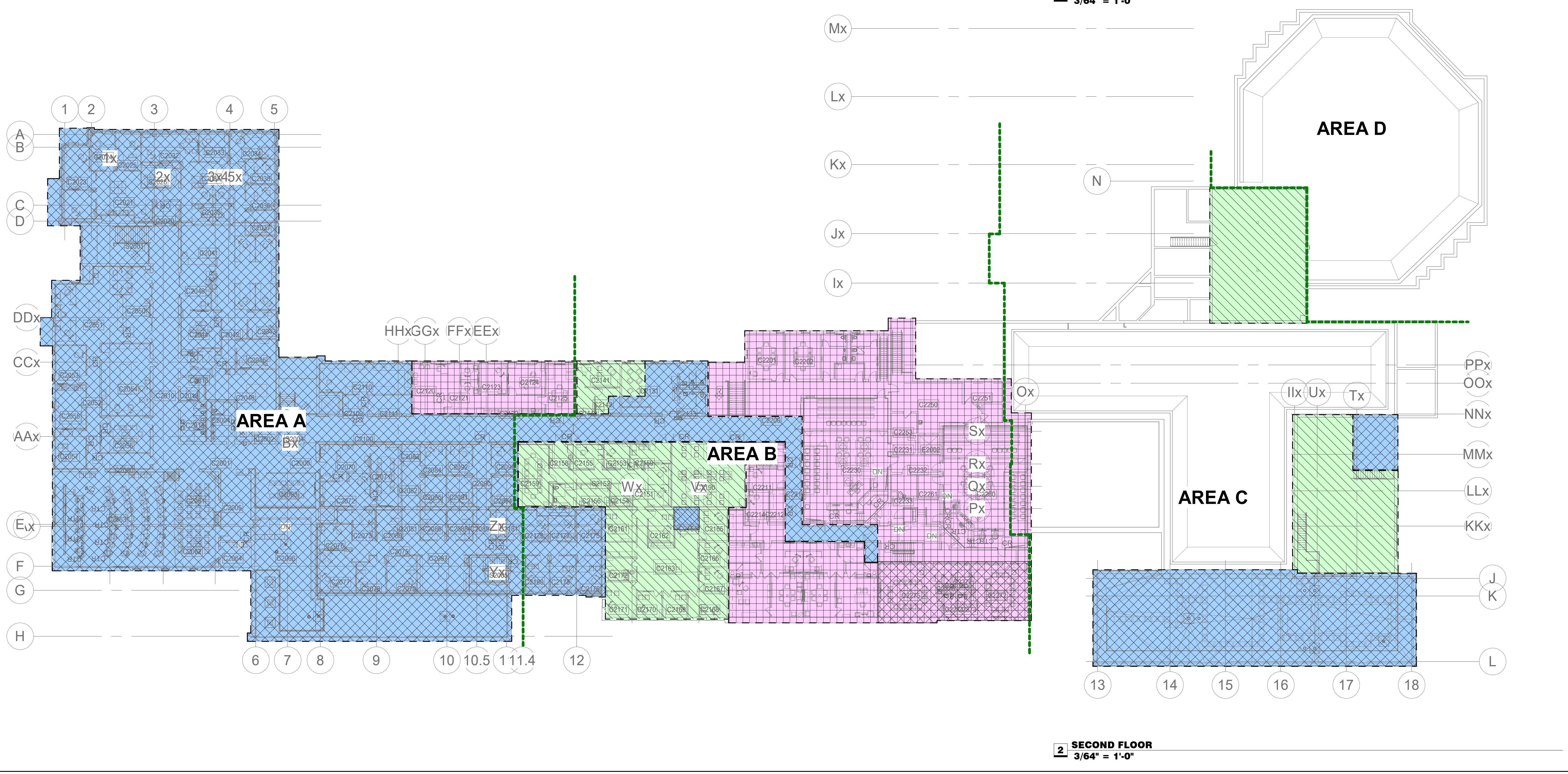
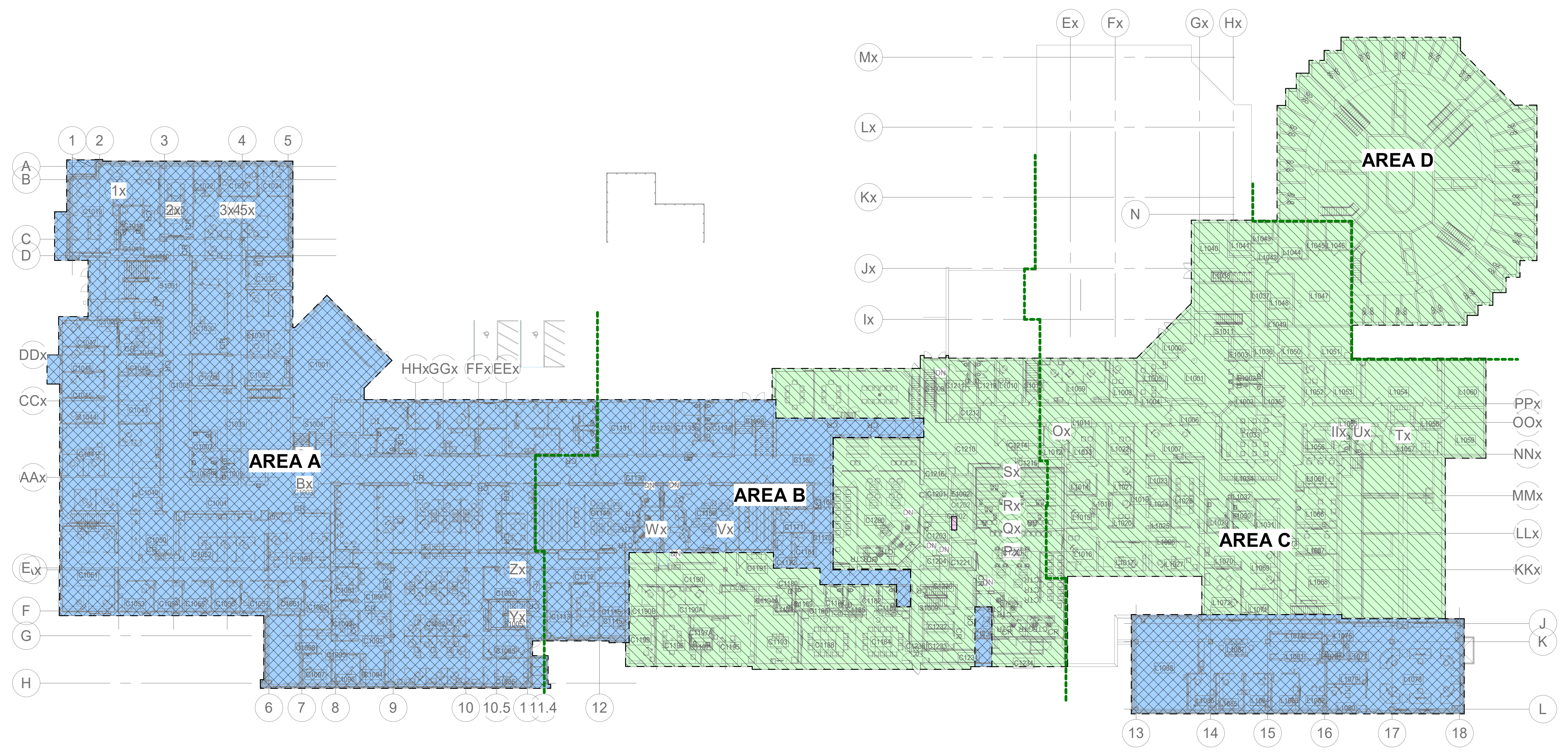
* MINIMUM CONDUIT SIZE BASED ON OUTER DIAMETER OF CABLE AND CONNECTORS AND/OR MINIMUM BEND RADIUS

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PBR	
SCALE: As indicated	DRAWING SET SIZE: 30" X 42"	
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502	
DOCUMENT SET: AV BID DOCUMENTS R1		
REVISIONS:		
REV #	DATE	DESCRIPTION
1	07-20-2022	AV INFRASTRUCTURE SET
2	09-30-2022	AV SYSTEM BID DOCUMENTS
SHEET TITLE: FACILITYWIDE REFERENCE PLANS		
SHEET NUMBER: AV011	REV: 1	

 PHASE 1 - NEW WORK
 PHASE 2 - NEW WORK
 PHASE 3 - NEW WORK



AV TAG LEGEND

DEVICE LOCATION ID

ASSOCIATED BOX TYPE (REFER TO AV900 SERIES SHEETS FOR BOX TYPES USED IN PROJECT)

ASSOCIATED BOX MOUNTING TYPE (SEE AV001)

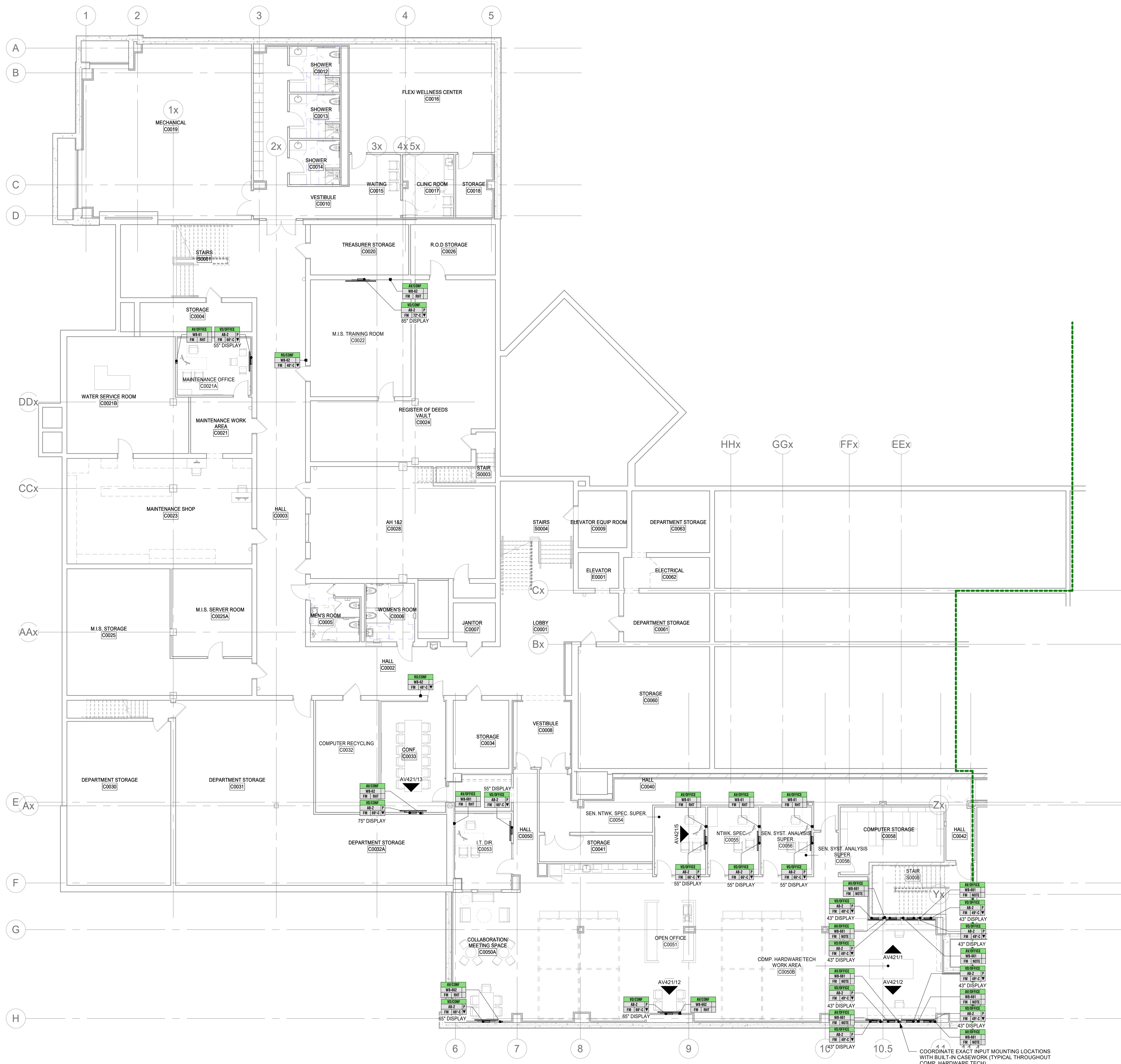
ASSOCIATED BOX MOUNTING HEIGHT (SEE AV001)

WHEN PRESENT, INDICATES POWER & DATA REQUIREMENTS (SEE AV900 SERIES SHEETS)

GENERAL SHEET NOTES

- 1 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
- 2 COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
- 3 AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
- 4 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS



1 LOWER LEVEL FLOOR PLAN - AREA A
1/8" = 1'-0"

RCP: 1 / AV110A

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PDR
SCALE: As Indicated	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISION:	DESCRIPTION:
1 07-20-2022 AV INFRASTRUCTURE SET	
2 09-30-2022 AV SYSTEM BID DOCUMENTS	

SHEET TITLE:
LOWER LEVEL FLOOR PLAN - AREA A

SHEET NUMBER: **AV100A** REV: **1**

P:\2022\11-25-24 - 03\Documents\2022\11-25-24 - Jeff County, WI - 1502.rvt

AV TAG LEGEND

DEVICE LOCATION ID

ASSOCIATED BOX TYPE (REFER TO AV900 SERIES SHEETS FOR BOX TYPES USED IN PROJECT)

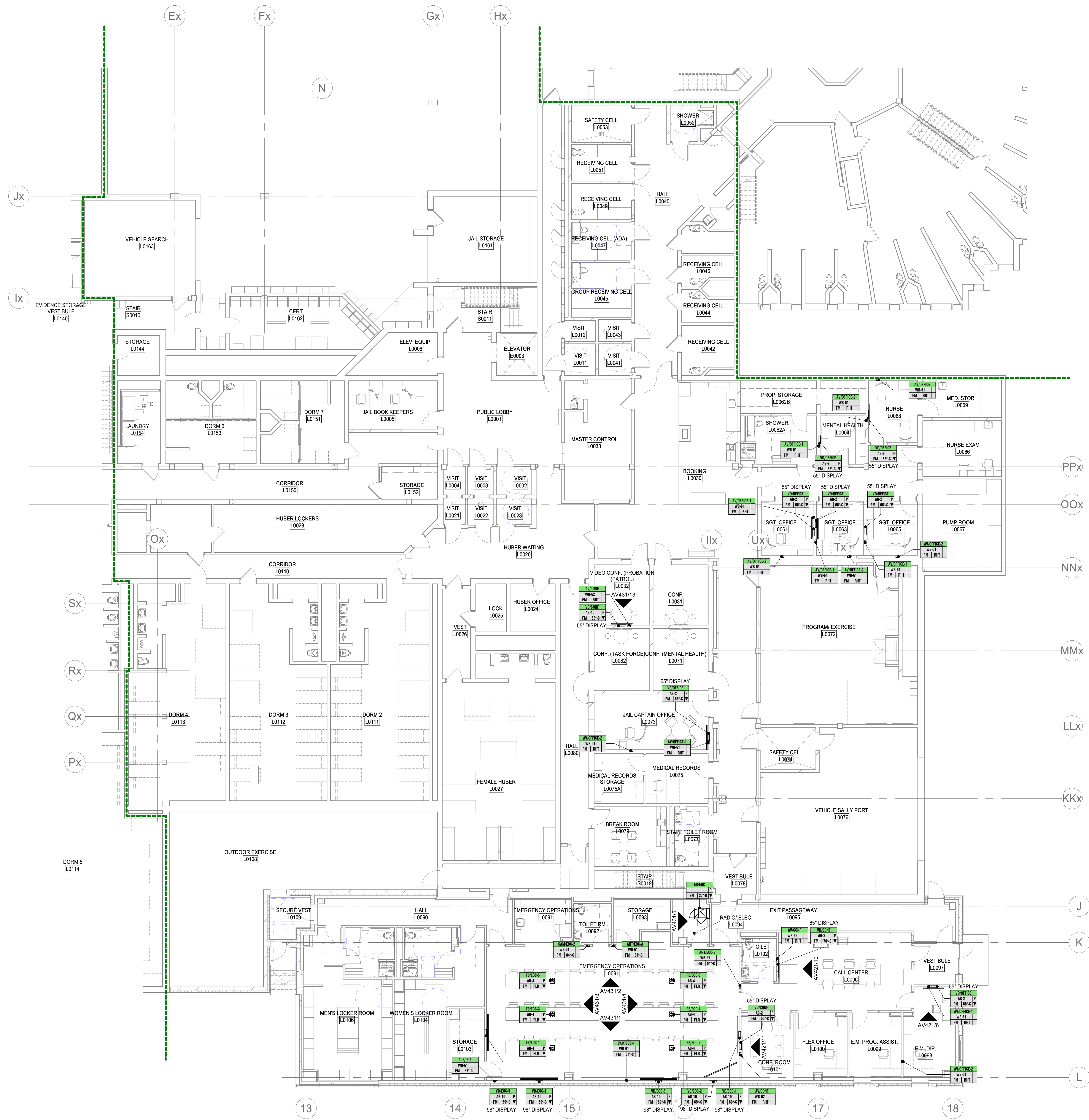
ASSOCIATED BOX MOUNTING TYPE (SEE AV001)

ASSOCIATED BOX MOUNTING HEIGHT (SEE AV001)

WHEN PRESENT, INDICATES POWER & DATA REQUIREMENTS (SEE AV900 SERIES SHEETS)

- GENERAL SHEET NOTES**
- 1 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
 - 2 COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
 - 3 AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
 - 4 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS



**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PDR
SCALE: As Indicated	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISION:	
REV. DATE DESCRIPTION	
1 09-30-2022 AV INFRASTRUCTURE SET	
2 09-30-2022 AV SYSTEM BID DOCUMENTS	

SHEET TITLE:
LOWER LEVEL FLOOR PLAN - AREA C

P:\2022\11-28-22\00-Documents\20221101-00-Audio\Jefferson County, WI_Audio\EDK.dwg

AV TAG LEGEND

DEVICE LOCATION ID

ASSOCIATED BOX TYPE (REFER TO AV900 SERIES SHEETS FOR BOX TYPES USED IN PROJECT)

ASSOCIATED BOX MOUNTING TYPE (SEE AV001)

ASSOCIATED BOX MOUNTING HEIGHT (SEE AV001)

WHEN PRESENT, INDICATES POWER & DATA REQUIREMENTS (SEE AV900 SERIES SHEETS)

- GENERAL SHEET NOTES**
- 1 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
 - 2 COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
 - 3 AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
 - 4 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS



1 FIRST FLOOR PLAN - AREA A
1/8" = 1'-0"
RCP: 1 / AV111A

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PBR	
SCALE: As Indicated	DRAWING SET SIZE: 30" X 42"	
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502	
DOCUMENT SET: AV BID DOCUMENTS R1		
REVISIONS:		
REV: 1	DATE: 07-20-2022	DESCRIPTION: AV INFRASTRUCTURE SET
REV: 2	DATE: 09-30-2022	DESCRIPTION: AV SYSTEM BID DOCUMENTS
SHEET TITLE:		
FIRST FLOOR PLAN - AREA A		
SHEET NUMBER: AV101A	REV: 1	

P:\2022\11-15-24 - Documents\2022\11-15-24 - Jefferson County, WI - AV101A

AV TAG LEGEND

DEVICE LOCATION ID

ASSOCIATED BOX TYPE (REFER TO AV900 SERIES SHEETS FOR BOX TYPES USED IN PROJECT)

ASSOCIATED BOX MOUNTING TYPE (SEE AV001)

ASSOCIATED BOX MOUNTING HEIGHT (SEE AV001)

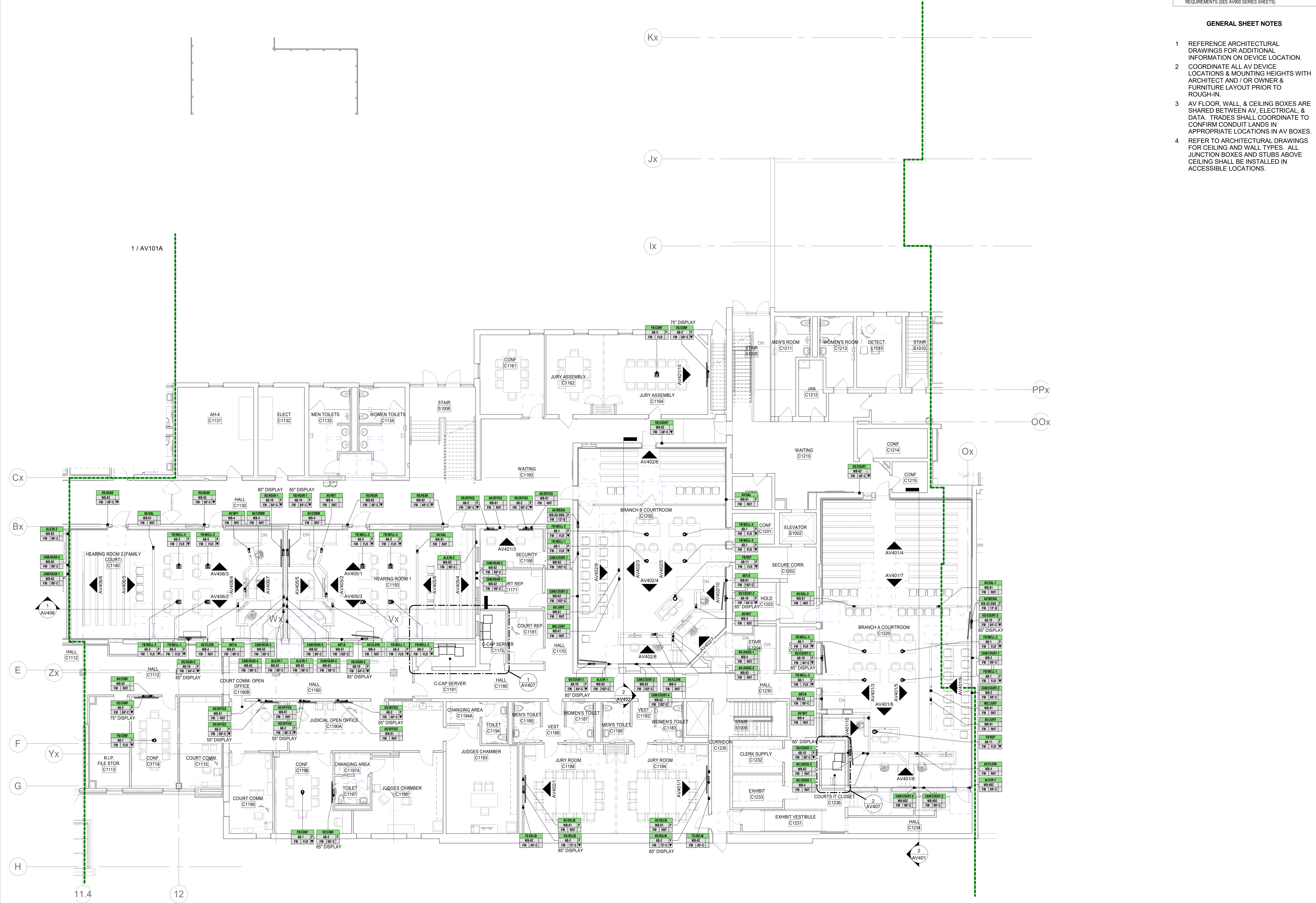
WHEN PRESENT, INDICATES POWER & DATA REQUIREMENTS (SEE AV900 SERIES SHEETS)

- GENERAL SHEET NOTES**
- 1 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
 - 2 COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
 - 3 AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
 - 4 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PDR
SCALE: As Indicated	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV / BID DOCUMENTS R1	
REVISIONS:	DESCRIPTION:
1 09-30-2022 AV INFRASTRUCTURE SET	
2 09-30-2022 AV SYSTEM BID DOCUMENTS	
SHEET TITLE: FIRST FLOOR PLAN - AREA B	
SHEET NUMBER: AV101B	REV: 1



1 FIRST FLOOR PLAN - AREA B
1/8" = 1'-0"

RCP:1 / AV111B

P:\2022\11-150 - Jefferson County, WI - AV101B.dwg

AV TAG LEGEND

DEVICE LOCATION ID

ASSOCIATED BOX TYPE (REFER TO AV900 SERIES SHEETS FOR BOX TYPES USED IN PROJECT)

ASSOCIATED BOX MOUNTING TYPE (SEE AV001)

ASSOCIATED BOX MOUNTING HEIGHT (SEE AV001)

WHEN PRESENT, INDICATES POWER & DATA REQUIREMENTS (SEE AV900 SERIES SHEETS)

- GENERAL SHEET NOTES**
- 1 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
 - 2 COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
 - 3 AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
 - 4 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS



1 FIRST FLOOR PLAN - AREA C
1/8" = 1'-0" RCP: 1 / AV111C

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: As Indicated	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV / BID DOCUMENTS R1	
REVISION:	DESCRIPTION:
1 09-30-2022	AV INFRASTRUCTURE SET
2 10-30-2022	AV SYSTEM BID DOCUMENTS
SHEET TITLE: FIRST FLOOR PLAN - AREA C	
SHEET NUMBER: AV101C	REV: 1

D:\Documents\202311\01 - Jefferson County, WI - AV101C.rvt

AV TAG LEGEND

DEVICE LOCATION ID

ASSOCIATED BOX TYPE (REFER TO AV900 SERIES SHEETS FOR BOX TYPES USED IN PROJECT)

ASSOCIATED BOX MOUNTING TYPE (SEE AV001)

ASSOCIATED BOX MOUNTING HEIGHT (SEE AV001)

WHEN PRESENT, INDICATES POWER & DATA REQUIREMENTS (SEE AV900 SERIES SHEETS)

- GENERAL SHEET NOTES**
- 1 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
 - 2 COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
 - 3 AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
 - 4 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.

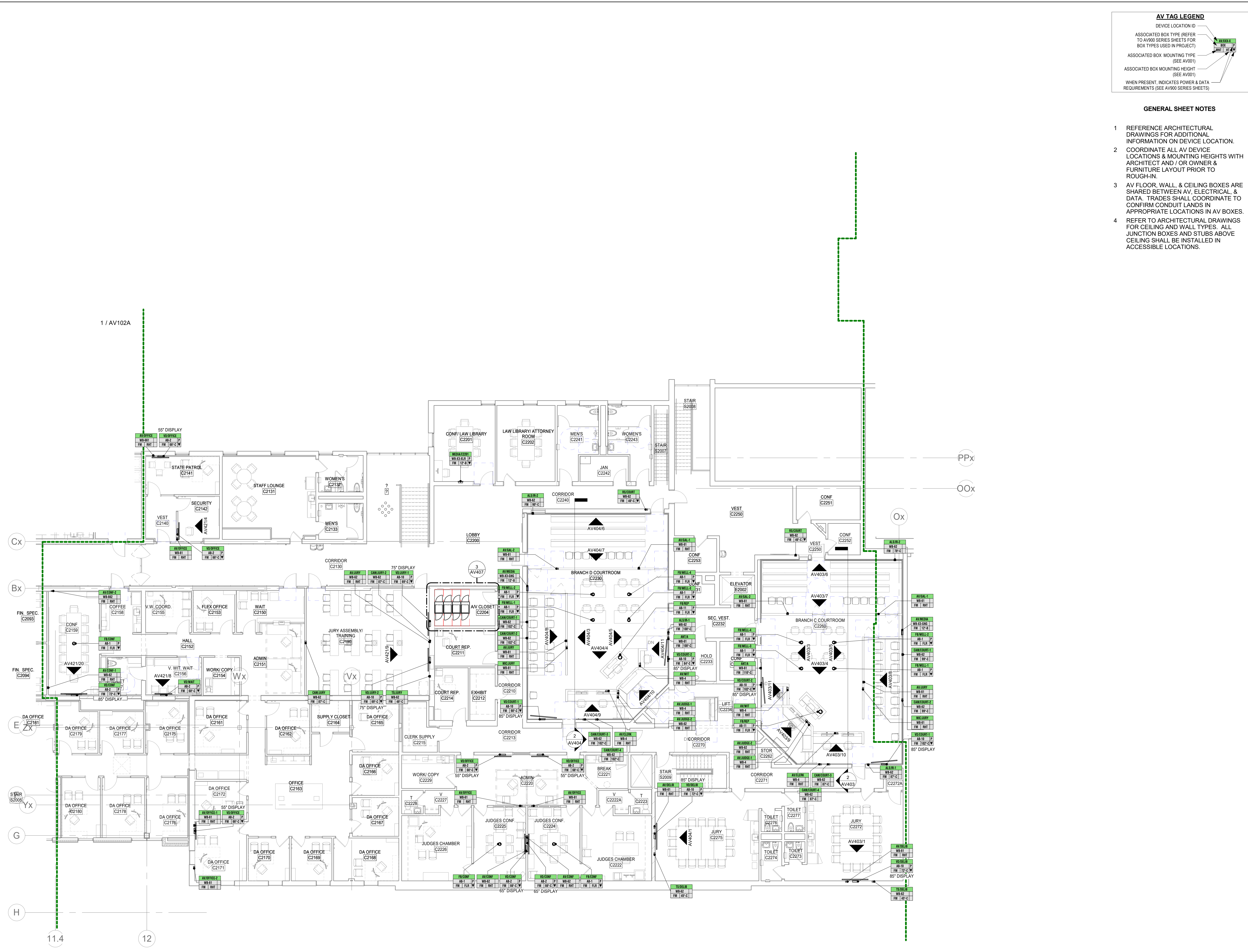
NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PDR
SCALE: As Indicated	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISION:	DESCRIPTION:
1	09-30-2022 AV INFRASTRUCTURE SET
2	09-30-2022 AV SYSTEM BID DOCUMENTS

SHEET TITLE:
SECOND FLOOR PLAN - AREA B

SHEET NUMBER: **AV102B** REV: 1



1 SECOND FLOOR PLAN - AREA B
1/8" = 1'-0" RCP: 1 / AV112B

P:\2022\11-19-22\0 - Jefferson County, WI - AV102B.rvt

AV TAG LEGEND

DEVICE LOCATION ID

ASSOCIATED BOX TYPE (REFER TO AV900 SERIES SHEETS FOR BOX TYPES USED IN PROJECT)

ASSOCIATED BOX MOUNTING TYPE (SEE AV001)

ASSOCIATED BOX MOUNTING HEIGHT (SEE AV001)

WHEN PRESENT, INDICATES POWER & DATA REQUIREMENTS (SEE AV900 SERIES SHEETS)

- GENERAL SHEET NOTES**
- 1 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
 - 2 COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
 - 3 AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
 - 4 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**



1 LOWER LEVEL REFLECTED CEILING PLAN - AREA C
1/8" = 1'-0" PLAN: 1 / AV100C

DESIGNER: EDK	PROJECT MANAGER: PDR
SCALE: As indicated	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISION:	DATE DESCRIPTION
1	07-30-2022 AV INFRASTRUCTURE SET
2	09-30-2022 AV SYSTEM BID DOCUMENTS

SHEET TITLE:
LOWER LEVEL REFLECTED CEILING PLAN - AREA C

SHEET NUMBER: **AV110C** REV: **1**

AV TAG LEGEND

DEVICE LOCATION ID

ASSOCIATED BOX TYPE (REFER TO AV900 SERIES SHEETS FOR BOX TYPES USED IN PROJECT)

ASSOCIATED BOX MOUNTING TYPE (SEE AV001)

ASSOCIATED BOX MOUNTING HEIGHT (SEE AV001)

WHEN PRESENT, INDICATES POWER & DATA REQUIREMENTS (SEE AV900 SERIES SHEETS)

GENERAL SHEET NOTES

- 1 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
- 2 COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
- 3 AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
- 4 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS



1 FIRST FLOOR REFLECTED CEILING PLAN - AREA A
1/8" = 1'-0" PLAN: 1 / AV101A

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PBR	
SCALE: As Indicated	DRAWING SET SIZE: 30" X 42"	
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502	
DOCUMENT SET: AV / BID DOCUMENTS R1		
REVISIONS:		
REV #	DATE	DESCRIPTION
1	07-30-2022	AV INFRASTRUCTURE SET
2	09-30-2022	AV SYSTEM BID DOCUMENTS

SHEET TITLE:
**FIRST FLOOR
REFLECTED
CEILING PLAN -
AREA A**

SHEET NUMBER: **AV111A** REV: **1**

AV TAG LEGEND

DEVICE LOCATION ID

ASSOCIATED BOX TYPE (REFER TO AV900 SERIES SHEETS FOR BOX TYPES USED IN PROJECT)

ASSOCIATED BOX MOUNTING TYPE (SEE AV001)

ASSOCIATED BOX MOUNTING HEIGHT (SEE AV001)

WHEN PRESENT, INDICATES POWER & DATA REQUIREMENTS (SEE AV900 SERIES SHEETS)

GENERAL SHEET NOTES

- 1 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
- 2 COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
- 3 AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
- 4 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.

KEYNOTE LEGEND

- 1 EXISTING CEILING TO REMAIN. REPLACE EXISTING SPEAKERS WITH NEW CEILING SPEAKERS WHERE SHOWN. MODIFY HOLE OPENINGS AS NEEDED TO ACCOMMODATE NEW SPEAKERS.
- 2 EXISTING CEILING SPEAKER LOCATION NOT REUSED IN NEW LAYOUT. ABANDON EXISTING CEILING SPEAKER IN PLACE.

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PDR
SCALE: As indicated	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISIONS:	
REV. DATE DESCRIPTION	
1 09-30-2022 AV INFRASTRUCTURE SET	
2 09-30-2022 AV SYSTEM BID DOCUMENTS	

SHEET TITLE:
FIRST FLOOR REFLECTED CEILING PLAN - AREA B

SHEET NUMBER: **AV111B** REV: **1**



1 FIRST FLOOR REFLECTED CEILING PLAN - AREA B
1/8" = 1'-0" PLAN: 1 / AV101B

D:\Documents\202311\01 - Jefferson County, WI - AV111B.dwg

AV TAG LEGEND

DEVICE LOCATION ID

ASSOCIATED BOX TYPE (REFER TO AV900 SERIES SHEETS FOR BOX TYPES USED IN PROJECT)

ASSOCIATED BOX MOUNTING TYPE (SEE AV001)

ASSOCIATED BOX MOUNTING HEIGHT (SEE AV001)

WHEN PRESENT, INDICATES POWER & DATA REQUIREMENTS (SEE AV900 SERIES SHEETS)

- GENERAL SHEET NOTES**
- 1 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
 - 2 COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
 - 3 AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
 - 4 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**



1 FIRST FLOOR REFLECTED CEILING PLAN - AREA C
1/8" = 1'-0"

PLAN: 1 / AV101C

DESIGNER: EDK	PROJECT MANAGER: PBR	
SCALE: As indicated	DRAWING SET SIZE: 30" X 42"	
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502	
DOCUMENT SET: AV BID DOCUMENTS R1		
REVISION:	DATE:	DESCRIPTION:
1	07-20-2022	AV INFRASTRUCTURE SET
2	09-30-2022	AV SYSTEM BID DOCUMENTS
SHEET TITLE:		REV:
FIRST FLOOR REFLECTED CEILING PLAN - AREA C		1
SHEET NUMBER:		AV111C

D:\Documents\202311\01 - Jeffco County, WI - Area C\01.dwg

AV TAG LEGEND

DEVICE LOCATION ID

ASSOCIATED BOX TYPE (REFER TO AV900 SERIES SHEETS FOR BOX TYPES USED IN PROJECT)

ASSOCIATED BOX MOUNTING TYPE (SEE AV001)

ASSOCIATED BOX MOUNTING HEIGHT (SEE AV001)

WHEN PRESENT, INDICATES POWER & DATA REQUIREMENTS (SEE AV900 SERIES SHEETS)

- GENERAL SHEET NOTES**
- 1 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
 - 2 COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
 - 3 AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
 - 4 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS



1 / AV112B

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PDR
SCALE: As Indicated	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISIONS:	DESCRIPTION:
1 09-30-2022 AV INFRASTRUCTURE SET	
2 09-30-2022 AV SYSTEM BID DOCUMENTS	

SHEET TITLE:
SECOND FLOOR REFLECTED CEILING PLAN - AREA A

SHEET NUMBER: **AV112A** REV: **1**

P:\2022\11-19-22\0 - Documents\202311-01 - JeffCo County, WI - AV112A.rvt

AV TAG LEGEND

DEVICE LOCATION ID

ASSOCIATED BOX TYPE (REFER TO AV900 SERIES SHEETS FOR BOX TYPES USED IN PROJECT)

ASSOCIATED BOX MOUNTING TYPE (SEE AV001)

ASSOCIATED BOX MOUNTING HEIGHT (SEE AV001)

WHEN PRESENT, INDICATES POWER & DATA REQUIREMENTS (SEE AV900 SERIES SHEETS)

GENERAL SHEET NOTES

- 1 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
- 2 COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
- 3 AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
- 4 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.

KEYNOTE LEGEND

- 1 EXISTING CEILING TO REMAIN. REPLACE EXISTING SPEAKERS WITH NEW CEILING SPEAKERS WHERE SHOWN. MODIFY HOLE OPENINGS AS NEEDED TO ACCOMMODATE NEW SPEAKERS.
- 2 EXISTING CEILING SPEAKER LOCATION NOT REUSED IN NEW LAYOUT. ABANDON EXISTING CEILING SPEAKER IN PLACE.

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PDR
SCALE: As Indicated	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISIONS:	
REV. DATE DESCRIPTION	
1 07-20-2022 AV INFRASTRUCTURE SET	
2 09-30-2022 AV SYSTEM BID DOCUMENTS	

SHEET TITLE:
SECOND FLOOR REFLECTED CEILING PLAN - AREA B

SHEET NUMBER: **AV112B** REV: **1**



1 SECOND FLOOR REFLECTED CEILING PLAN - AREA B
1/8" = 1'-0" PLAN: 1 / AV102B

AV TAG LEGEND

DEVICE LOCATION ID
ASSOCIATED BOX TYPE (REFER TO AV900 SERIES SHEETS FOR BOX TYPES USED IN PROJECT)
ASSOCIATED BOX MOUNTING TYPE (SEE AV1001)
ASSOCIATED BOX MOUNTING HEIGHT (SEE AV1011)
WHEN PRESENT, INDICATES POWER & DATA REQUIREMENTS (SEE AV900 SERIES SHEETS)

- GENERAL SHEET NOTES**
- 1 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
 - 2 COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
 - 3 AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
 - 4 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.

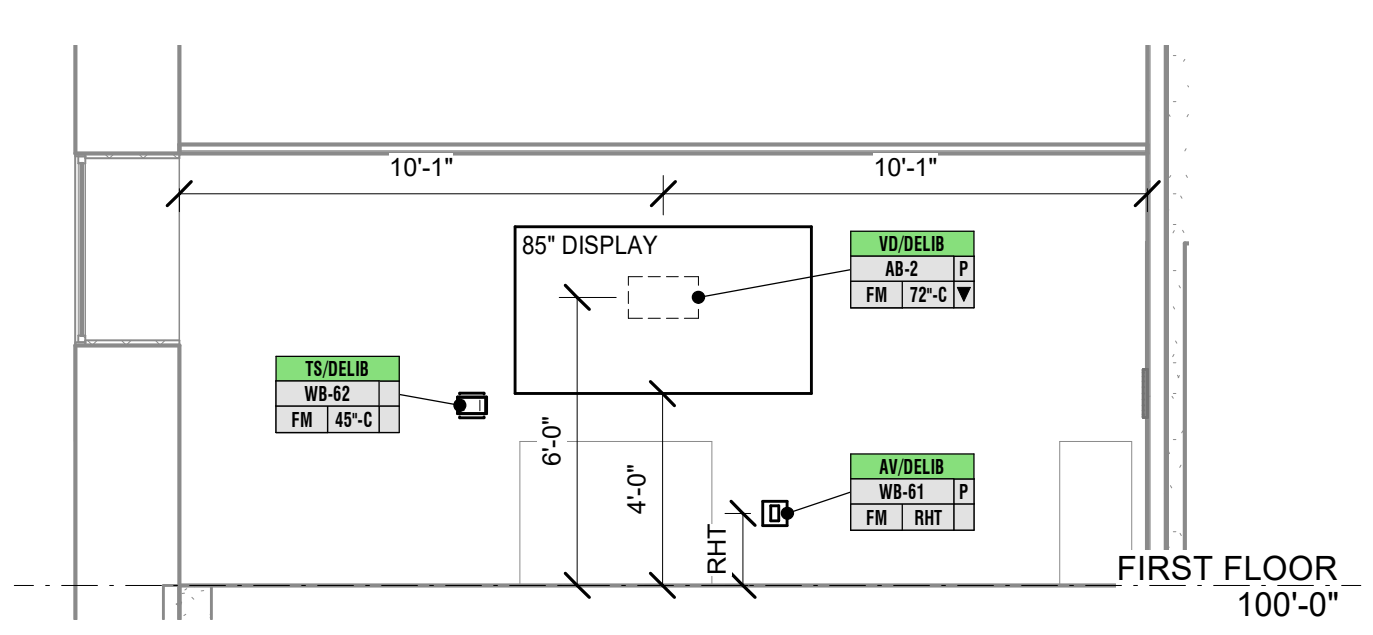
NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

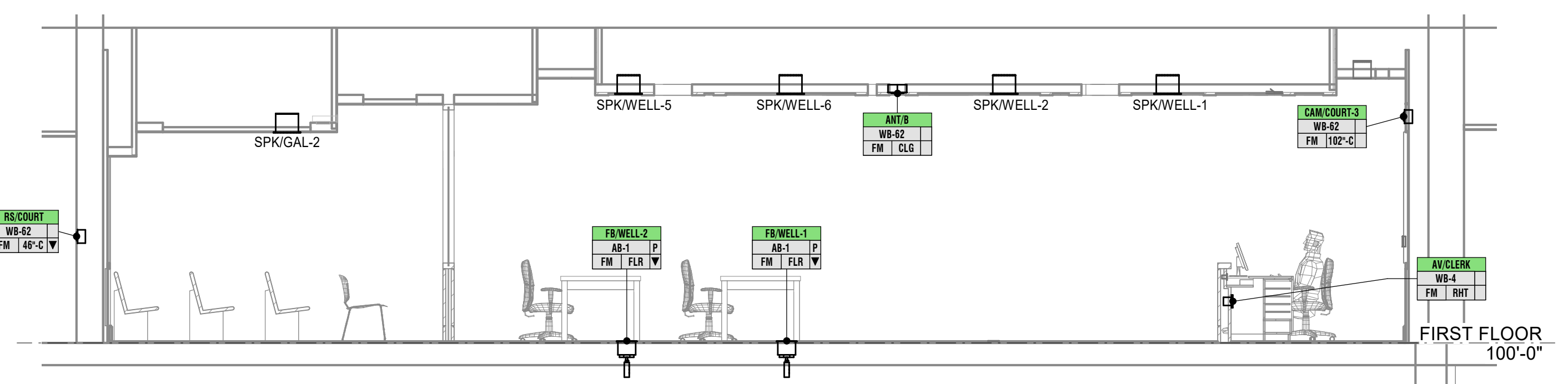
DESIGNER: EDK	PROJECT MANAGER: FBR
SCALE: As Indicated	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV / BID DOCUMENTS R1	
REVISION:	DATE: DESCRIPTION:
1	10/30/2022 AV SYSTEM BID DOCUMENTS

SHEET TITLE:
BRANCH B COURTROOM C1200 SECTIONS & ELEVATIONS

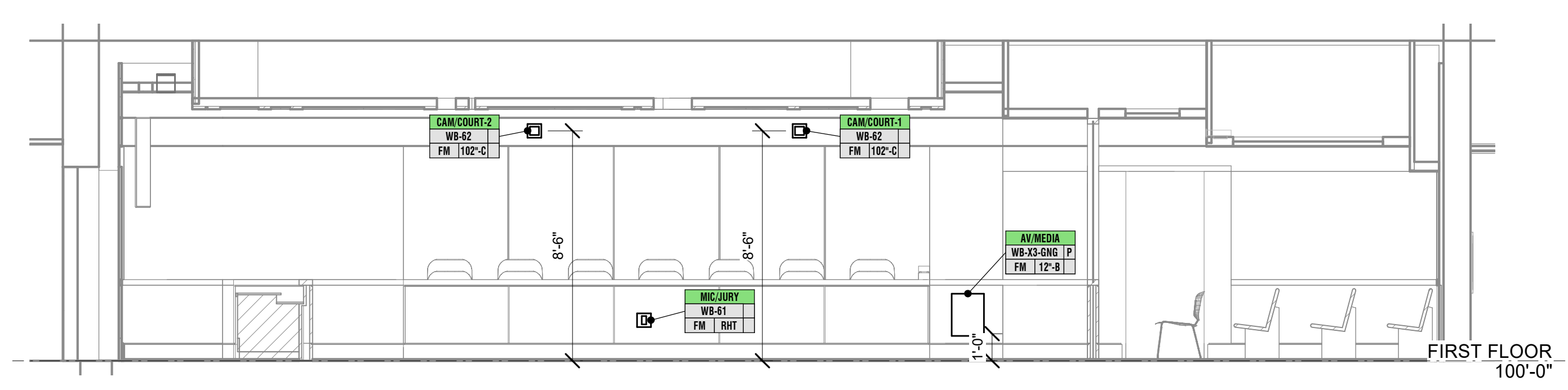
SHEET NUMBER: AV402
REV: 1



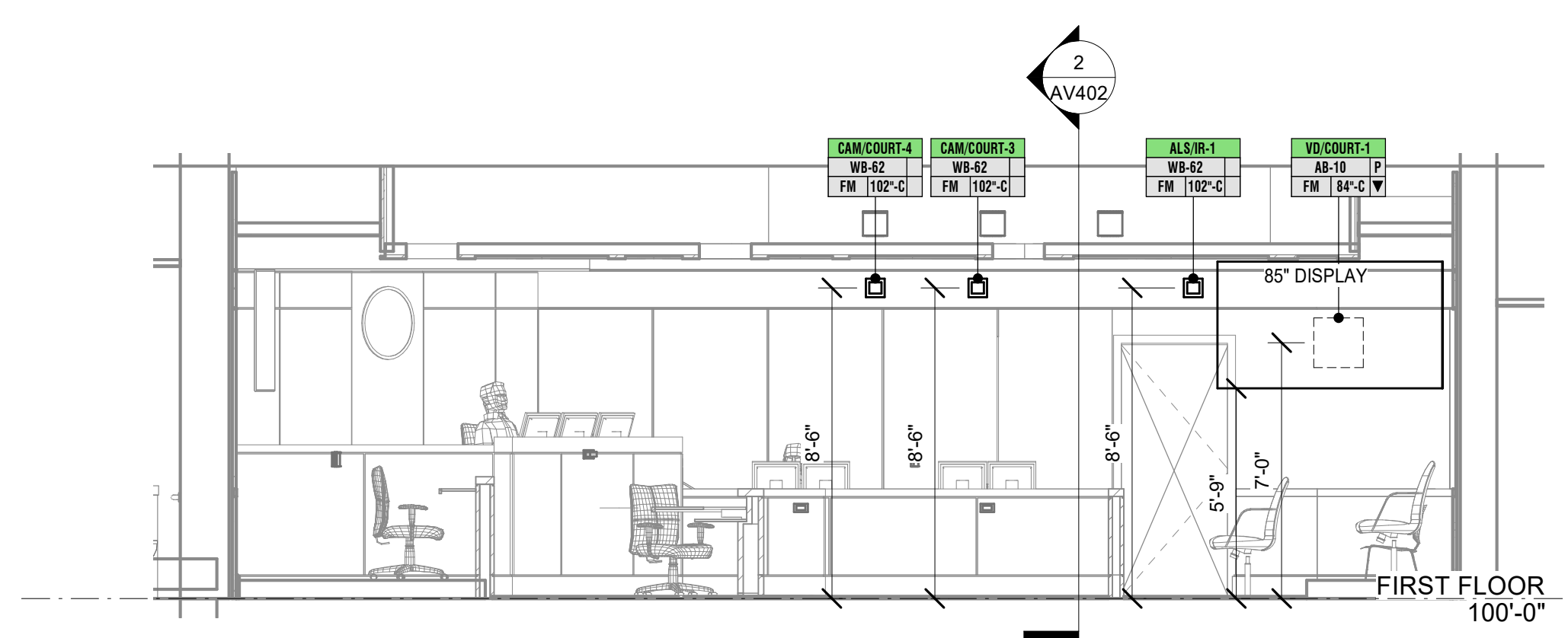
1 JURY ROOM C1188 (BRANCH B COURTROOM) - NORTH ELEVATION
1/4" = 1'-0"



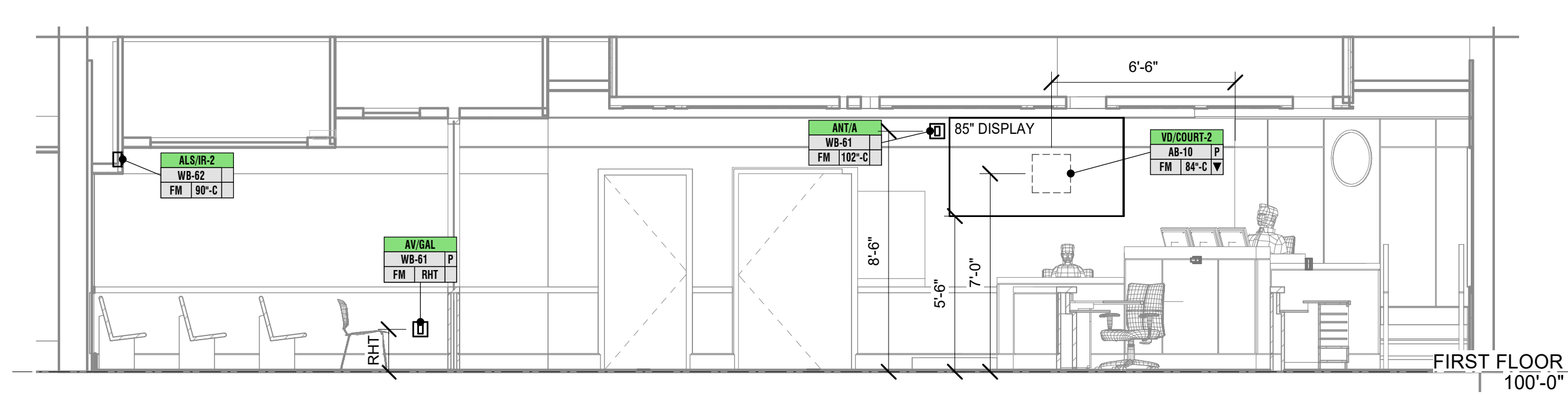
2 BRANCH B COURTROOM C1200 - LONGITUDINAL SECTION
1/4" = 1'-0"



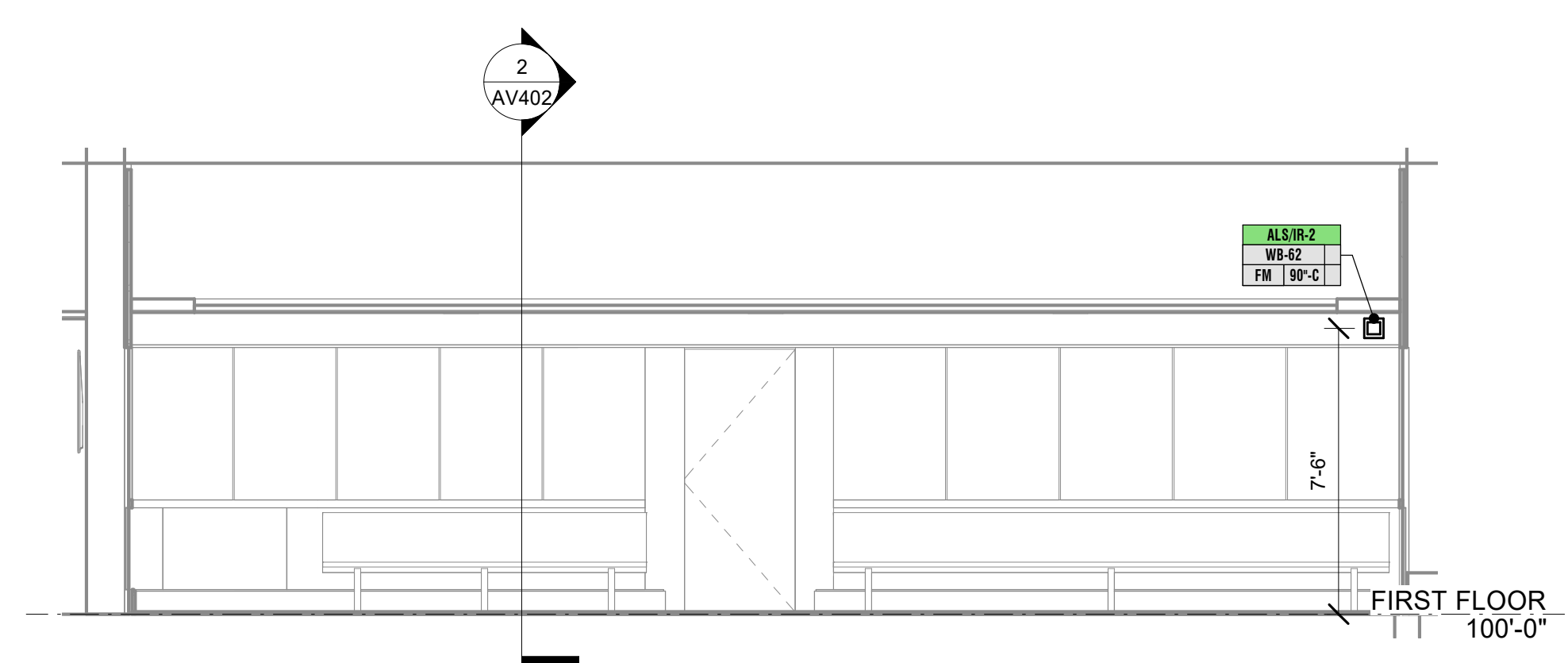
3 BRANCH B COURTROOM C1200 - NORTH ELEVATION
1/4" = 1'-0"



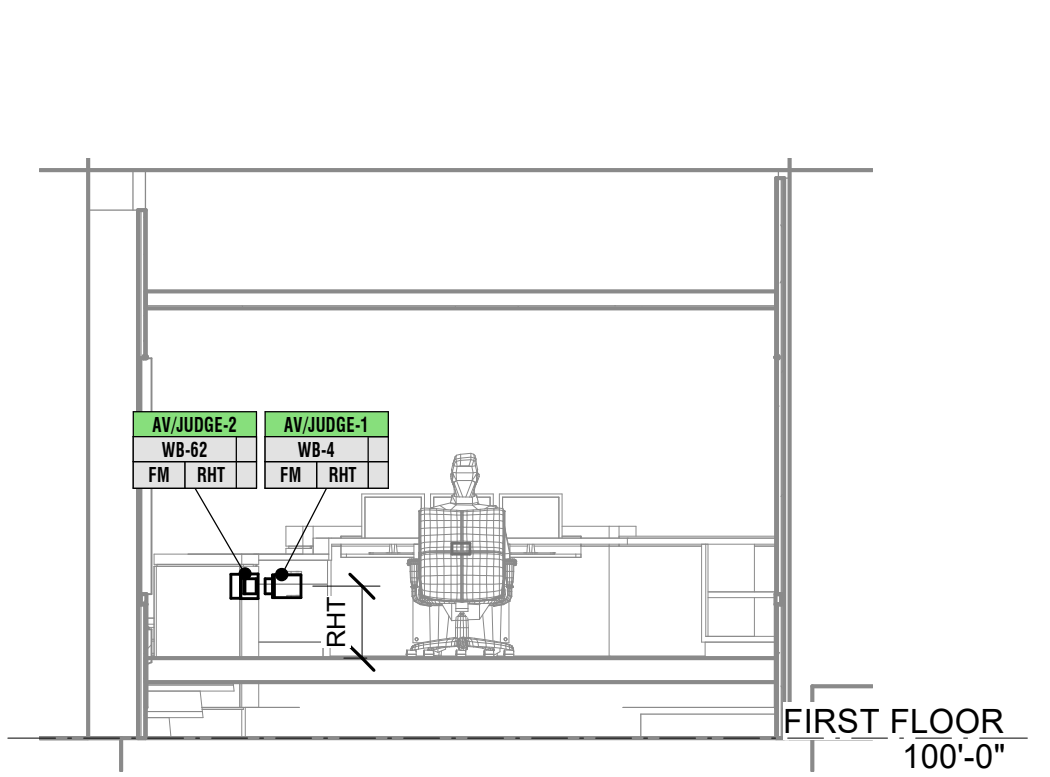
4 BRANCH B COURTROOM ELEVATION WEST
1/4" = 1'-0"



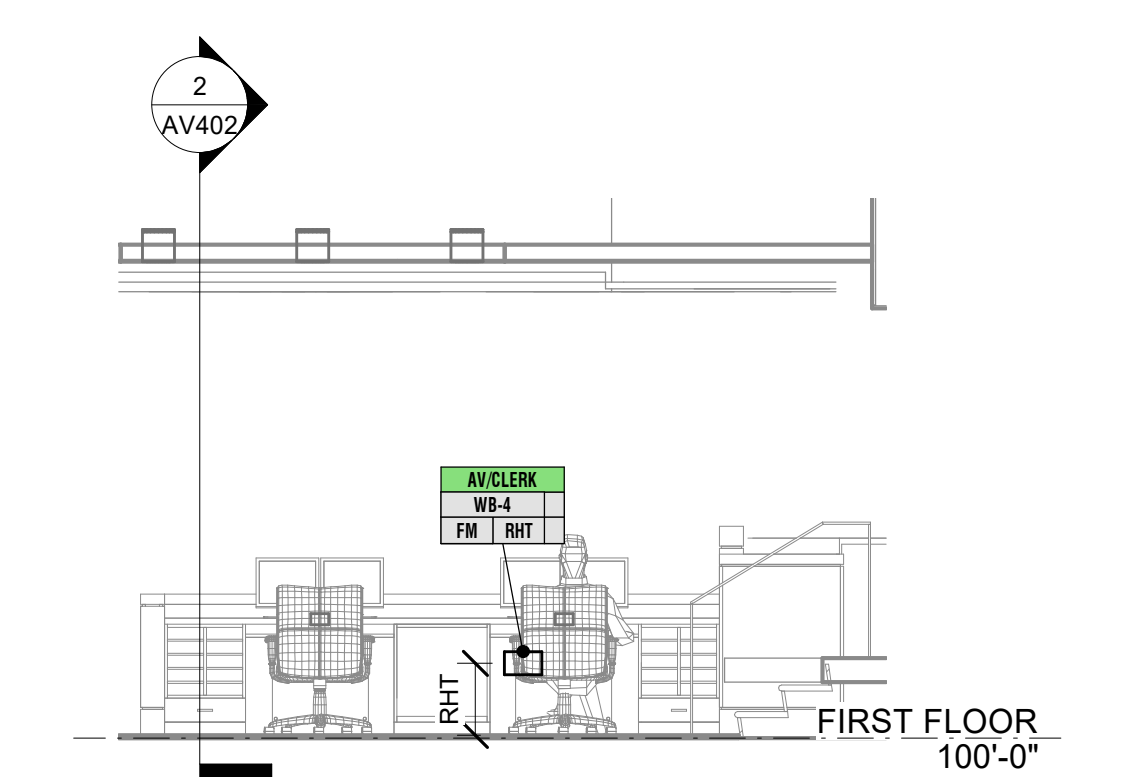
5 BRANCH B COURTROOM C1200 - SOUTH ELEVATION
1/4" = 1'-0"



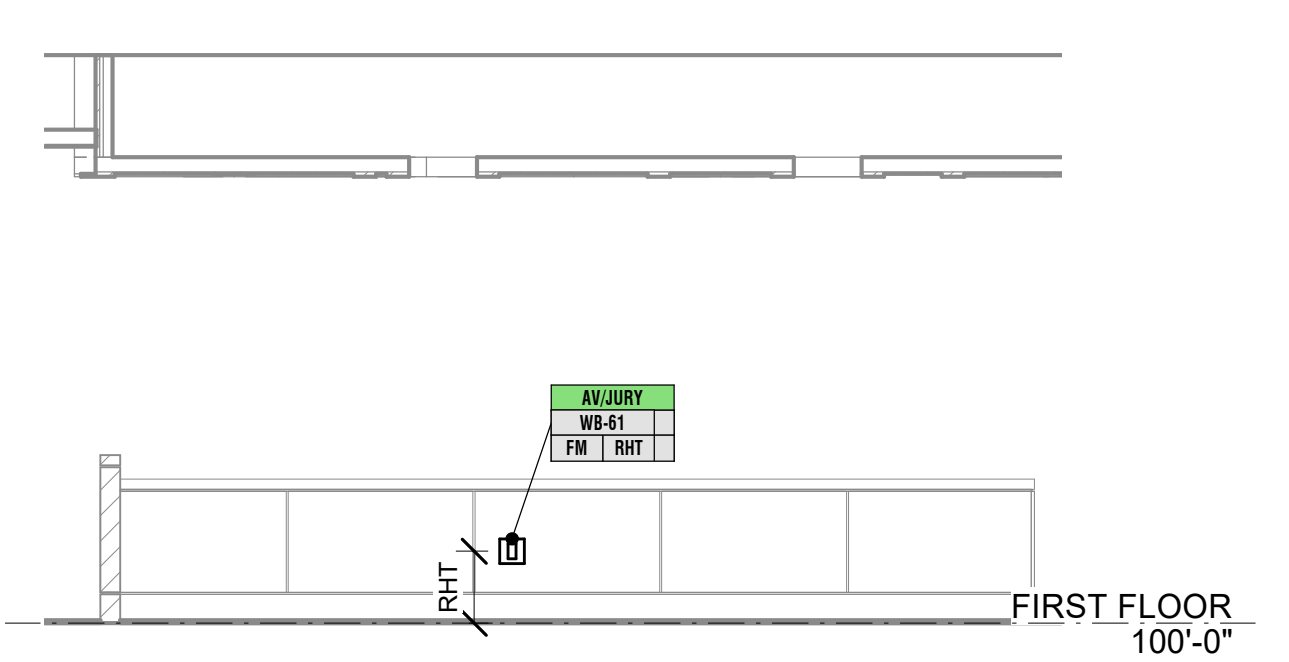
6 BRANCH B COURTROOM C1200 - EAST ELEVATION
1/4" = 1'-0"



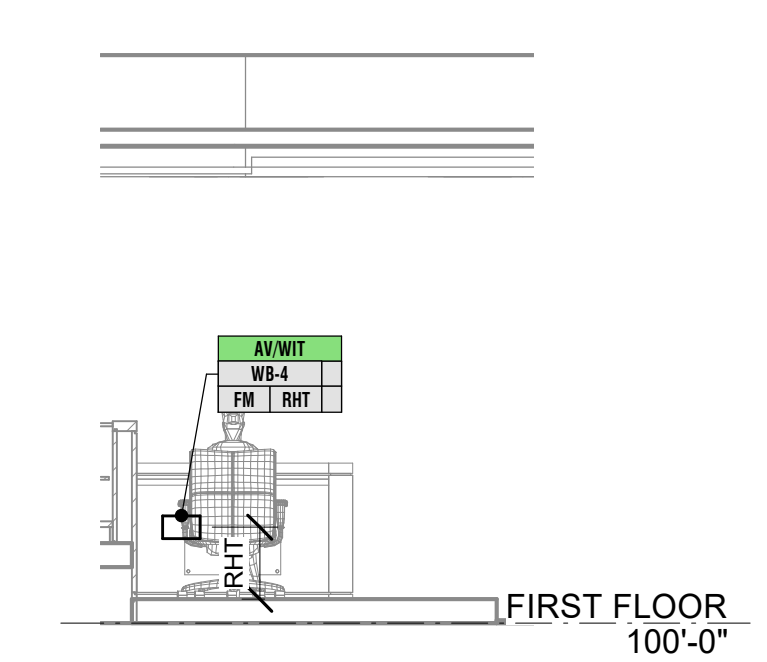
7 BRANCH B COURTROOM C1200 - JUDGE'S BENCH ELEVATION
1/4" = 1'-0"



8 BRANCH B COURTROOM C1200 - CLERK'S DESK ELEVATION
1/4" = 1'-0"



9 BRANCH B COURTROOM C1200 - JURY RAIL ELEVATION (JURY SIDE)
1/4" = 1'-0"



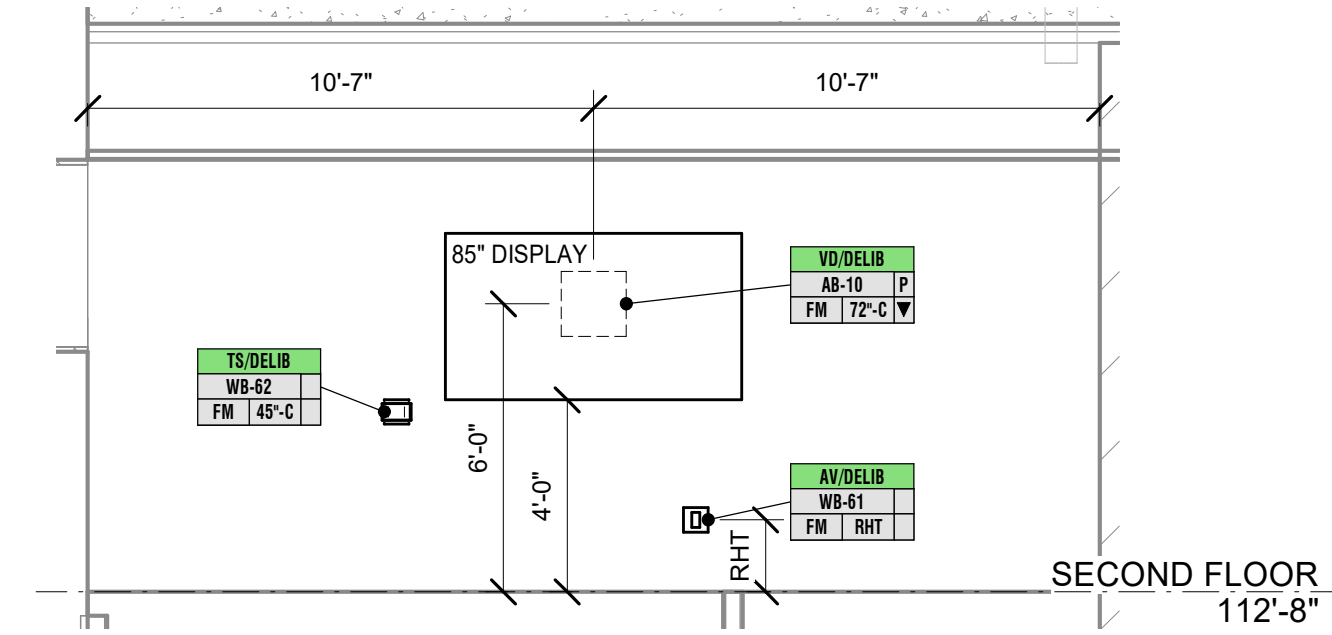
10 BRANCH B COURTROOM C1200 - WITNESS POSITION ELEVATION
1/4" = 1'-0"

AV TAG LEGEND

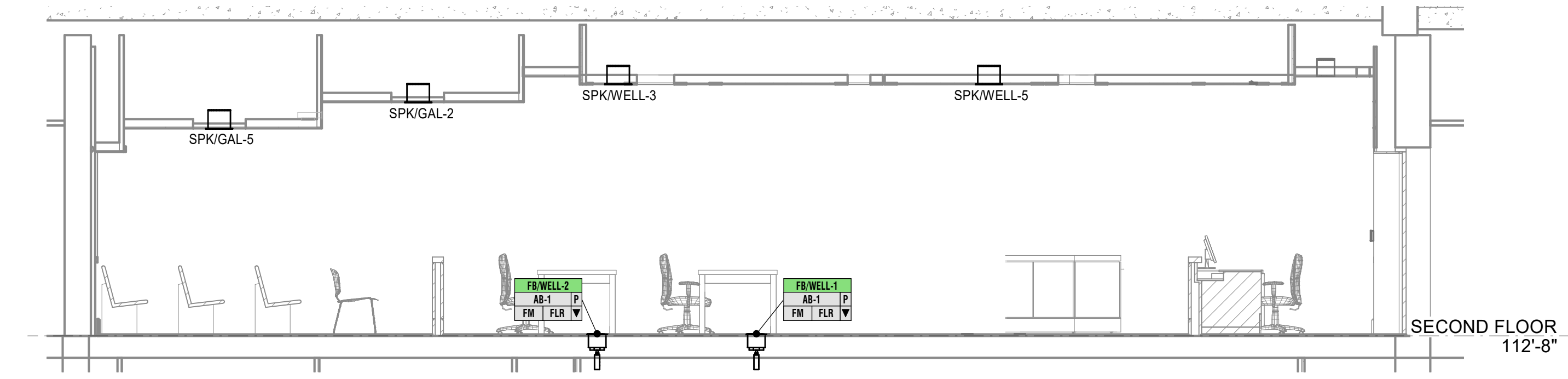
DEVICE LOCATION ID
ASSOCIATED BOX TYPE (REFER TO AV900 SERIES SHEETS FOR BOX TYPES USED IN PROJECT)
ASSOCIATED BOX MOUNTING TYPE (SEE AV001)
ASSOCIATED BOX MOUNTING HEIGHT (SEE AV001)
WHEN PRESENT, INDICATES POWER & DATA REQUIREMENTS (SEE AV900 SERIES SHEETS)

- GENERAL SHEET NOTES**
- REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
 - COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
 - AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
 - REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.

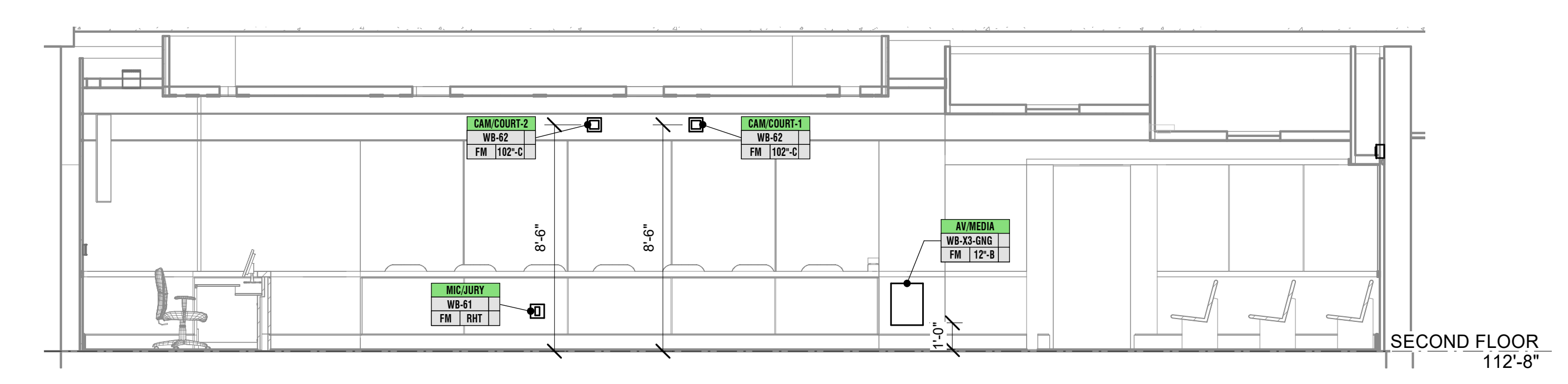
NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS



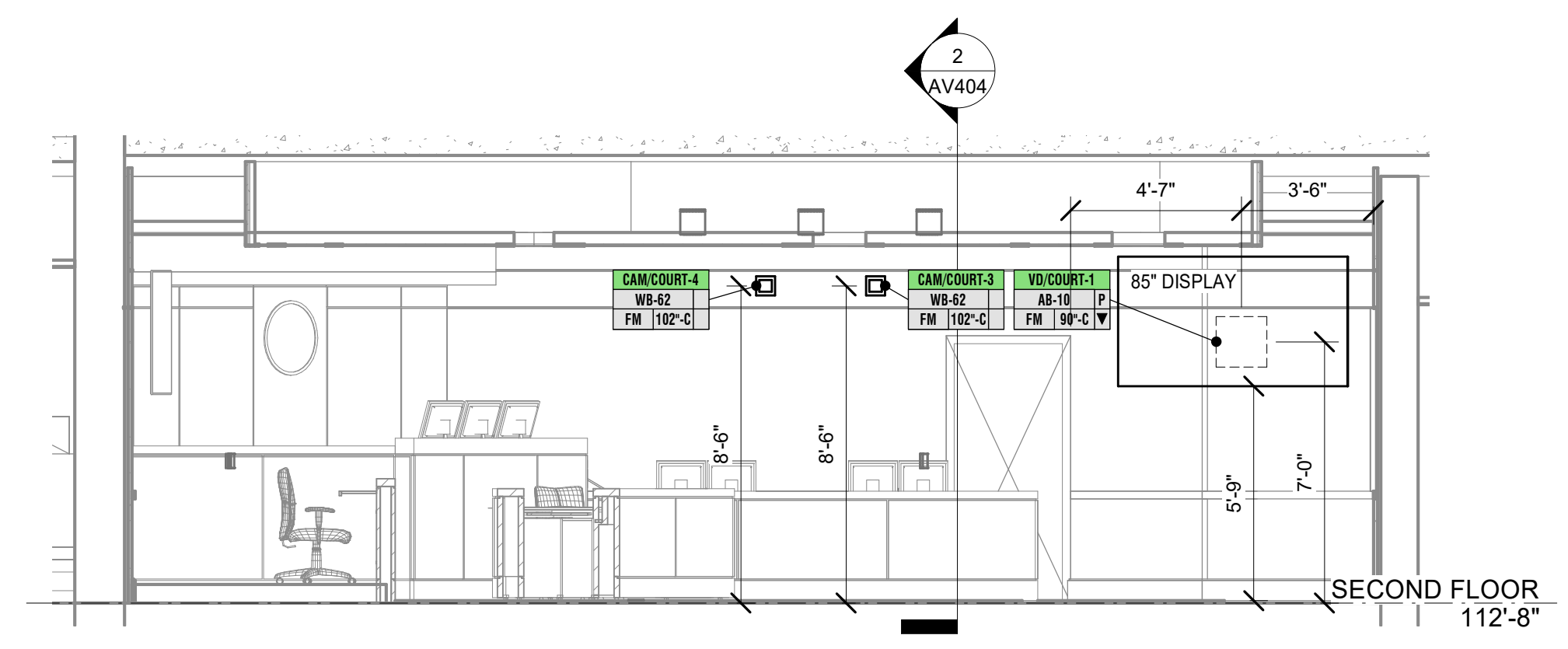
1 JURY C2275 - SOUTH ELEVATION (BRANCH D COURTROOM)
1/4" = 1'-0"



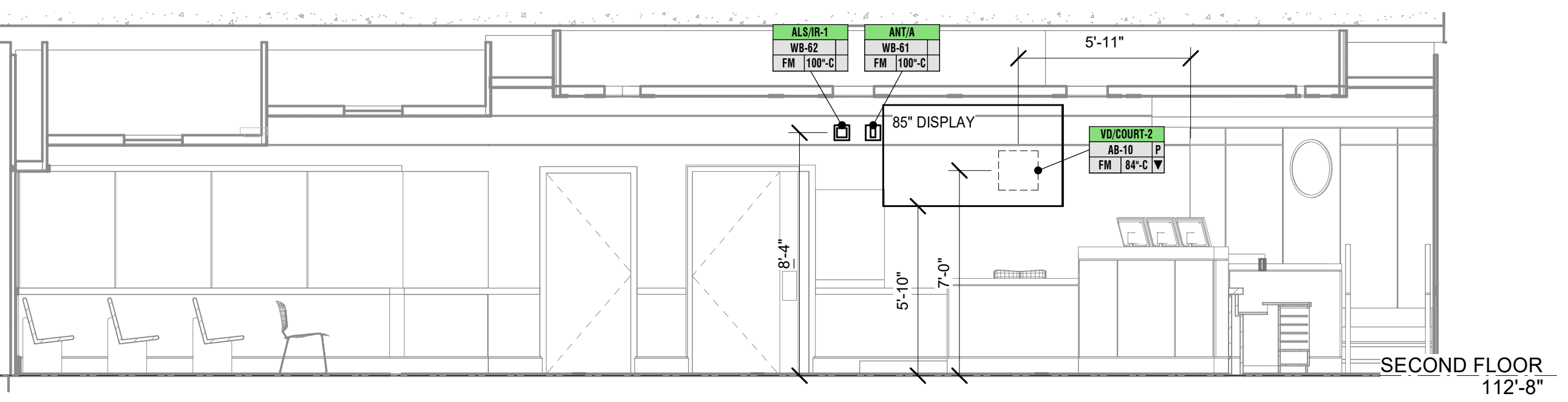
2 BRANCH D COURTROOM C2230 - LONGITUDINAL SECTION
1/4" = 1'-0"



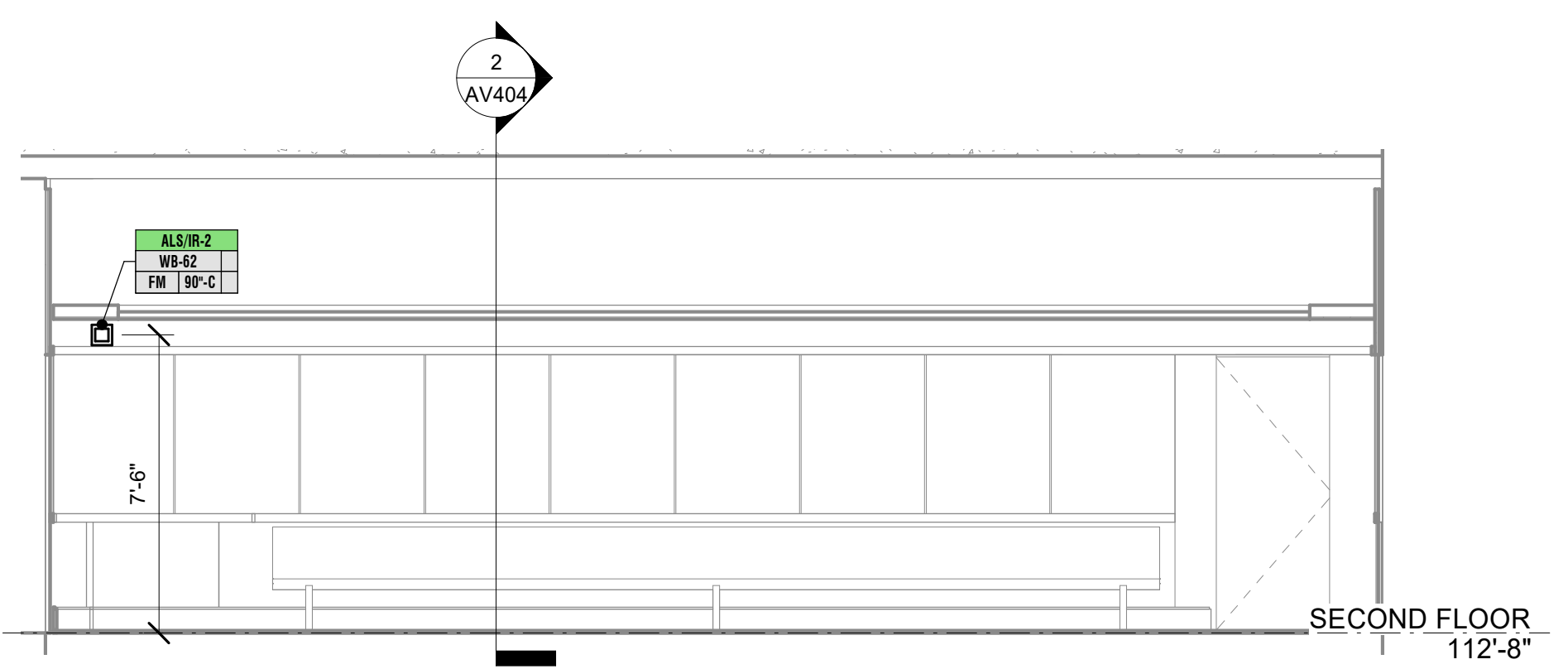
3 BRANCH D COURTROOM C2230 - NORTH ELEVATION
1/4" = 1'-0"



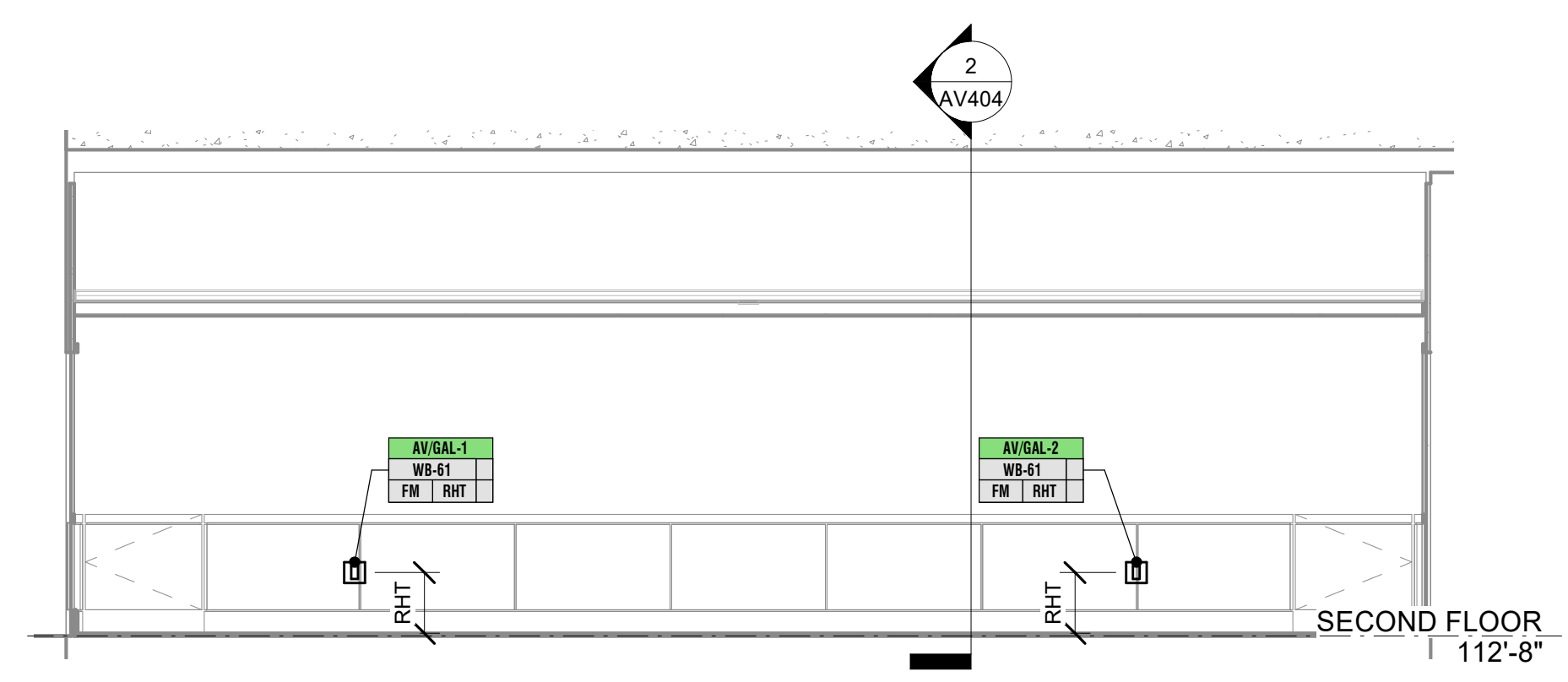
4 BRANCH D COURTROOM C2230 - WEST ELEVATION
1/4" = 1'-0"



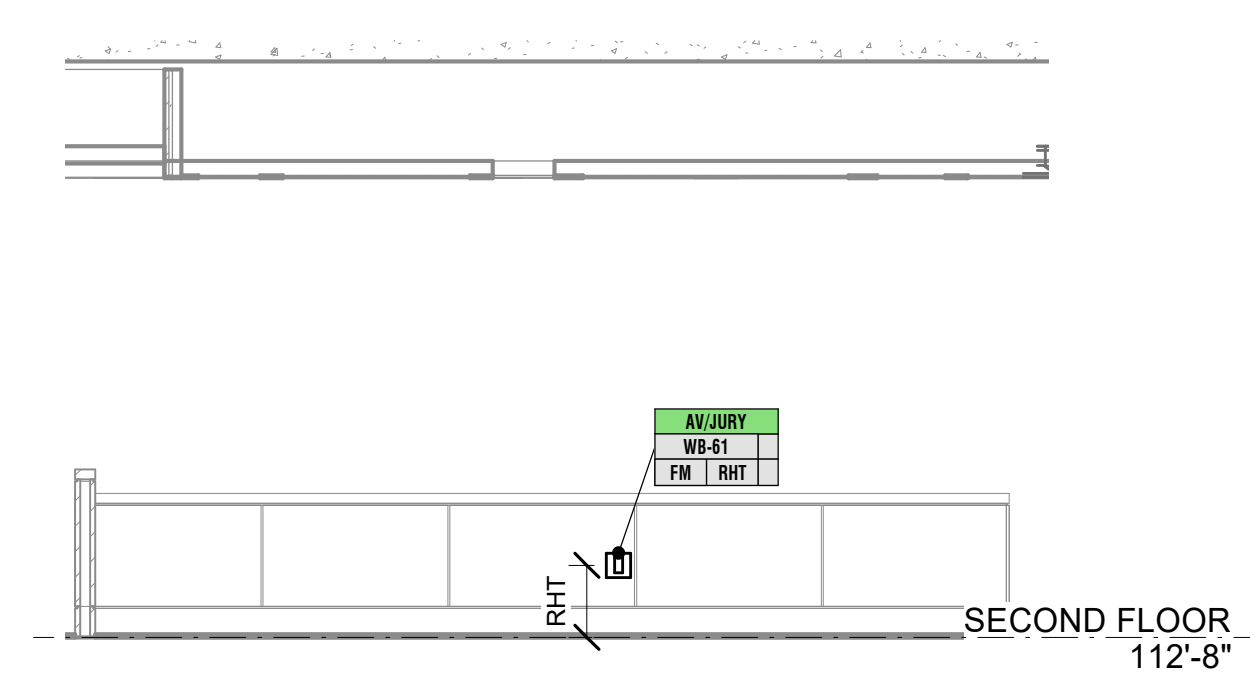
5 BRANCH D COURTROOM C2230 - SOUTH ELEVATION
1/4" = 1'-0"



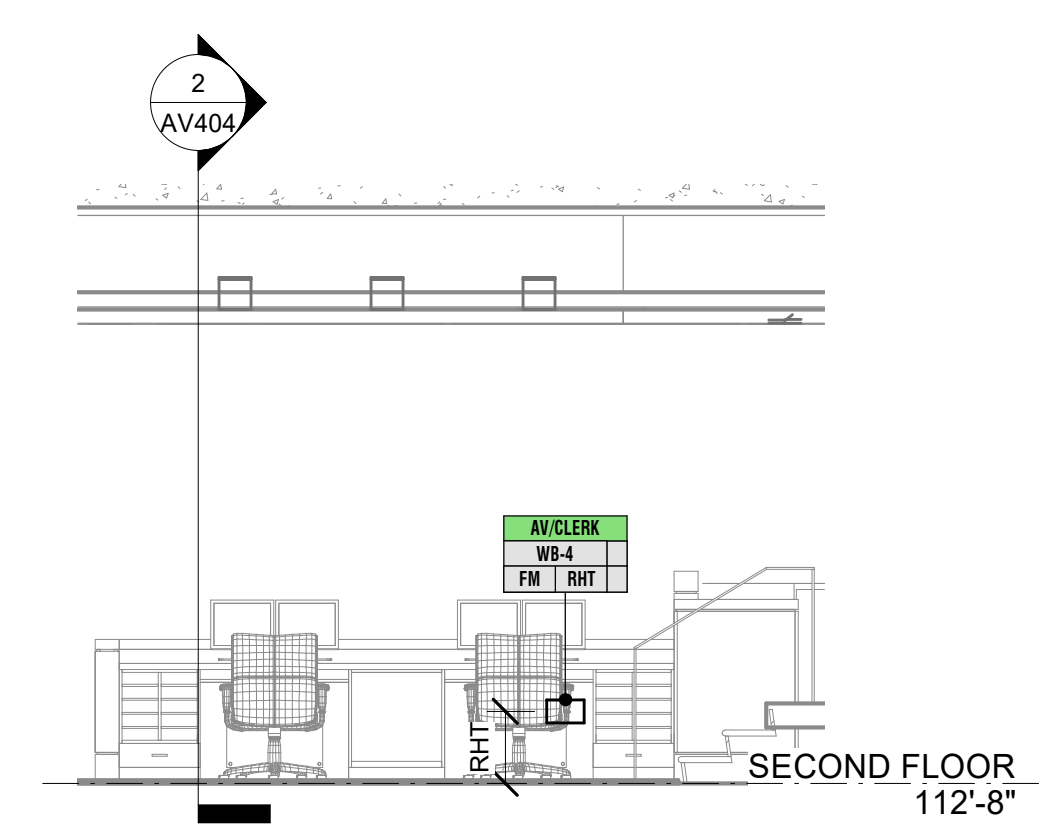
6 BRANCH D COURTROOM C2230 - EAST ELEVATION
1/4" = 1'-0"



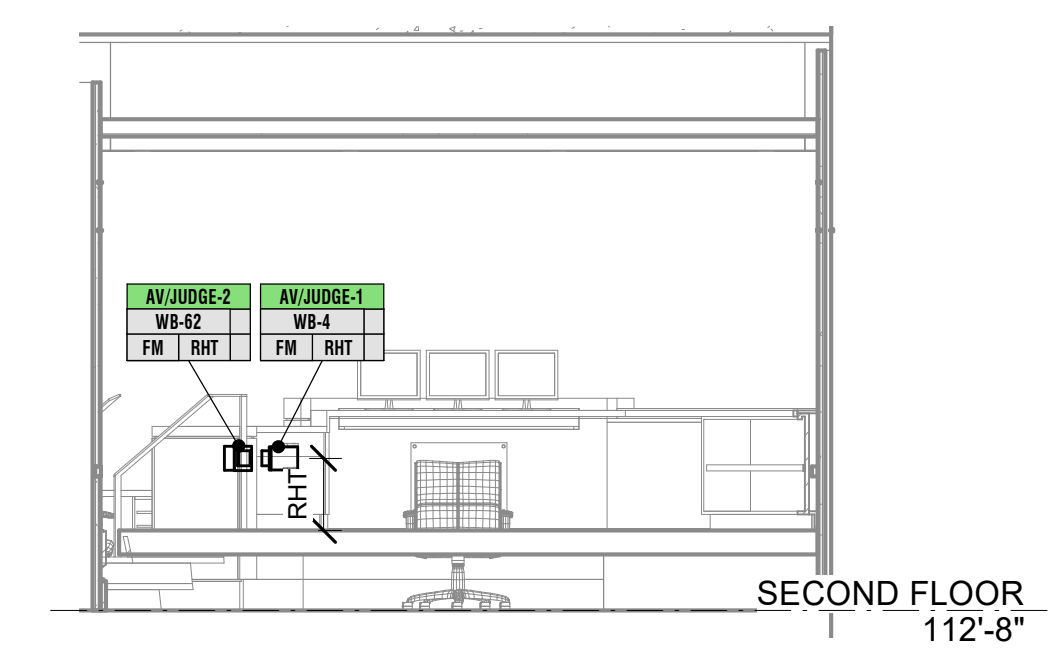
7 BRANCH D COURTROOM C2230 - BAR ELEVATION (GALLERY SIDE)
1/4" = 1'-0"



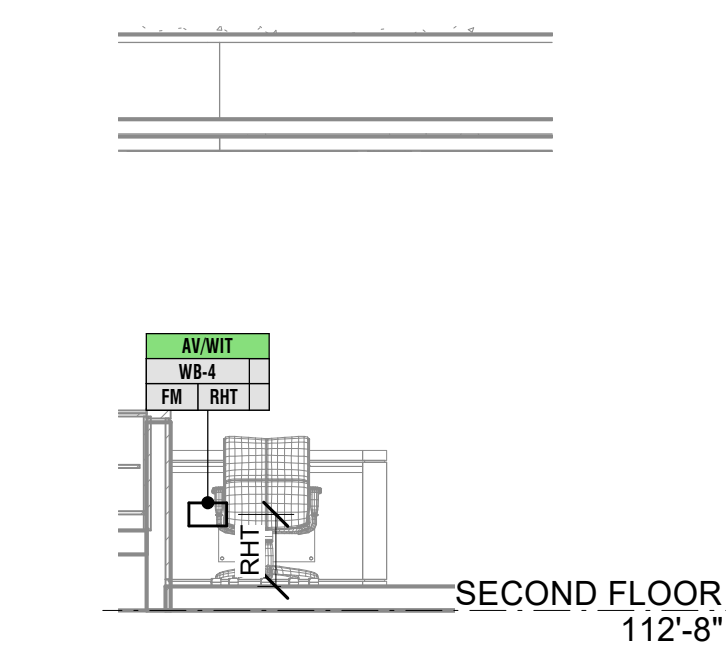
8 BRANCH D COURTROOM C2230 - JURY RAIL ELEVATION (JURY SIDE)
1/4" = 1'-0"



9 BRANCH D COURTROOM C2230 - CLERK ELEVATION
1/4" = 1'-0"



10 BRANCH D COURTROOM ELEVATION JUDGE RAIL
1/4" = 1'-0"



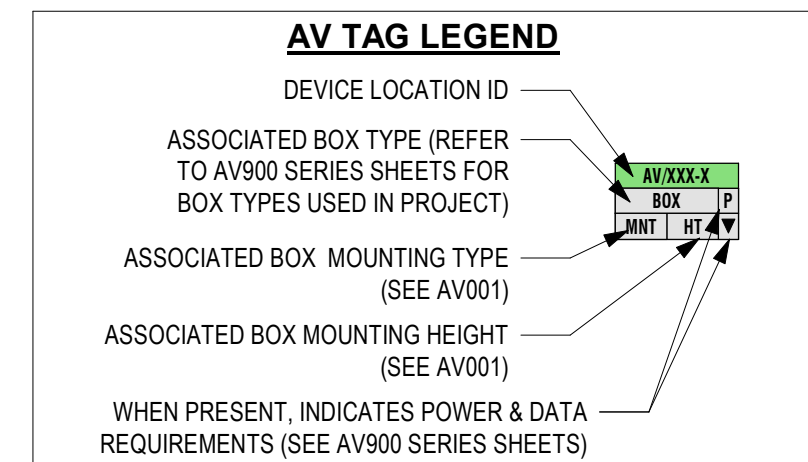
11 BRANCH D COURTROOM C2230 - WITNESS ELEVATION WITNESS
1/4" = 1'-0"

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: FBR
SCALE: As Indicated	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV / BID DOCUMENTS R1	
REVISION:	DATE: DESCRIPTION:
1	10/30/2022 AV SYSTEM BID DOCUMENTS

SHEET TITLE:
**BRANCH D
COURTROOM
SECTIONS &
ELEVATIONS**

SHEET NUMBER: **AV404** REV: **1**

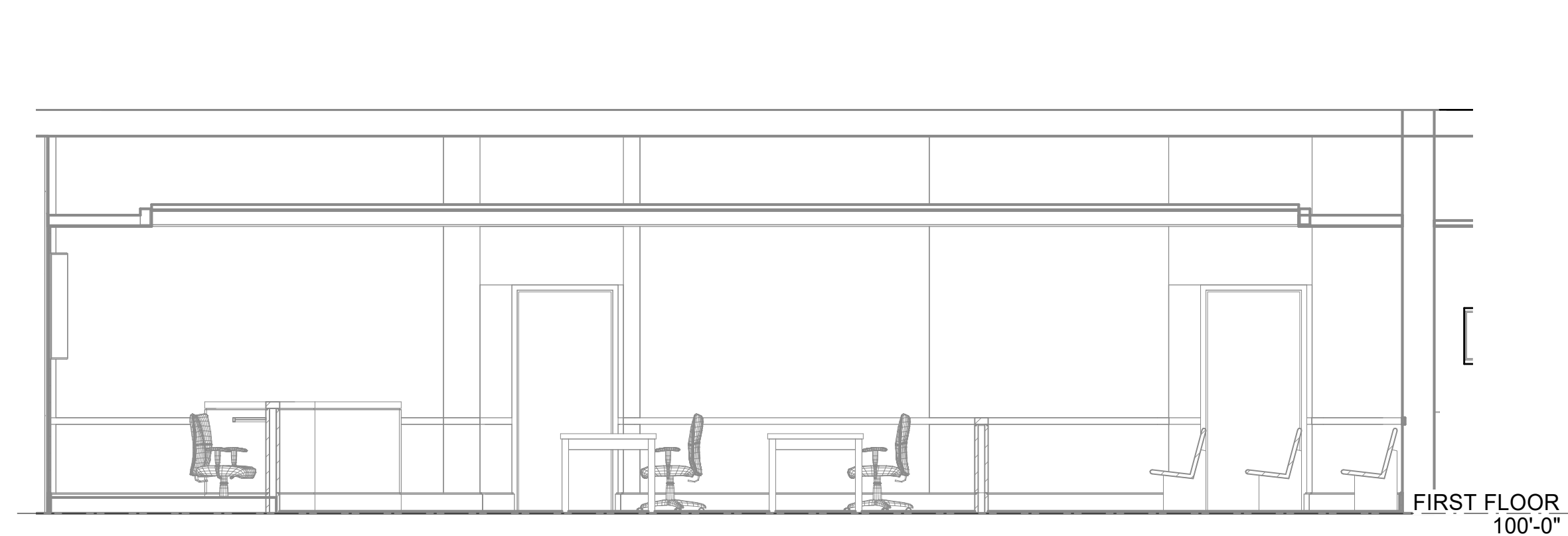


GENERAL SHEET NOTES

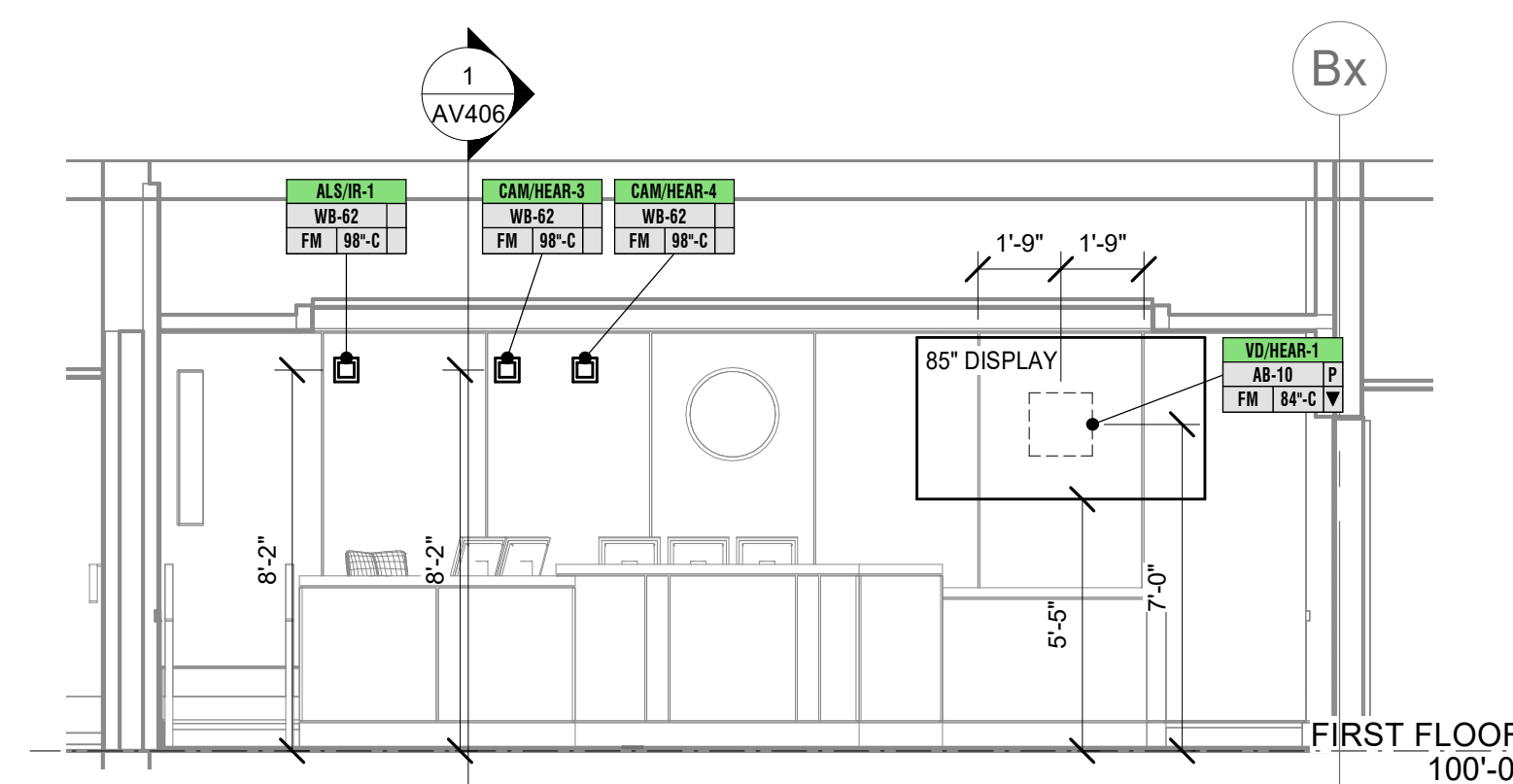
- 1 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
- 2 COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
- 3 AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
- 4 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

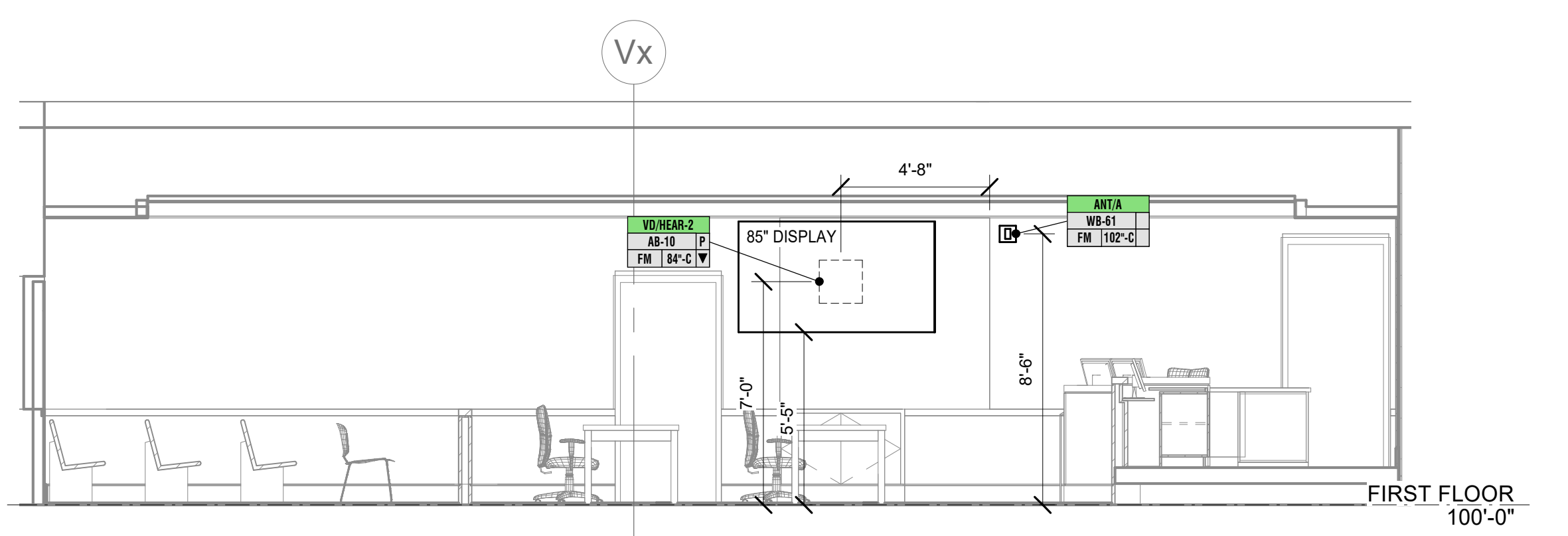
**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**



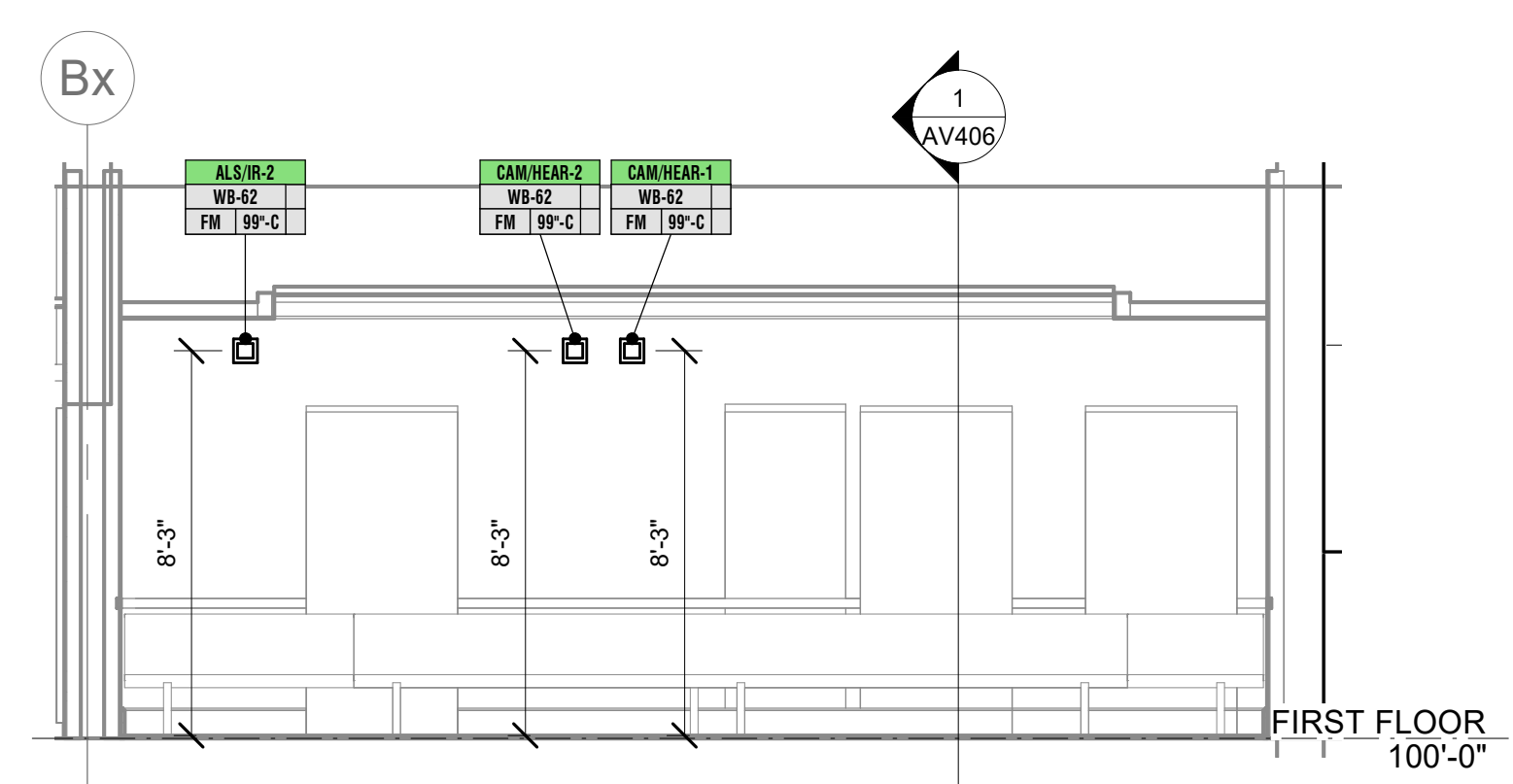
1 HEARING ROOM 1 C1150 - EAST ELEVATION
1/4" = 1'-0"



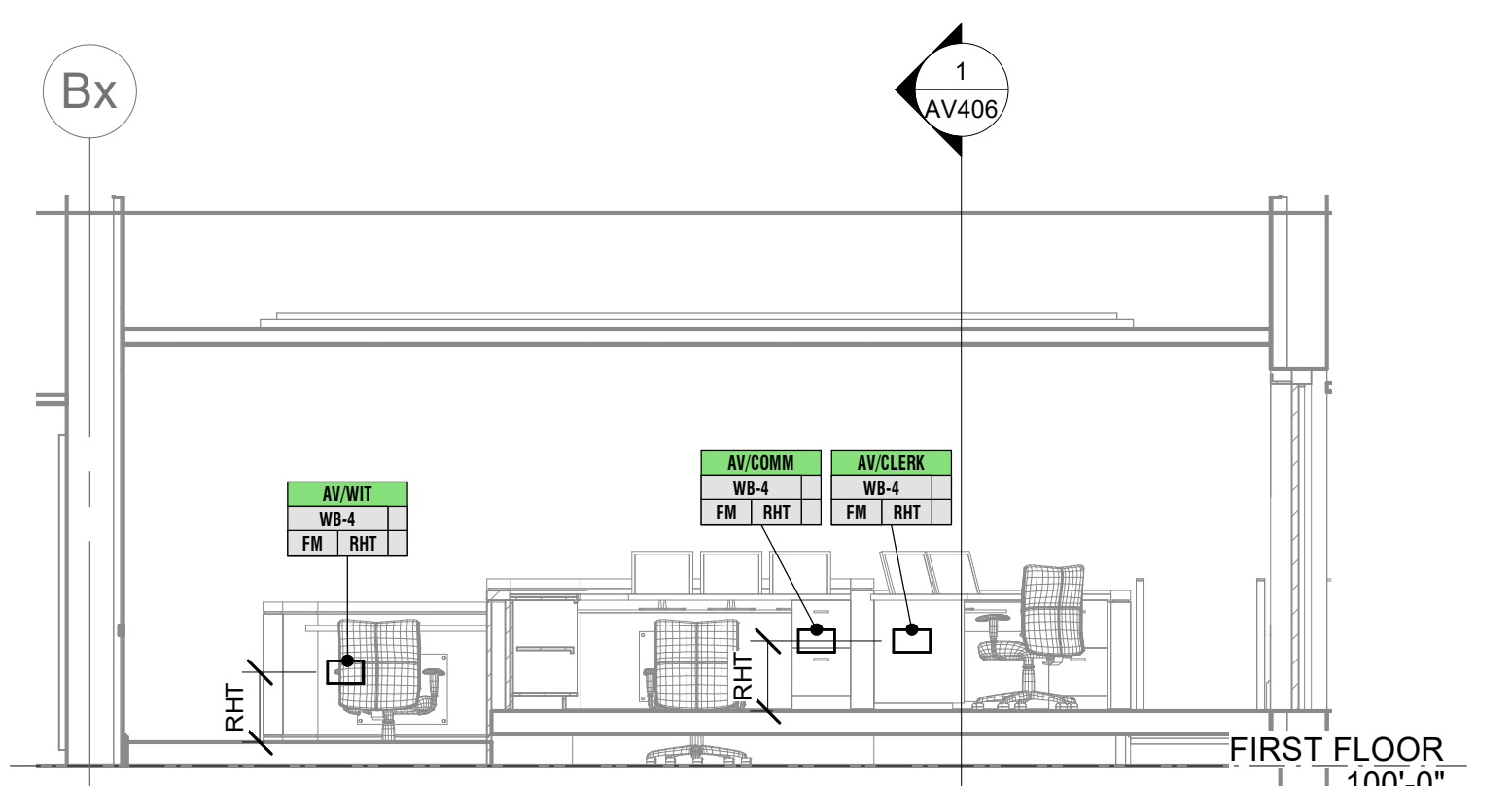
2 HEARING ROOM 1 C1150 - NORTH ELEVATION
1/4" = 1'-0"



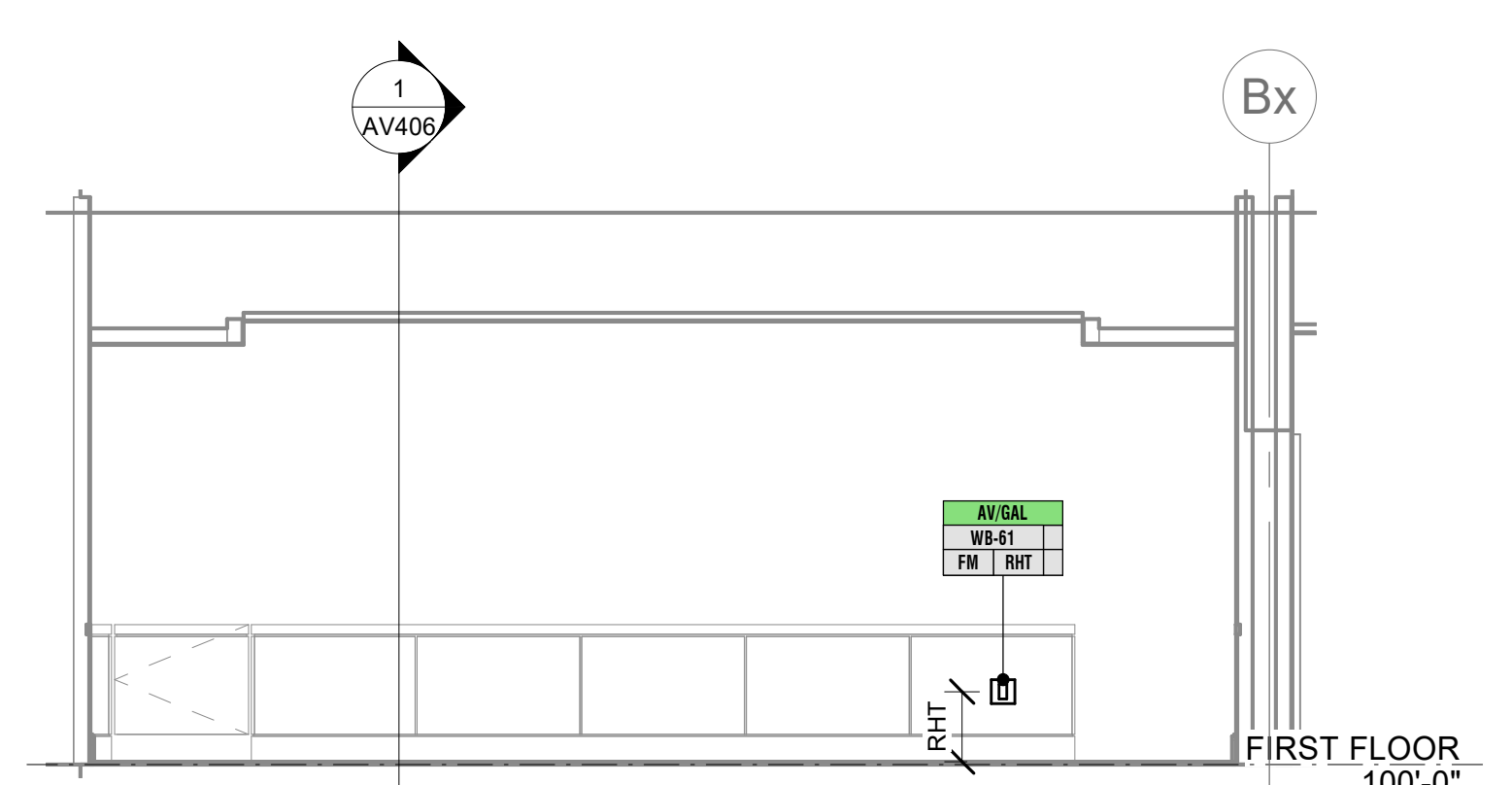
3 HEARING ROOM 1 C1150 - WEST ELEVATION
1/4" = 1'-0"



4 HEARING ROOM 1 C1150 - SOUTH ELEVATION
1/4" = 1'-0"



5 HEARING ROOM 1 C1150 - COMMISSIONER, CLERK, WITNESS BENCH ELEVATION
1/4" = 1'-0"



6 HEARING ROOM 1 C1150 - BAR ELEVATION (GALLERY SIDE)
1/4" = 1'-0"

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: As Indicated	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISION:	DESCRIPTION:
1 10/30/2022	AV SYSTEM BID DOCUMENTS

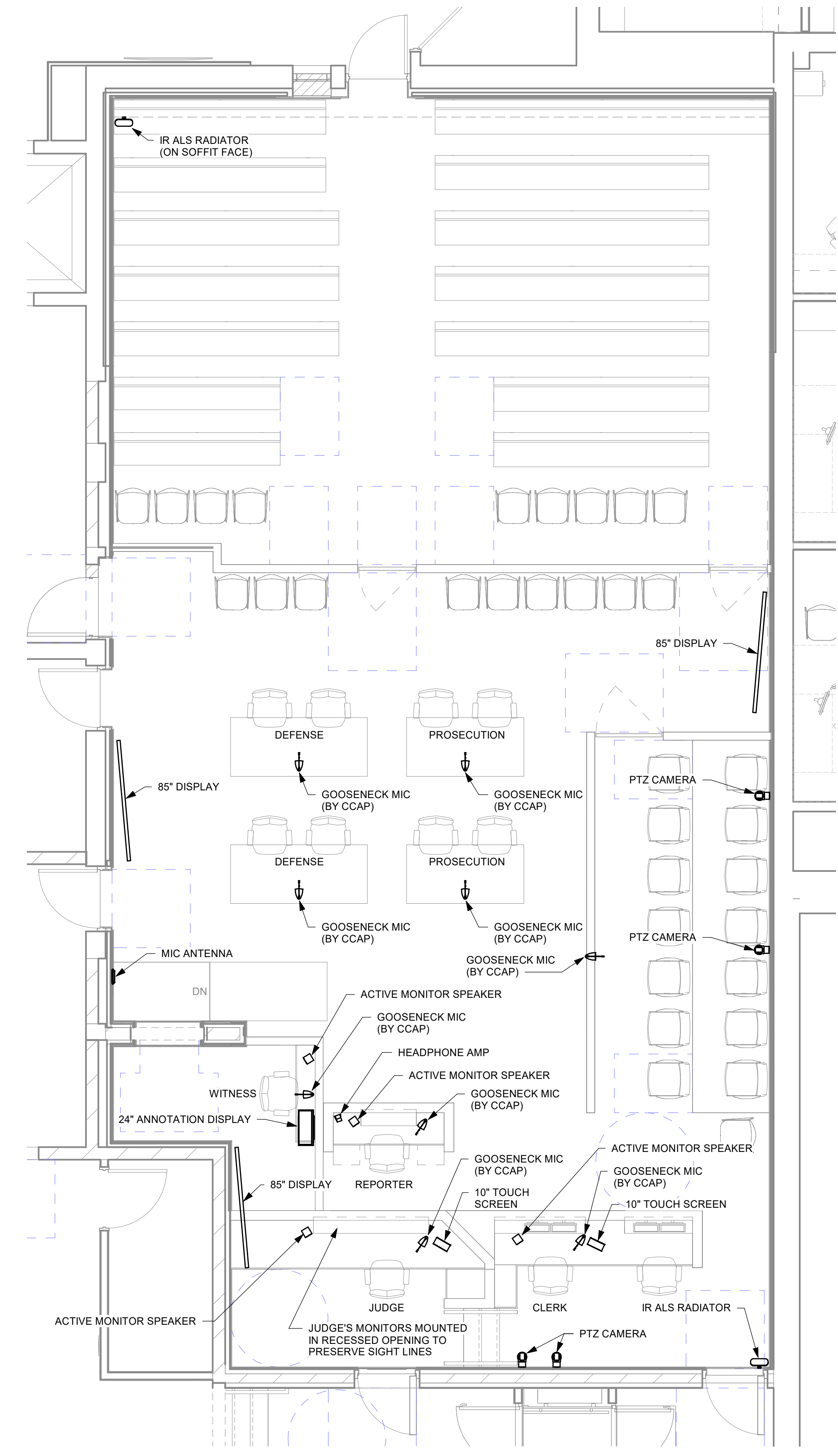
SHEET TITLE:
**HEARING ROOM 1
SECTIONS &
ELEVATIONS**

SHEET NUMBER: **AV405** REV: **1**

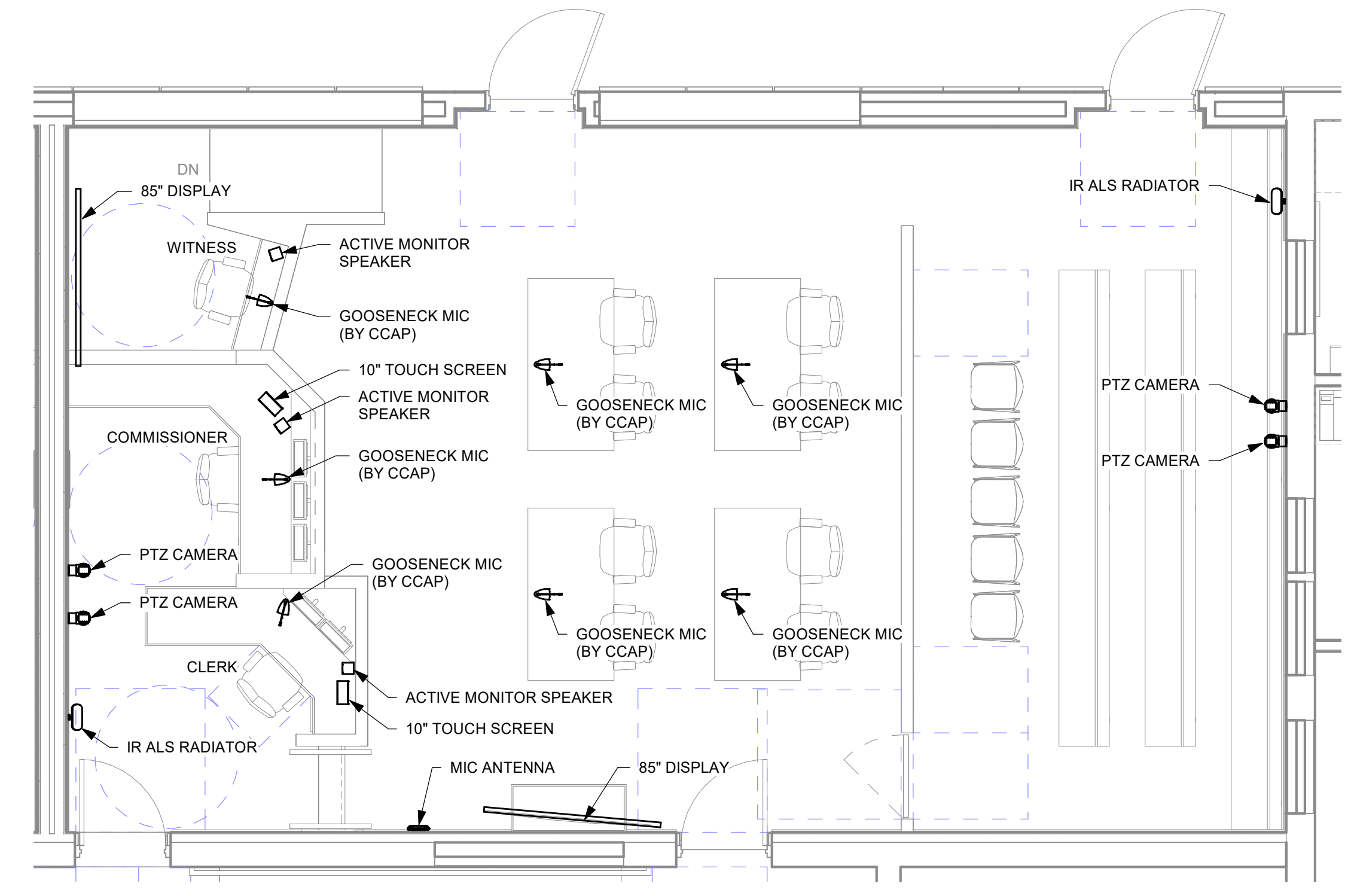
GENERAL SHEET NOTES

- 1 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
- 2 COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
- 3 AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
- 4 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS



1 TYPICAL COURTROOM AV DEVICE LAYOUT PLAN
1/4" = 1'-0"



2 TYPICAL HEARING ROOM AV DEVICE LAYOUT
1/4" = 1'-0"

NOTE: CAMERA SHOTS ARE EXAMPLES OF PRESETS THAT MAY BE CREATED FOR EACH COURTROOM. COORDINATE WITH OWNER FOR EXACT PRESETS REQUIRED. FOR SHOTS OF ATTORNEY TABLES, CARE SHOULD BE TAKEN TO LIMIT CAPTURE OF THE GALLERY SEATING TO THE EXTENT POSSIBLE. COORDINATE WITH OWNER TO IDENTIFY SEATING AREAS THAT ARE NOT WITHIN THE CAMERAS' VIEW TO IDENTIFY THE BEST AREAS WITHIN EACH COURTROOM WHERE VICTIMS MAY BE SEATED WITHOUT BEING CAPTURED BY THE CAMERAS.



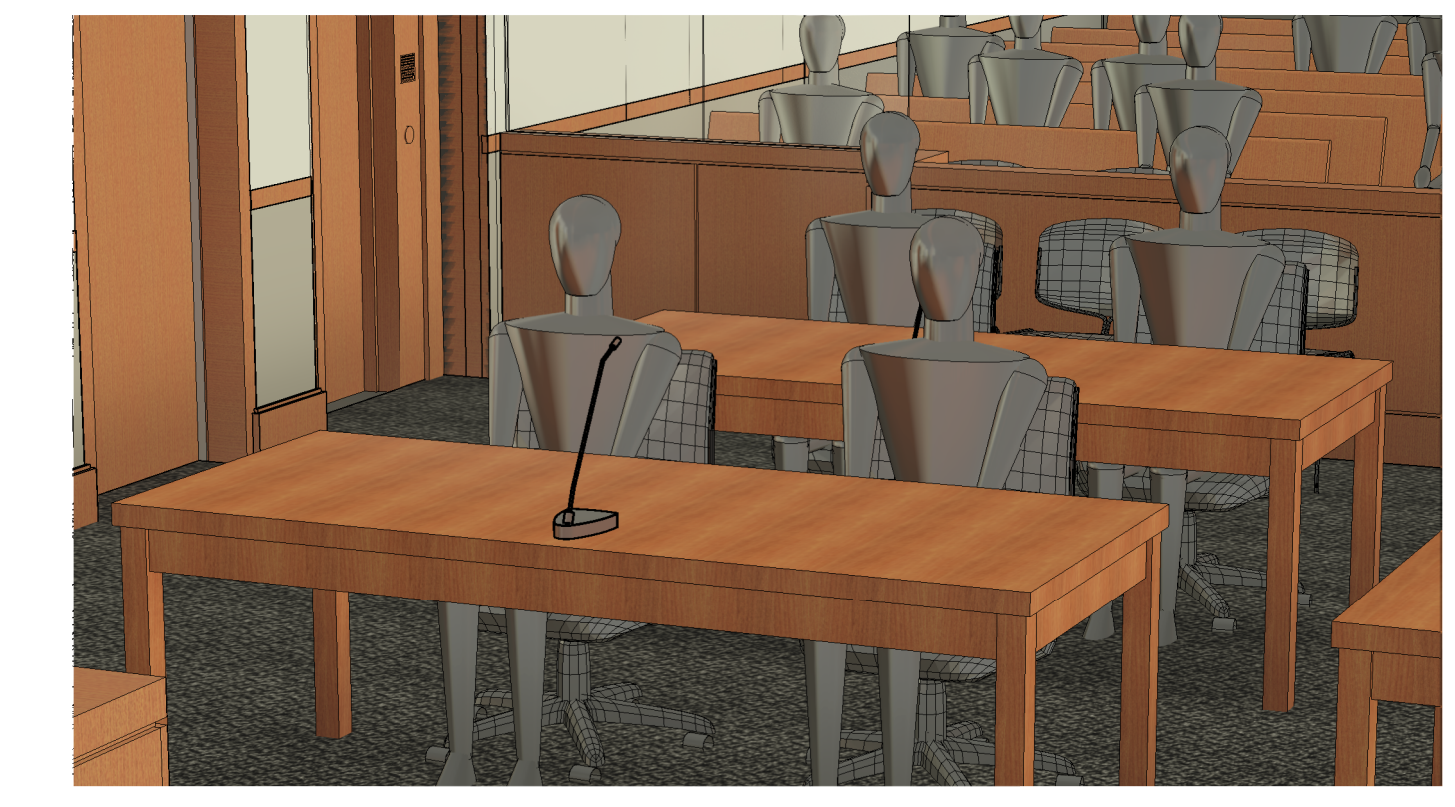
3 COURTROOM JUDGE CAMERA (CAMERA #1)



4 COURTROOM WITNESS CAMERA (CAMERA #2)



5 COURTROOM PROSECUTION CAMERA (CAMERA #3)



6 COURTROOM DEFENSE CAMERA (CAMERA #4)

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: FBR
SCALE: 1/4" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISIONS:	
REV: 1	DATE: 10/14/2022 DESCRIPTION: AV SYSTEM BID DOCUMENTS

SHEET TITLE:
COURTROOM & HEARING ROOM TYPICAL DEVICE LAYOUTS

AV TAG LEGEND

DEVICE LOCATION ID

ASSOCIATED BOX TYPE (REFER TO AV900 SERIES SHEETS FOR BOX TYPES USED IN PROJECT)

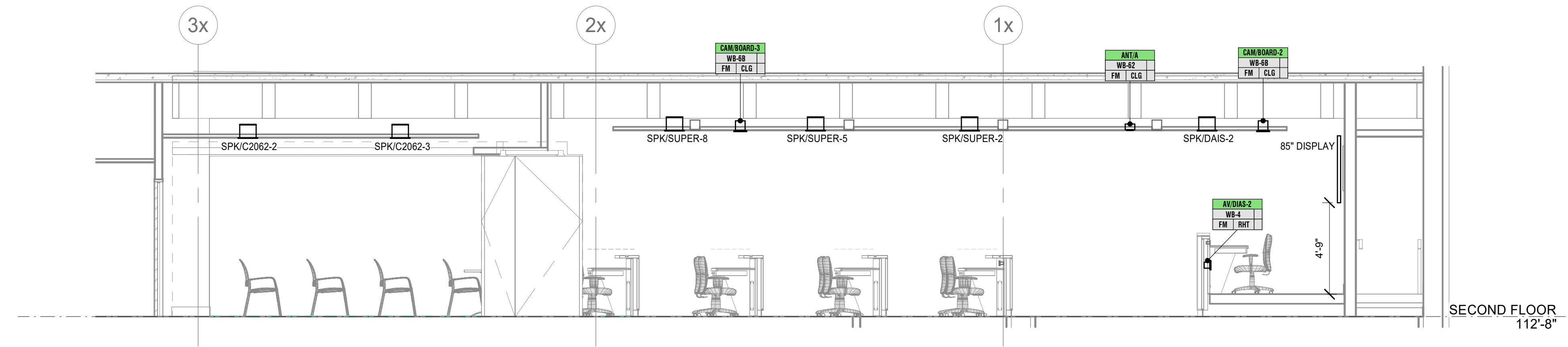
ASSOCIATED BOX MOUNTING TYPE (SEE AV001)

ASSOCIATED BOX MOUNTING HEIGHT (SEE AV001)

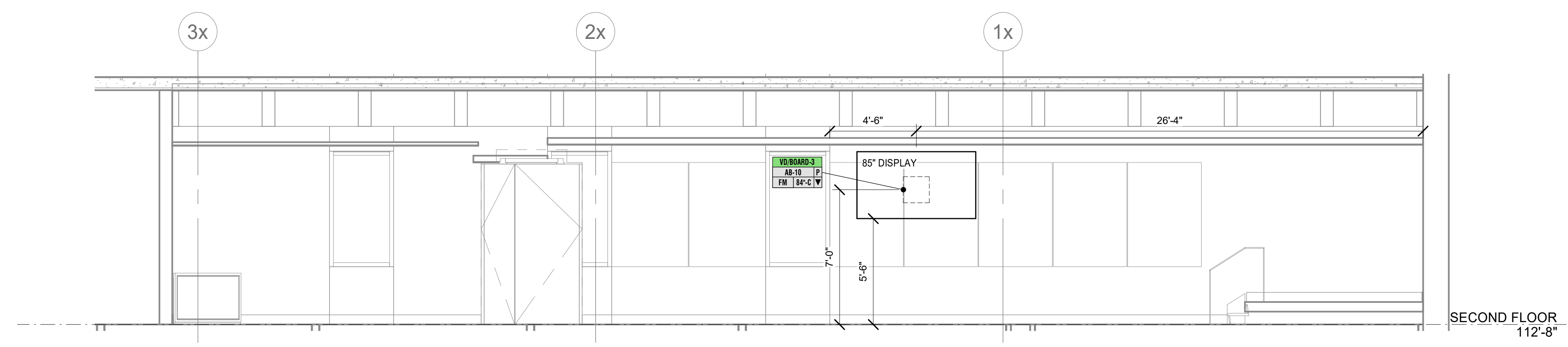
WHEN PRESENT, INDICATES POWER & DATA REQUIREMENTS (SEE AV900 SERIES SHEETS)

- GENERAL SHEET NOTES**
- 1 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
 - 2 COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
 - 3 AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
 - 4 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.

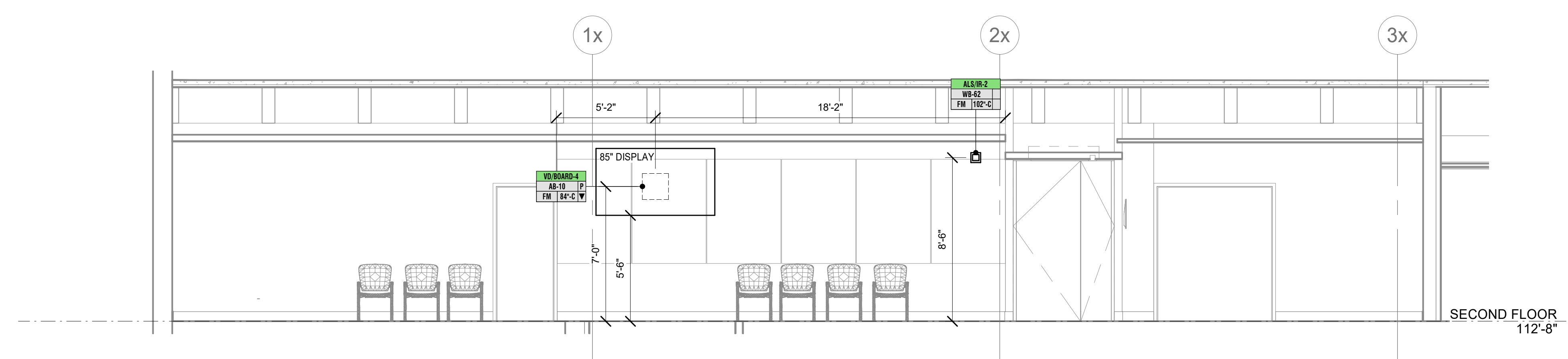
NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS



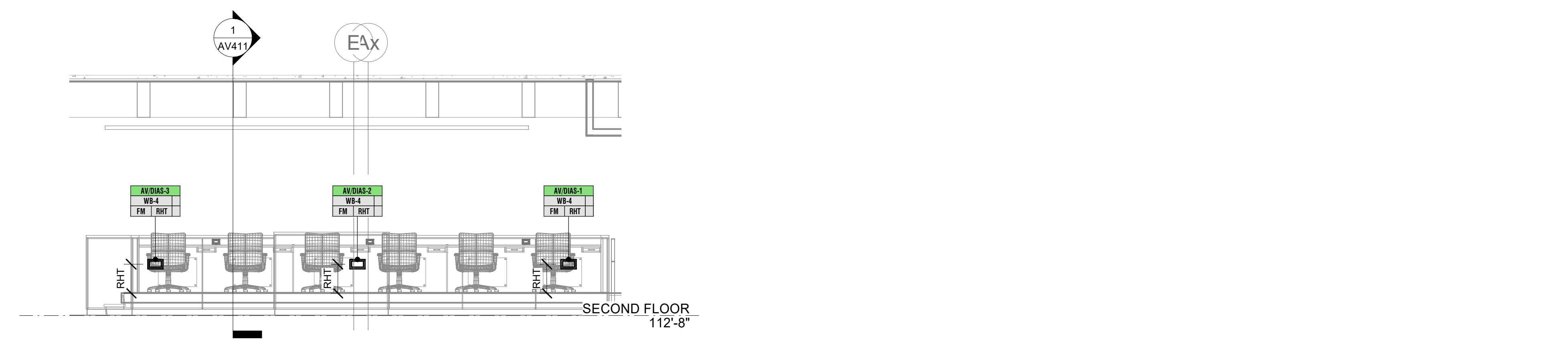
1 COUNTY BOARD ROOM - LONGITUDINAL SECTION
1/4" = 1'-0"



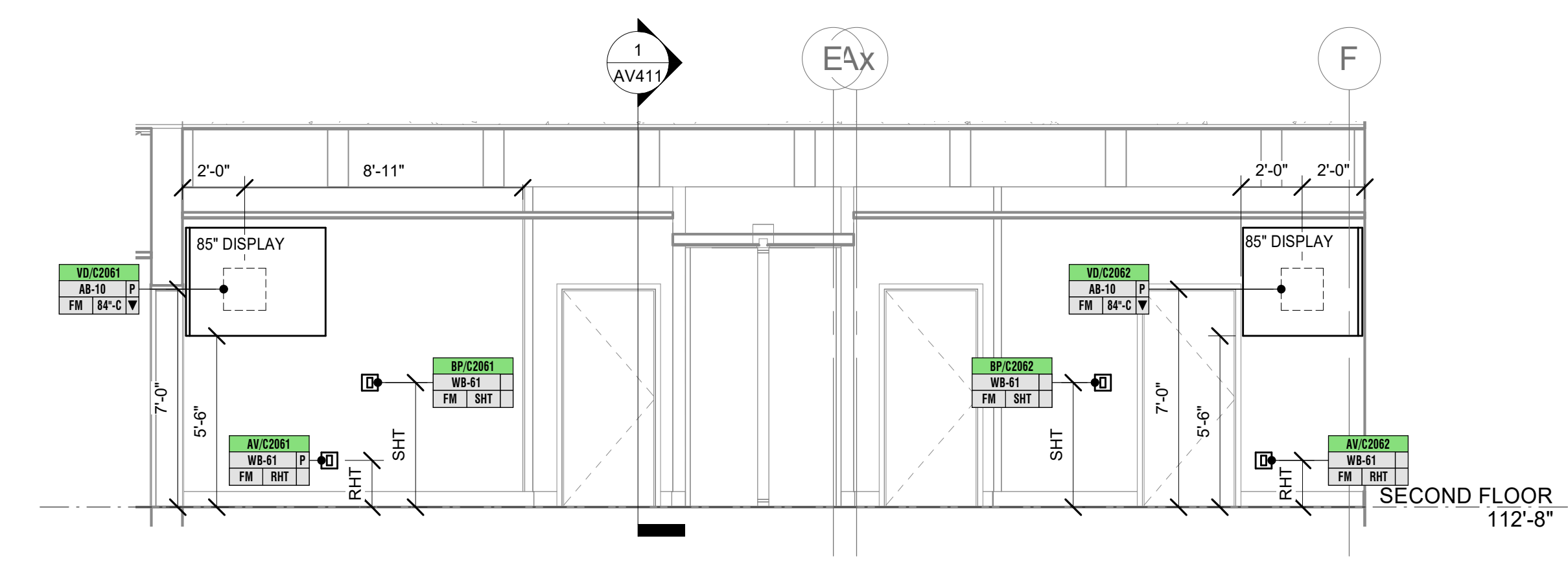
2 COUNTY BOARD ROOM - WEST ELEVATION
1/4" = 1'-0"



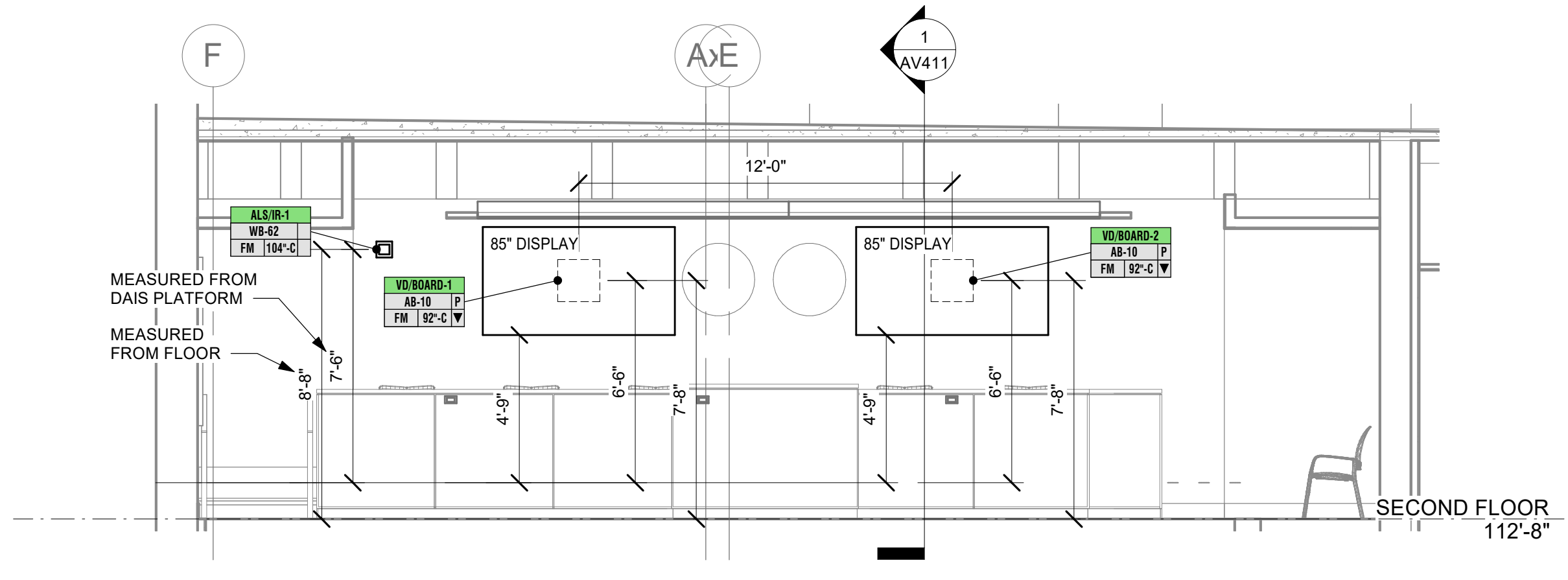
4 COUNTY BOARD ROOM - EAST ELEVATION
1/4" = 1'-0"



6 COUNTY BOARD ROOM - DAIS ELEVATION
1/4" = 1'-0"



3 COUNTY BOARD ROOM - SOUTH ELEVATION
1/4" = 1'-0"



5 COUNTY BOARD ROOM - NORTH ELEVATION
1/4" = 1'-0"

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: As Indicated	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISIONS:	DESCRIPTION:
1 07-30-2022 AV INFRASTRUCTURE SET	
2 09-30-2022 AV SYSTEM BID DOCUMENTS	

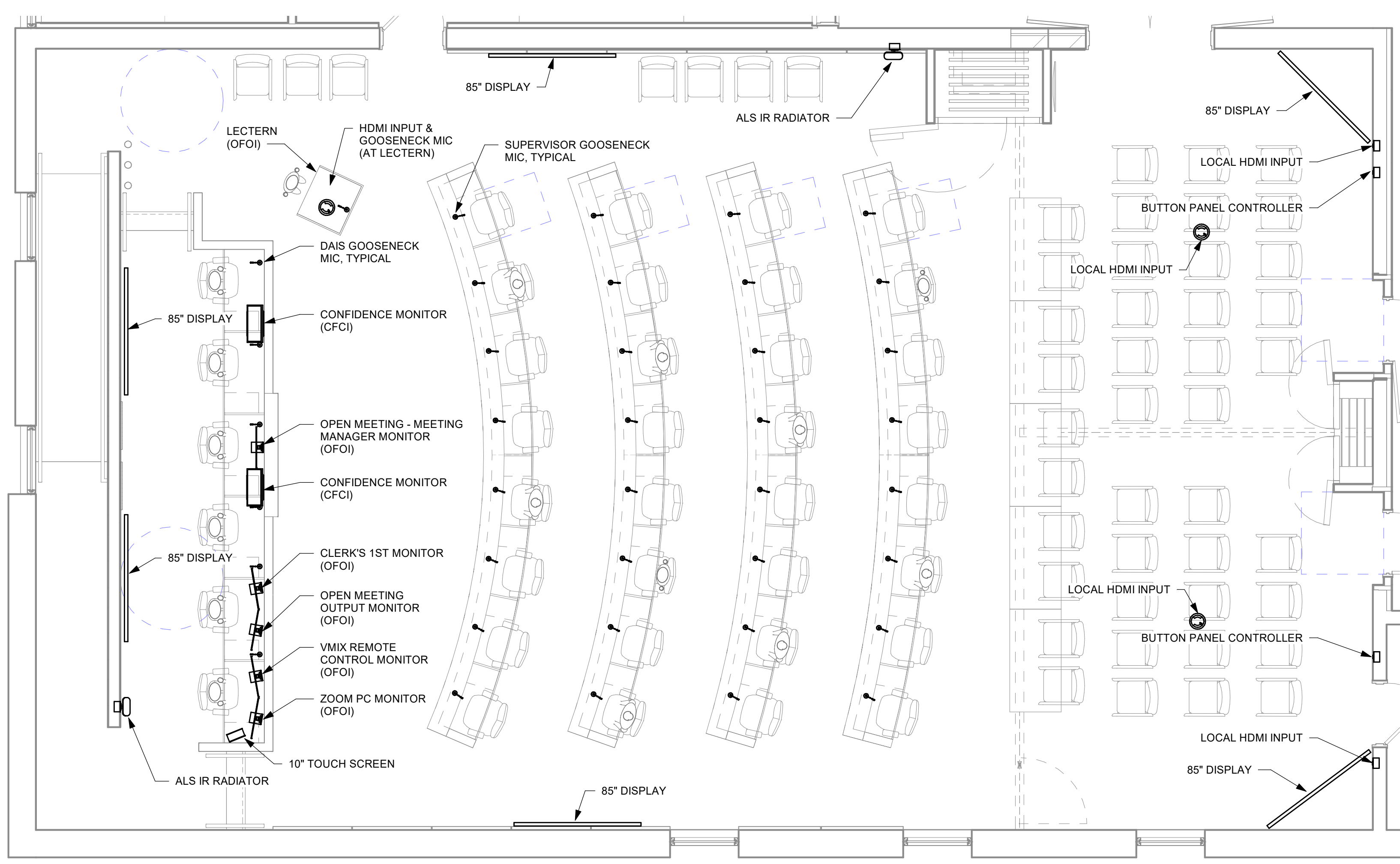
SHEET TITLE:
COUNTY BOARDROOM SECTIONS & ELEVATIONS

SHEET NUMBER: AV411 REV: 1

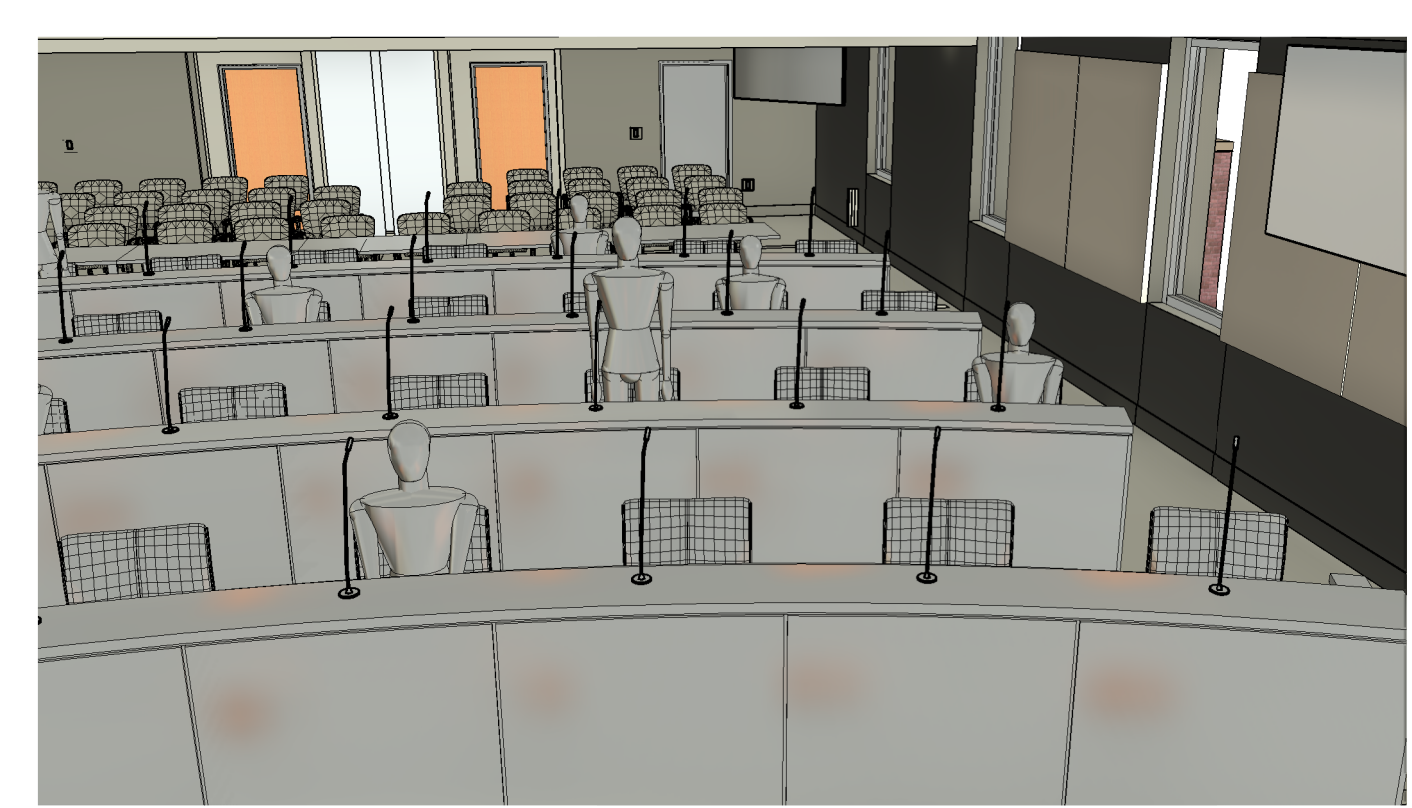
GENERAL SHEET NOTES

- 1 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
- 2 COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
- 3 AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
- 4 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.

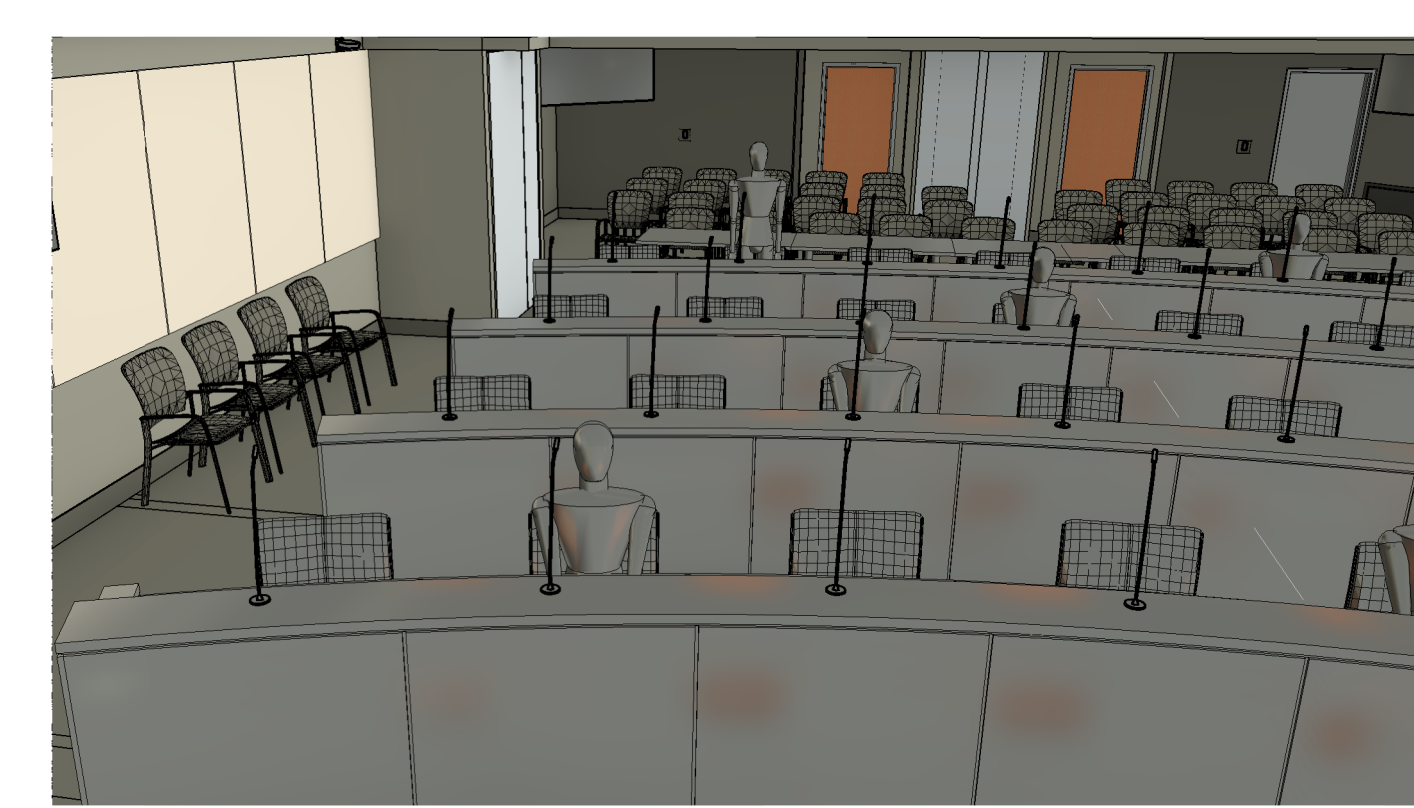
NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS



1 COUNTY BOARD ROOM DEVICE LAYOUT PLAN
1/4" = 1'-0"



2 COUNTY SUPERVISOR VIEW - CAM 1



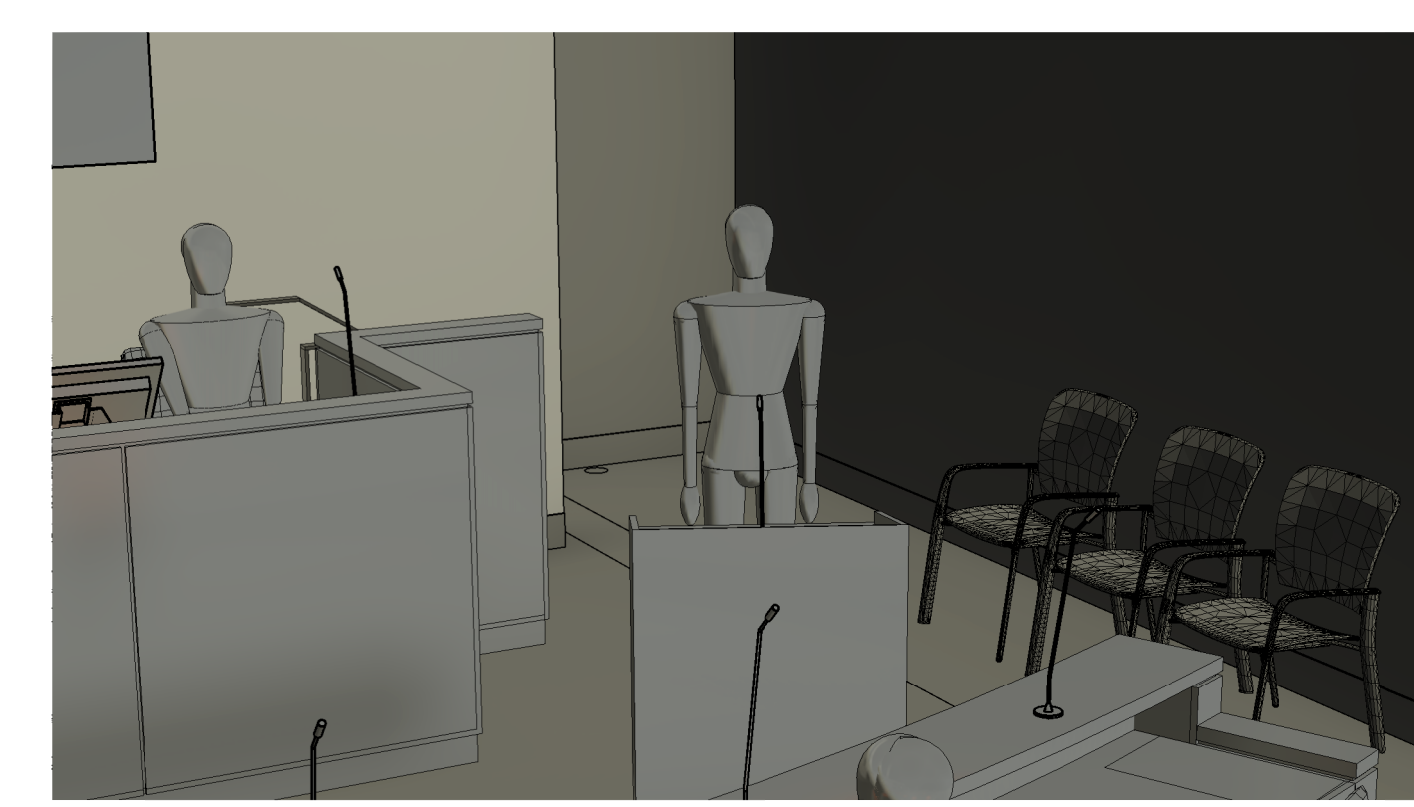
3 COUNTY SUPERVISOR VIEW - CAM 2



4 COUNTY BOARD ROOM EXAMPLE SUPERVISOR ZOOMED VIEW - CAM 1



5 COUNTY BOARD ROOM DAIS - CAM 3



6 COUNTY BOARD ROOM LECTERN - CAM 3

NOTE: SAMPLE CAMERA SHOTS ARE PROVIDED AS AN EXAMPLE OF THE VARIOUS PRESETS THAT MUST BE CREATED. COORDINATE WITH OWNER FOR ALL CAMERA SHOTS REQUESTED FOR INTEGRATION WITH THE OFOJ OPEN MEETING TECHNOLOGIES SOFTWARE. ADDITIONAL PRESETS MAY BE REQUIRED FOR RECALL FROM WITHIN THE OWNER'S VMIX VIDEO PRODUCTION SOFTWARE.

JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549

DESIGNER: EDK	PROJECT MANAGER: FBR	
SCALE: 1/4" = 1'-0"	DRAWING SET SIZE: 30" X 42"	
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502	
DOCUMENT SET: AV / BID DOCUMENTS R1		
REV#	DATE	DESCRIPTION
1	07-30-2022	AV INFRASTRUCTURE SET
2	09-30-2022	AV SYSTEM BID DOCUMENTS

SHEET TITLE:
COUNTY BOARD ROOM TYPICAL DEVICE LAYOUT

SHEET NUMBER:
AV412

REV:
1

AV TAG LEGEND

DEVICE LOCATION ID

ASSOCIATED BOX TYPE (REFER TO AV900 SERIES SHEETS FOR BOX TYPES USED IN PROJECT)

ASSOCIATED BOX MOUNTING TYPE (SEE AV001)

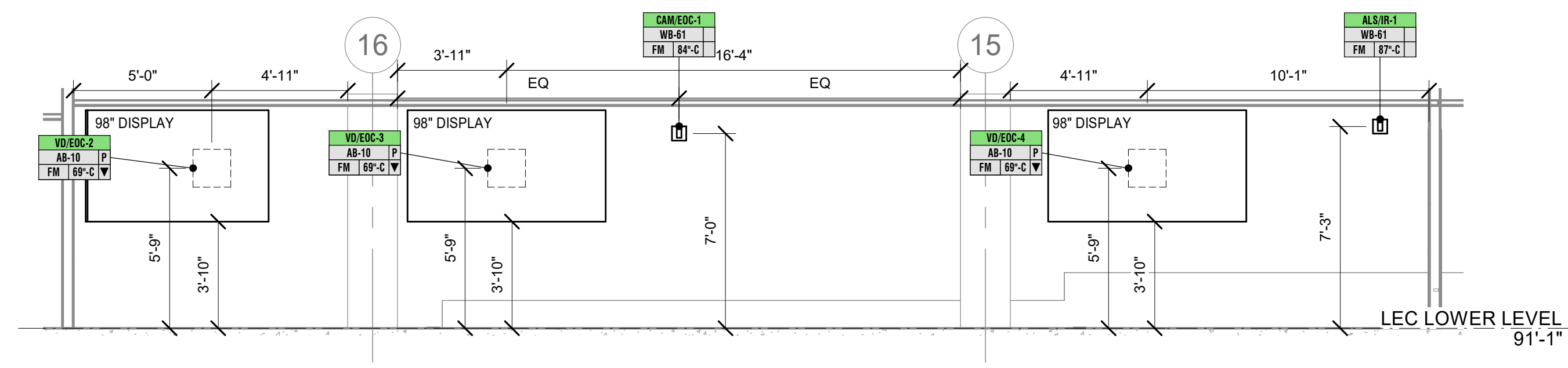
ASSOCIATED BOX MOUNTING HEIGHT (SEE AV001)

WHEN PRESENT, INDICATES POWER & DATA REQUIREMENTS (SEE AV900 SERIES SHEETS)

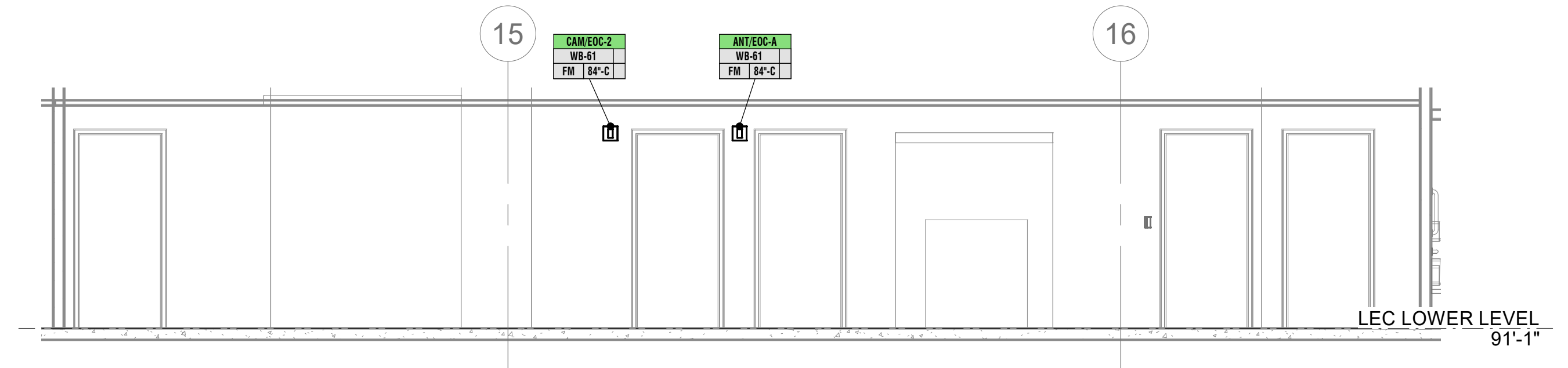
GENERAL SHEET NOTES

- 1 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
- 2 COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
- 3 AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
- 4 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.

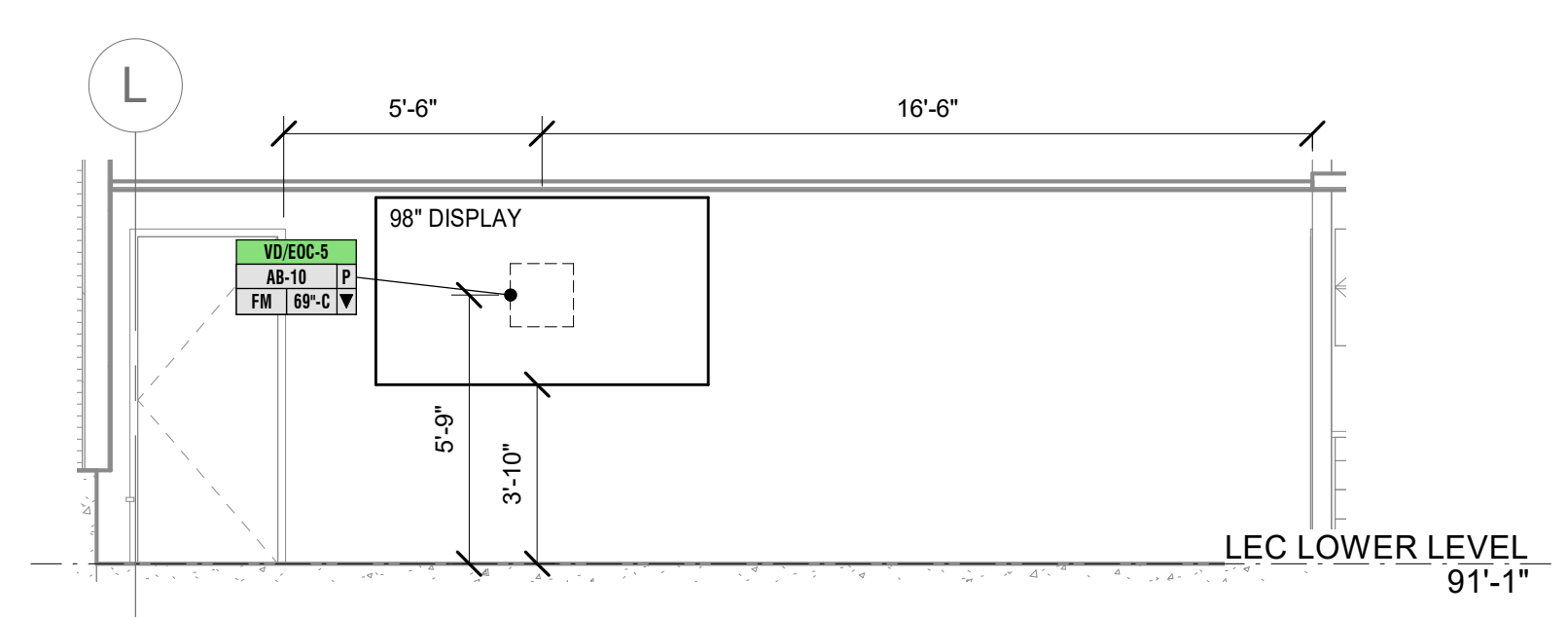
NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS



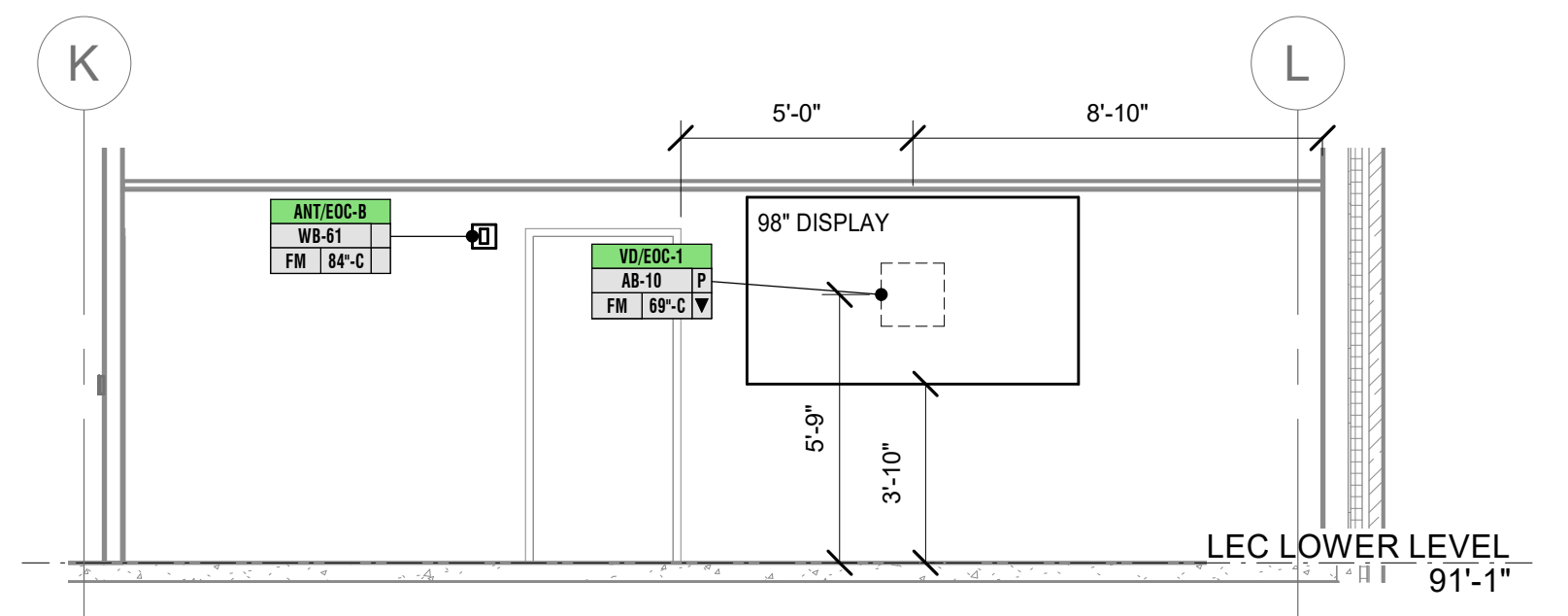
1 EMERGENCY OPERATIONS L0091 - WEST ELEVATION
1/4" = 1'-0"



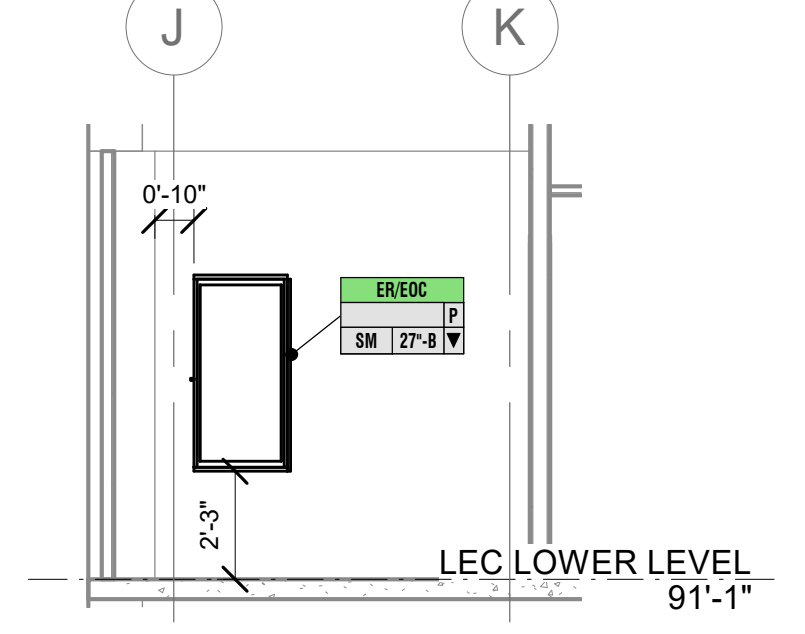
2 EMERGENCY OPERATIONS L0091 - EAST ELEVATION
1/4" = 1'-0"



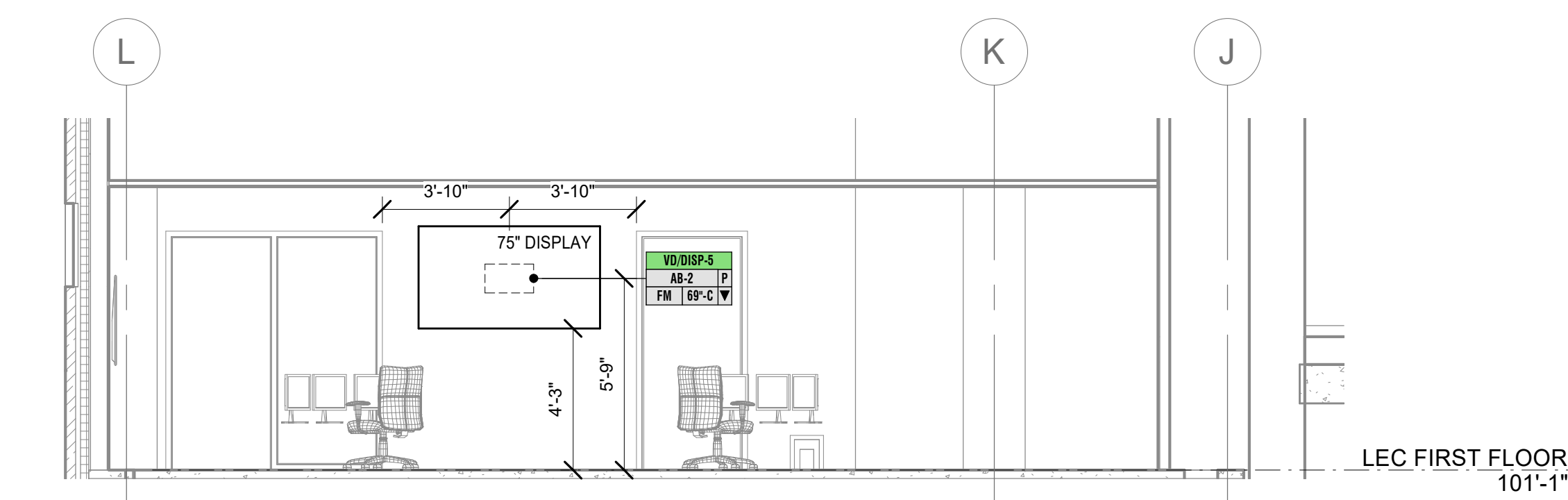
3 EMERGENCY OPERATIONS L0091 - NORTH ELEVATION
1/4" = 1'-0"



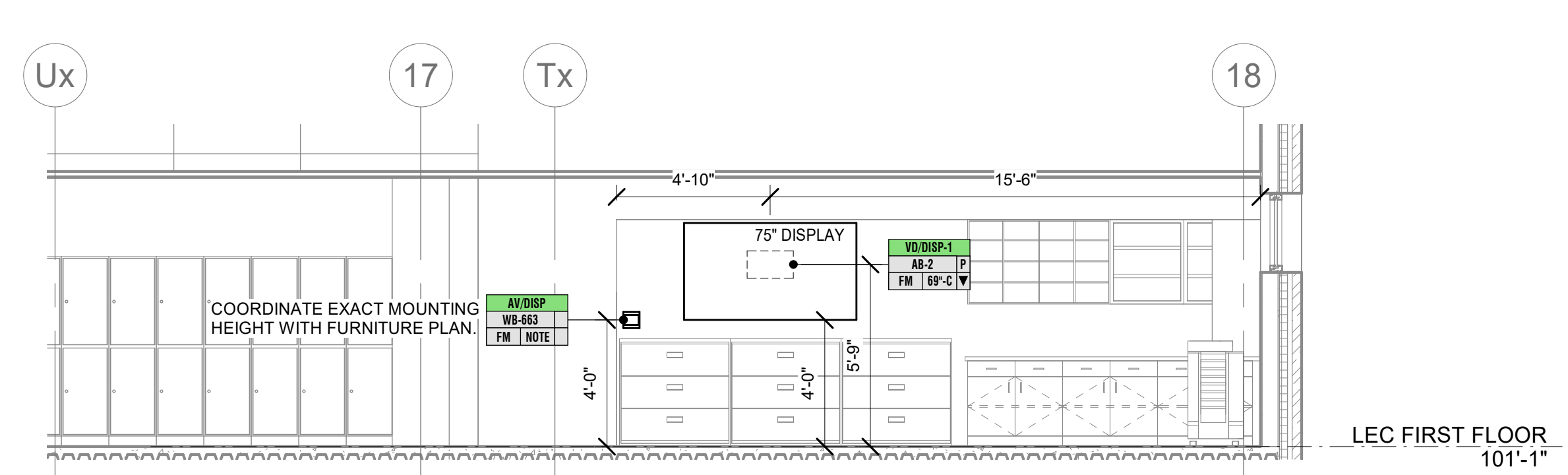
4 EMERGENCY OPERATIONS L0091 - SOUTH ELEVATION
1/4" = 1'-0"



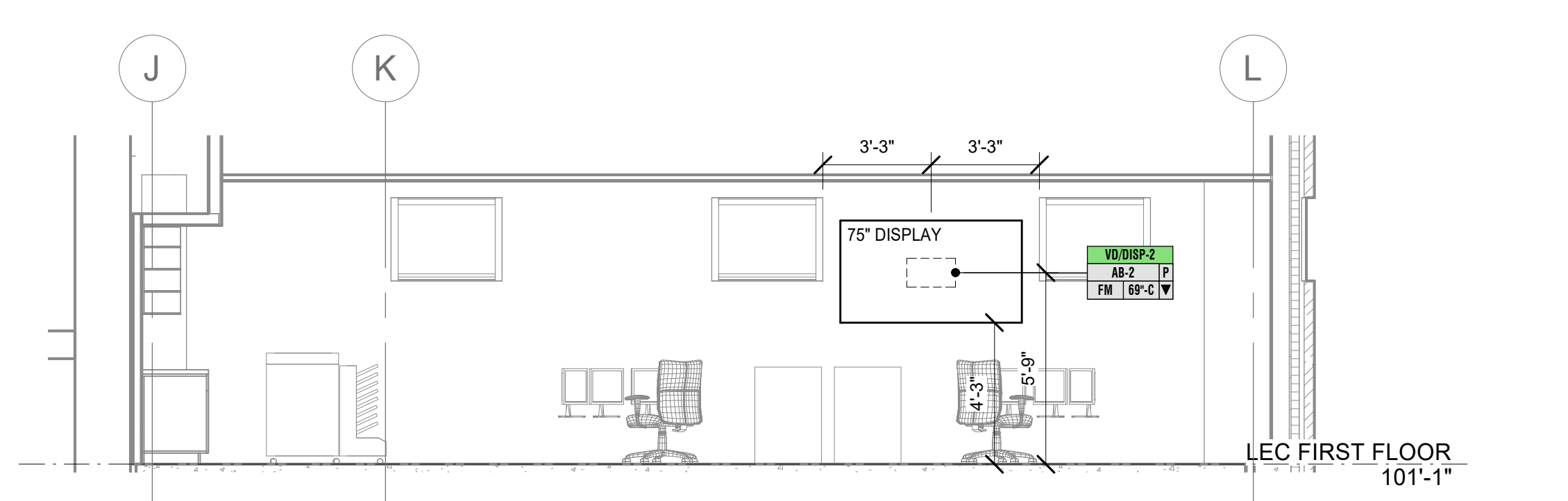
5 EMERGENCY OPERATIONS - EQUIPMENT RACK ELEVATION
1/4" = 1'-0"



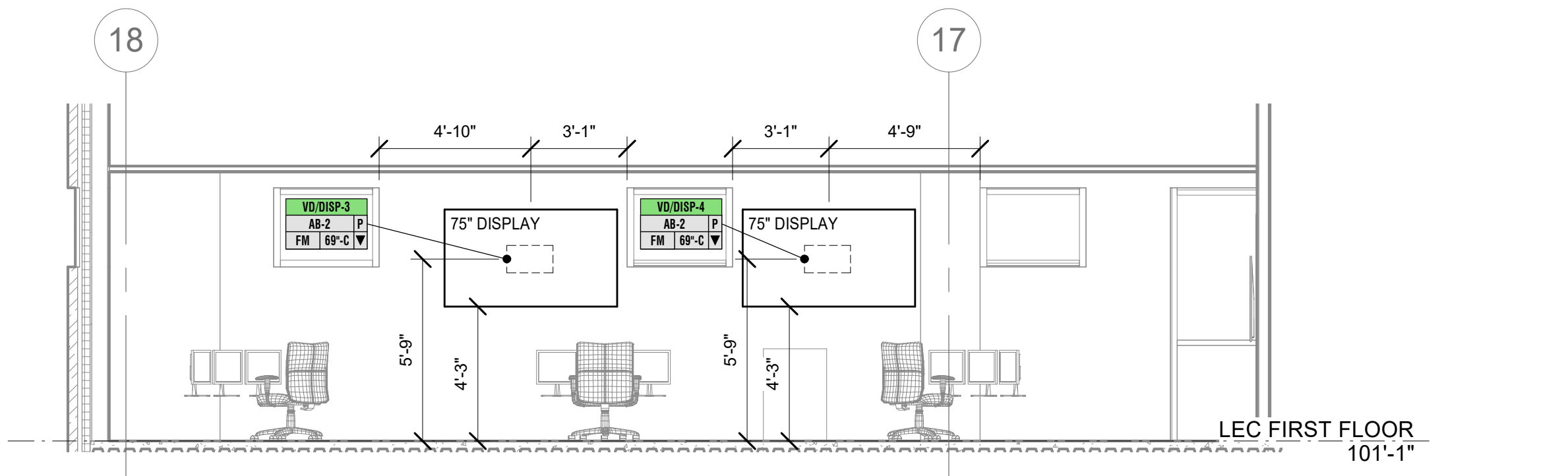
6 DISPATCH L1078 - NORTH ELEVATION
1/4" = 1'-0"



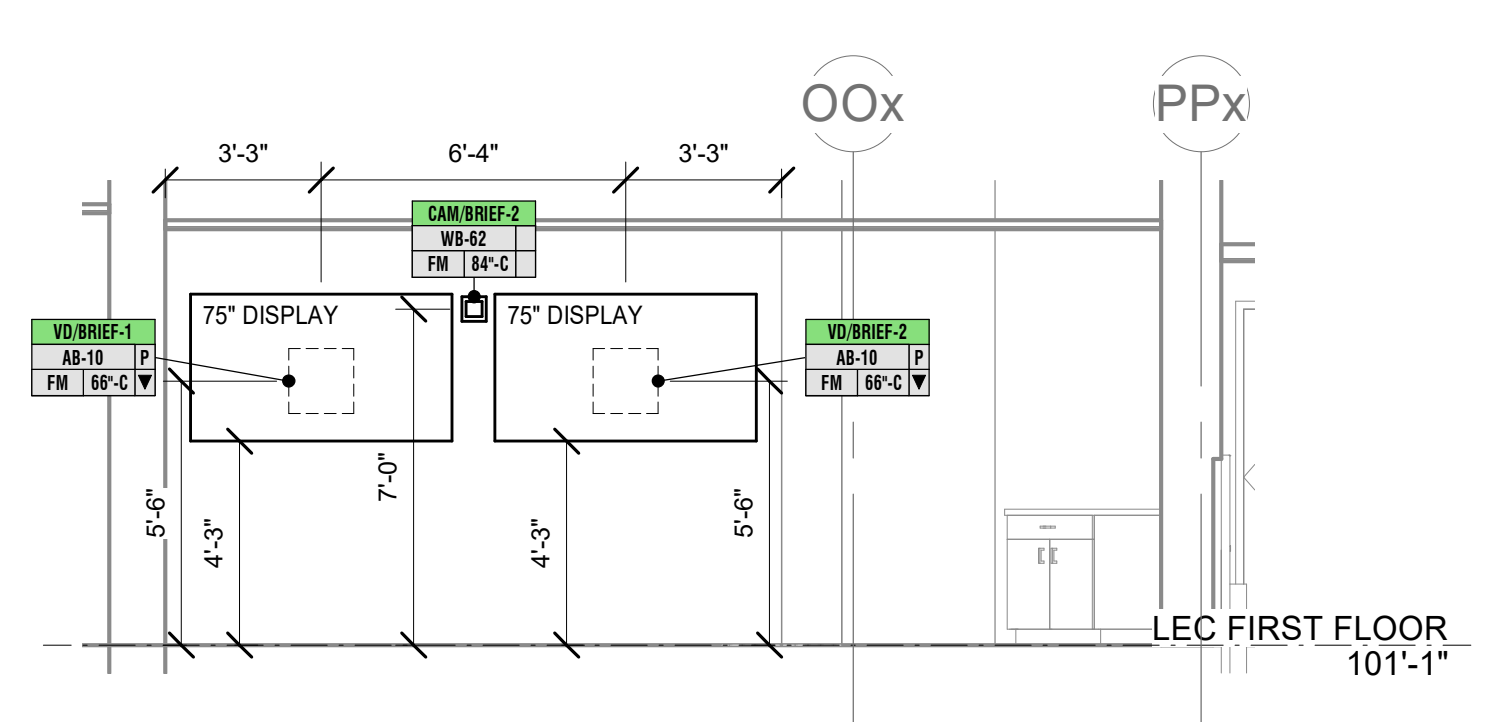
7 DISPATCH L1078 - EAST ELEVATION
1/4" = 1'-0"



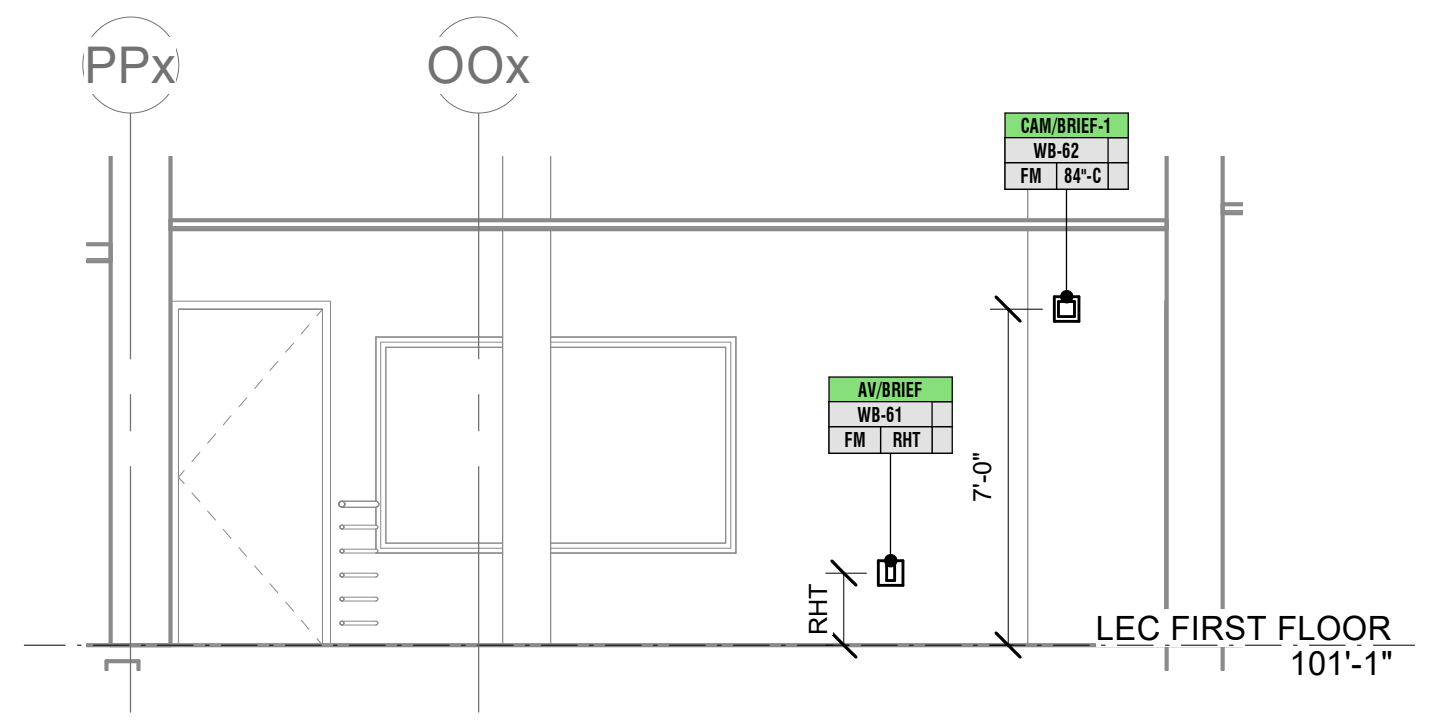
8 DISPATCH L1078 - SOUTH ELEVATION
1/4" = 1'-0"



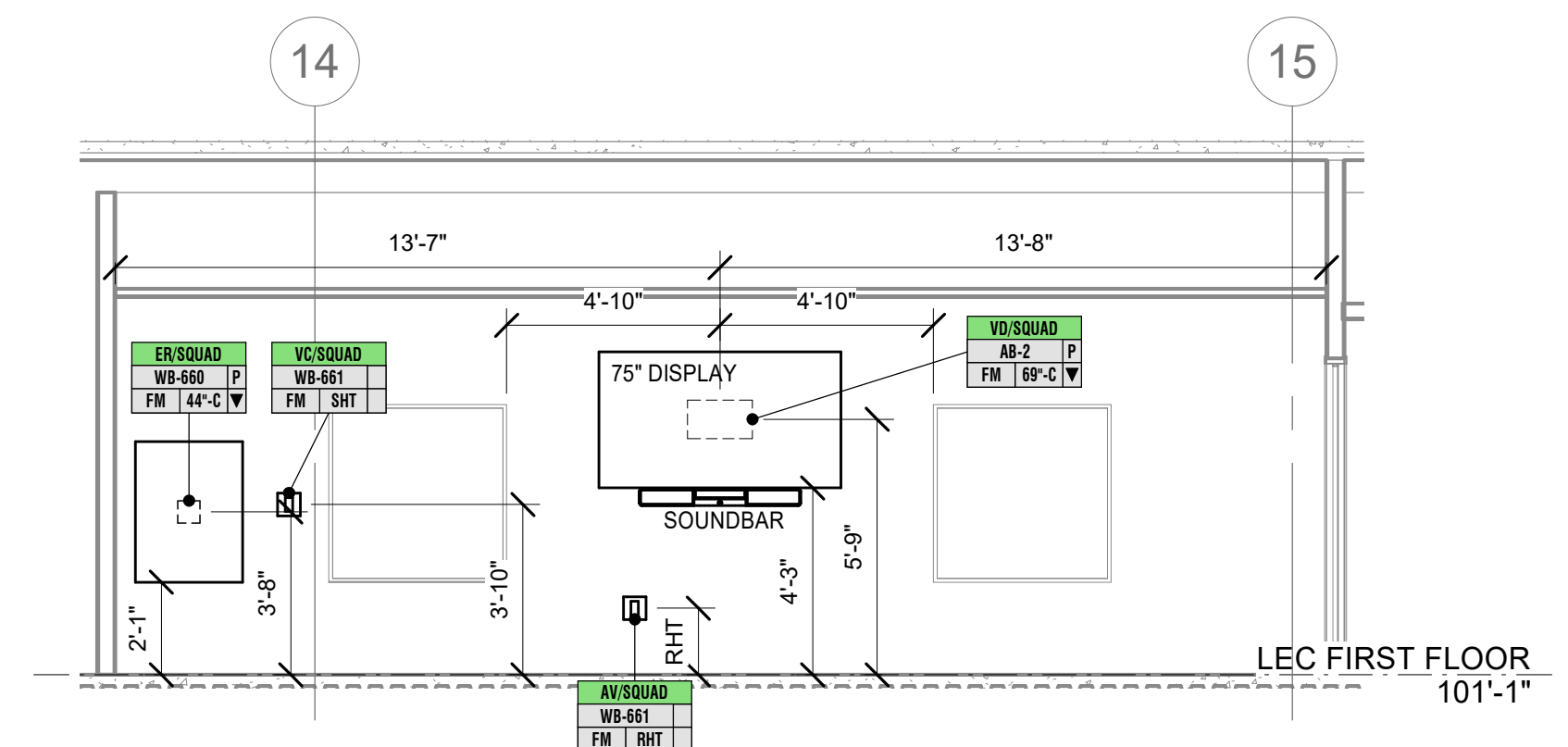
9 DISPATCH L1078 - WEST ELEVATION
1/4" = 1'-0"



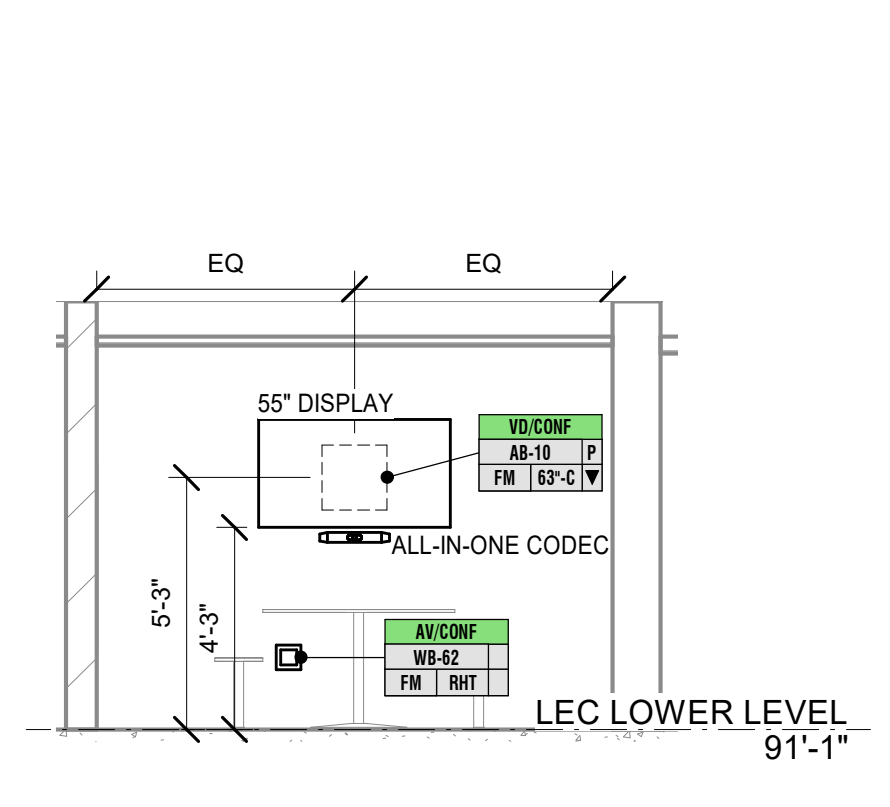
10 BRIEFING L1033 - NORTH ELEVATION
1/4" = 1'-0"



11 BRIEFING L1033 - SOUTH ELEVATION
1/4" = 1'-0"



12 SQUAD ROOM L1087 - EAST ELEVATION
1/4" = 1'-0"



13 VIDEO CONF. (PROBATION PATROL) L0032 - WEST ELEVATION
1/4" = 1'-0"

JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549

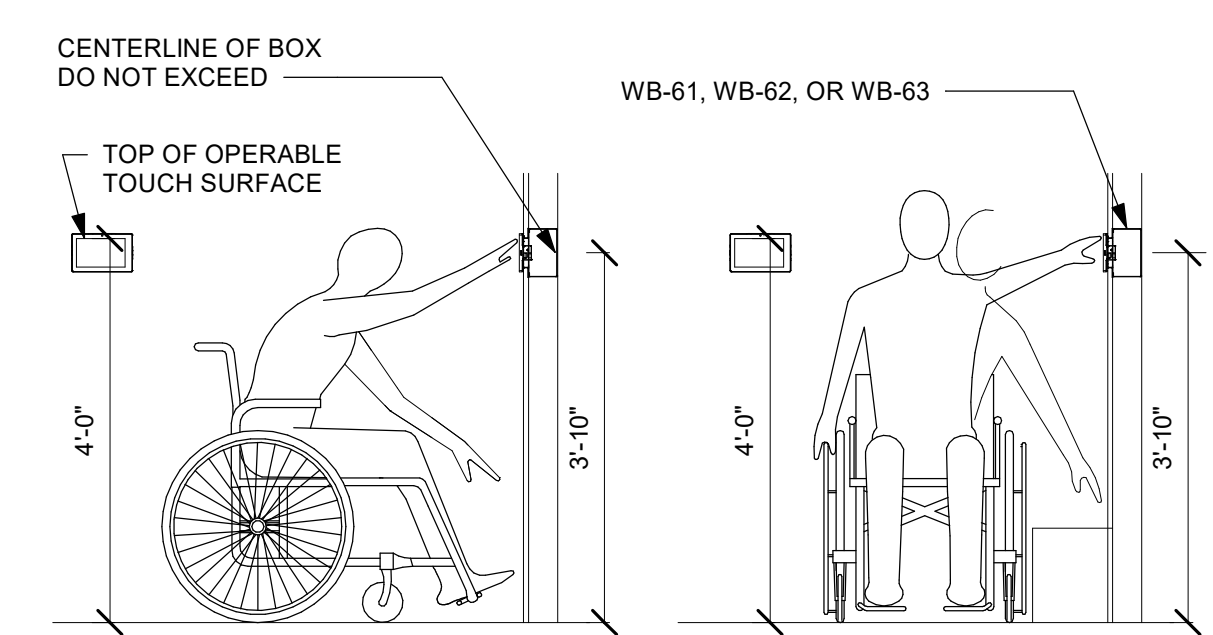
DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: As indicated	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV / BID DOCUMENTS R1	
REVISION:	DESCRIPTION:
1	10/30/2022 AV SYSTEM EQ DOCUMENTS

SHEET TITLE:
SHERIFF'S DEPARTMENT - SECTIONS & ELEVATIONS

SHEET NUMBER: **AV431** REV: **1**

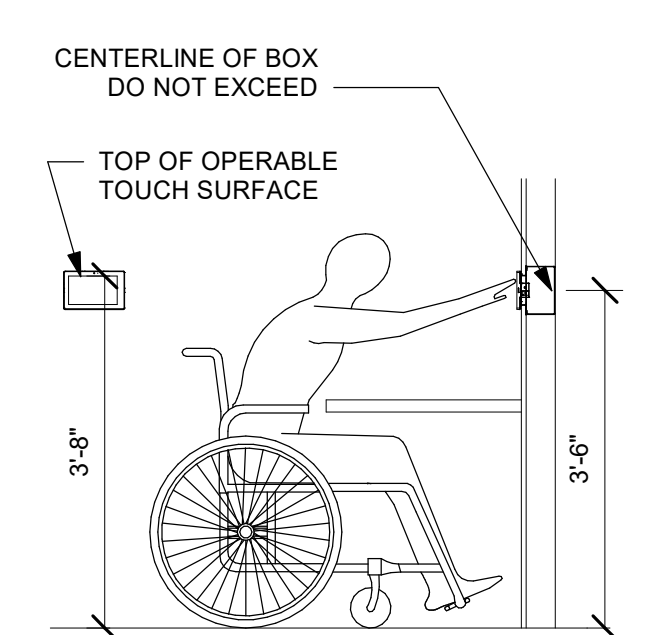
NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**



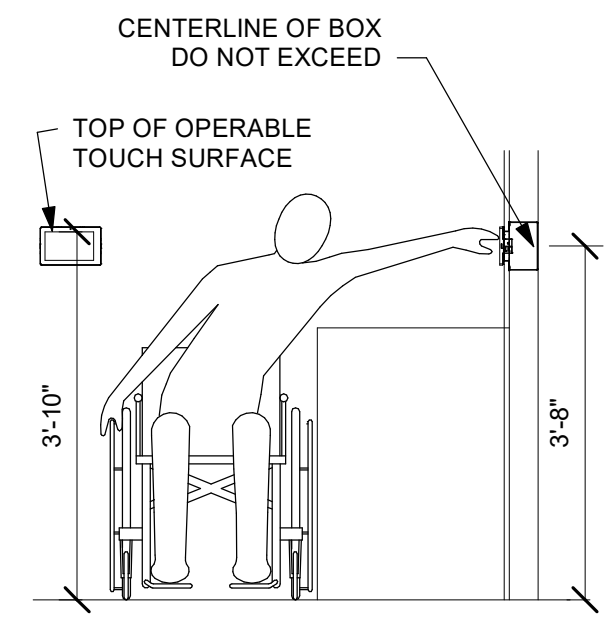
REFERENCE: ADA 2010 - 308.2.1 & 308.3.1

1 7" TOUCH SCREEN UNOBSTRUCTED FORWARD & SIDE REACH NTS



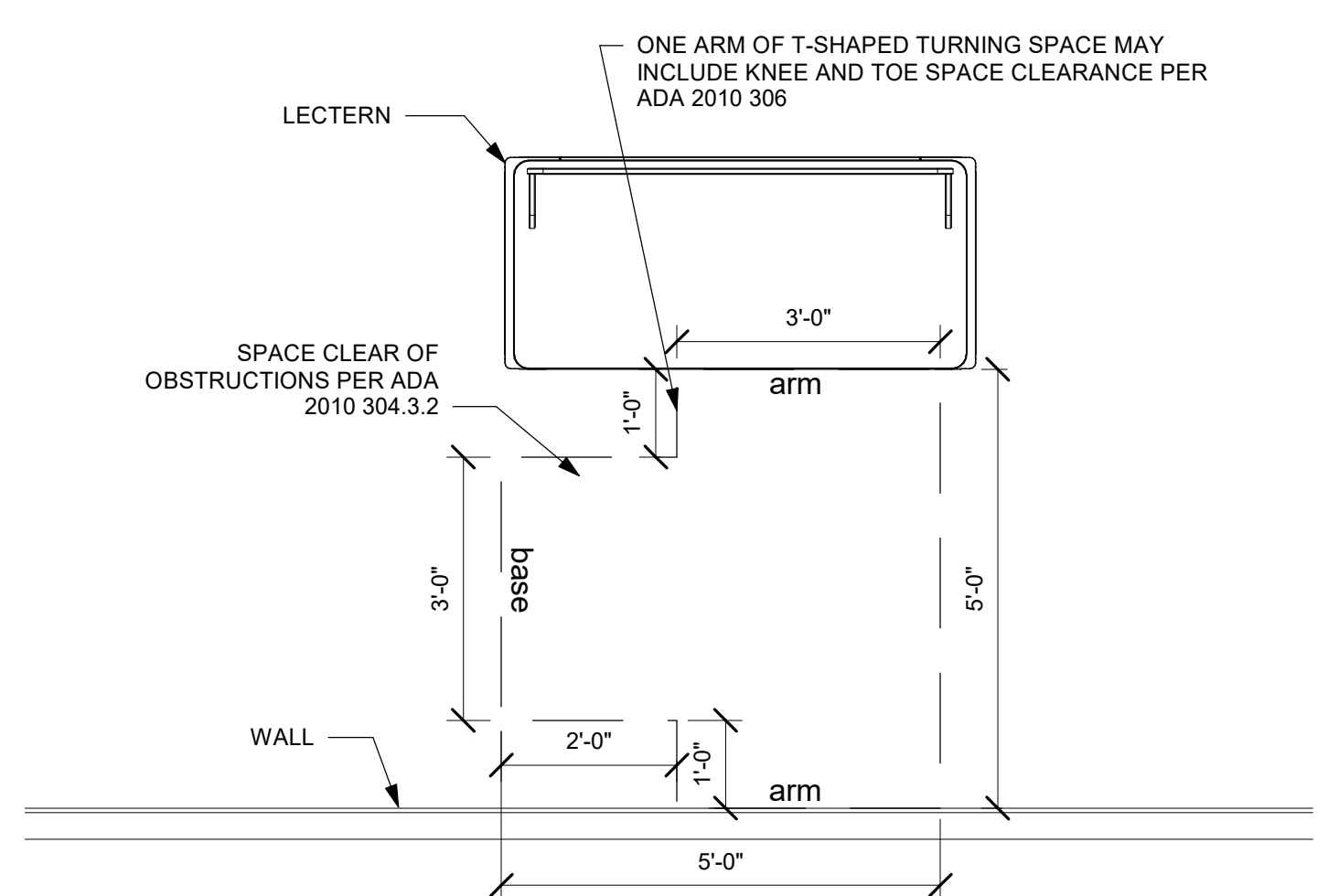
REFERENCE: ADA 2010 - 308.2.2

2 7" TOUCH SCREEN OBSTRUCTED HIGH FORWARD REACH NTS

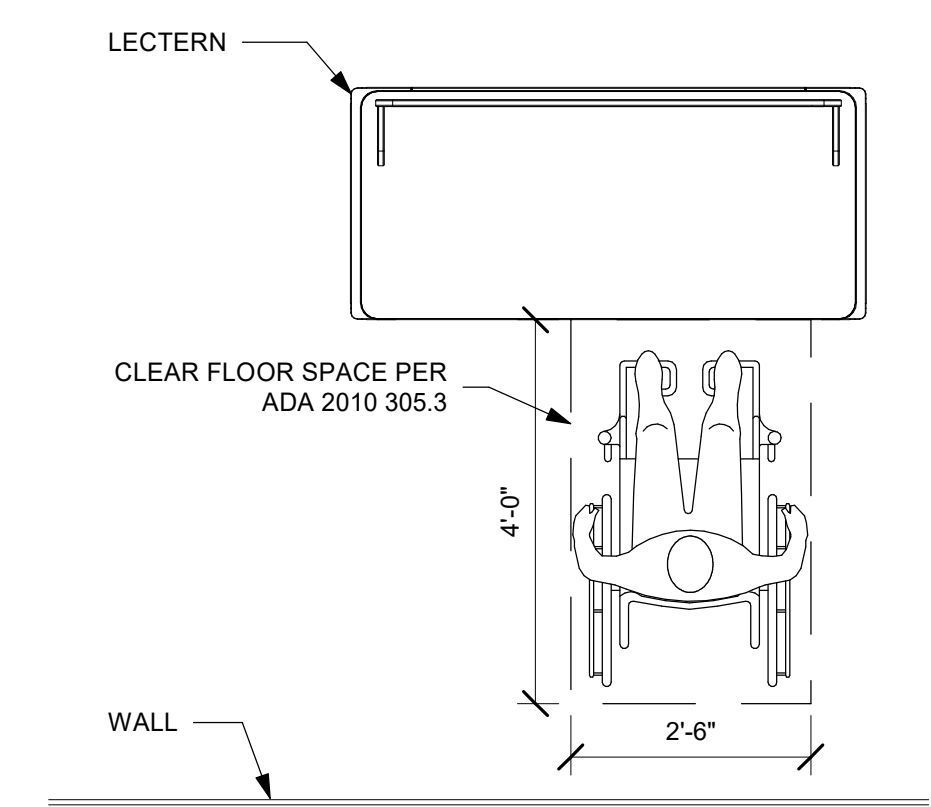


REFERENCE: ADA 2010 - 308.3.2

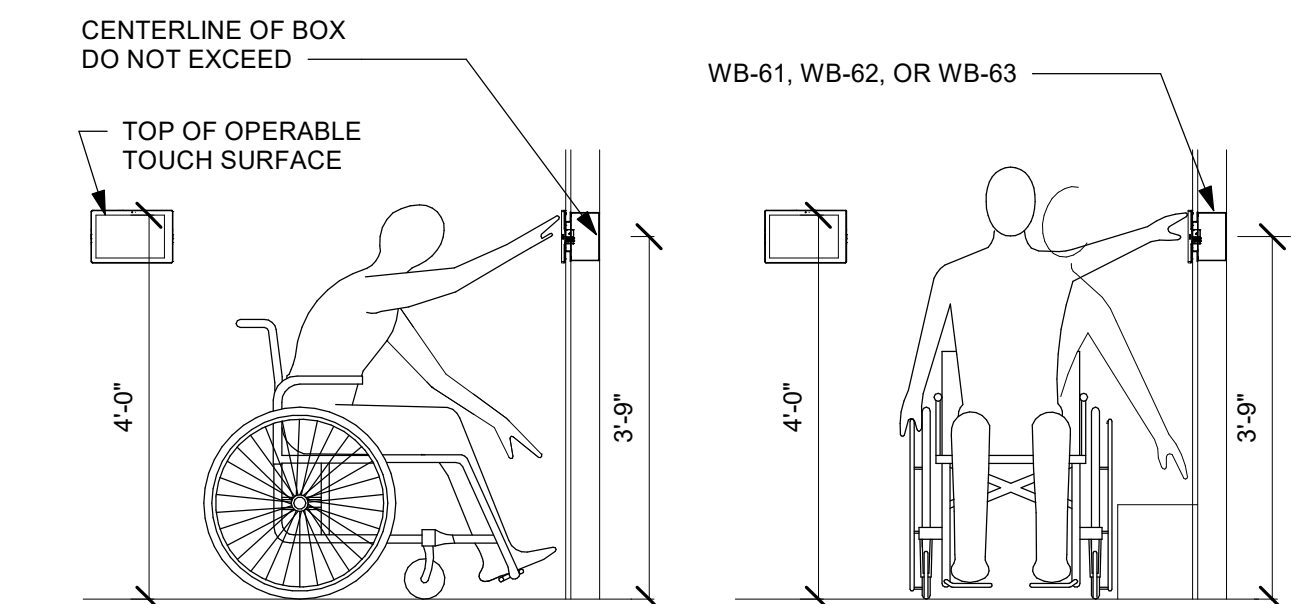
3 7" TOUCH SCREEN OBSTRUCTED HIGH SIDE REACH NTS



16 LECTERN TURNING SPACE PLAN NTS

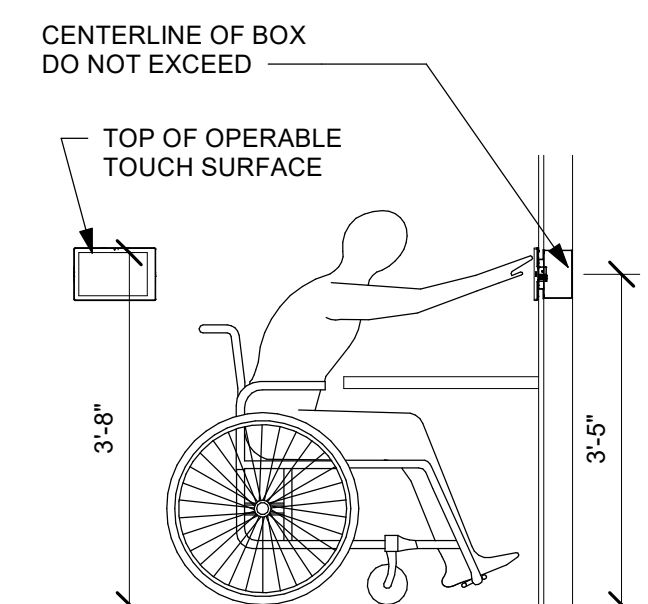


17 LECTERN CLEAR FLOOR SPACE PLAN NTS



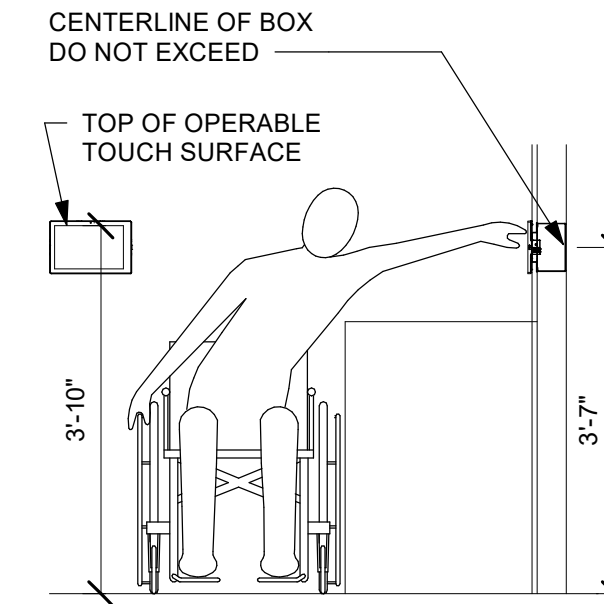
REFERENCE: ADA 2010 - 308.2.1 & 308.3.1

4 10" TOUCH SCREEN UNOBSTRUCTED FRONT AND SIDE REACH NTS



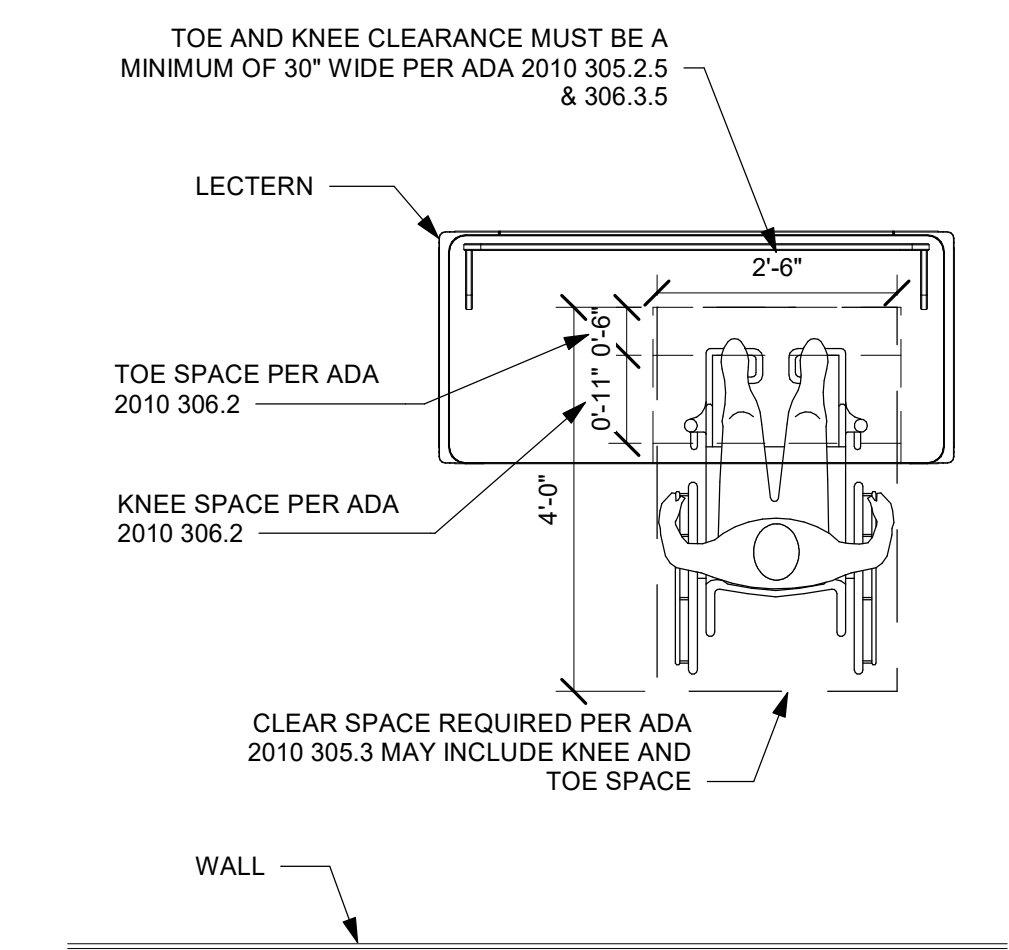
REFERENCE: ADA 2010 - 308.2.2

5 10" TOUCH SCREEN OBSTRUCTED HIGH FORWARD REACH NTS

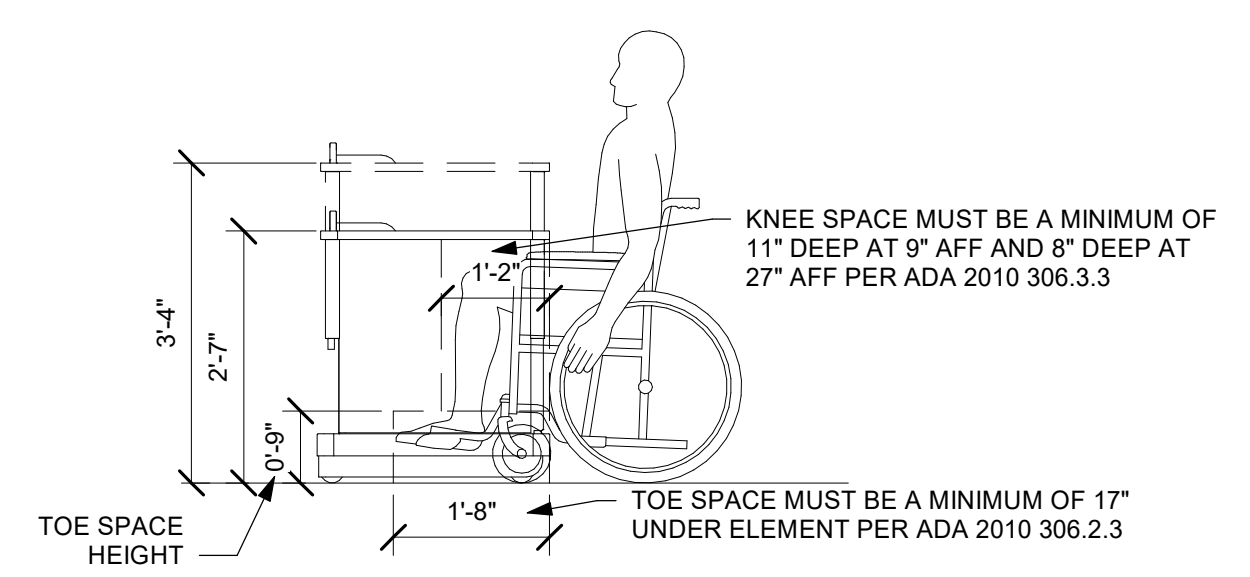


REFERENCE: ADA 2010 - 308.3.2

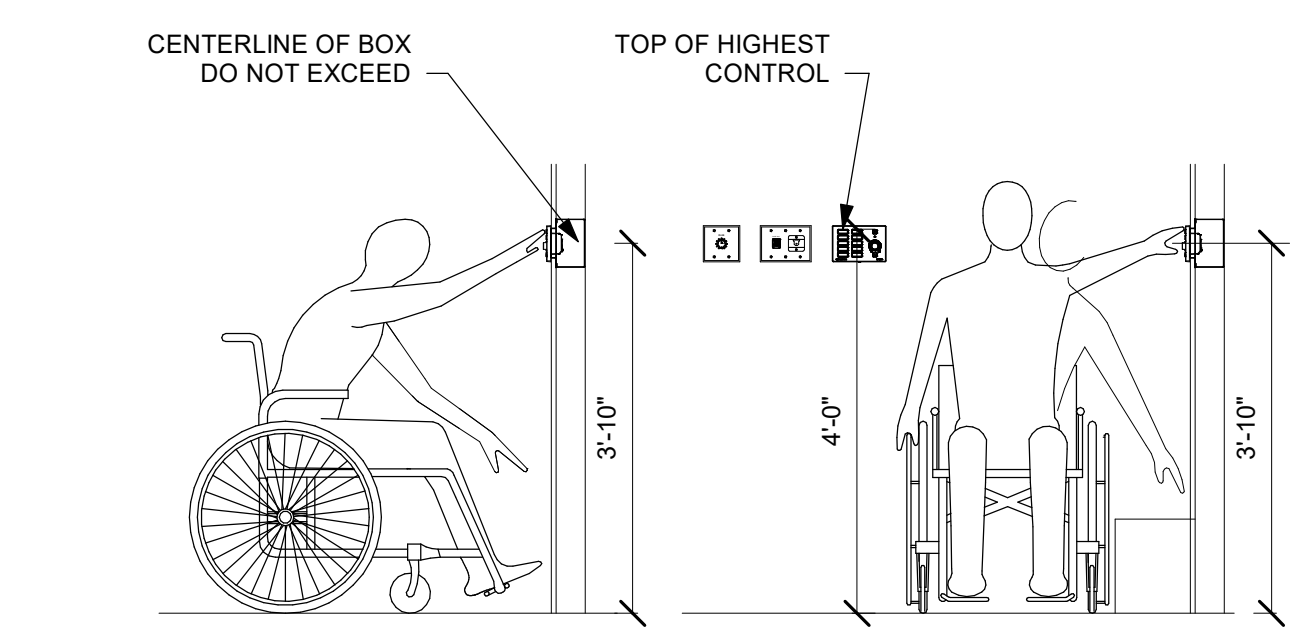
6 10" TOUCH SCREEN OBSTRUCTED HIGH SIDE REACH NTS



18 LECTERN TOE AND KNEE SPACE PLAN NTS

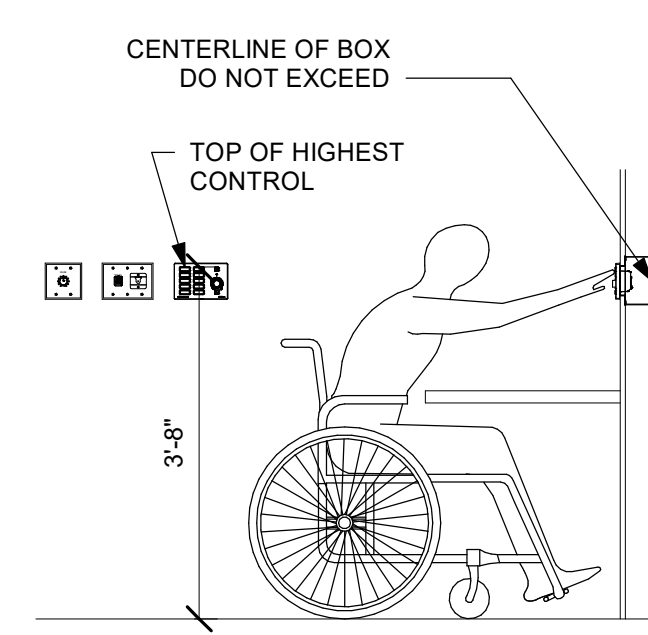


19 LECTERN TOE AND KNEE SPACE SECTION NTS



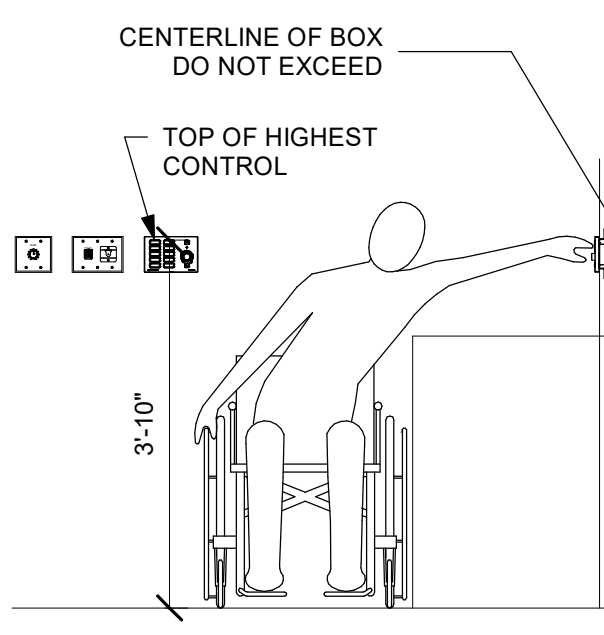
REFERENCE: ADA 2010 - 308.2.1 & 308.3.1

7 1- TO 3-GANG DEVICE UNOBSTRUCTED HIGH FORWARD AND SIDE REACH NTS



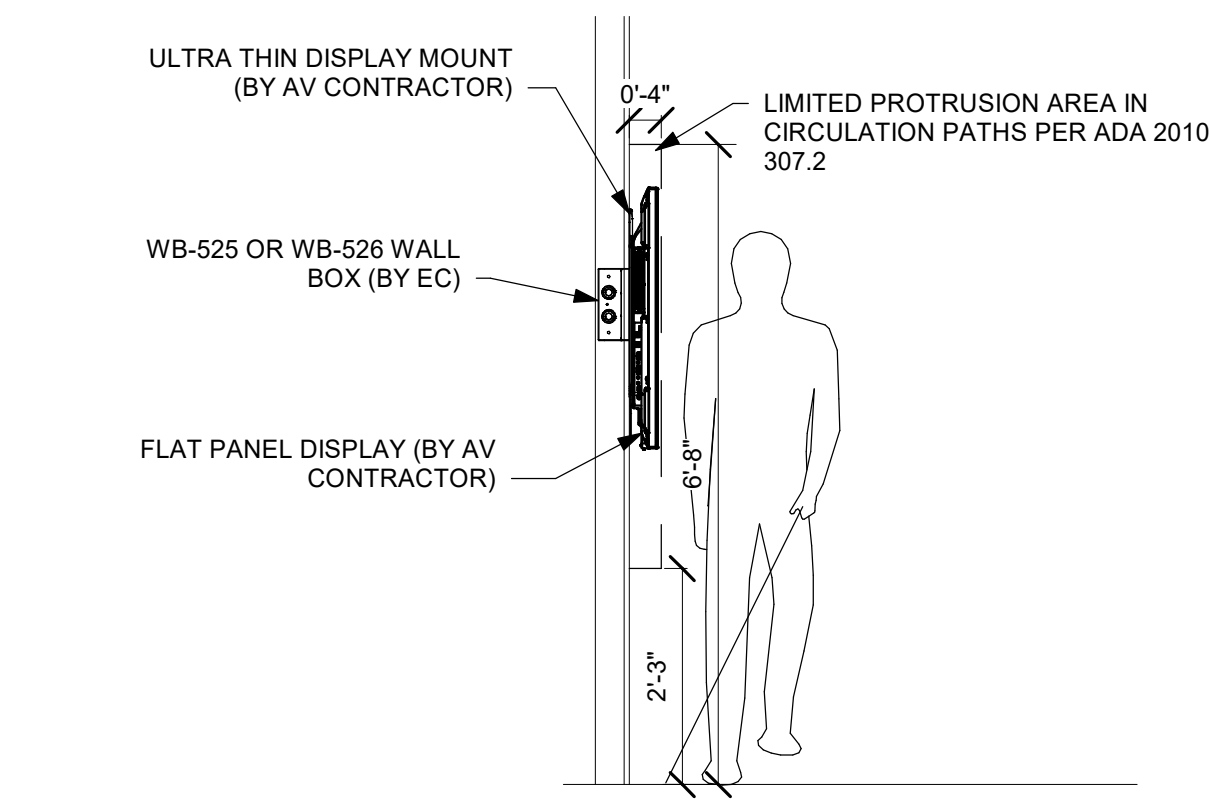
REFERENCE: ADA 2010 - 308.2.2

8 1- TO 3-GANG DEVICE OBSTRUCTED HIGH FORWARD REACH NTS



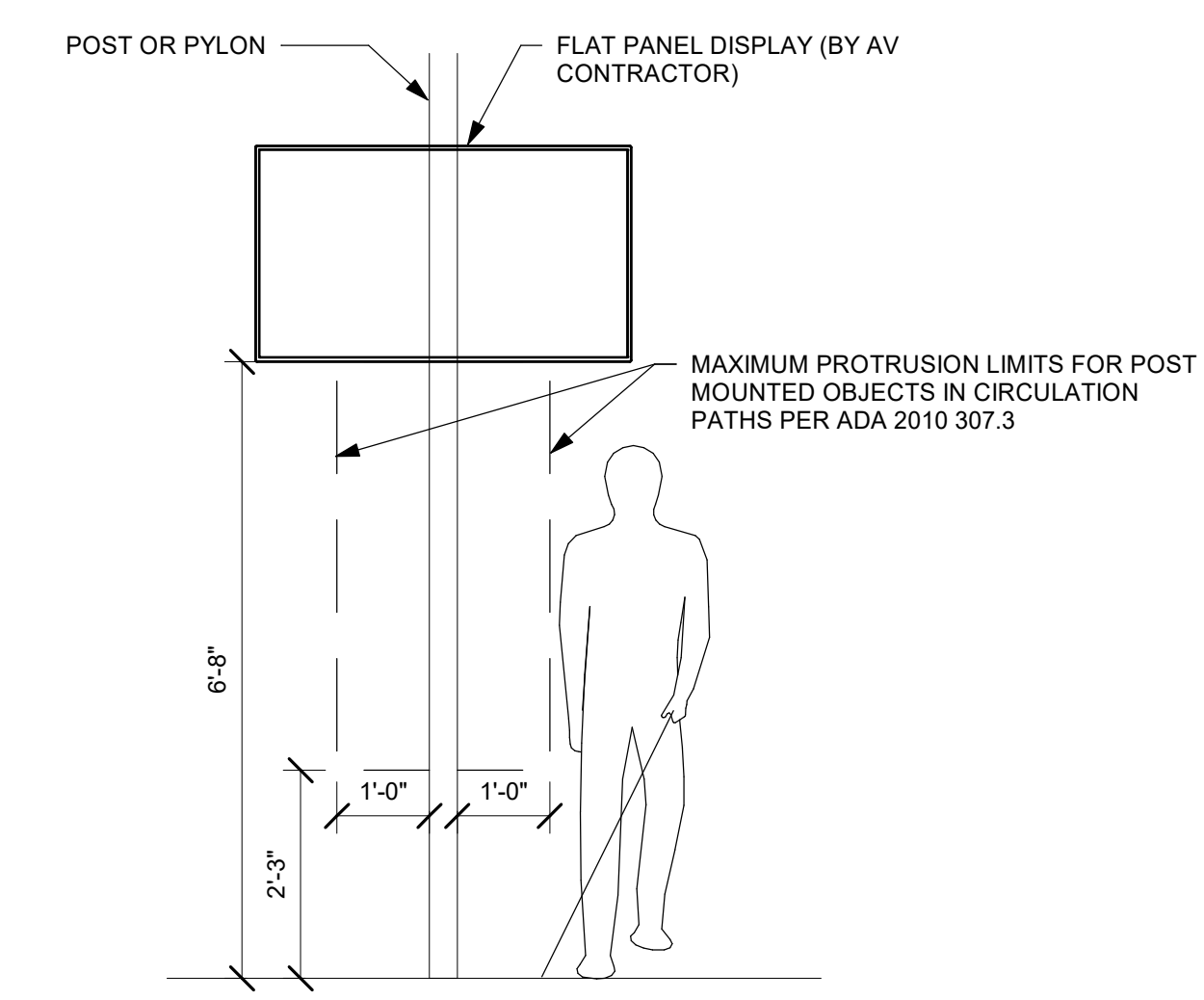
REFERENCE: ADA 2010 - 308.3.2

9 1- TO 3-GANG DEVICE OBSTRUCTED HIGH SIDE REACH NTS

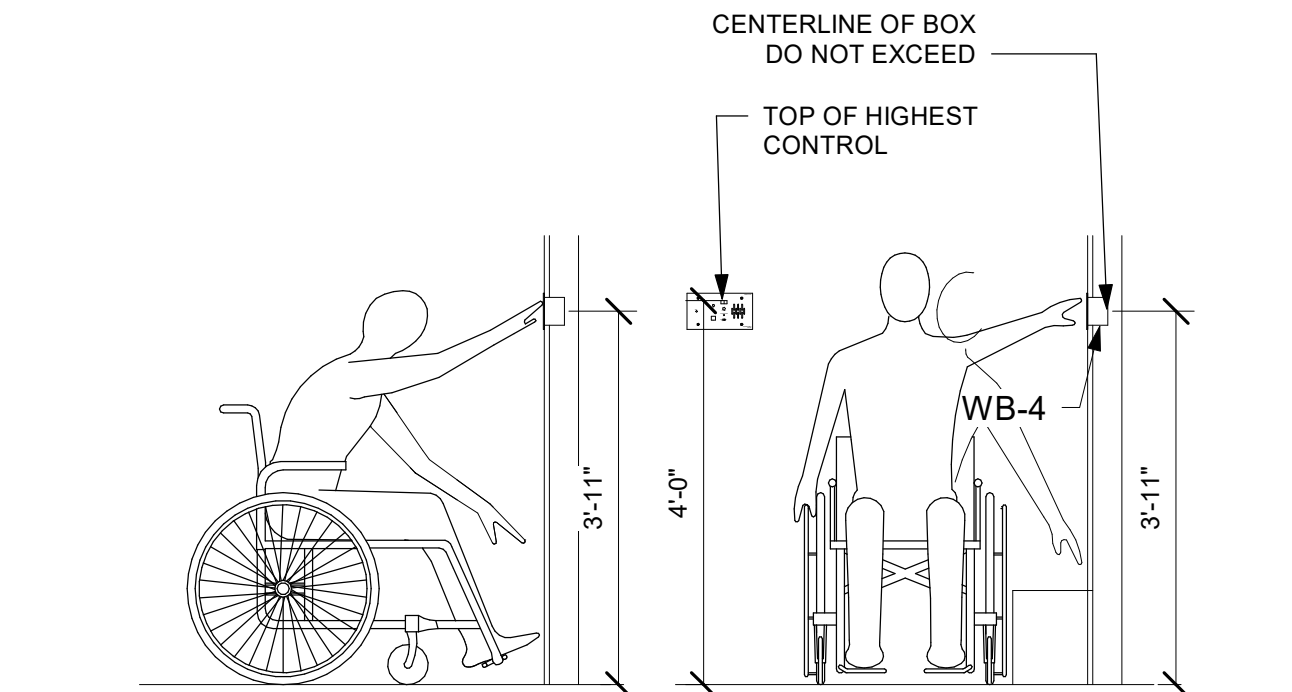


20 WALL-MOUNTED PROTRUSION LIMITS IN CIRCULATION PATHS NTS

NOTE: A "CIRCULATION PATH" IS DEFINED AS "AN EXTERIOR OR INTERIOR WAY OF PASSAGE PROVIDED FOR PEDESTRIAN TRAVEL, INCLUDING BUT NOT LIMITED TO, WALKS, HALLWAYS, COURTYARDS, ELEVATORS, PLATFORM LIFTS, RAMPS, STAIRWAYS, AND LANDINGS."

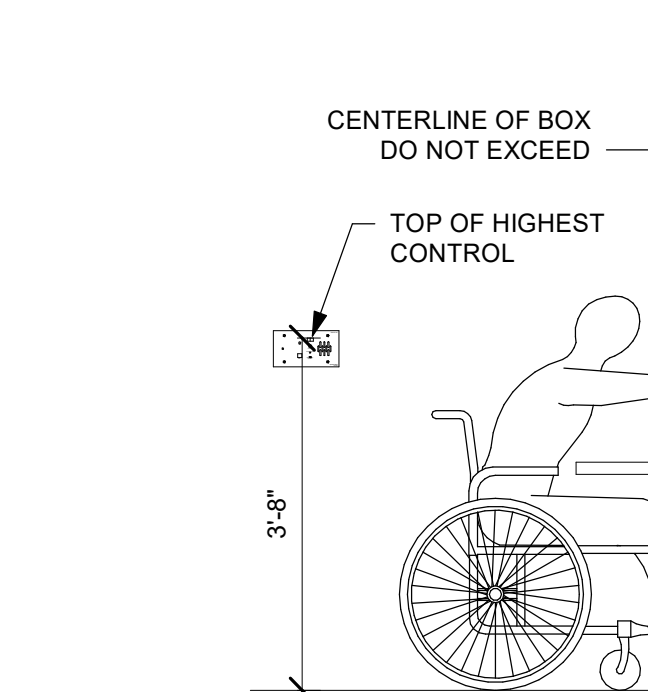


21 POST-MOUNTED PROTRUSION LIMITS IN CIRCULATION PATHS NTS



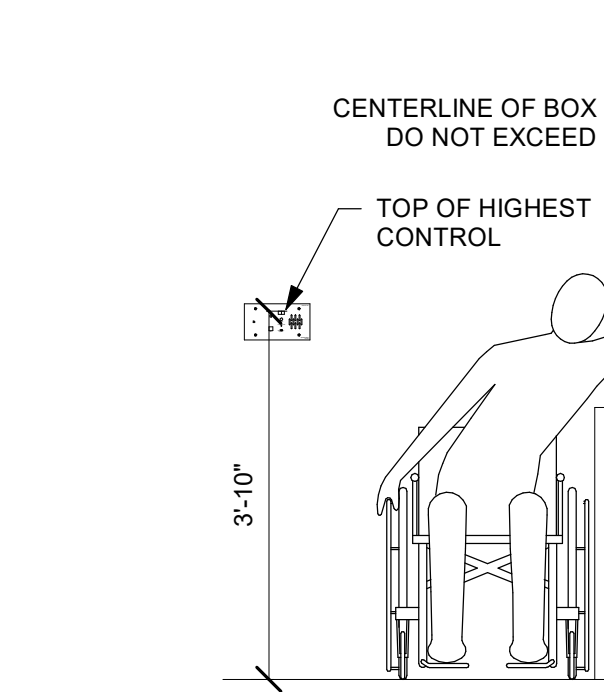
REFERENCE: ADA 2010 - 308.2.1 & 308.3.1

10 4-GANG DEVICE UNOBSTRUCTED FORWARD AND SIDE REACH NTS



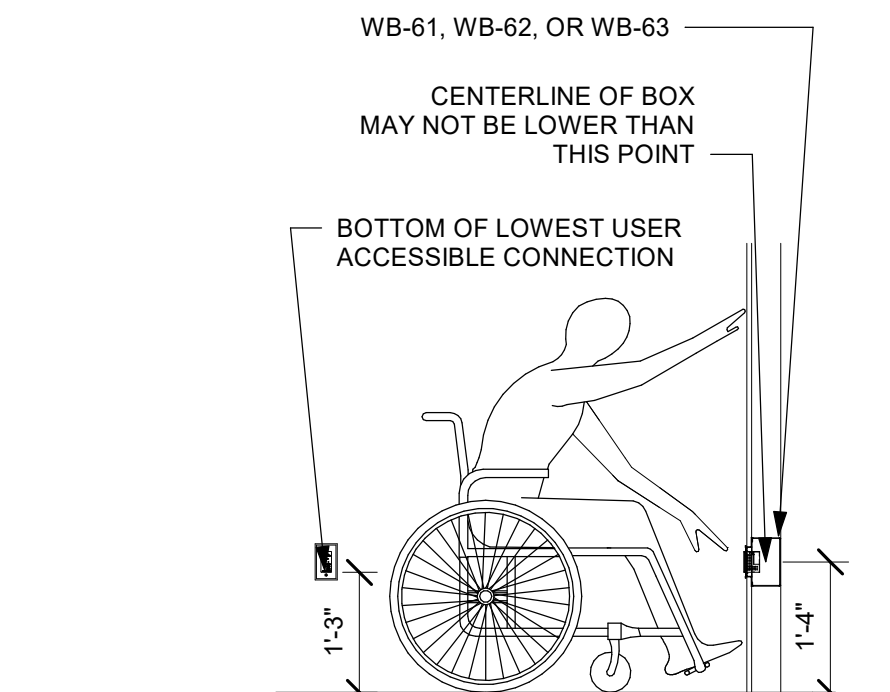
REFERENCE: ADA 2010 - 308.2.2

11 4-GANG DEVICE OBSTRUCTED HIGH FORWARD REACH NTS



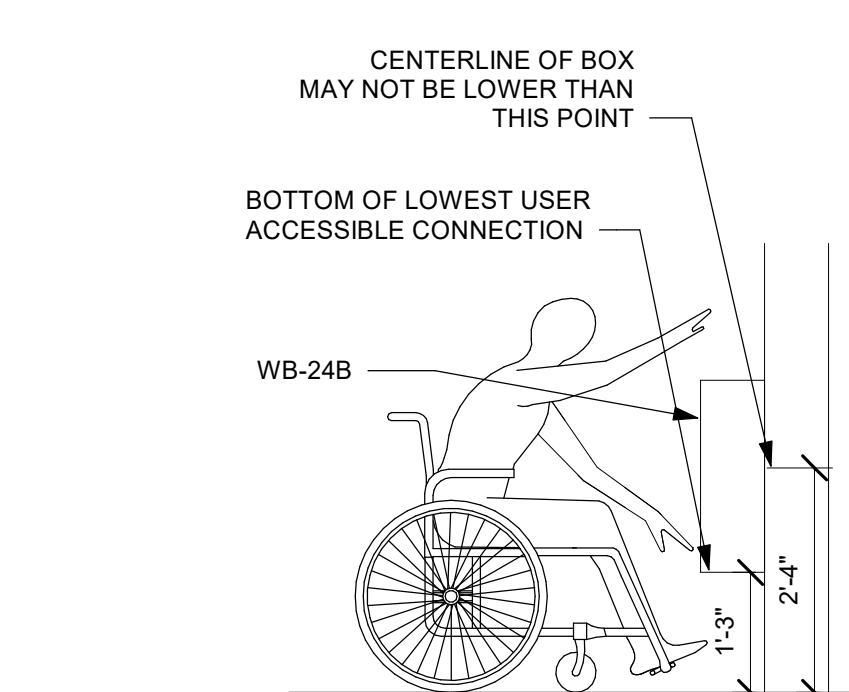
REFERENCE: ADA 2010 - 308.3.2

12 4-GANG DEVICE OBSTRUCTED HIGH SIDE REACH NTS



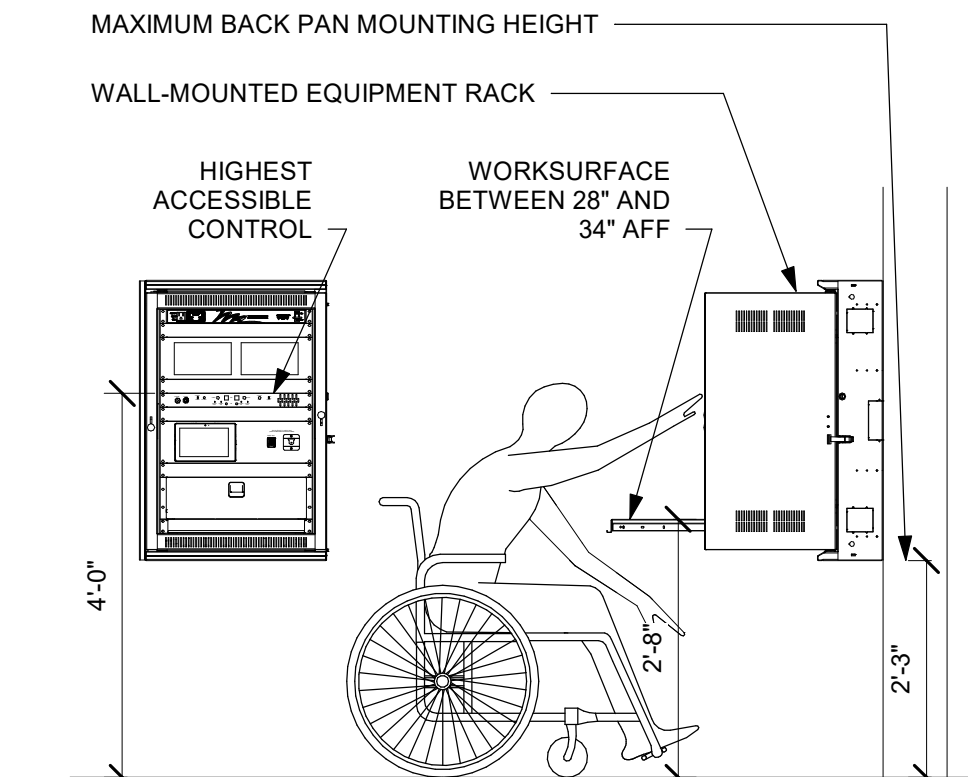
REFERENCE: ADA 2010 - 308.2.1

13 1- TO 3-GANG DEVICE UNOBSTRUCTED LOW FORWARD REACH NTS



REFERENCE: ADA 2010 - 308.2.1

14 SURFACE WALL BOX UNOBSTRUCTED LOW FORWARD REACH NTS

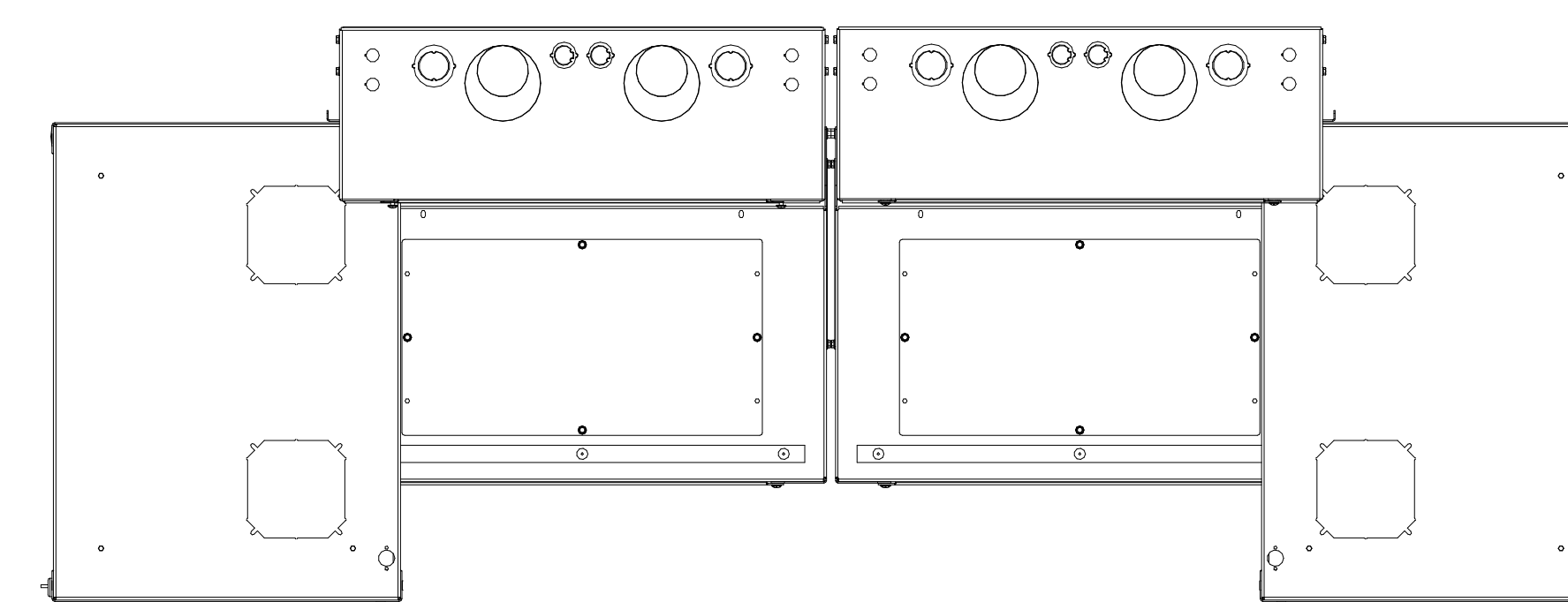


REFERENCE: ADA 2010 - 308.2.1 & 902.3

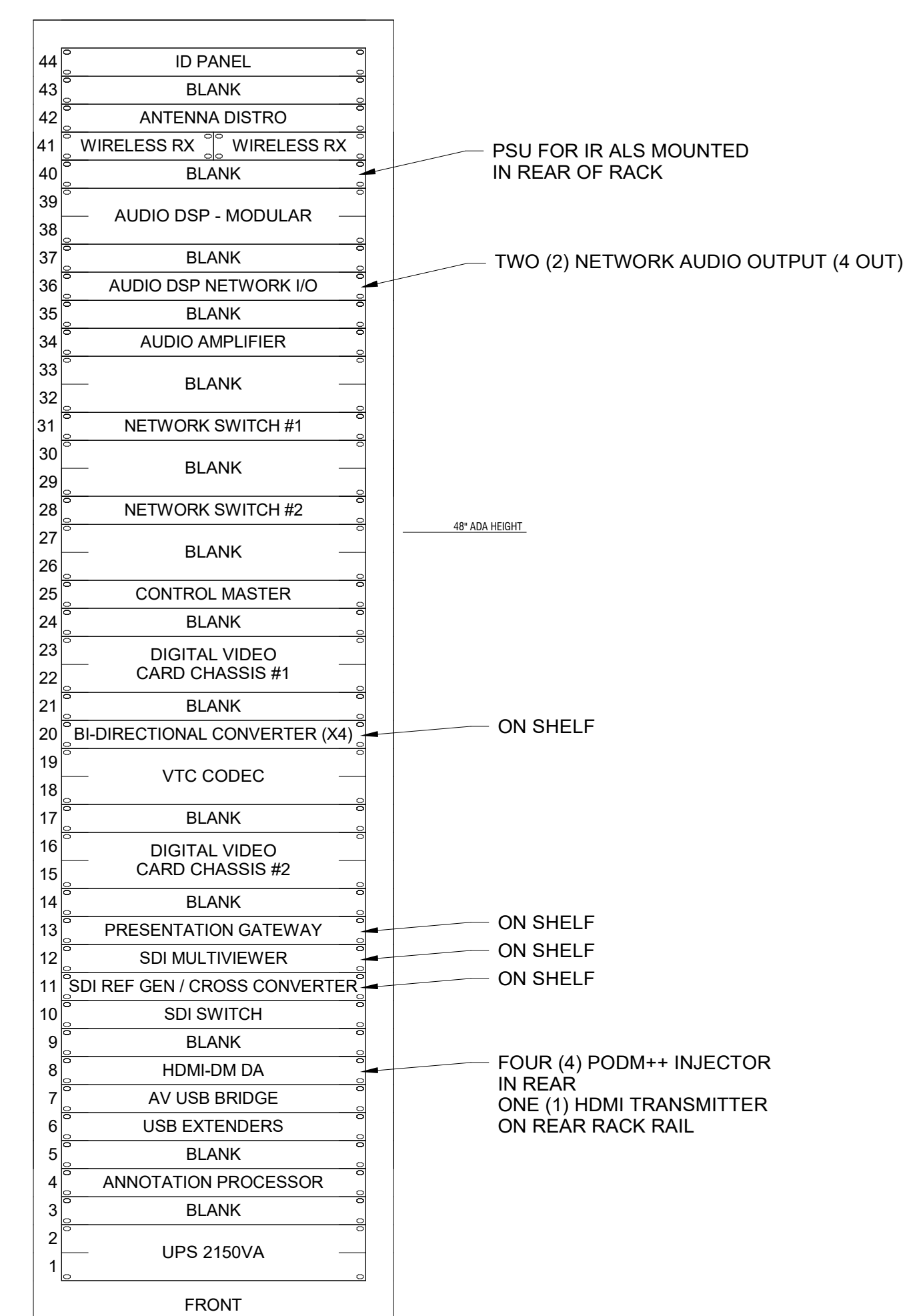
15 WALL RACK UNOBSTRUCTED HIGH FORWARD REACH NTS

DESIGNER: EDK	PROJECT MANAGER: PBR	
SCALE: 1/2" = 1'-0"	DRAWING SET SIZE: 30" X 42"	
SHEET SERIES DATE: 10/14/2022	PROJECT NUMBER: 1502	
DOCUMENT SET: AV BID DOCUMENTS R1		
REVISION:	DATE	DESCRIPTION
1	07-30-2022	AV INFRASTRUCTURE SET
2	09-30-2022	AV SYSTEM BID DOCUMENTS
SHEET NUMBER: AV492		REV: 1

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS



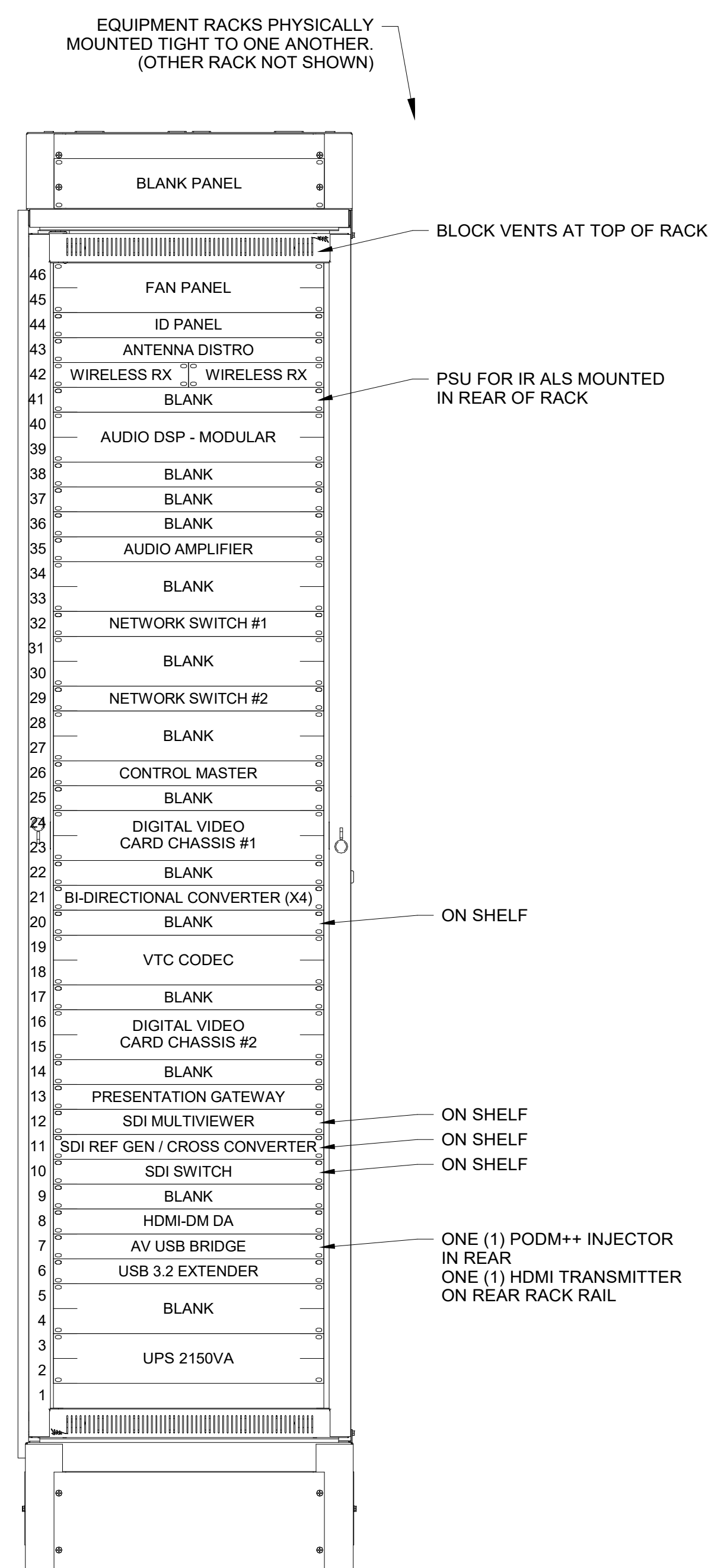
ER/HEAR EQUIPMENT RACK SERVICE POSITION
C-CAP SERVER 1191



ER/COURT
TYPICAL FOR BRANCH C COURTROOM C2260 AND BRANCH D COURTROOM C2230

- FREE-STANDING FLOOR RACK
- MIDDLE ATLANTIC WRK-44-32 RACK
- MIDDLE ATLANTIC SPN-44-312 SIDE PANELS (ONE SET FOR GANGED RACKS)
- MIDDLE ATLANTIC MW-10FT-FC FAN
- MIDDLE ATLANTIC LF-ISO ISOLATING LEVELING FEET

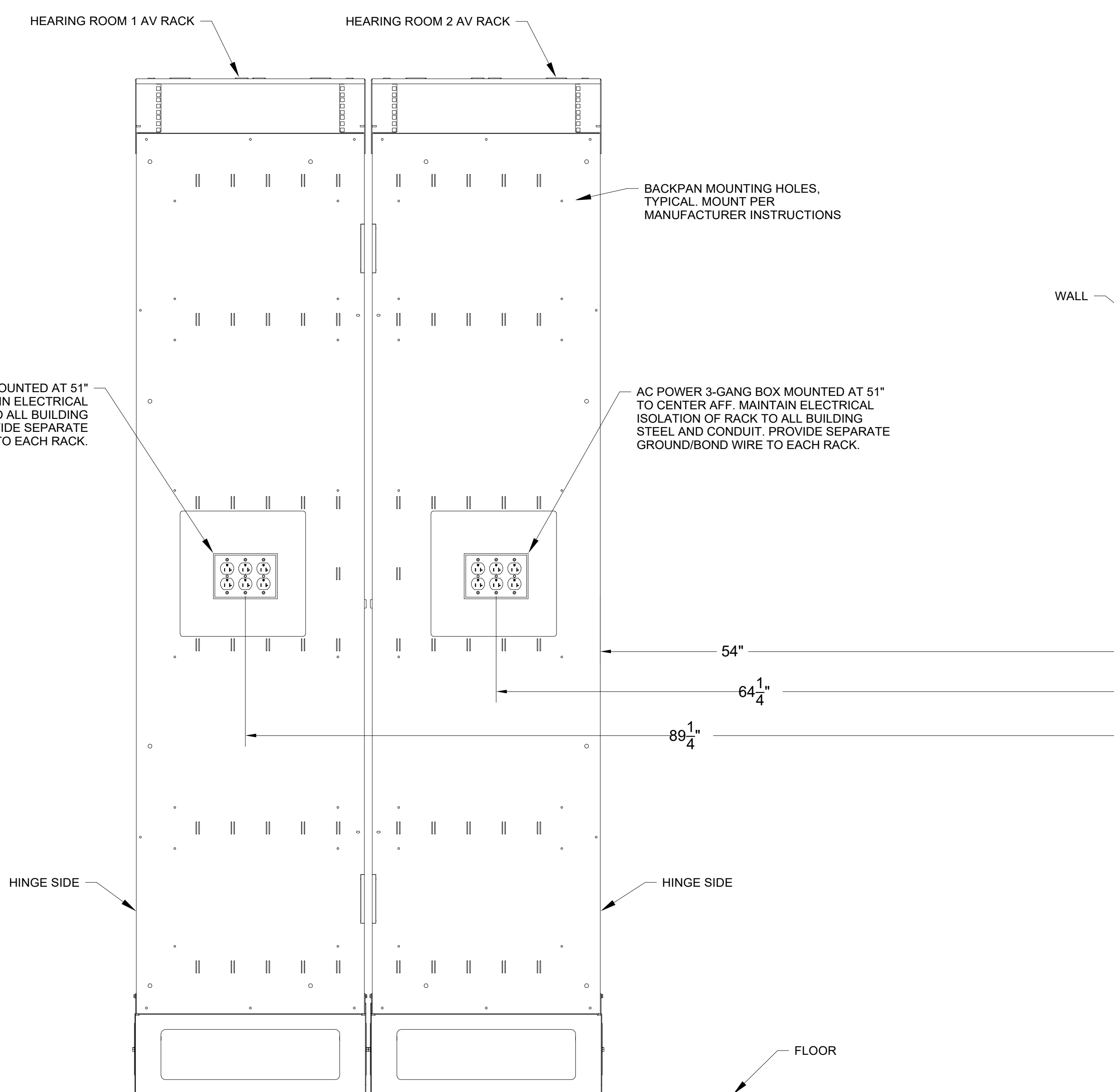
LOCATIONS:
BOTH RACKS LOCATED IN AV CLOSET C2204



ER/HEAR
TYPICAL FOR HEARING ROOM 1 C1150 AND HEARING ROOM 2 (FAMILY COURT) C1140

- LARGE PIVOTING WALL RACK
- MIDDLE ATLANTIC SR-46-28 RACK
- MIDDLE ATLANTIC DWRSR-ZL LATCH
- MIDDLE ATLANTIC UQFP-4RT FAN 2RU
- MIDDLE ATLANTIC VBK-S28 VENT BLOCK KIT

LOCATIONS:
BOTH RACKS LOCATED IN C-CAP SERVER 1191



ER/HEAR EQUIPMENT RACK BACKPAN DETAIL
C-CAP SERVER 1191

JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 1 1/2" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	

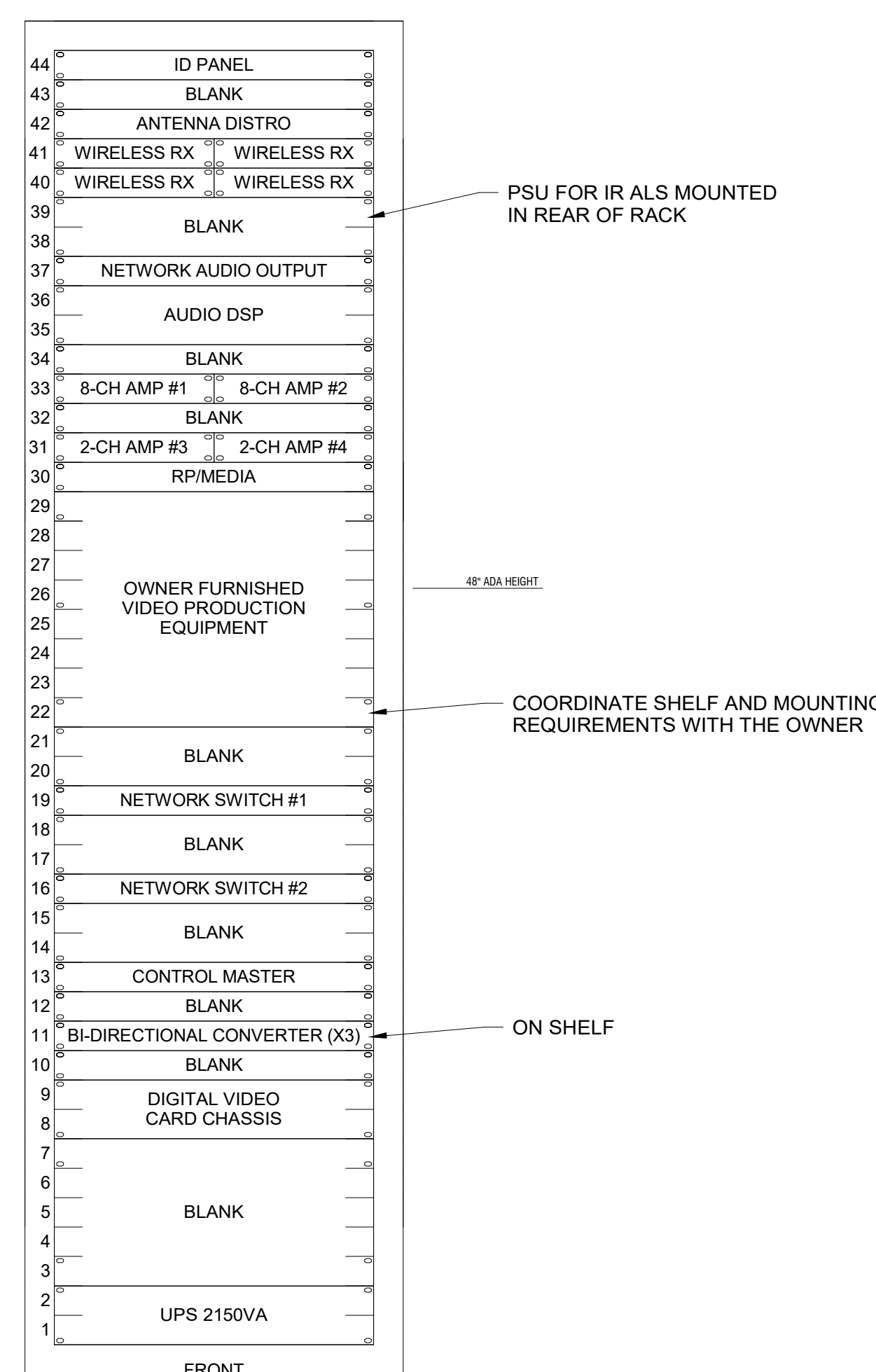
REV	DATE	DESCRIPTION
1	10/30/2022	AV SYSTEM BID DOCUMENTS

SHEET TITLE:
EQUIPMENT RACK ELEVATIONS

SHEET NUMBER: **AV502** REV: **1**

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

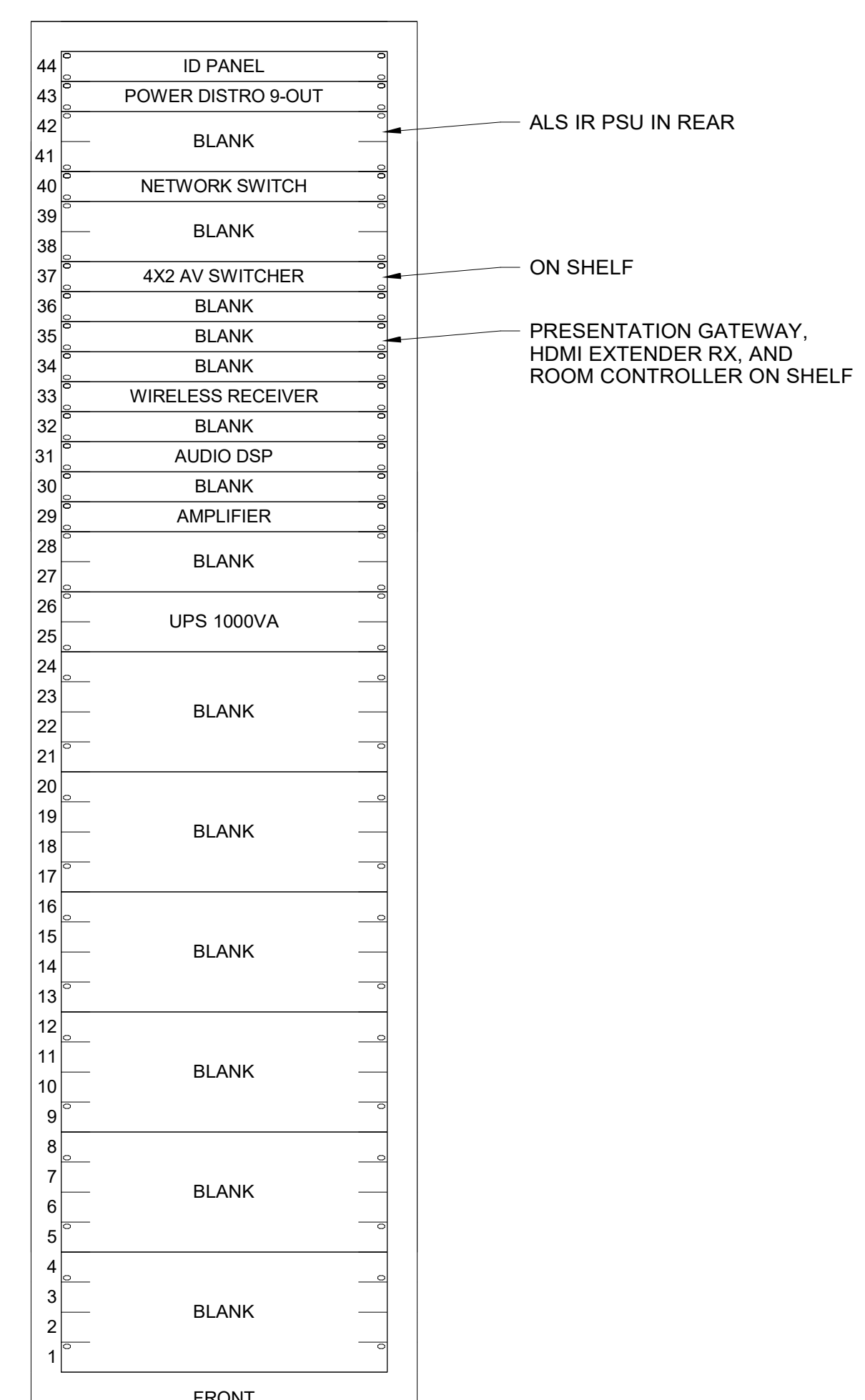
**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**



ER/BOARD
SERVES COUNTY BOARD ROOM C2063

FREE-STANDING FLOOR RACK
MIDDLE ATLANTIC WRK-44-32 RACK
MIDDLE ATLANTIC SPN-44-312 SIDE PANELS
MIDDLE ATLANTIC MW-10FT-FC FAN
MIDDLE ATLANTIC LF-ISO ISOLATING LEVELING FEET

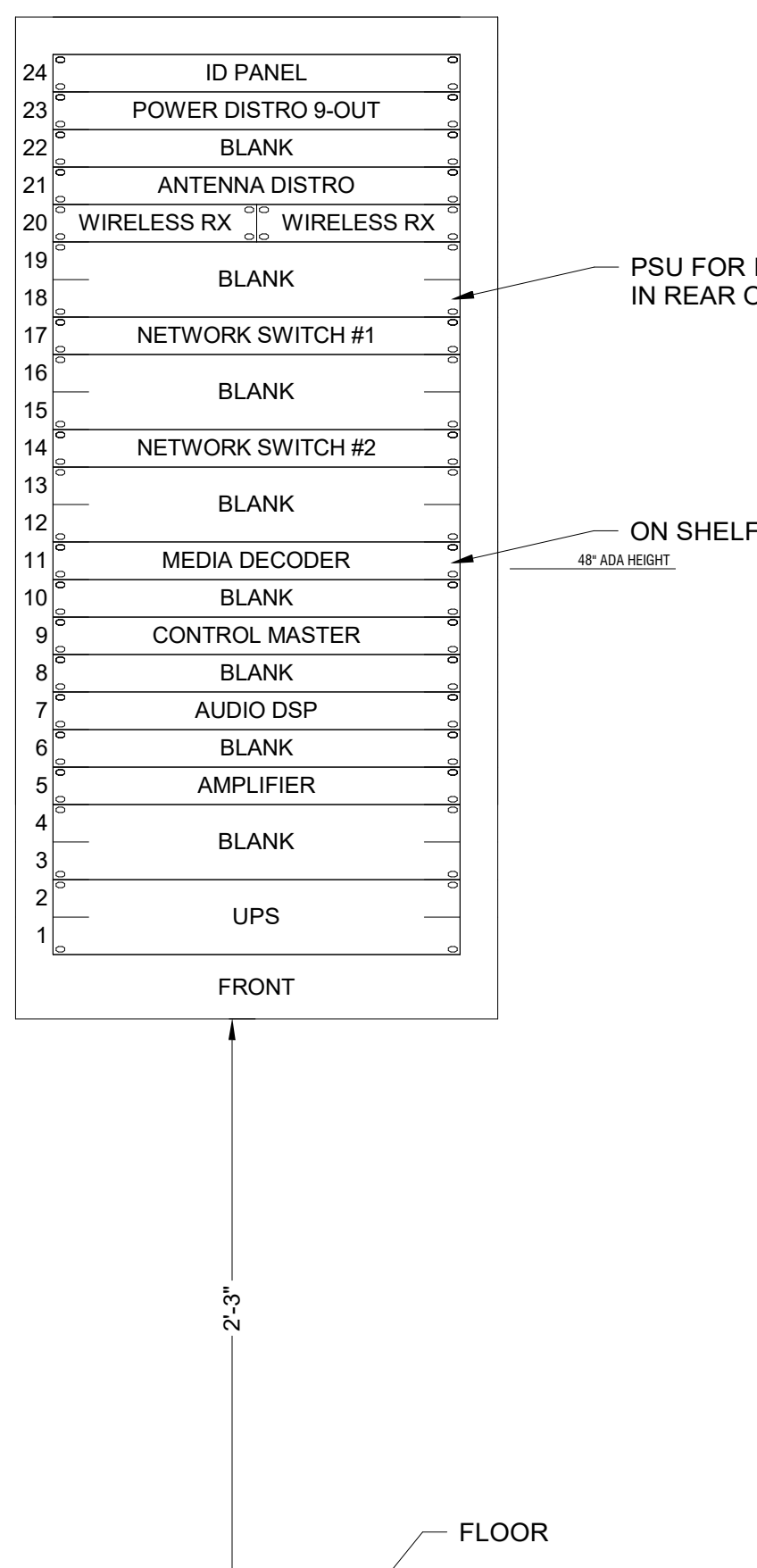
LOCATION:
IT/AV C2064



ER/JURY
SERVES JURY ASSEMBLY / TRAINING C2190

FREE-STANDING FLOOR RACK
MIDDLE ATLANTIC WRK-44-32 RACK
MIDDLE ATLANTIC SPN-44-312 SIDE PANELS (ONE SET FOR GANGED RACKS)
MIDDLE ATLANTIC MW-10FT-FC FAN
MIDDLE ATLANTIC LF-ISO ISOLATING LEVELING FEET

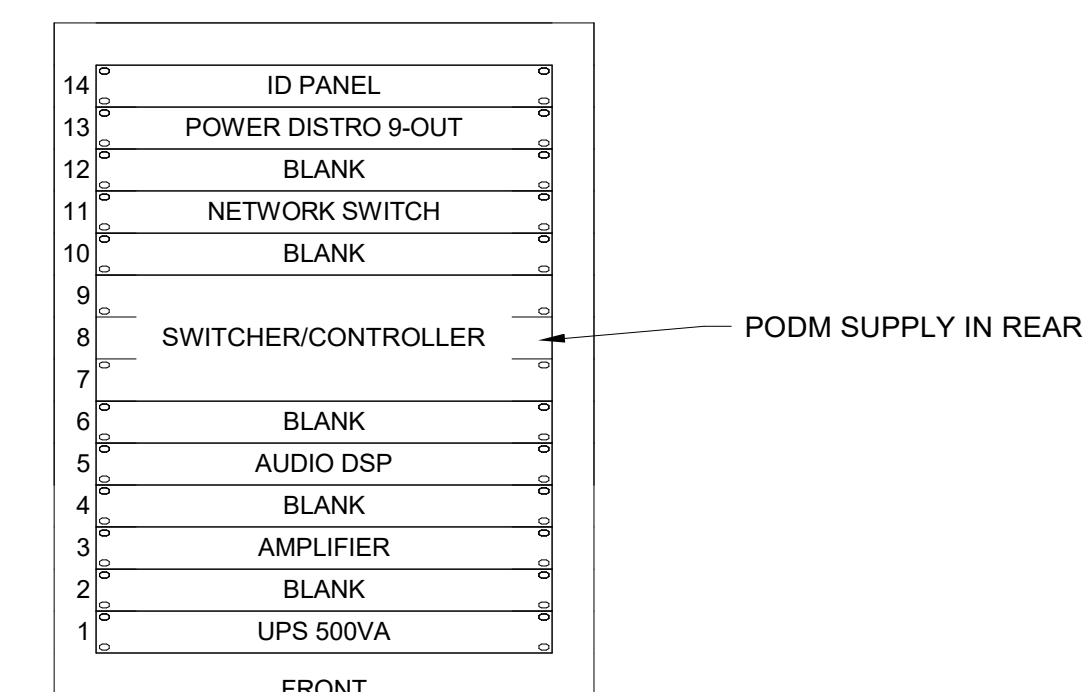
LOCATION:
AV CLOSET C2204 (GANGED WITH COURTROOM RACKS)



ER/EOC
SUPPORTS EMERGENCY OPERATIONS L0091

WALL RACK
MIDDLE ATLANTIC DWR-18-26 RACK

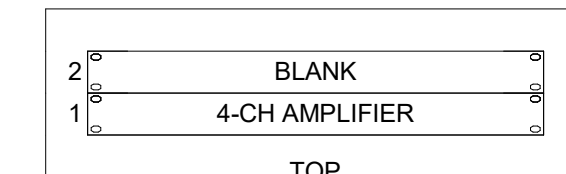
LOCATIONS:
ON WALL IN RADIO/ELEC. L0094



ER/BRIEF
SERVES BRIEFING L1033

CABINET FRAME RACK
MIDDLE ATLANTIC CFR-14-20 RACK
MIDDLE ATLANTIC 5-RS20 RUNNER KIT

LOCATION:
IN FURNITURE ABOVE FB/BRIEF-1
AV CONTRACTOR COORDINATE WITH OWNER TO ENSURE RACK FITS WITHIN FURNITURE



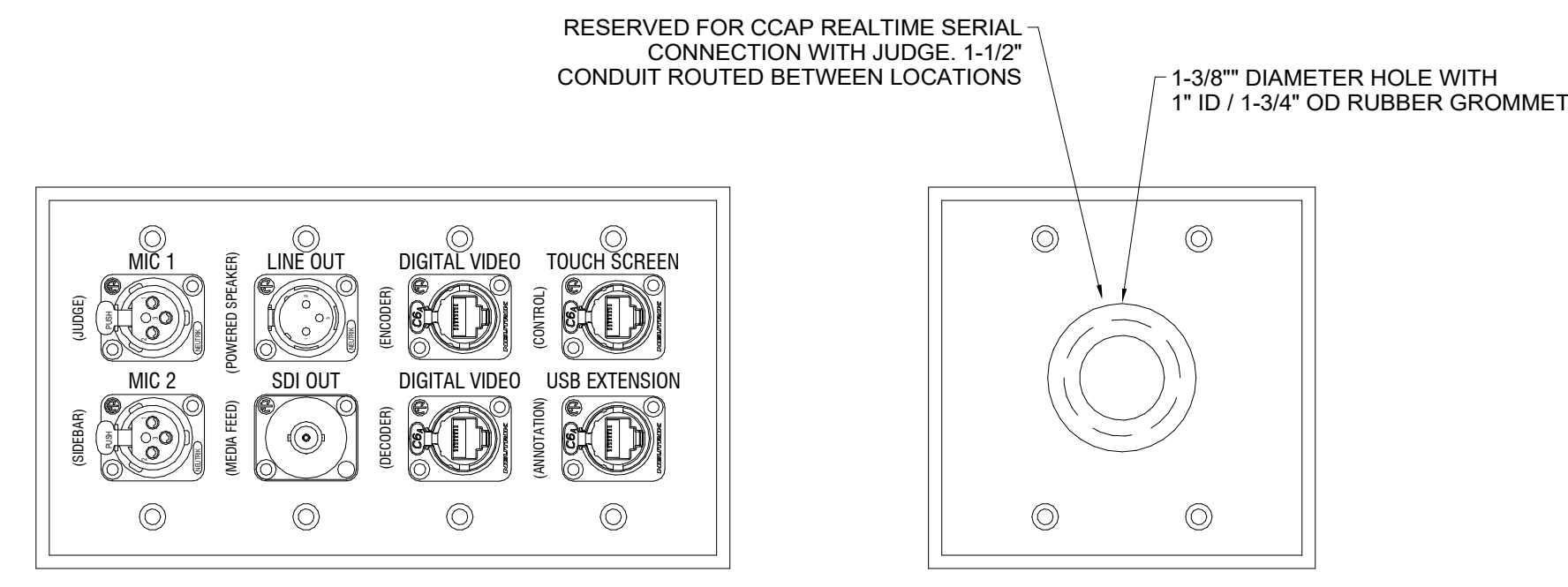
ER/SQUAD
"OVERHEAD RADIO" DISTRIBUTION RACK

TILT-OUT WALL RACK
MIDDLE ATLANTIC TOR-2-20SP TILT OUT RACK

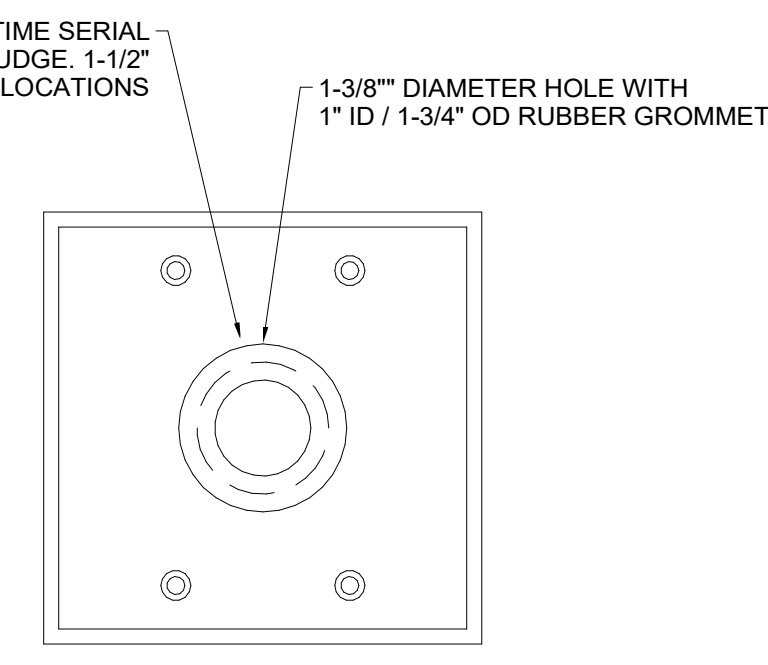
LOCATION:
ON WALL IN SQUAD ROOM L1087

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 1 1/2" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISION:	DESCRIPTION:
1	10/14/2022 AV SYSTEM BID DOCUMENTS
SHEET TITLE: EQUIPMENT RACK ELEVATIONS	
SHEET NUMBER: AV503	REV: 1

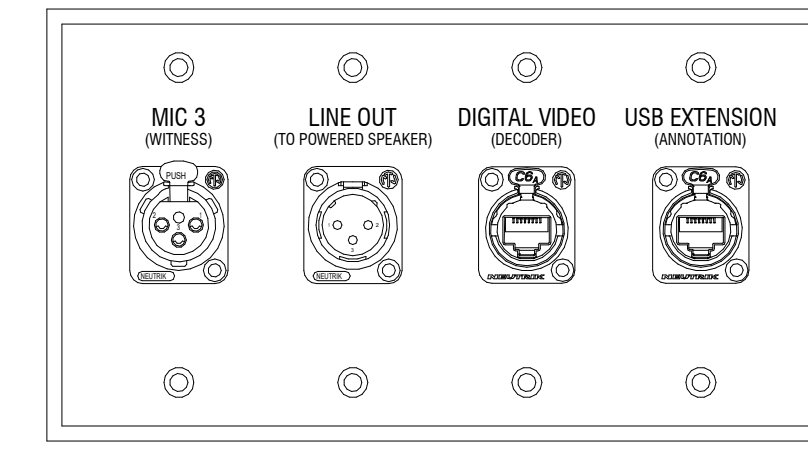
PANEL DRAWINGS SHOW DESIGN INTENT ONLY. AV CONTRACTOR IS RESPONSIBLE FOR VERIFYING PANEL SIZES & CONNECTOR SPACING.



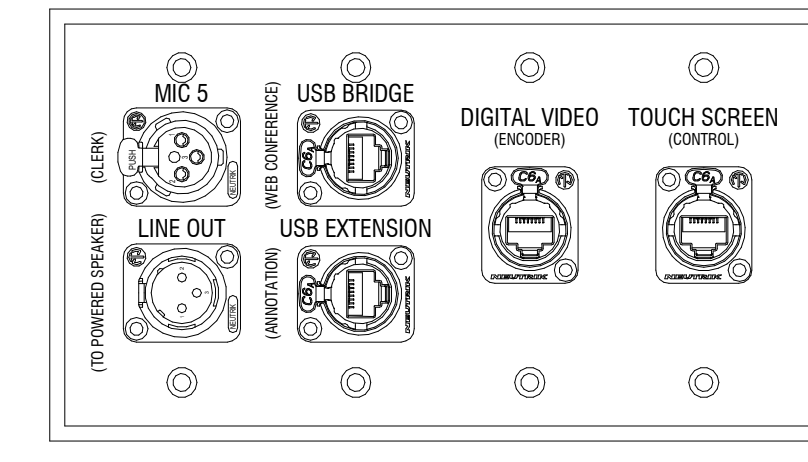
AV/JUDGE-1
PANEL SIZE 4-GANG
PANEL COLOR COORDINATE WITH ARCHITECT
LOCATION BELOW JUDGE'S DESK
QUANTITY 1 (PER COURTROOM)



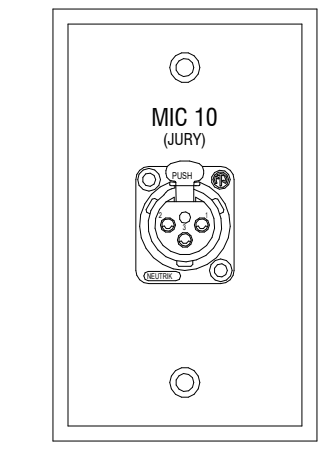
AV/JUDGE-2
PANEL SIZE 2-GANG
PANEL COLOR COORDINATE WITH ARCHITECT
LOCATION BELOW JUDGE'S DESK
QUANTITY 1 (PER COURTROOM)



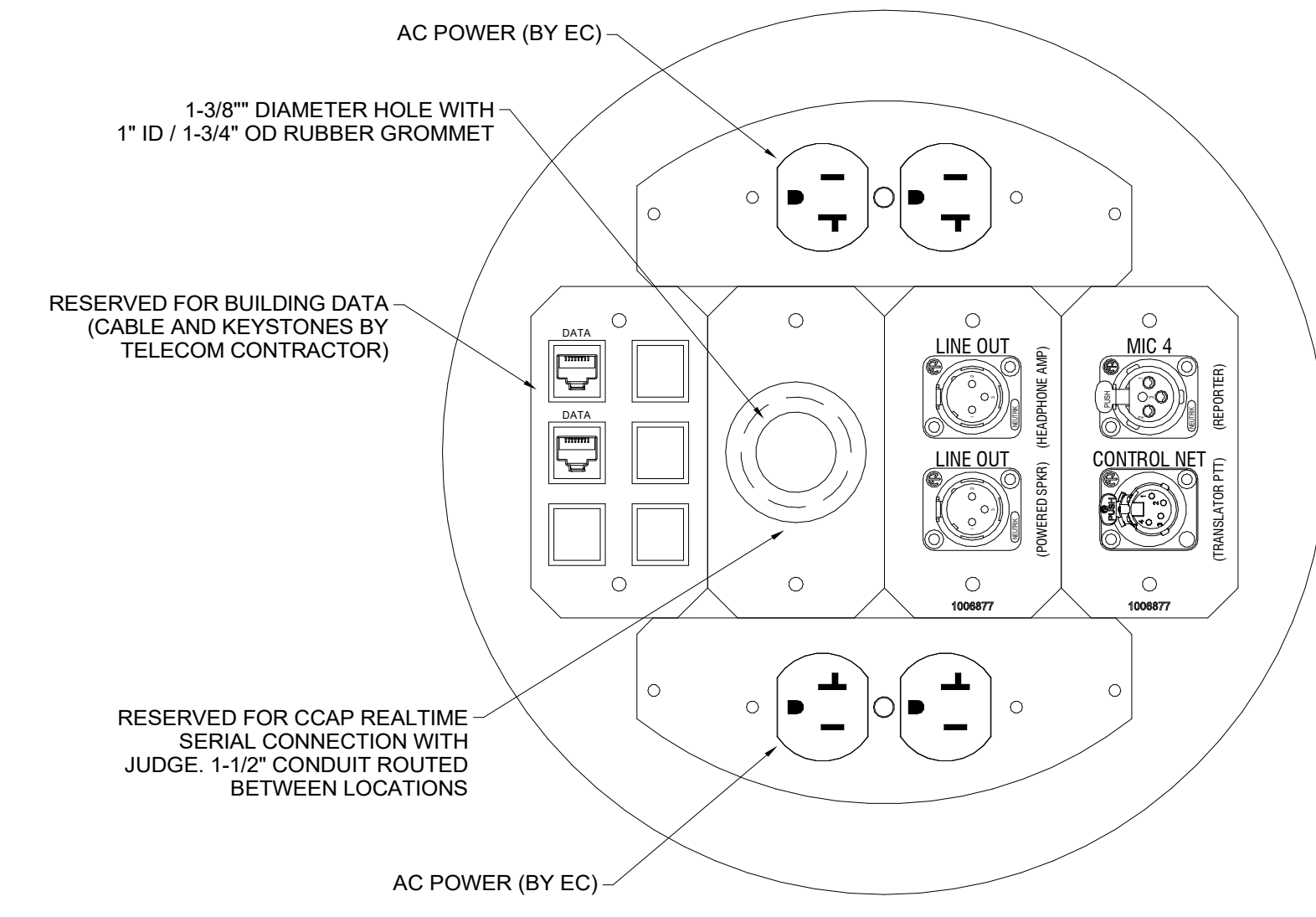
AV/WIT
PANEL SIZE 4-GANG
PANEL COLOR COORDINATE WITH ARCHITECT
LOCATION BELOW WITNESS DESK
QUANTITY 1 (PER COURTROOM)



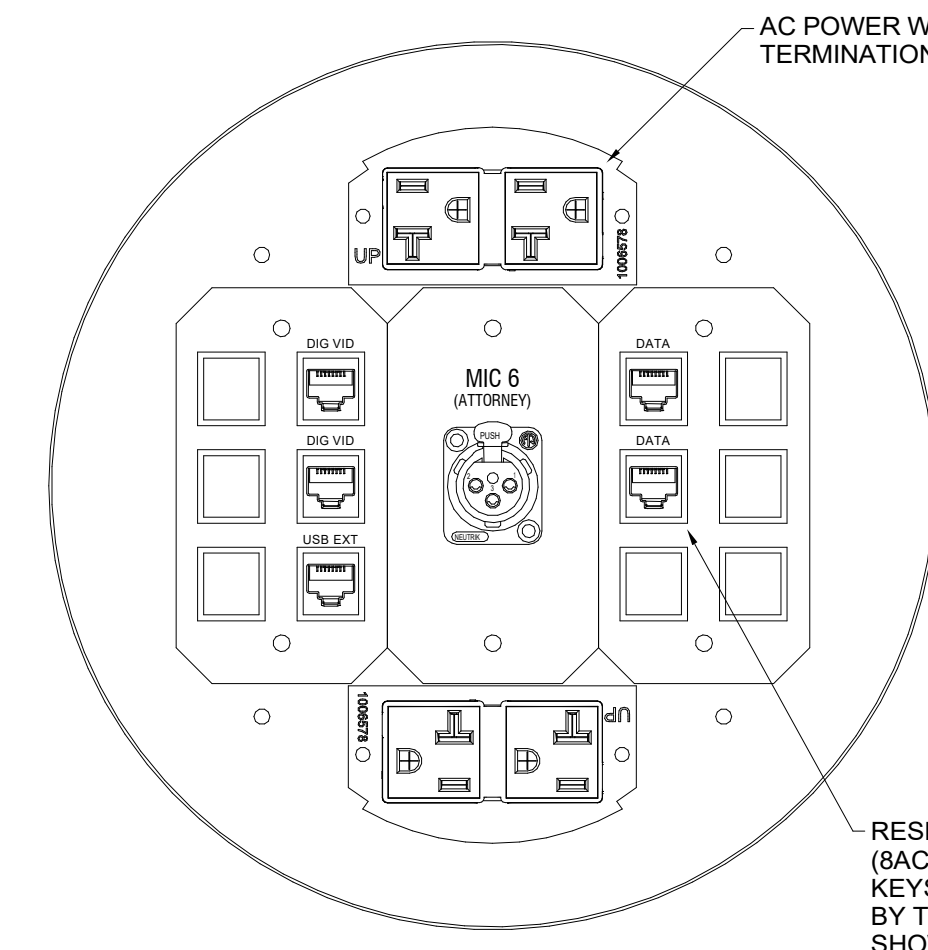
AV/CLERK
PANEL SIZE 4-GANG
PANEL COLOR COORDINATE WITH ARCHITECT
LOCATION BELOW CLERK'S DESK
QUANTITY 1 (PER COURTROOM)



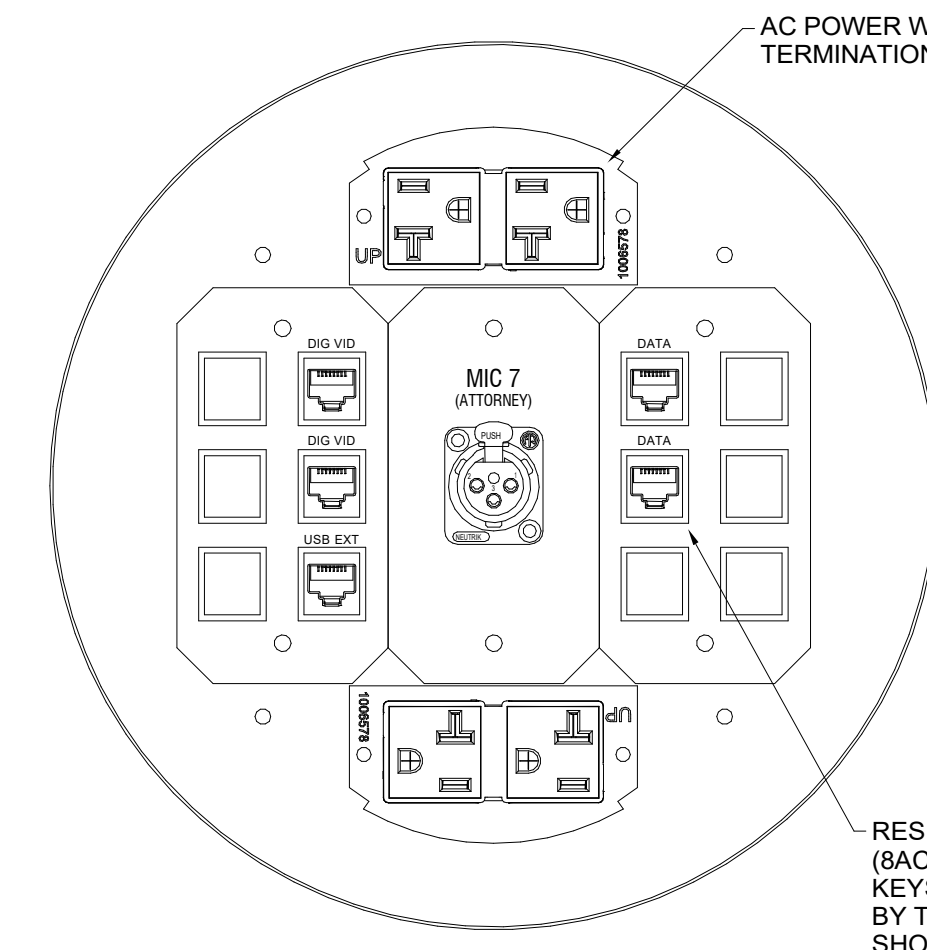
MIC/JURY
PANEL SIZE 1-GANG
PANEL COLOR COORDINATE WITH ARCHITECT
LOCATION WELL SIDE OF JURY BOX
QUANTITY 1 (PER COURTROOM)



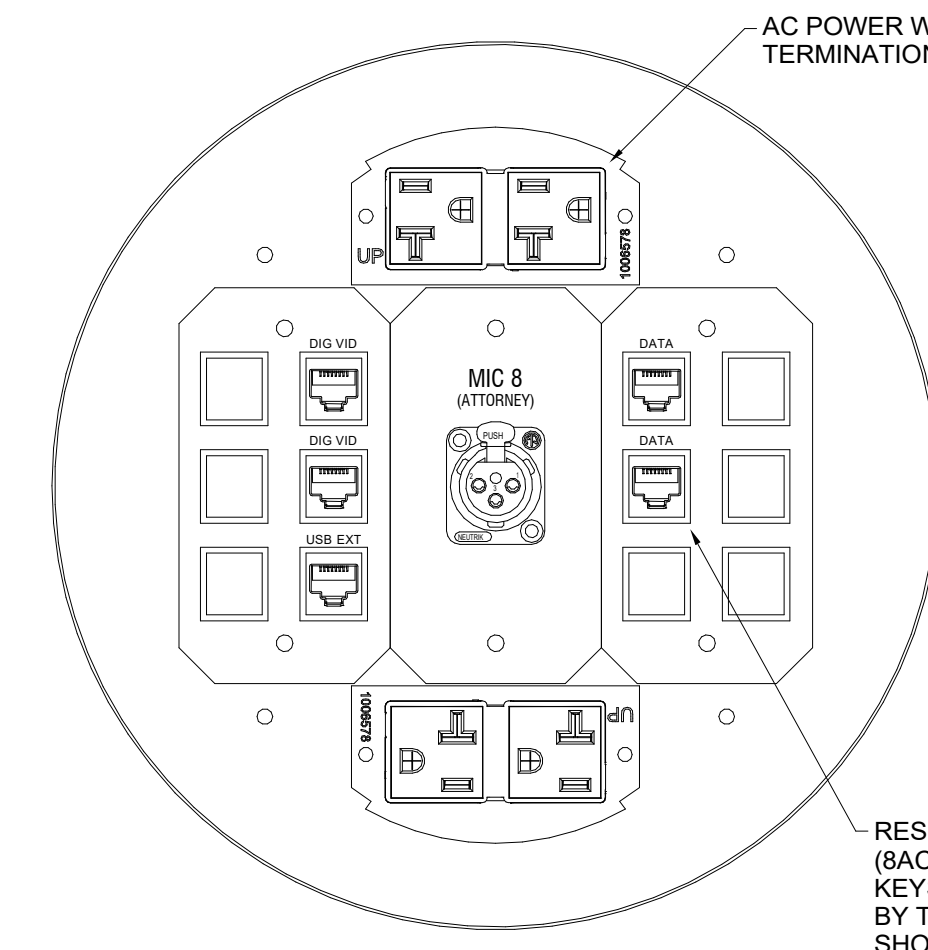
FB/REP
PANEL SIZE 10\"/>



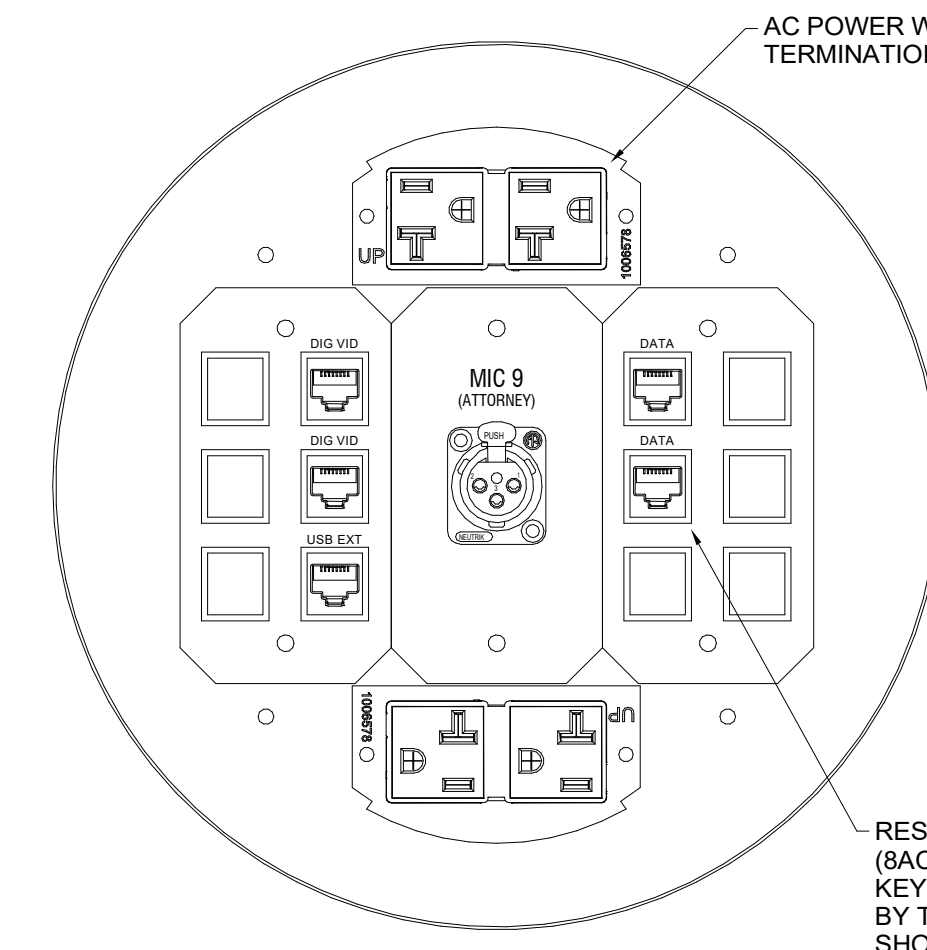
FB/WELL-1
PANEL SIZE 8\"/>



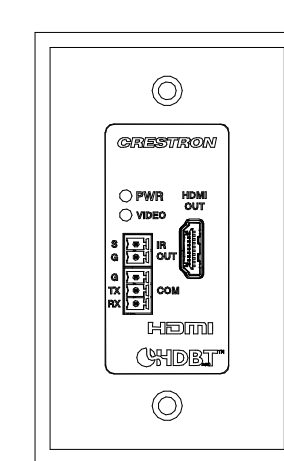
FB/WELL-2
PANEL SIZE 8\"/>



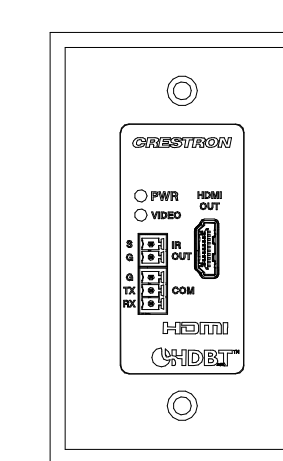
FB/WELL-3
PANEL SIZE 8\"/>



FB/WELL-4
PANEL SIZE 8\"/>

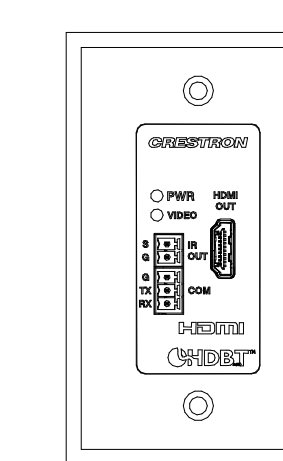


AV/GAL-1
PANEL SIZE 1-GANG
PANEL COLOR COORDINATE WITH ARCHITECT
LOCATION GALLERY SIDE OF BAR
QUANTITY 1 (PER COURTROOM)

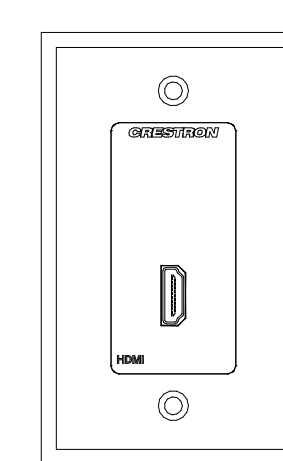


AV/GAL-2
PANEL SIZE 1-GANG
PANEL COLOR COORDINATE WITH ARCHITECT
LOCATION GALLERY SIDE OF BAR
QUANTITY 1 (PER COURTROOM)

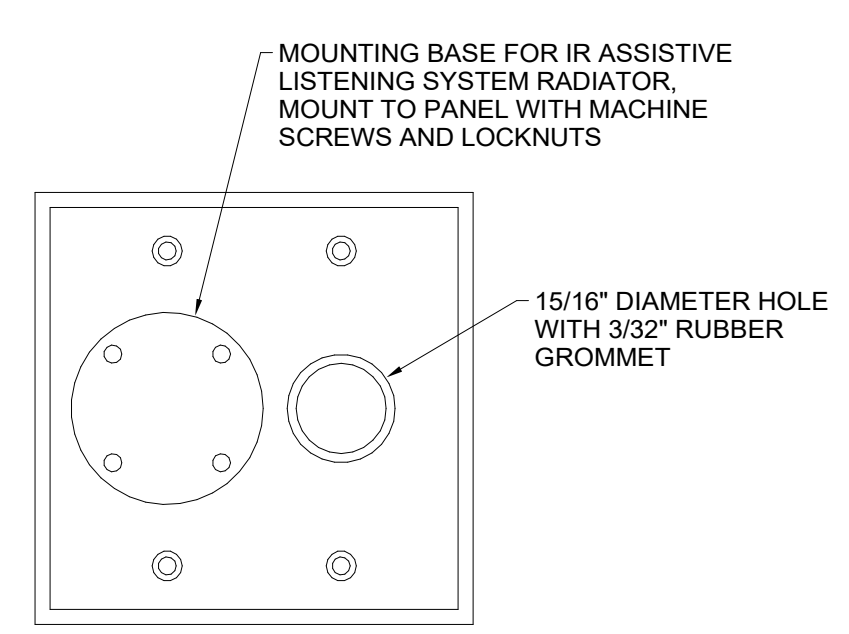
BRANCH B COURTROOM ONLY HAS A SINGLE GALLERY OUTPUT



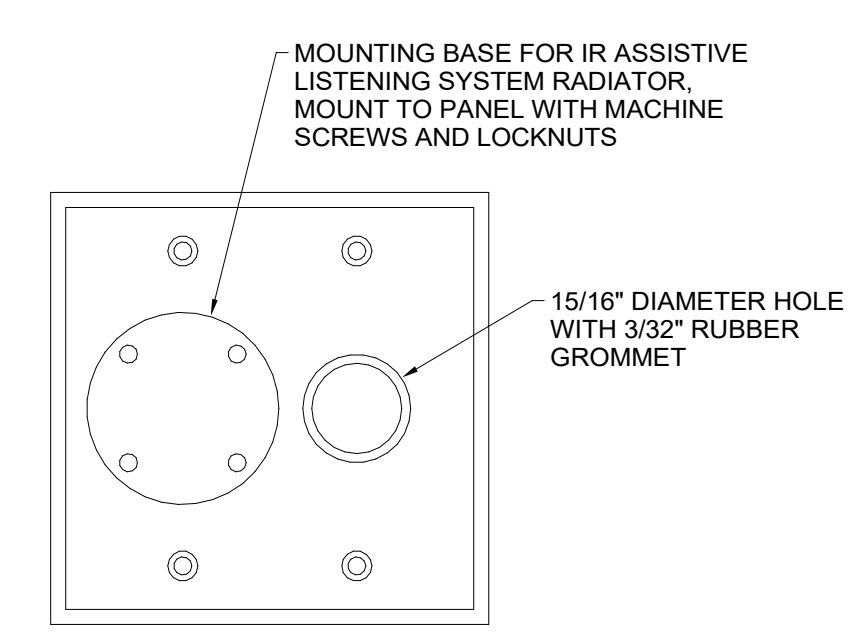
AV/JURY
PANEL SIZE 1-GANG
PANEL COLOR COORDINATE WITH ARCHITECT
LOCATION JURY BOX
QUANTITY 1 (PER COURTROOM)



AV/DELIB
PANEL SIZE 1-GANG
PANEL COLOR COORDINATE WITH ARCHITECT
LOCATION JURY DELIBERATION ROOM
QUANTITY 1 (PER DELIBERATION ROOM)



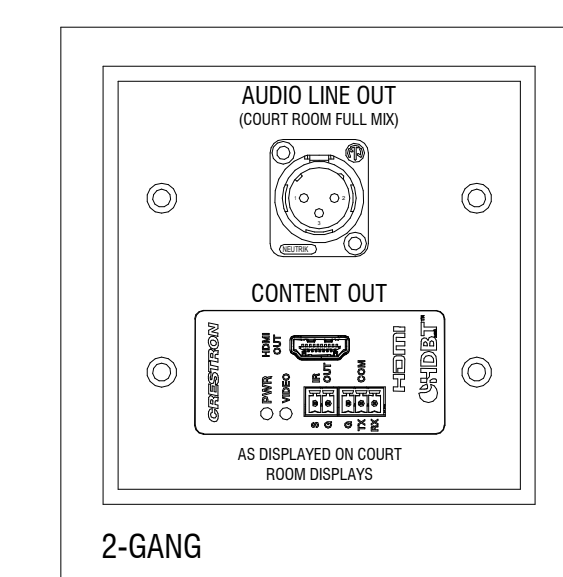
ALS/IR-1
PANEL SIZE 2-GANG
PANEL COLOR COORDINATE WITH ARCHITECT
LOCATION FRONT WALL OF COURTROOM
QUANTITY 1 (PER COURTROOM)



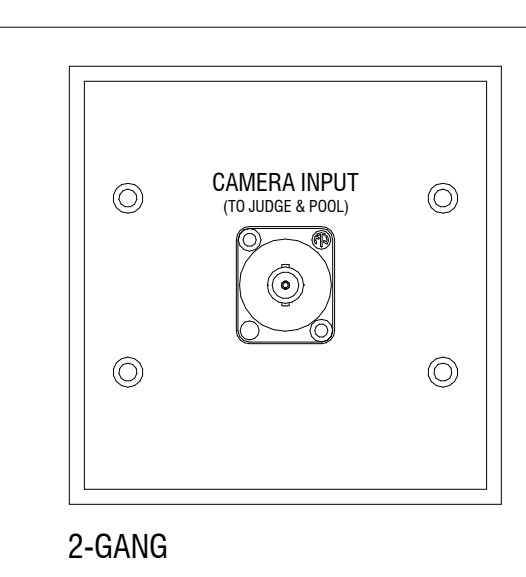
ALS/IR-2
PANEL SIZE 2-GANG
PANEL COLOR COORDINATE WITH ARCHITECT
LOCATION REAR WALL OF COURTROOM
QUANTITY 1 (PER COURTROOM)

IT IS ASSUMED THAT THE FOLLOWING LOCATIONS WILL HAVE DEVICES MOUNT DIRECTLY OVER THE BOX AND NO PLATE OR PANEL IS REQUIRED.

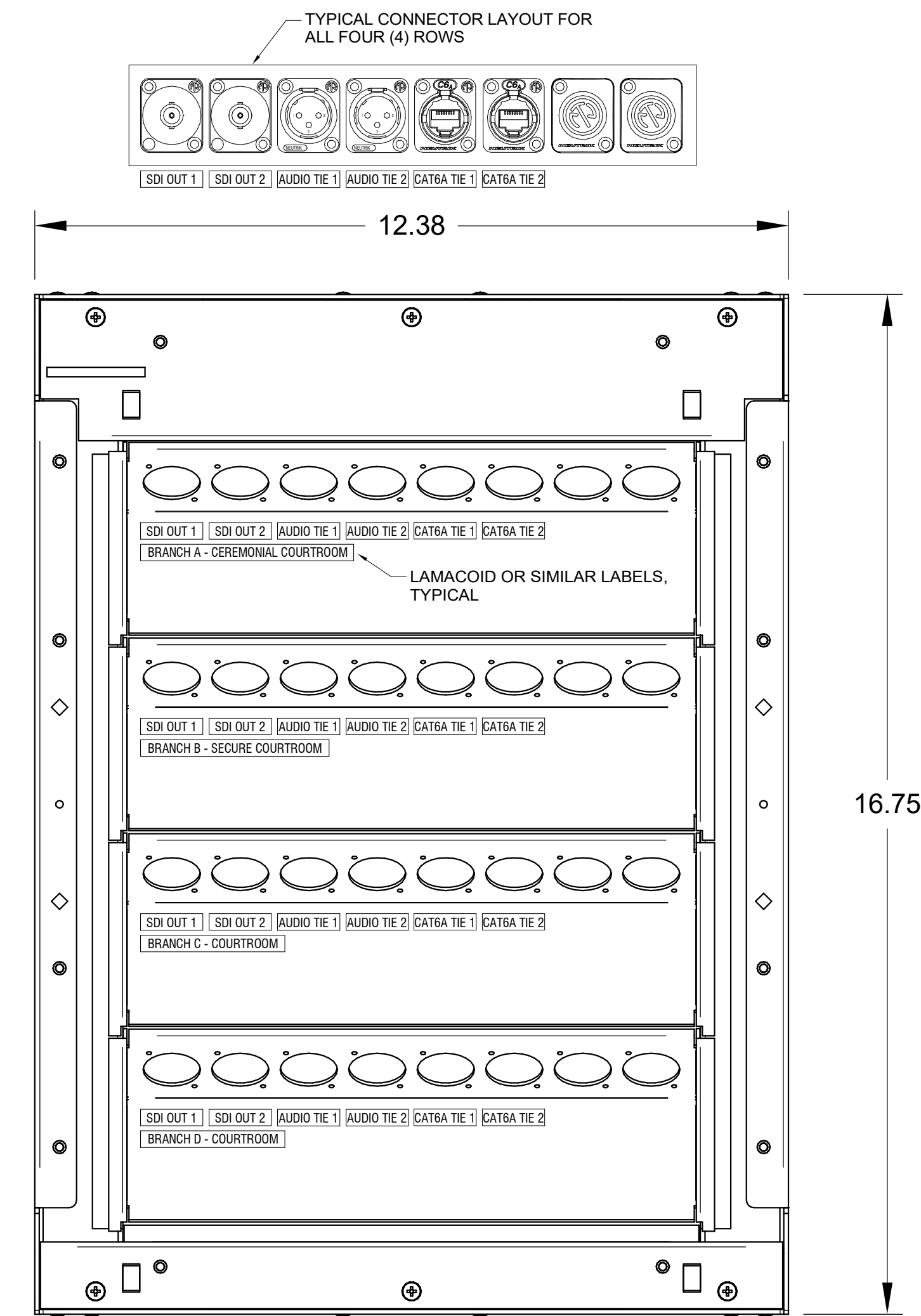
- CAMCOURT-1
- CAMCOURT-2
- CAMCOURT-3
- CAMCOURT-4
- ANT/A
- ANT/B
- TROUBLE



AV/MEDIA
PANEL SIZE 2-GANG
PANEL COLOR COORDINATE WITH ARCHITECT
LOCATION COURT ROOM SIDE WALL
QUANTITY 1 (PER COURT ROOM) - INCLUDE COVER



AV/MEDIA
PANEL SIZE 2-GANG
PANEL COLOR COORDINATE WITH ARCHITECT
LOCATION COURT ROOM SIDE WALL
QUANTITY 1 (PER COURT ROOM) - INCLUDE COVER



MEDIA/C2201
PANEL SIZE 12.38\"/>

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549

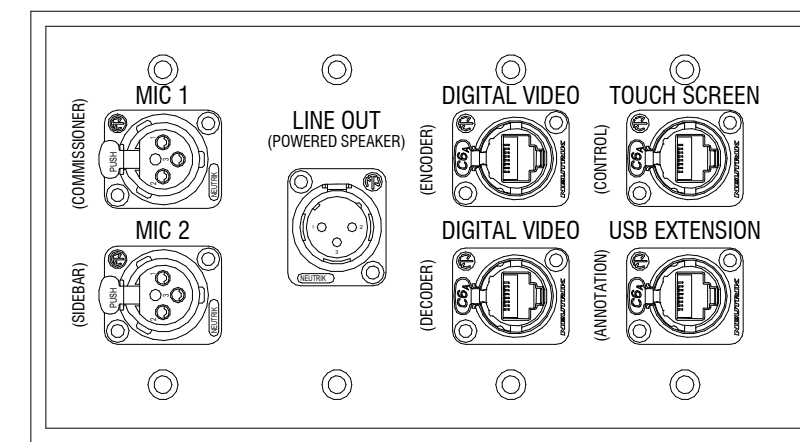
DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: NTS	DRAWING SET SIZE: 30\"/>

SHEET TITLE: BRANCH COURTROOM - TYPICAL PANEL & PLATE DETAILS	
SHEET NUMBER: AV601	REV: 1

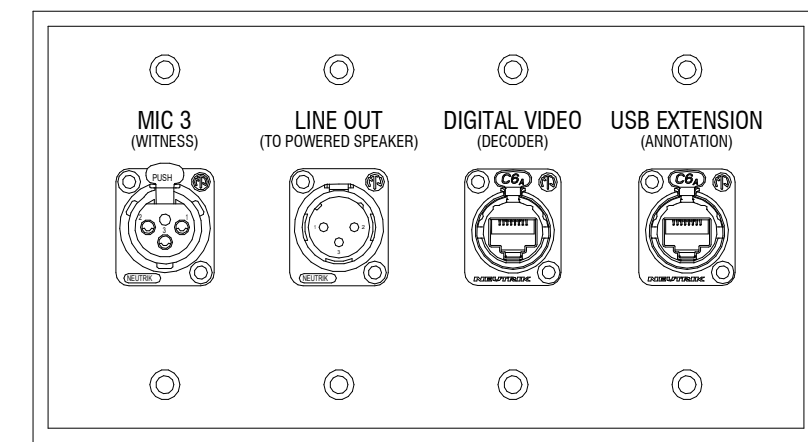
BRANCH COURTROOM - TYPICAL PANEL & PLATE DETAILS

TYPICAL FOR BRANCH A COURTROOM C1220, BRANCH B COURTROOM C1200, BRANCH C COURTROOM C2260 AND BRANCH D COURTROOM C2230

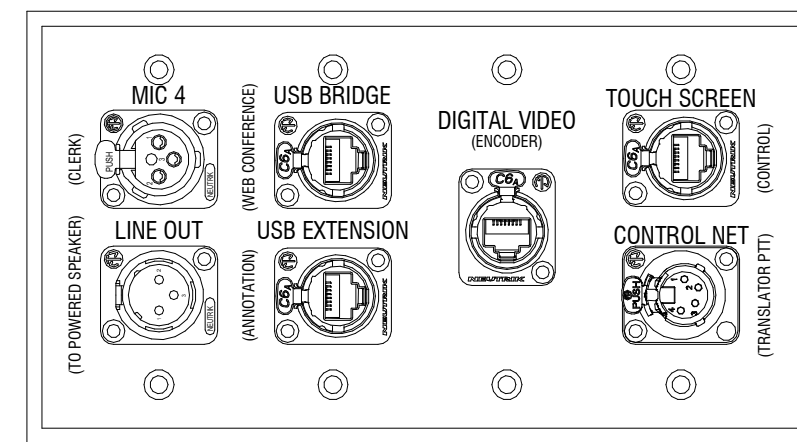
PANEL DRAWINGS SHOW DESIGN INTENT ONLY. AV CONTRACTOR IS RESPONSIBLE FOR VERIFYING PANEL SIZES & CONNECTOR SPACING.



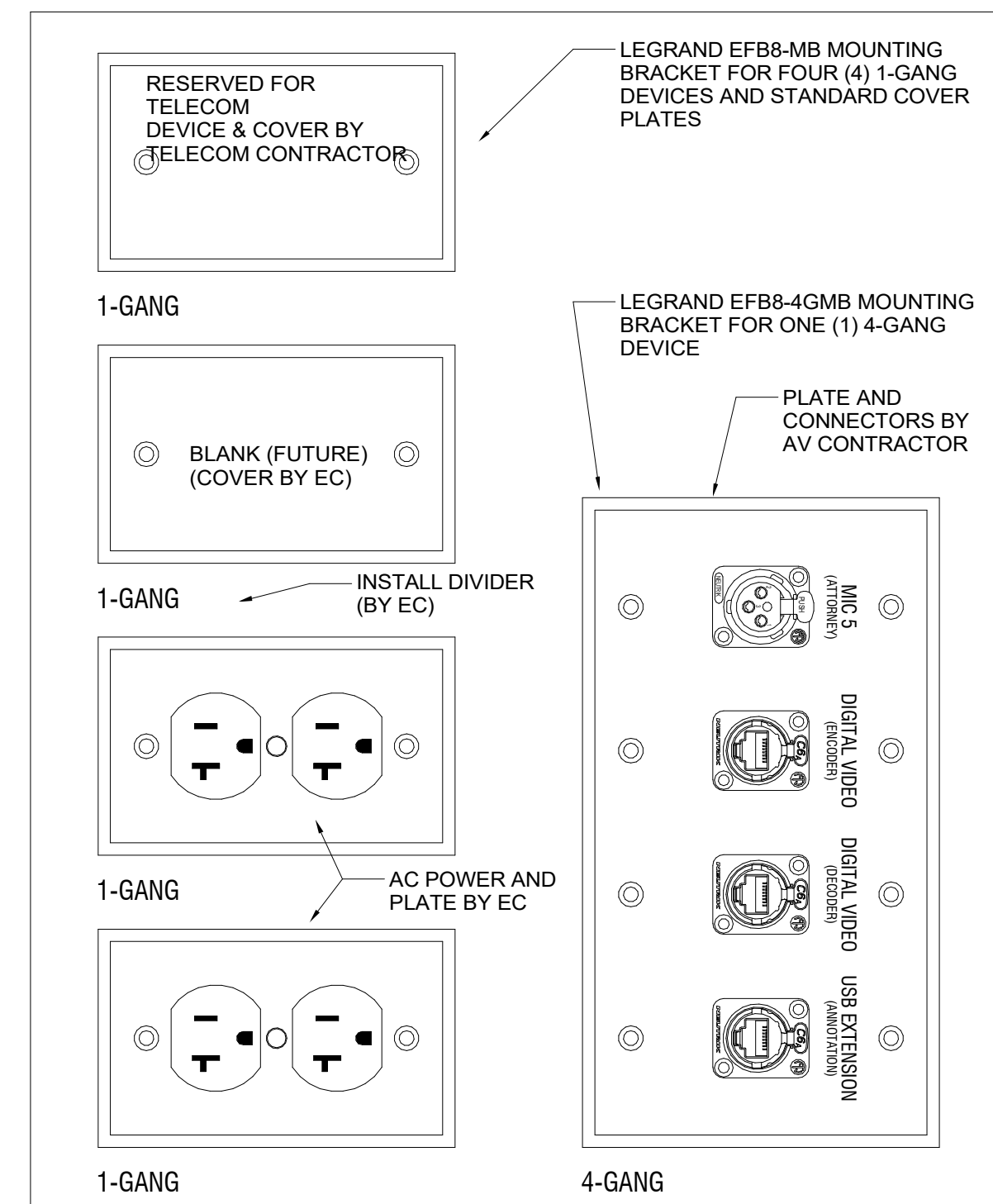
AV/COMM	
PANEL SIZE	4-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	LOCATION
QUANTITY	1



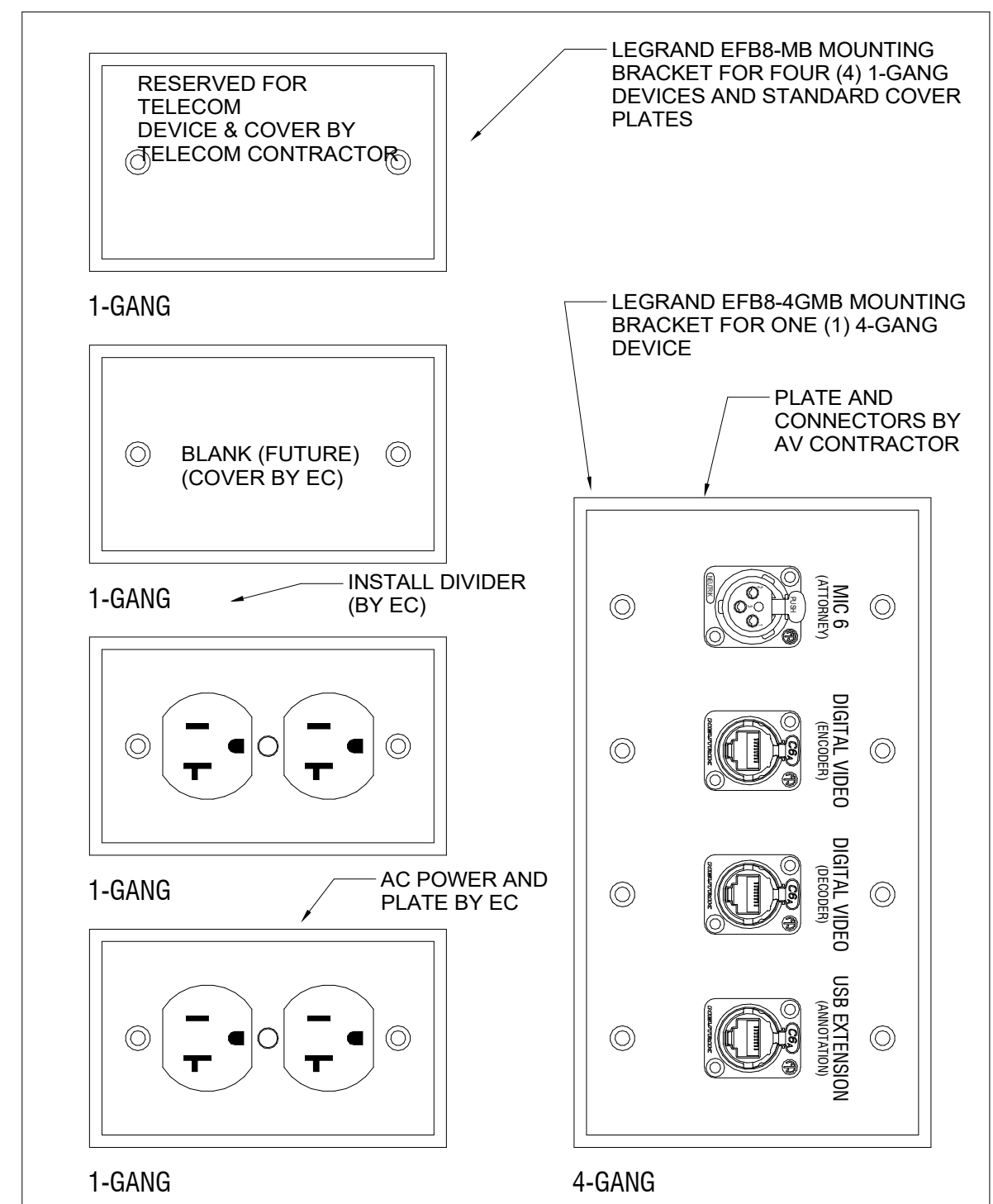
AV/WIT	
PANEL SIZE	4-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	LOCATION
QUANTITY	1



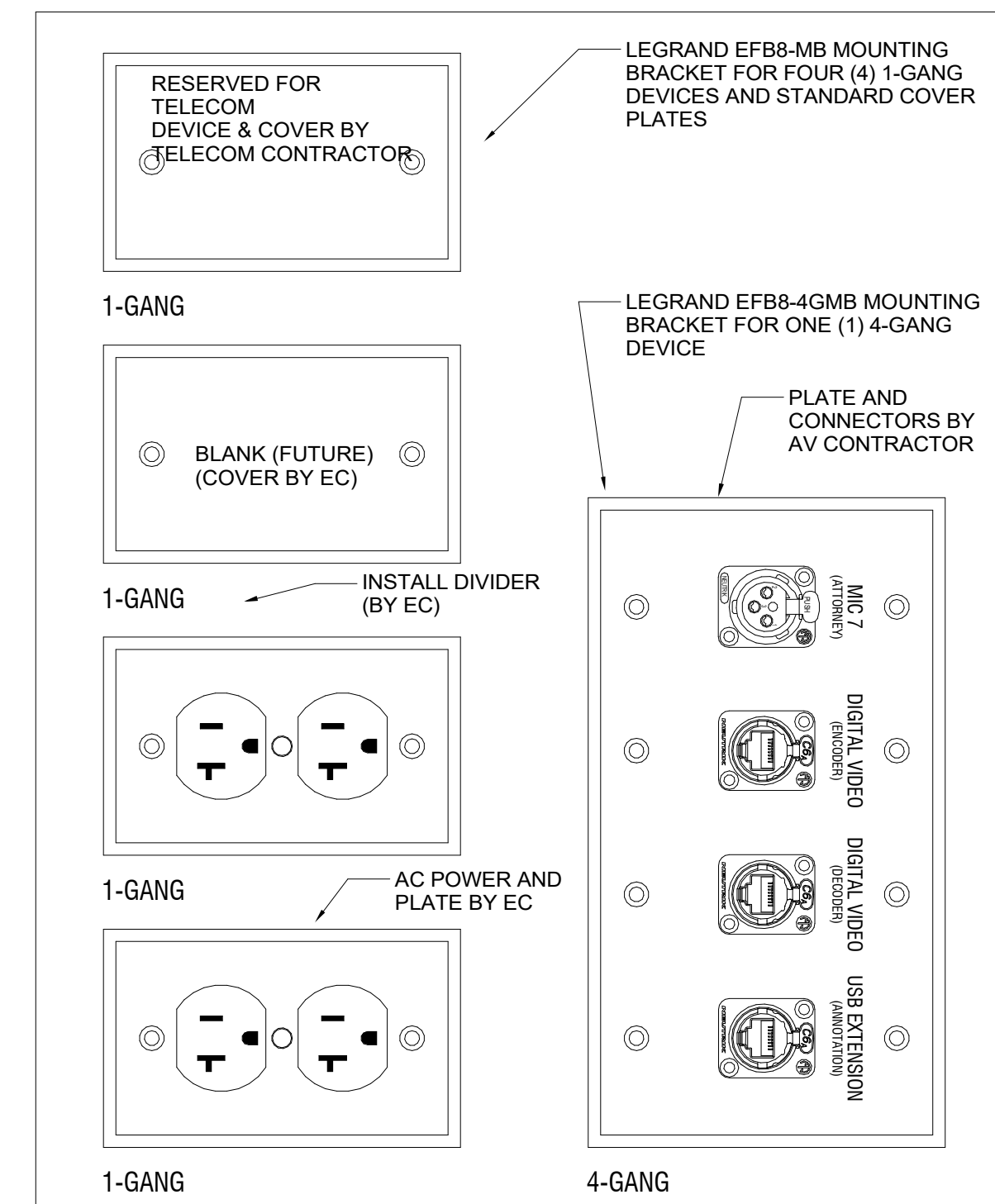
AV/CLERK	
PANEL SIZE	4-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	LOCATION
QUANTITY	1



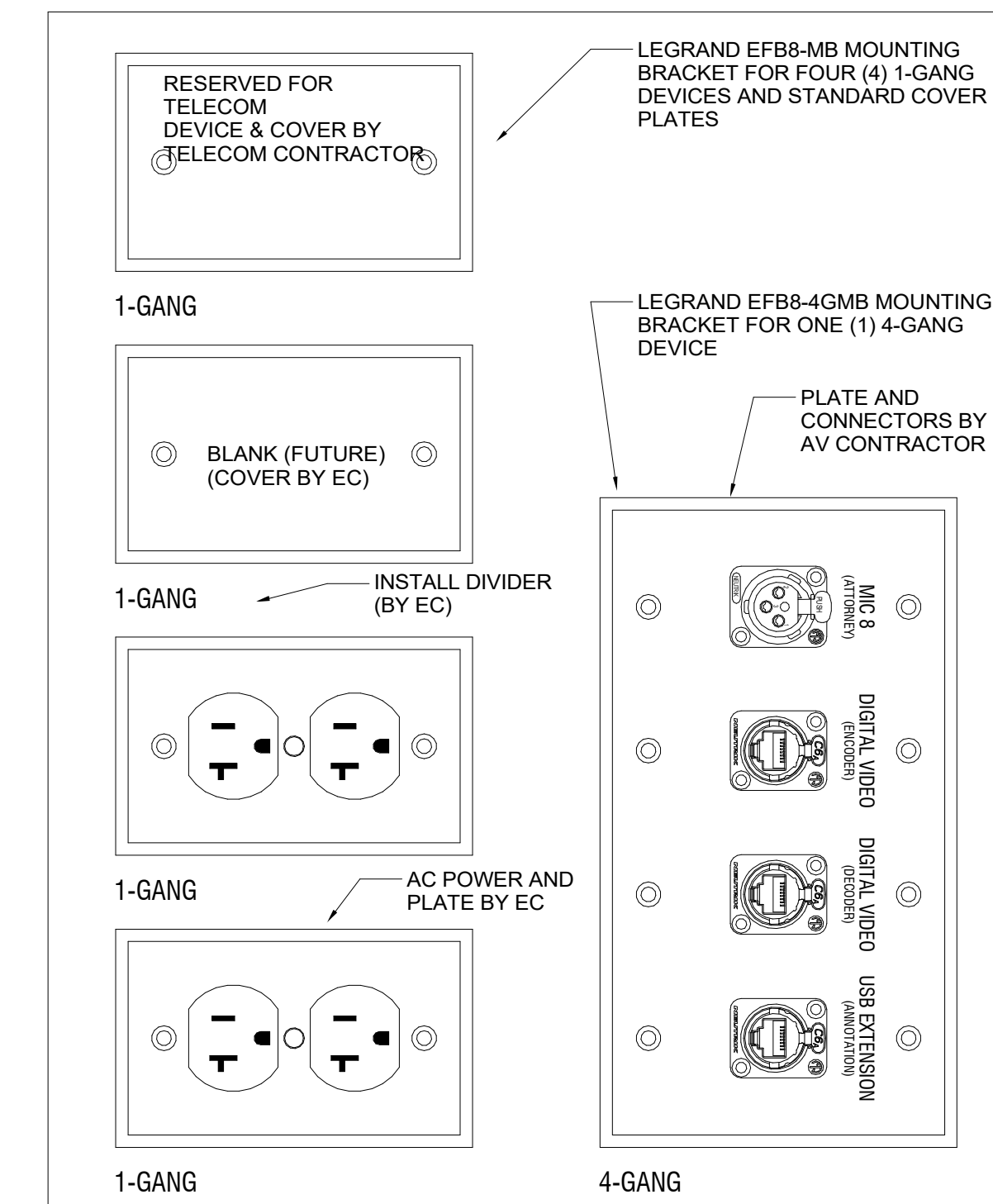
FB/WELL-1	
PANEL SIZE	4-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	LOCATION
QUANTITY	1



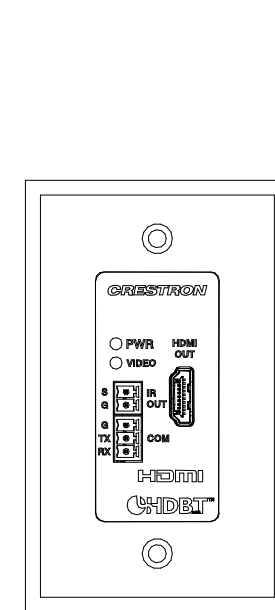
FB/WELL-2	
PANEL SIZE	4-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	LOCATION
QUANTITY	1



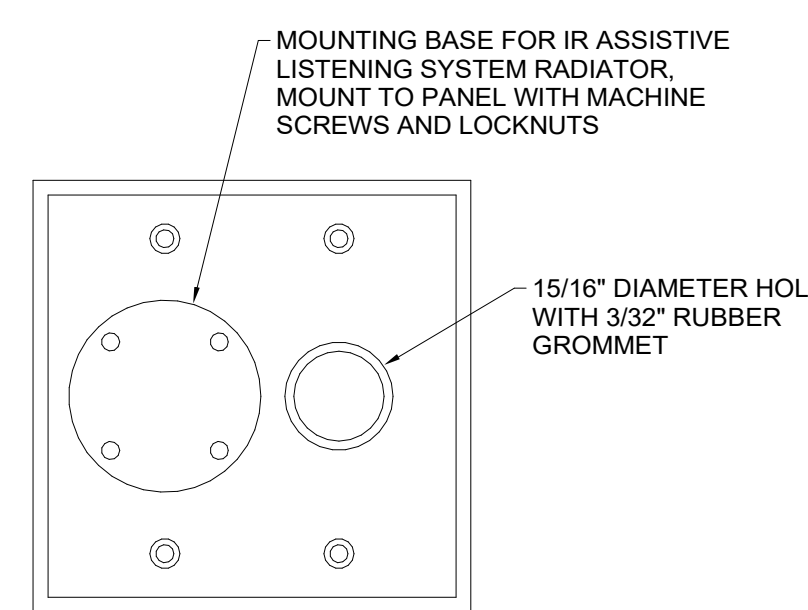
FB/WELL-3	
PANEL SIZE	4-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	LOCATION
QUANTITY	1



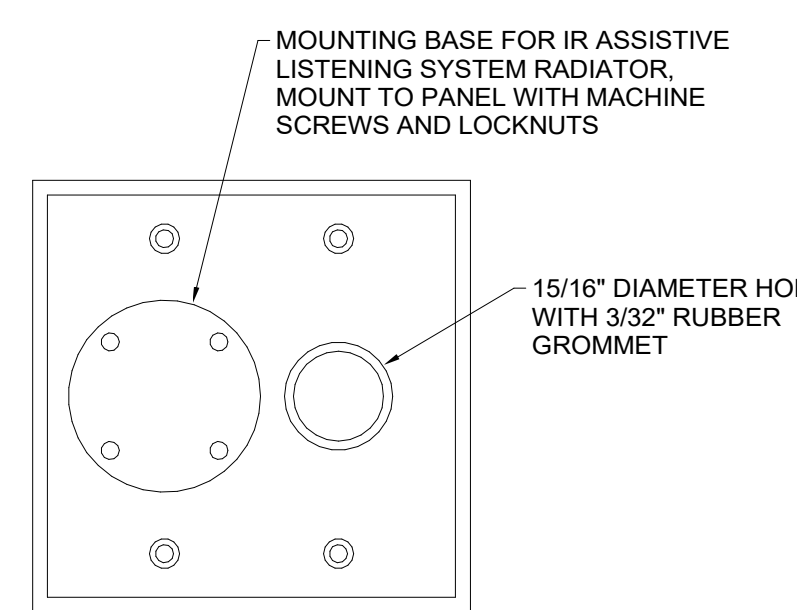
FB/WELL-4	
PANEL SIZE	4-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	LOCATION
QUANTITY	1



AV/GAL	
PANEL SIZE	1-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	LOCATION
QUANTITY	1



ALS/IR-1	
PANEL SIZE	2-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	LOCATION
QUANTITY	1



ALS/IR-2	
PANEL SIZE	2-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	LOCATION
QUANTITY	1

IT IS ASSUMED THAT THE FOLLOWING LOCATIONS WILL HAVE DEVICES MOUNT DIRECTLY OVER THE BOX AND NO PLATE OR PANEL IS REQUIRED:

- CAM/HEAR-1
- CAM/HEAR-2
- CAM/HEAR-3
- CAM/HEAR-4
- ANT/A
- ANT/B

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549

DESIGNER	EDK	PROJECT MANAGER	FBR
SCALE	6" = 1'-0"	DRAWING SET SIZE	30" X 42"
SHEET ISSUE DATE	10/14/2022	PROJECT NUMBER	1502
DOCUMENT SET	AV / BID DOCUMENTS R1		
REVISION	REV	DATE	DESCRIPTION
	1	10/20/2022	AV SYSTEM BID DOCUMENTS

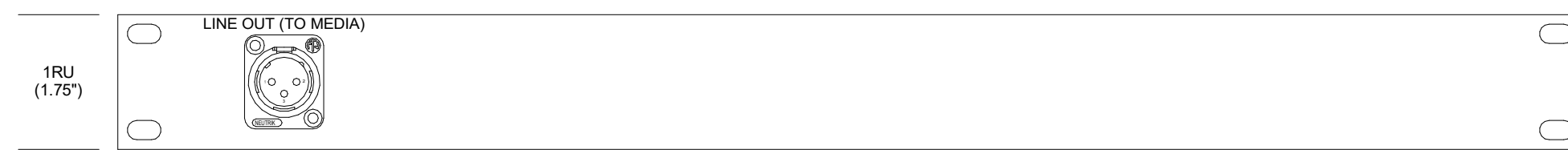
SHEET TITLE:
HEARING ROOM - TYPICAL PANEL & PLATE DETAILS

SHEET NUMBER	AV602	REV	1
--------------	-------	-----	---

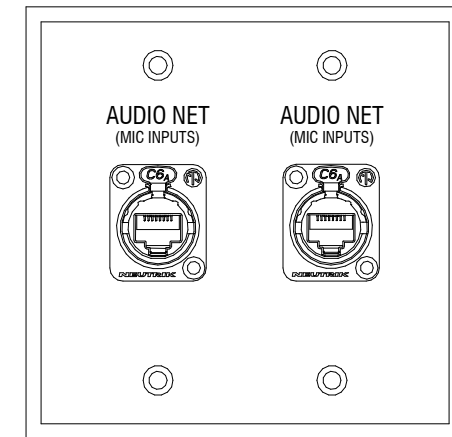
HEARING ROOM - TYPICAL PANEL & PLATE DETAILS

TYPICAL FOR HEARING ROOM 1 C1150 AND HEARING ROOM 2 (FAMILY COURT) C1140

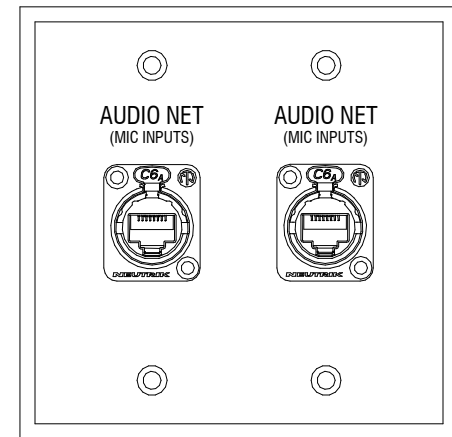
PANEL DRAWINGS SHOW DESIGN INTENT ONLY. AV CONTRACTOR IS RESPONSIBLE FOR VERIFYING PANEL SIZES & CONNECTOR SPACING.



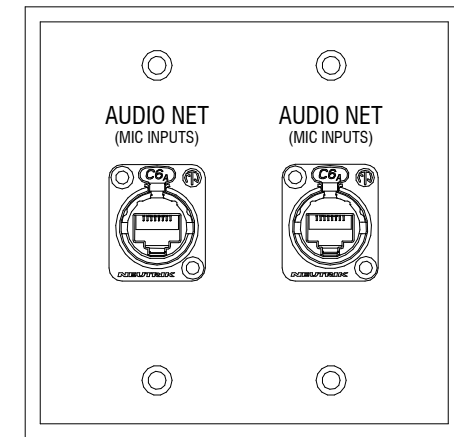
RP/MEDIA	
PANEL SIZE	1RU
PANEL COLOR	BLACK
EQUIPMENT RACK	19" RACK
DEVICE	CUSTOM PANEL



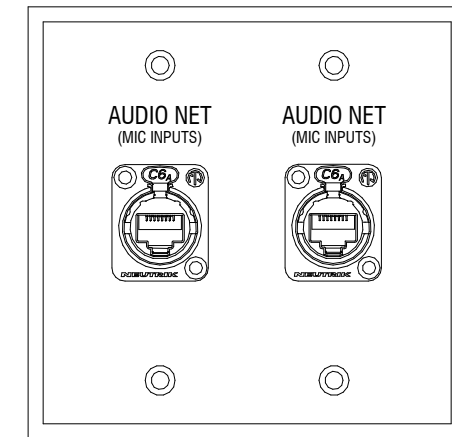
AV/ROW-1	
PANEL SIZE	2-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	SUPERVISOR SEATING ROW 1
QUANTITY	1



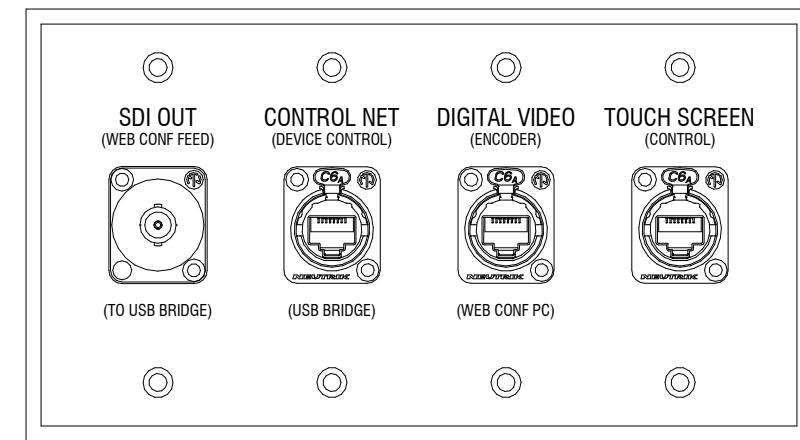
AV/ROW-2	
PANEL SIZE	2-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	SUPERVISOR SEATING ROW 2
QUANTITY	1



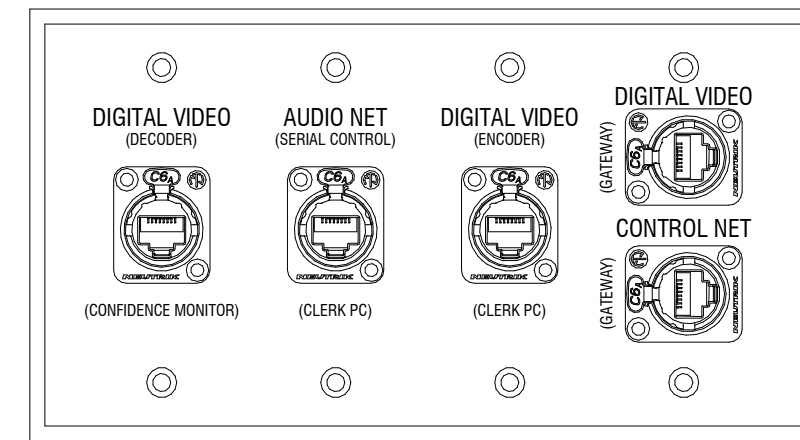
AV/ROW-3	
PANEL SIZE	2-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	SUPERVISOR SEATING ROW 3
QUANTITY	1



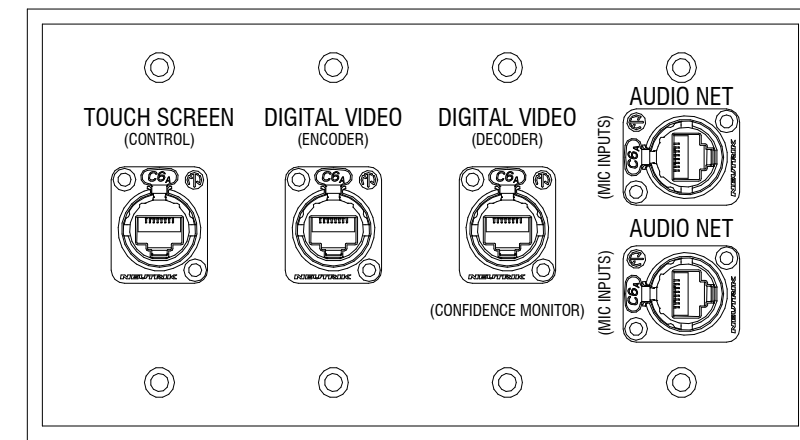
AV/ROW-4	
PANEL SIZE	2-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	SUPERVISOR SEATING ROW 4
QUANTITY	1



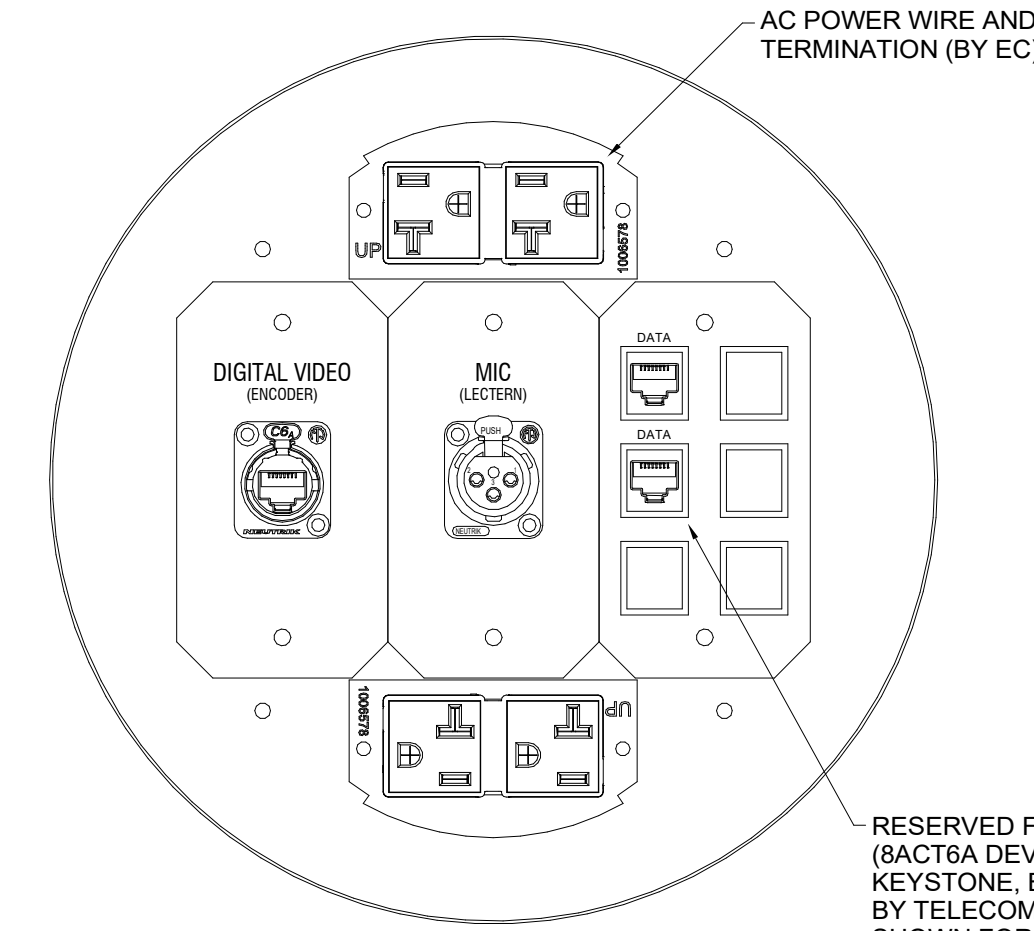
AV/DAIS-1	
PANEL SIZE	4-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	DAIS
QUANTITY	1



AV/DAIS-2	
PANEL SIZE	4-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	DAIS
QUANTITY	1

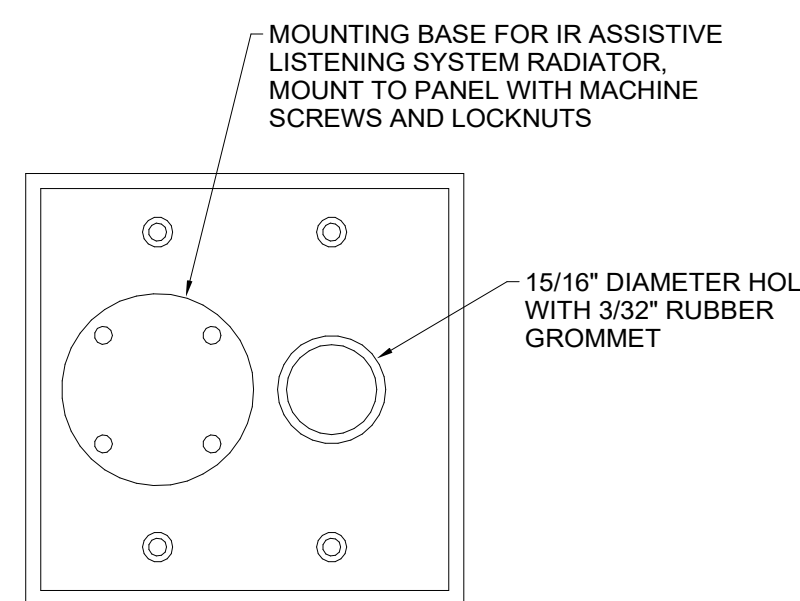


AV/DAIS-3	
PANEL SIZE	4-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	DAIS
QUANTITY	1

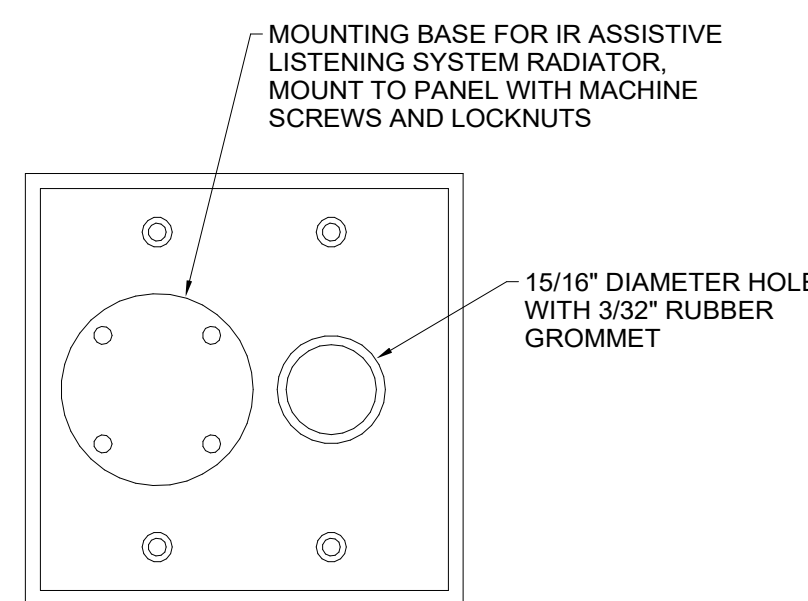


FB/LEC	
PANEL SIZE	8" POKE-THRU
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	BOARD ROOM LECTERN
QUANTITY	1

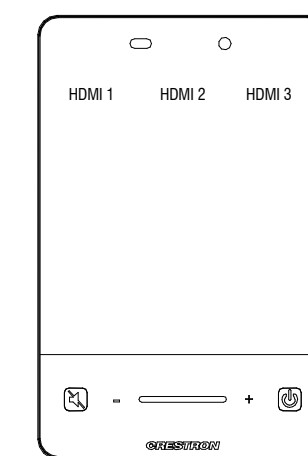
IT IS ASSUMED THAT THE FOLLOWING LOCATIONS WILL HAVE DEVICES MOUNT DIRECTLY OVER THE BOX AND NO PLATE OR PANEL IS REQUIRED:
CAMBOARD-1
CAMBOARD-2
CAMBOARD-3
ANT1A
ANT1B



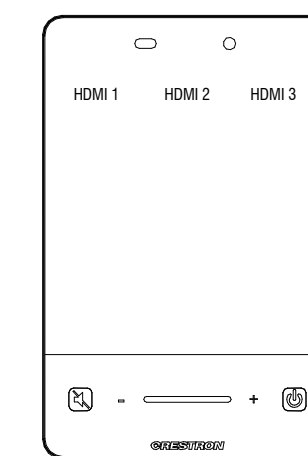
ALS/IR-1	
PANEL SIZE	2-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	FRONT WALL
QUANTITY	1



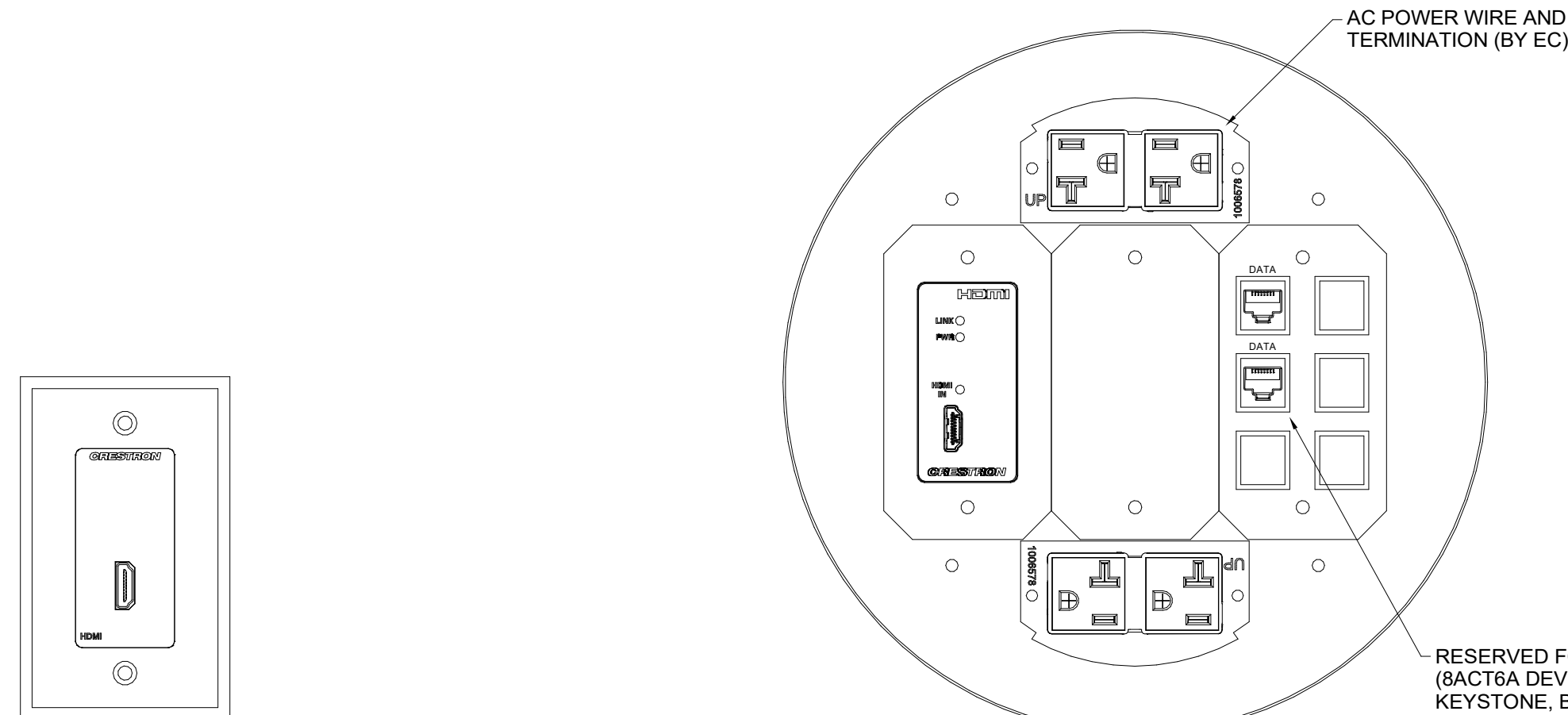
ALS/IR-2	
PANEL SIZE	2-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	SIDE WALL
QUANTITY	1



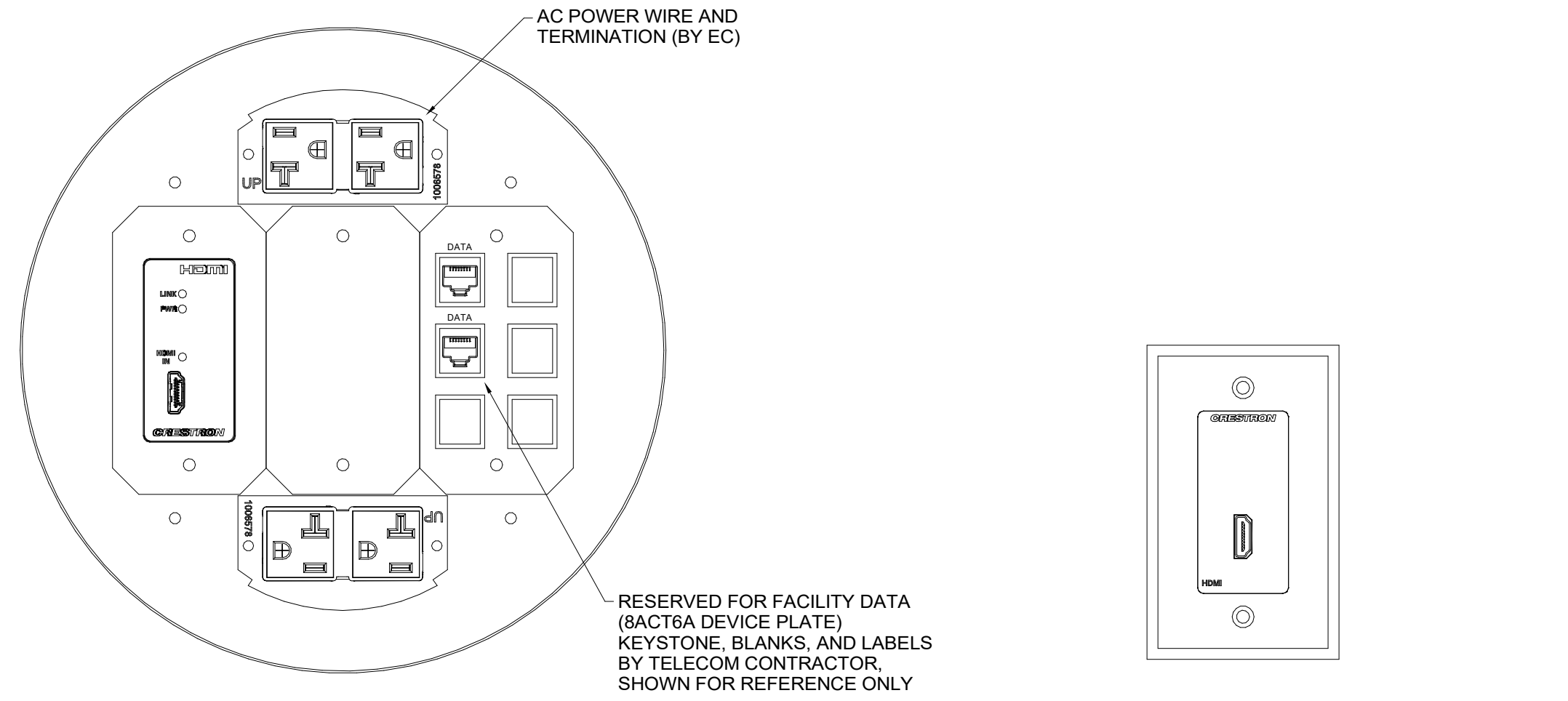
BP/C2061	
PANEL SIZE	1-GANG DEVICE
PANEL COLOR	BLACK
LOCATION	CONFERENCE C2061
QUANTITY	1



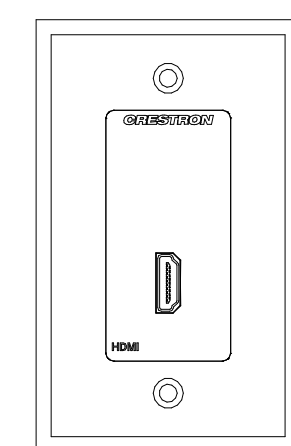
BP/C2062	
PANEL SIZE	1-GANG DEVICE
PANEL COLOR	BLACK
LOCATION	CONFERENCE C2062
QUANTITY	1



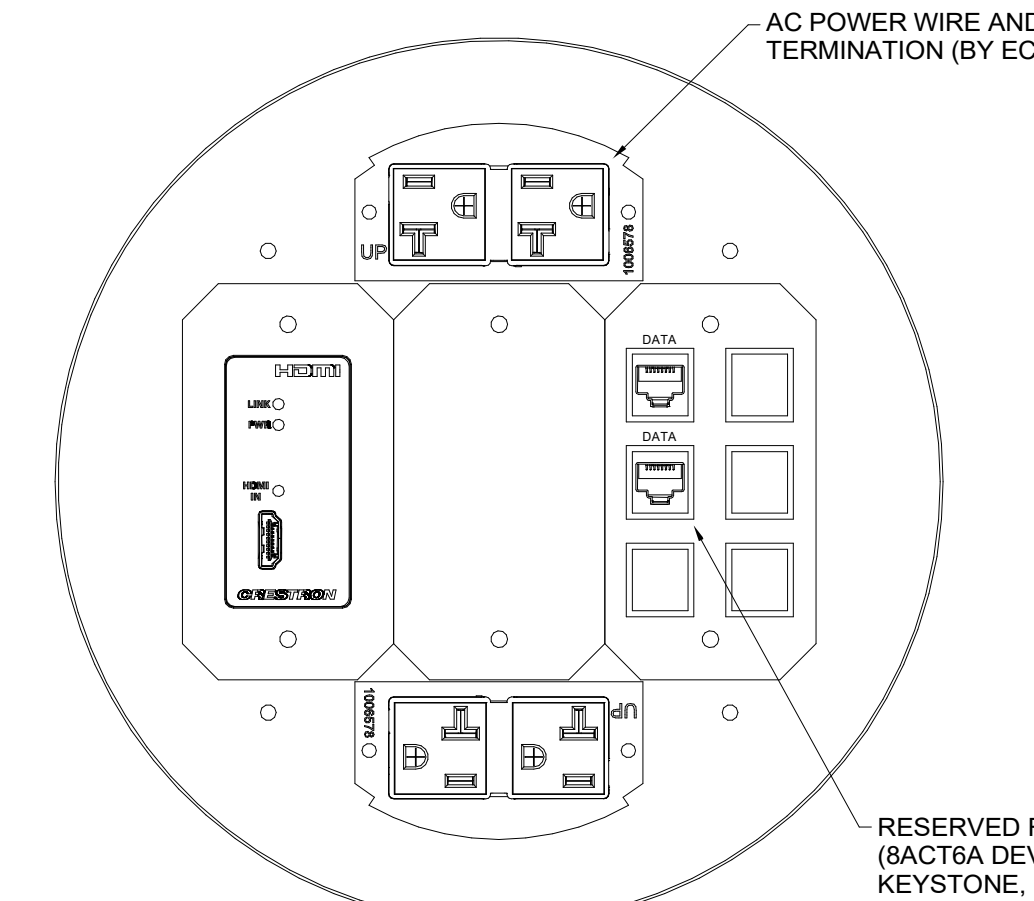
AV/C2061	
PANEL SIZE	1-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	CONFERENCE C2061
QUANTITY	1



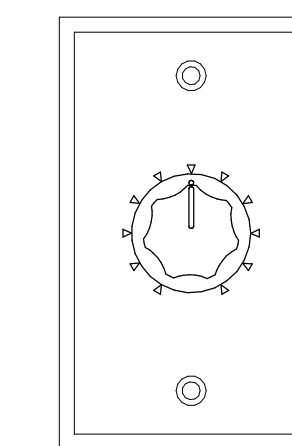
FB/C2061	
PANEL SIZE	8" POKE-THRU
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	CONFERENCE C2061
QUANTITY	1



AV/C2062	
PANEL SIZE	1-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	CONFERENCE C2062
QUANTITY	1



FB/C2062	
PANEL SIZE	8" POKE-THRU
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	CONFERENCE C2062
QUANTITY	1



VG/CONF	
PANEL SIZE	1-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	CONFERENCE ROOM WALL
QUANTITY	2

TYPICAL FOR:
CONFERENCE 2003
CONFERENCE 2056

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

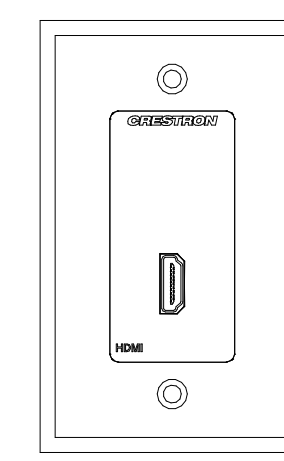
DESIGNER: EDK	PROJECT MANAGER: FBR
SCALE: 6" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISION:	DATE: DESCRIPTION:
1	09/26/2022 AV SYSTEM BID DOCUMENTS

SHEET TITLE:
COUNTY BOARD ROOM C2063 - PANEL & PLATE DETAILS

DESIGNER: EDK	PROJECT MANAGER: FBR
SCALE: 6" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISION:	DESCRIPTION:
1 10/30/2022	AV SYSTEM BID DOCUMENTS

SHEET TITLE:
**OFFICE, CONF.
ROOM & JURY
ROOM - PANEL &
PLATE DETAILS**

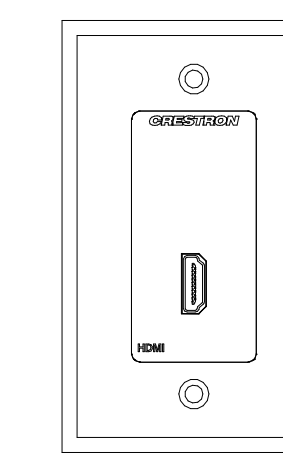
SHEET NUMBER: **AV604** REV: **1**



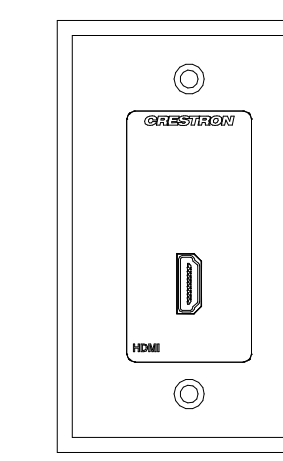
AV/OFFICE	
PANEL SIZE	1-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	OFFICE WALLS
QUANTITY	1

OFFICE - TYPE 1 - TYPICAL PANEL & PLATE DETAILS

OFFICE - TYPE 1 - ROOM LIST	
ROOM NAME & NUMBER	
MAINTENANCE OFFICE C0021A	
COMP. HARDWARE TECH WORK AREA C0050B	
I.T. DIR. C0053	
SEN. NTWK. SPEC. SUPER. C0054	
NTWK. SPEC. C0055	
SEN. SYST. ANALYSIS SUPER. C0056	
R.O.D. OFFICE C1034	
CLERK OF COURTS C1086	
SECURITY C1166	
JUDICIAL OPEN OFFICE C1190A	
COURT COMM. OPEN OFFICE C1190B	
WAITING C2120	
NET SERV. OFFICE C2124	
STATE PATROL C2141	
SECURITY C2142	
ADMIN C2220	
NURSE L0068	



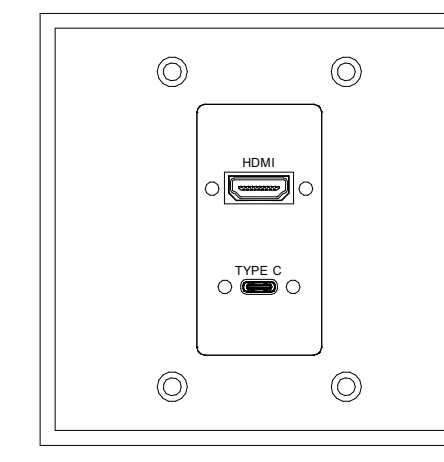
AV/OFFICE-1	
PANEL SIZE	1-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	OFFICE WALLS
QUANTITY	1



AV/OFFICE-2	
PANEL SIZE	1-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	OFFICE WALLS
QUANTITY	1

OFFICE - TYPE 2 - ROOM LIST	
ROOM NAME & NUMBER	
TREASURER OFFICE C1023	
ZONING DIRECTOR OFFICE C1047	
L+W DIR. OFFICE C1057	
PARKS DIR. OFFICE C1062	
OFFICE C1102	
R.I.P. OFFICE/ CONF. C1111	
M.E. OFFICE C1121	
CORP. COUNSEL C2023	
ADMIN OFFICE C2032	
HR OFFICE C2034	
FIN. DIRECTOR C2045	
COUNTY CLERK C2053	
COUNTY BOARD CHAIR C2057	
C.S. DIRECTOR C2077	
OPEN OFFICE C2121	
DA OFFICE C2171	
SGT. OFFICE L0061	
SGT. OFFICE L0063	
MENTAL HEALTH L0064	
SGT. OFFICE L0065	
JAIL CAPTAIN OFFICE L0073	
E.M. DIR. L0088	
ADMIN. CAPTAIN L1017	
CHIEF DEPUTY L1027	
M.A.I.T. OFFICE L1067	
SHERIFF L1072	
PATROL CAPTAIN L1082	

OFFICE - TYPE 2 - TYPICAL PANEL & PLATE DETAILS

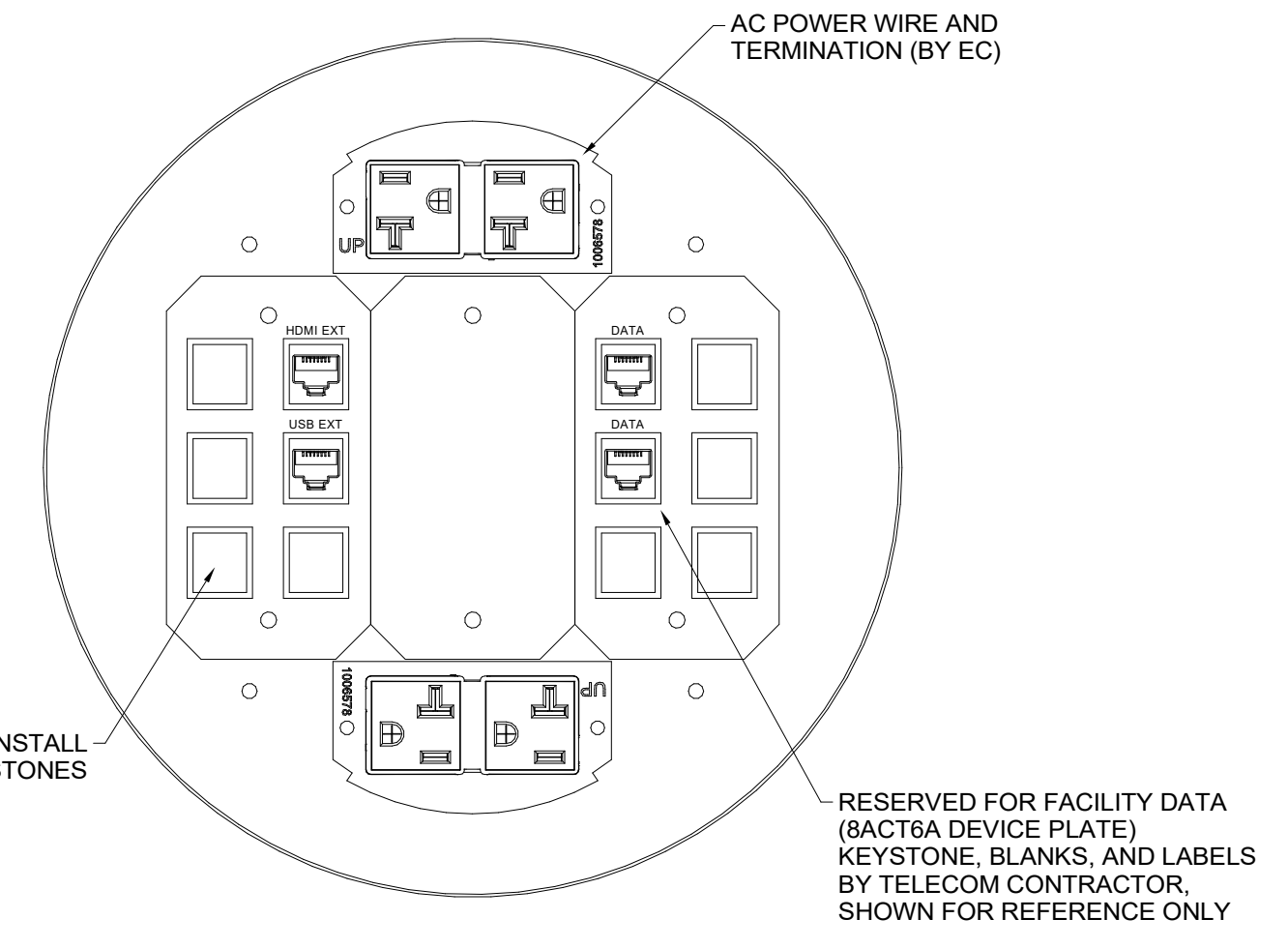


AV/CONF	
PANEL SIZE	2-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	CONFERENCE ROOM WALLS
QUANTITY	1

CONFERENCE ROOM - TYPE 1 - TYPICAL PANEL & PLATE DETAILS

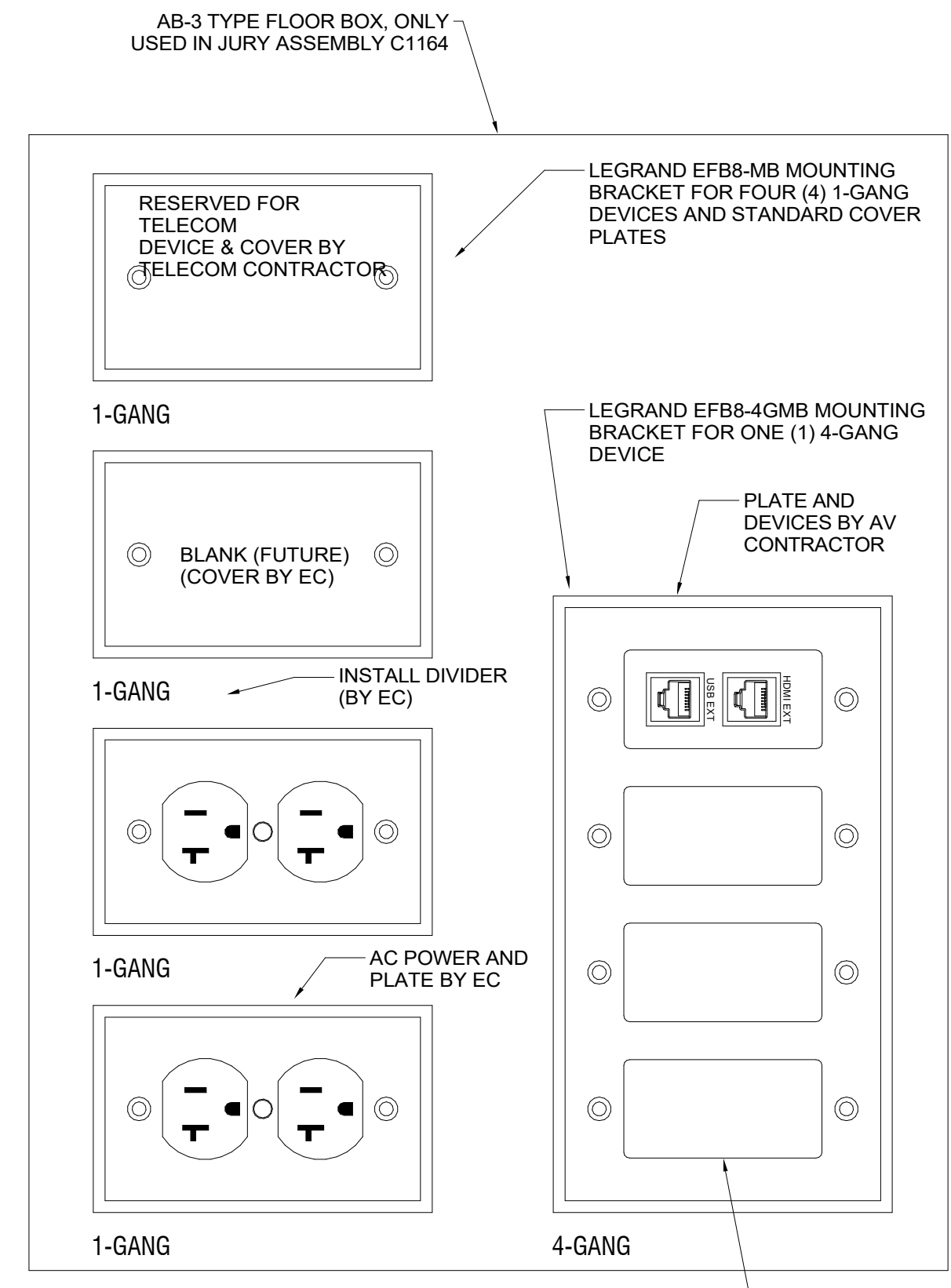
CONFERENCE ROOM - TYPE 1 - ROOM LIST	
ROOM NAME & NUMBER	
M.I.S. TRAINING ROOM C0022	
CONF. C0033	
COLLABORATION/ MEETING SPACE C0050A	
OPEN OFFICE C0051	
STAFF BREAK C1013	
CONF. C1091	
CONF. C1092	
CONF. C2125	
CALL CENTER L0096	
CONF. ROOM L0101	

CONFERENCE ROOM - TYPE 2 - ROOM LIST	
ROOM NAME & NUMBER	
CONF. C1021	
CONFERENCE C1049	
JURY ASSEMBLY C1164	
CONF. C1196	

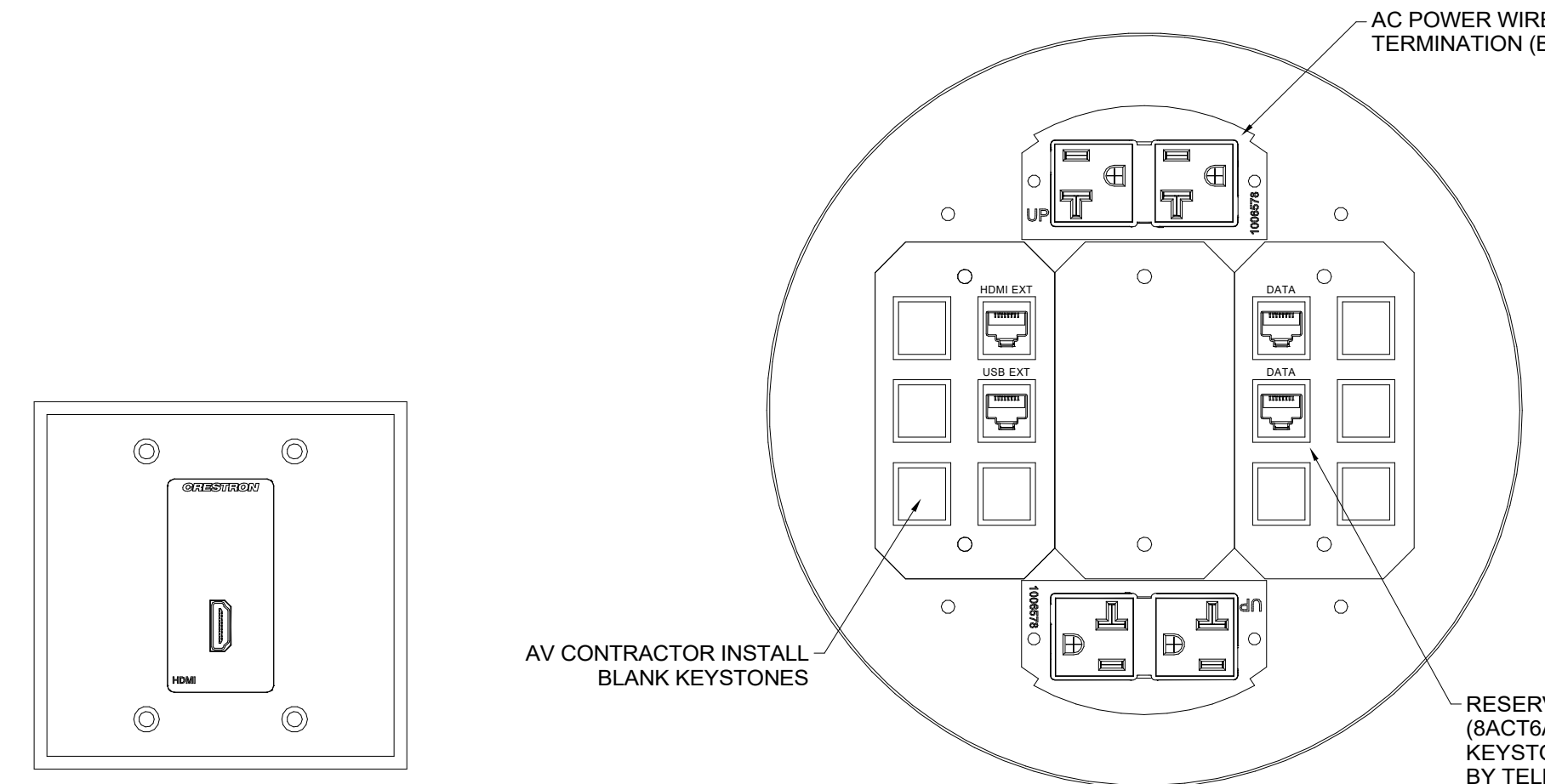


FB/CONF	
PANEL SIZE	8" POKE-THRU
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	CONFERENCE FLOOR BELOW TABLE
QUANTITY	1 (PER CONFERENCE ROOM)

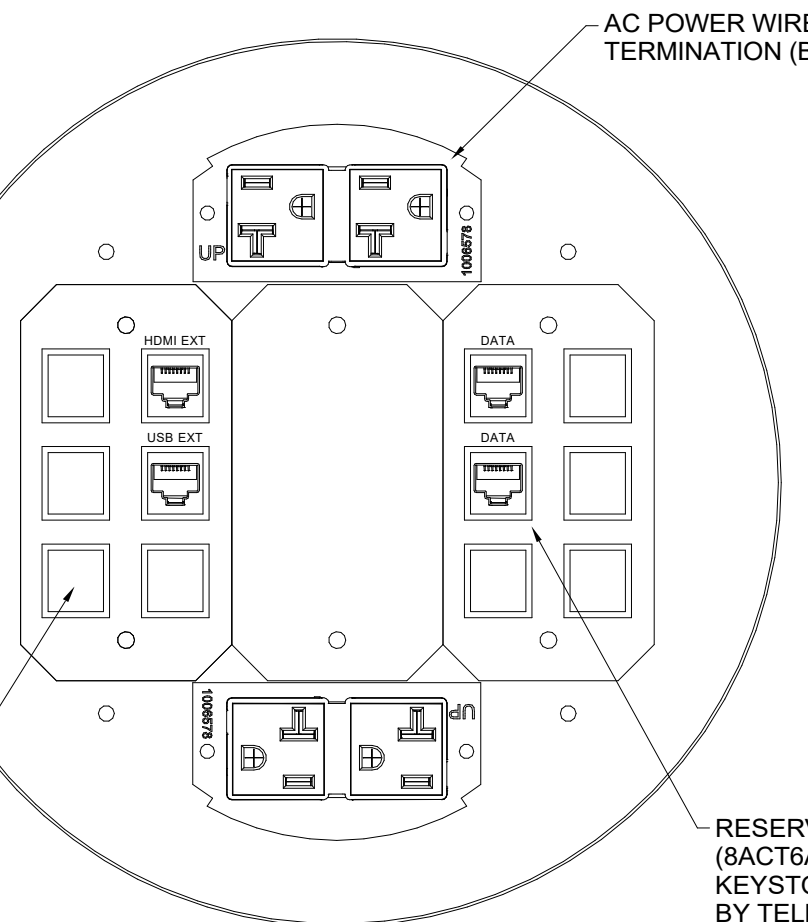
CONFERENCE ROOM - TYPE 2 - TYPICAL PANEL & PLATE DETAILS



FB/CONF	
PANEL SIZE	12.75" X 16.13" X 0"
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	CONFERENCE FLOOR BELOW TABLE
QUANTITY	1



AV/CONF	
PANEL SIZE	2-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	CONFERENCE ROOM WALLS
QUANTITY	1

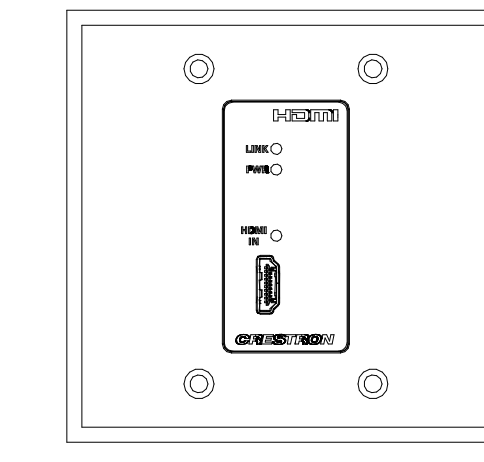


FB/CONF	
PANEL SIZE	8" POKE-THRU
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	CONFERENCE FLOOR BELOW TABLE
QUANTITY	1

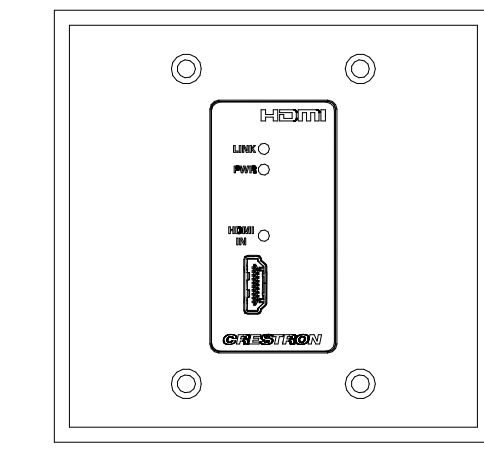
CONFERENCE ROOM - TYPE 3 - TYPICAL PANEL & PLATE DETAILS

CONFERENCE ROOM - TYPE 3 - ROOM LIST	
ROOM NAME & NUMBER	
CONF. C1114	
CONFERENCE C2003	
CONFERENCE C2044	
CONFERENCE C2056	
CONF. C2071	
JUDGES CONF. C2224	
JUDGES CONF. C2225	
CONF. L1028	

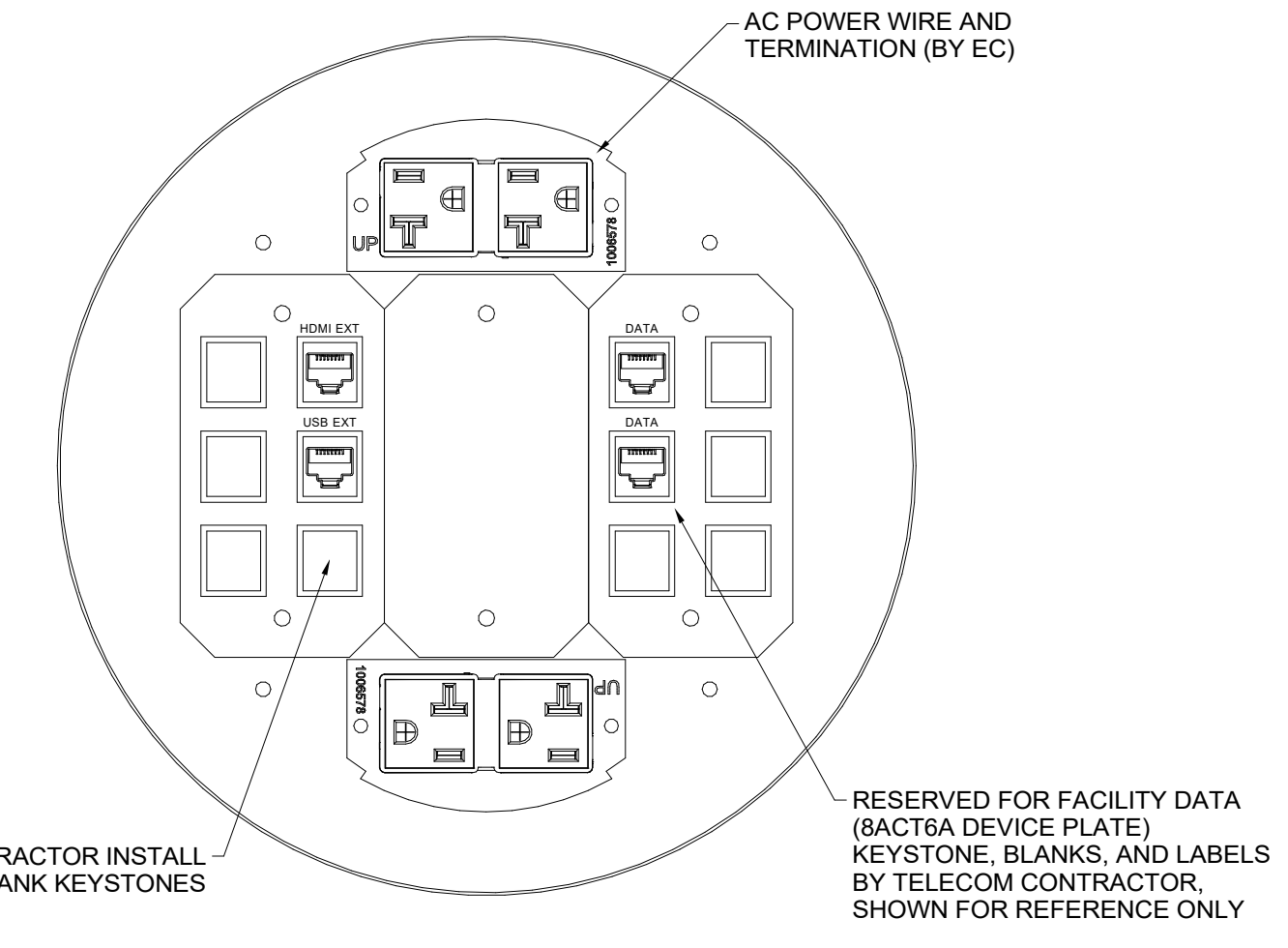
CONFERENCE ROOM - TYPE 4 - ROOM LIST	
ROOM NAME & NUMBER	
CONF C2159	



AV/CONF-1	
PANEL SIZE	2-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	CONFERENCE ROOM WALLS
QUANTITY	1

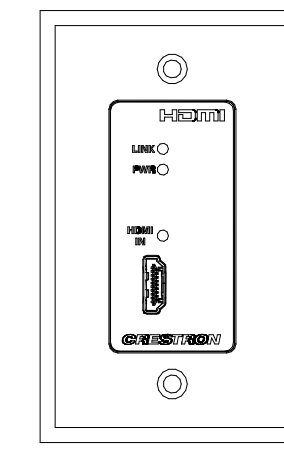


AV/CONF-2	
PANEL SIZE	2-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	CONFERENCE ROOM WALLS
QUANTITY	1



FB/CONF	
PANEL SIZE	8" POKE-THRU
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	CONFERENCE FLOOR BELOW TABLE
QUANTITY	1

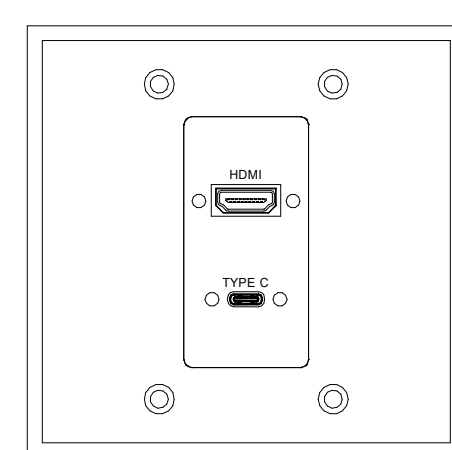
CONFERENCE ROOM - TYPE 4 - TYPICAL PANEL & PLATE DETAILS



AV/JURY	
PANEL SIZE	1-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	FRONT WALL
QUANTITY	1

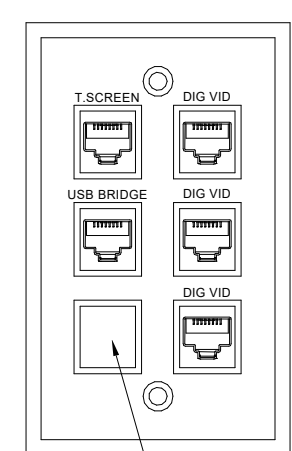
JURY ASSEMBLY / TRAINING C2190 - PANEL & PLATE DETAILS

PANEL DRAWINGS SHOW DESIGN INTENT ONLY. AV CONTRACTOR IS RESPONSIBLE FOR VERIFYING PANEL SIZES & CONNECTOR SPACING.

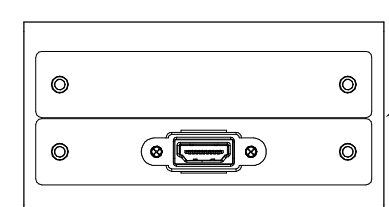


AV/CONF	
PANEL SIZE	2-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	CONFERENCE ROOM WALL
QUANTITY	1

VIDEO CONF. (PROBATION PATROL) L0032 - PANEL & PLATE DETAILS

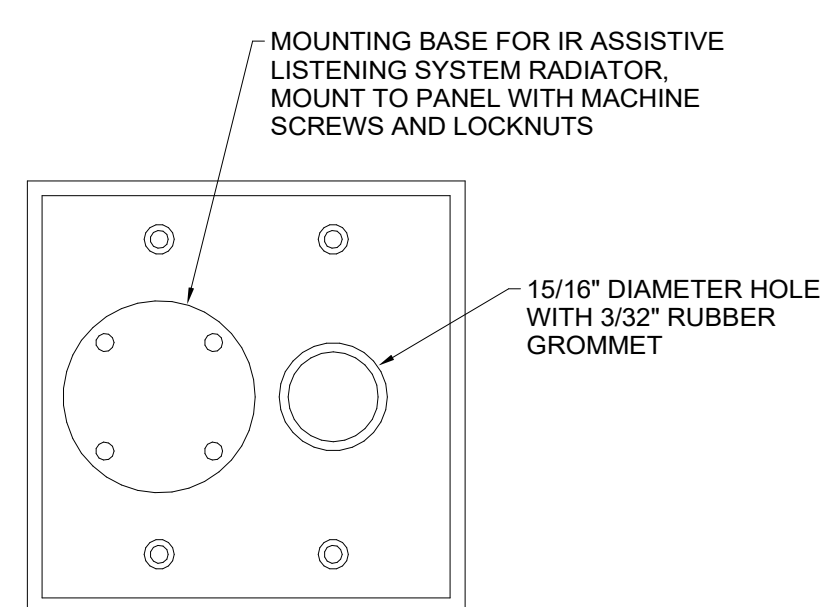


FB/EOC-#	
PANEL SIZE	1-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	EMERGENCY OPERATIONS FLOOR BOXES
QUANTITY	6 (ONE PER FLOOR BOX)

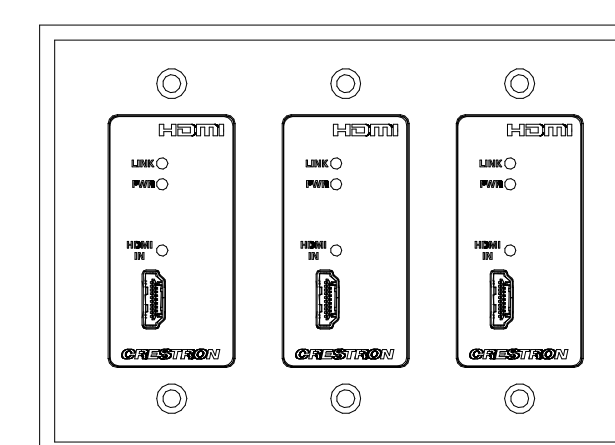


UNDER-DESK MOUNT	
PANEL SIZE	3.75 INCH (W) X 2.0 INCH (H)
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	UNDER EDC DESKTOPS
QUANTITY	18

UNDER DESK CONNECTIVITY KIT
 - (1) EXTRON TMR 120 AAP (MOUNTING FRAME)
 - (1) 70-616-02 (HDM AAP)
 - (1) 70-096-11 (BLANK AAP)

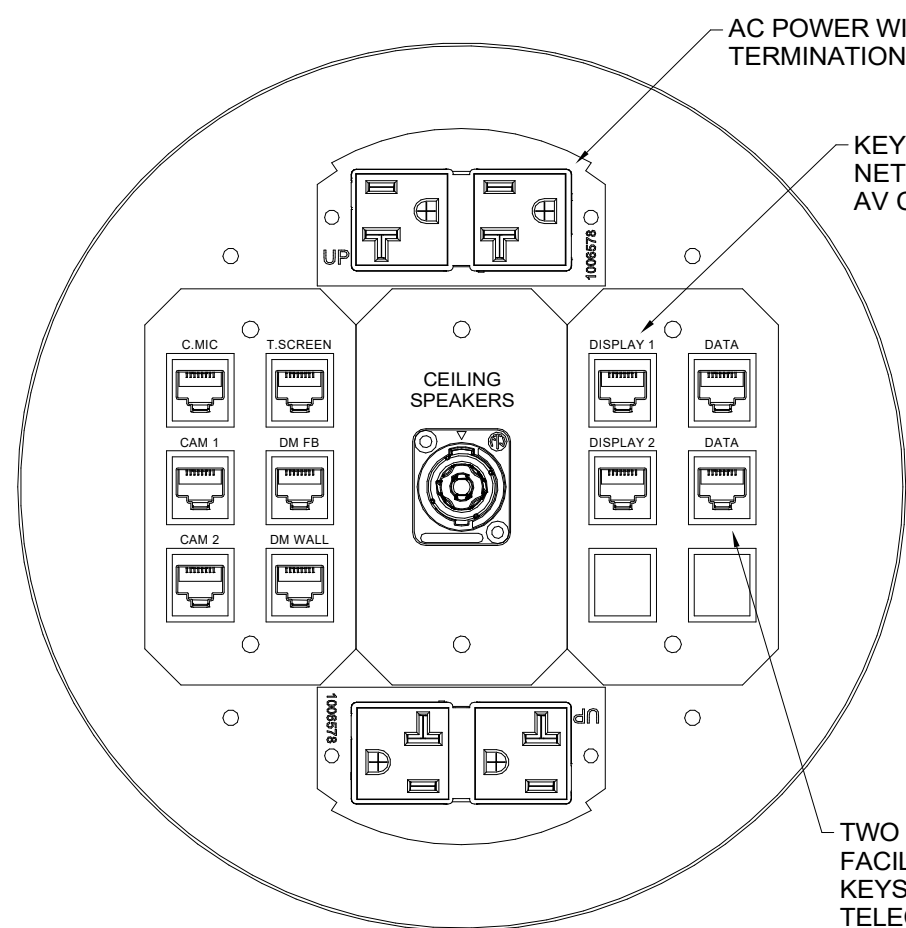


ALS/IR-1	
PANEL SIZE	2-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	FRONT WALL
QUANTITY	1

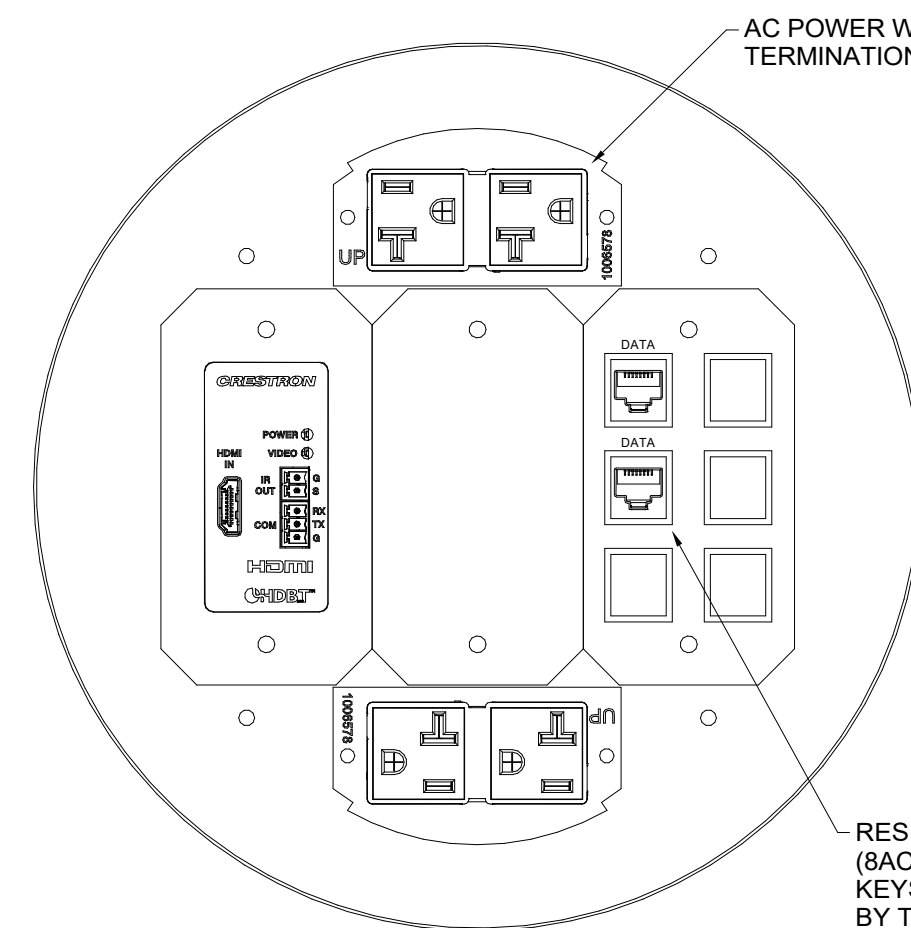


AV/DISP	
PANEL SIZE	3-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	WALL
QUANTITY	1

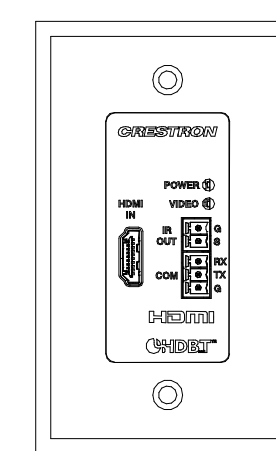
EMERGENCY OPERATIONS L0091 - PANEL & PLATE DETAILS



FB/BRIEF-1	
PANEL SIZE	6" POKE-THRU
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	BRIEFING ROOM BELOW FURNITURE
QUANTITY	1

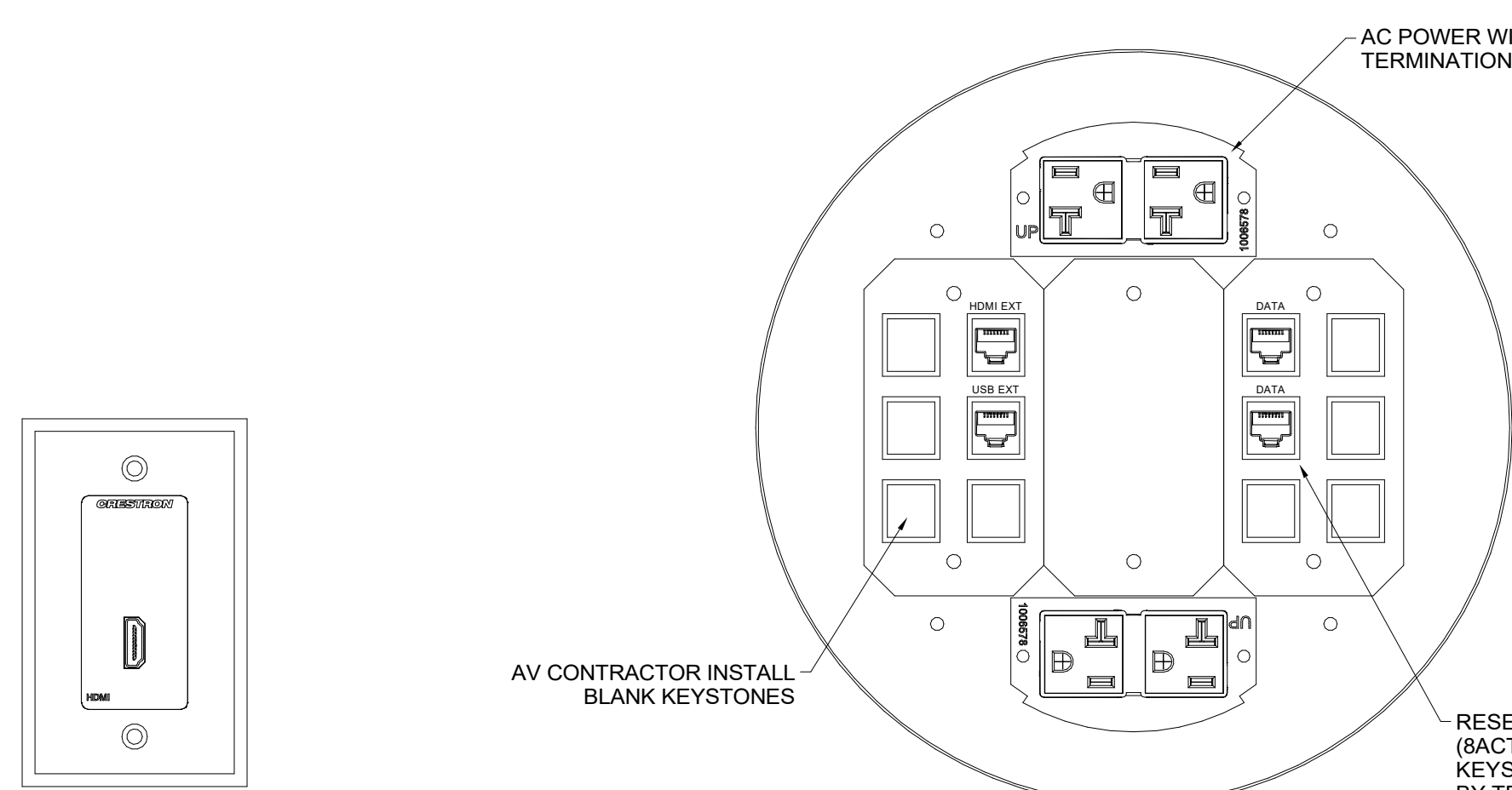


FB/BRIEF-2	
PANEL SIZE	6" POKE-THRU
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	BRIEFING ROOM BELOW LECTERN
QUANTITY	1

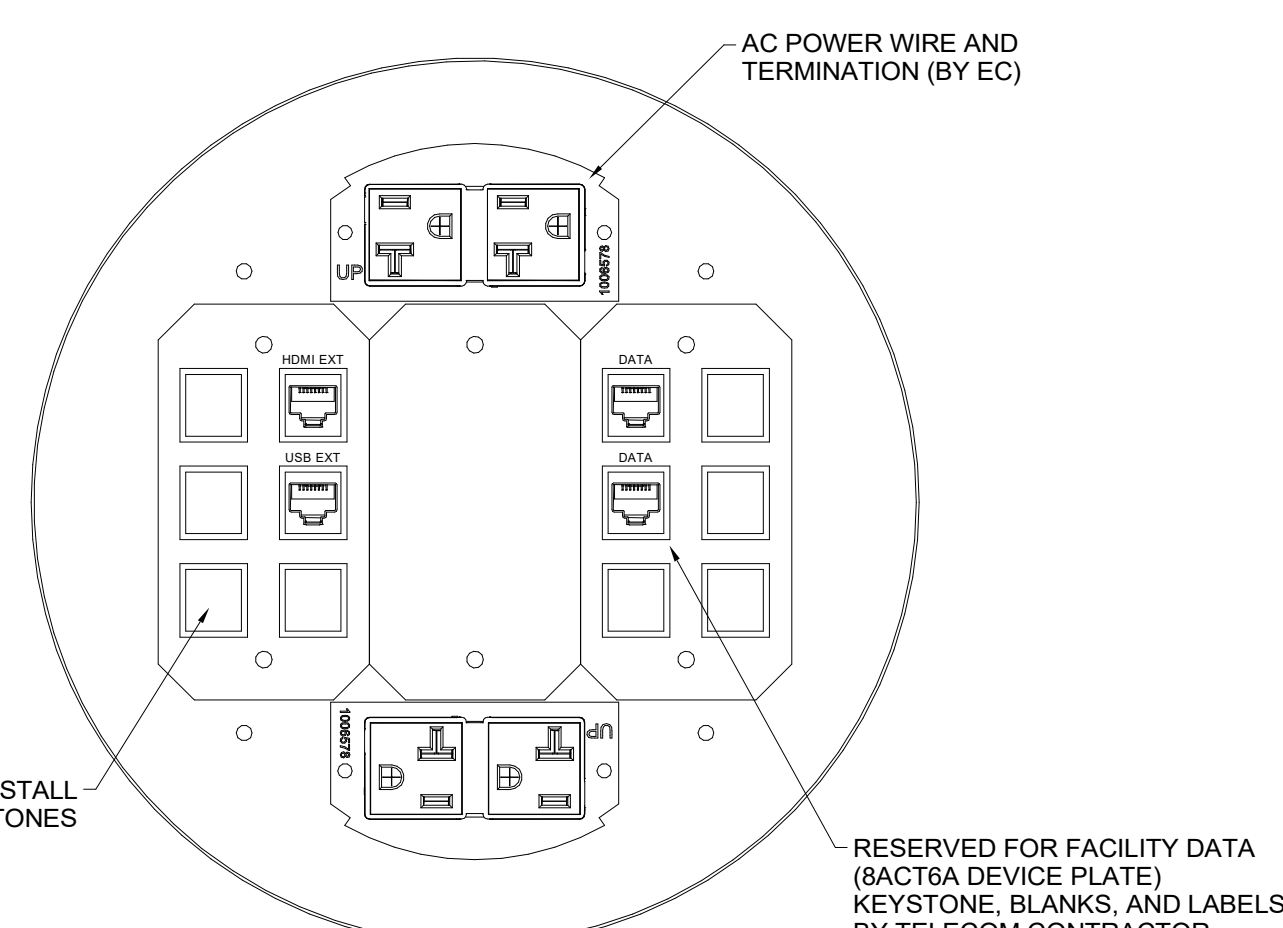


AV/BRIEF	
PANEL SIZE	1-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	REAR WALL
QUANTITY	1

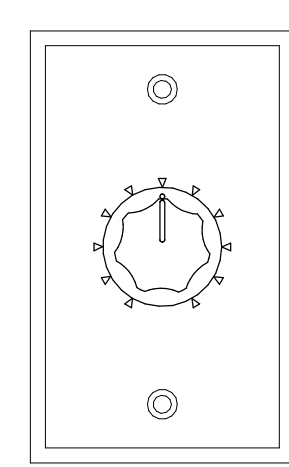
BRIEFING L1033 - PANEL & PLATE DETAILS



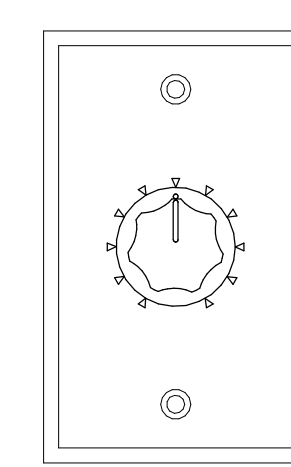
AV/SQUAD	
PANEL SIZE	1-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	SQUAD ROOM WALL
QUANTITY	1



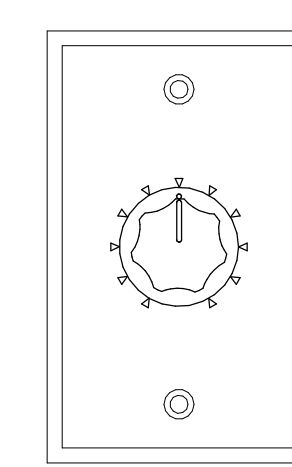
FB/SQUAD	
PANEL SIZE	6" POKE-THRU
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	SQUAD ROOM FLOOR BELOW TABLE
QUANTITY	1



VC/SQUAD	
PANEL SIZE	1-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	SQUAD ROOM L1087 WALL
QUANTITY	1



VC/BREAK	
PANEL SIZE	1-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	BREAK ROOM L1066 WALL
QUANTITY	1



VC/BRIEF	
PANEL SIZE	1-GANG
PANEL COLOR	COORDINATE WITH ARCHITECT
LOCATION	BRIEFING L1033 WALL
QUANTITY	1

SQUAD ROOM L1087 - PANEL & PLATE DETAILS

DISPATCH L1078 - PANEL & PLATE DETAILS

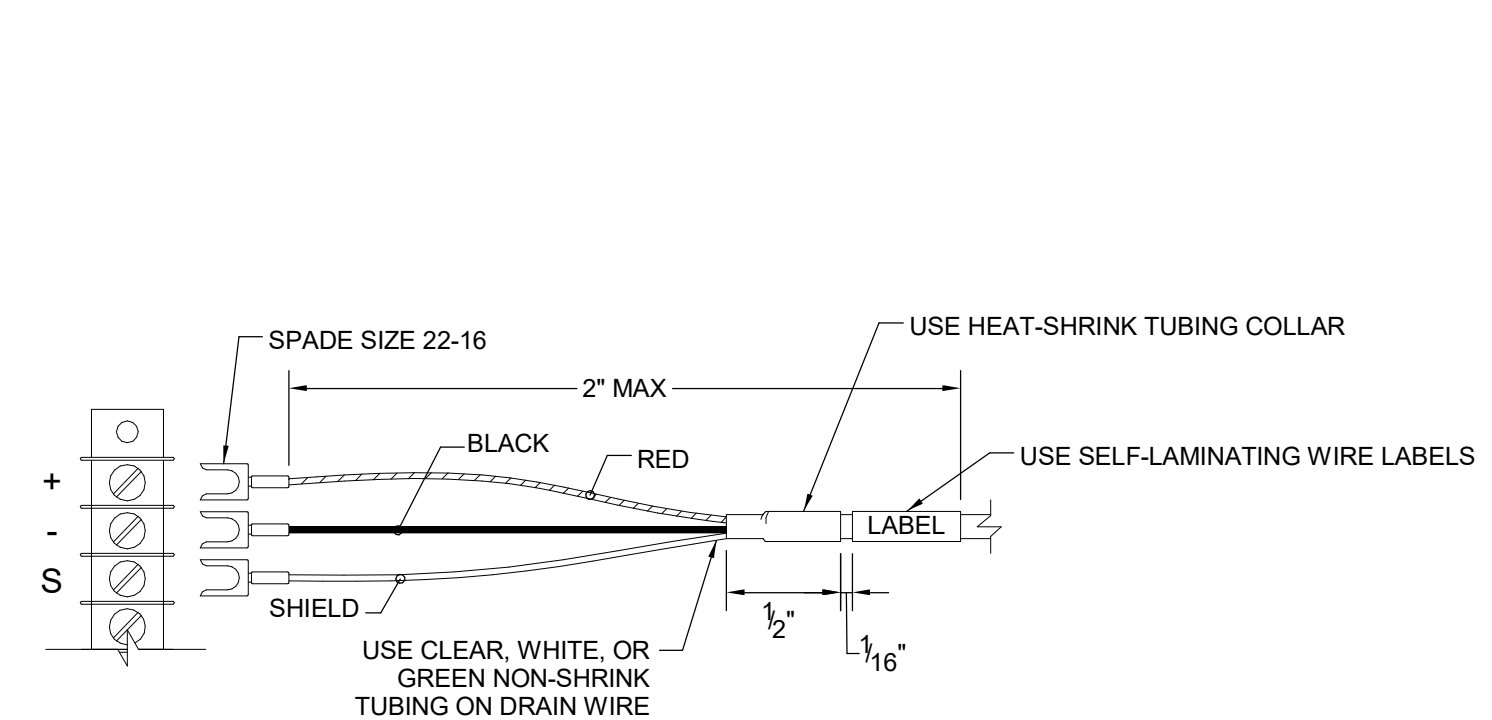
NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

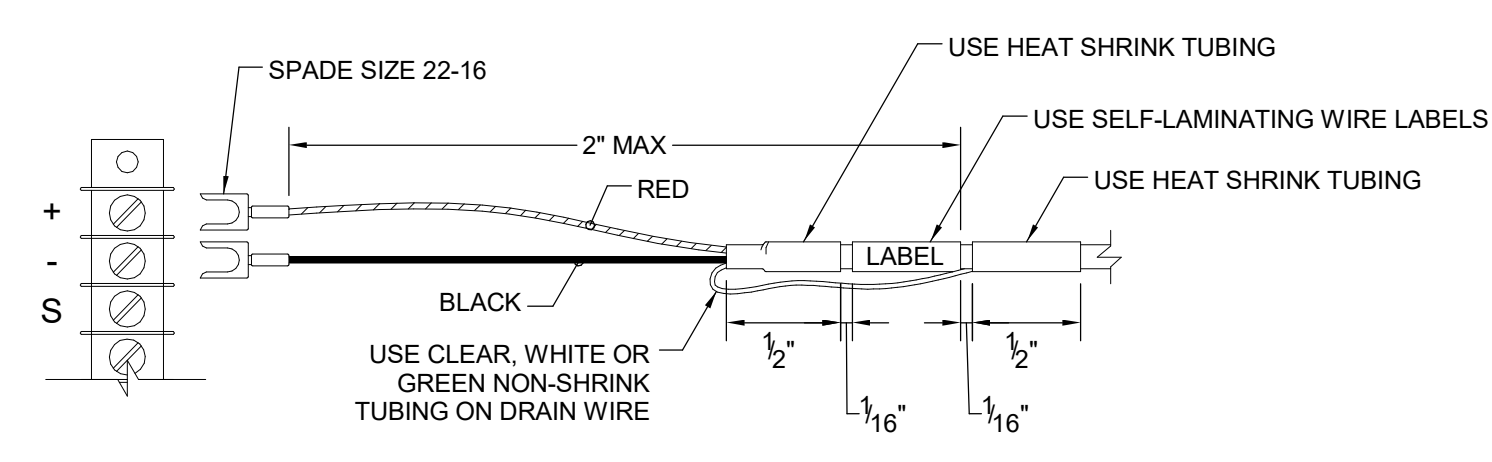
DESIGNER	EDK	PROJECT MANAGER	FDR
SCALE	6" = 1'-0"	DRAWING SET SIZE	30" X 42"
SHEET ISSUE DATE	10/14/2022	PROJECT NUMBER	1502
DOCUMENT SET	AV BID DOCUMENTS R1		
REVISION	DATE	DESCRIPTION	
1	10/30/2022	AV SYSTEM BID DOCUMENTS	

**SHEET TITLE:
EOC, DISPATCH,
BRIEFING, & SQUAD
- PANEL & PLATE
DETAILS**

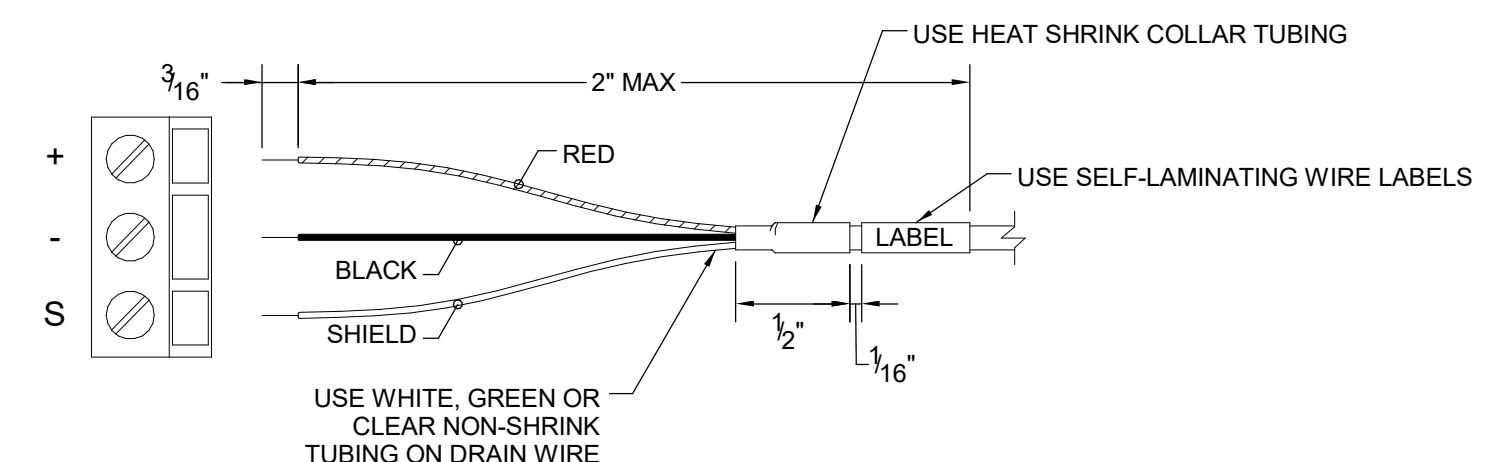
SHEET NUMBER	AV605	REV	1
--------------	-------	-----	---



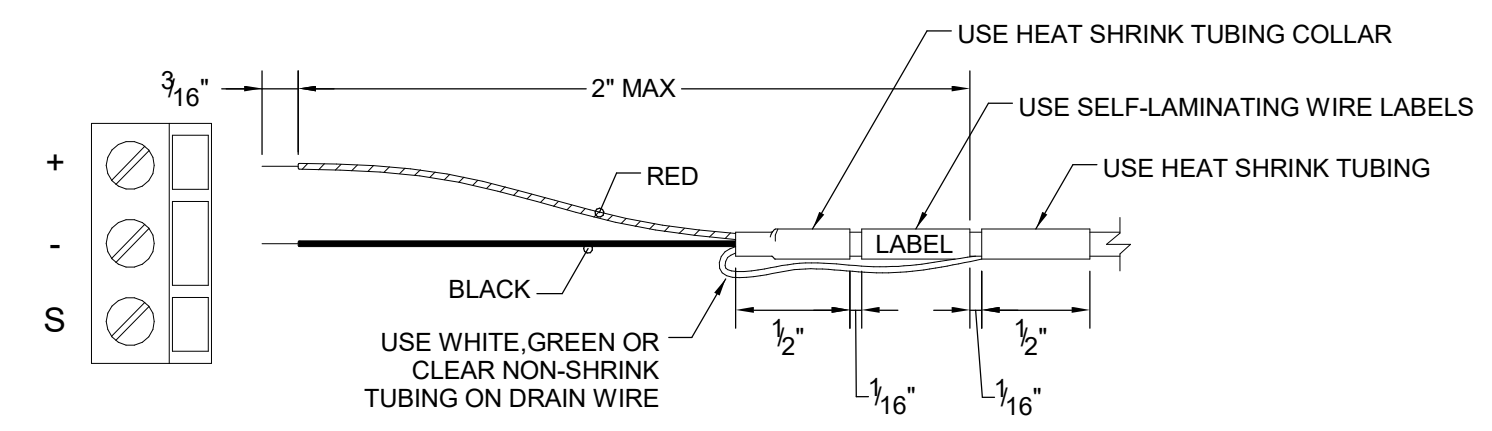
SPADE LUG AND SCREW TERMINAL STRIP



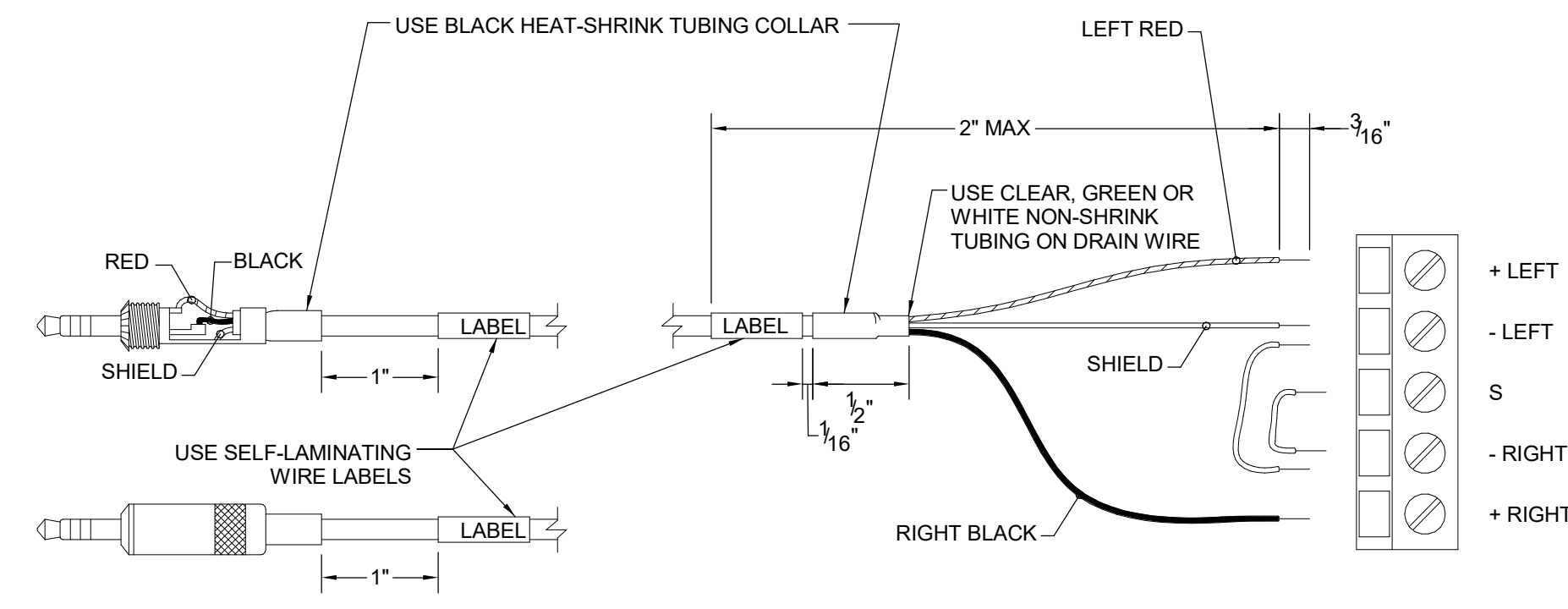
**SPADE LUG AND SCREW TERMINAL STRIP
SHIELD LIFTED**



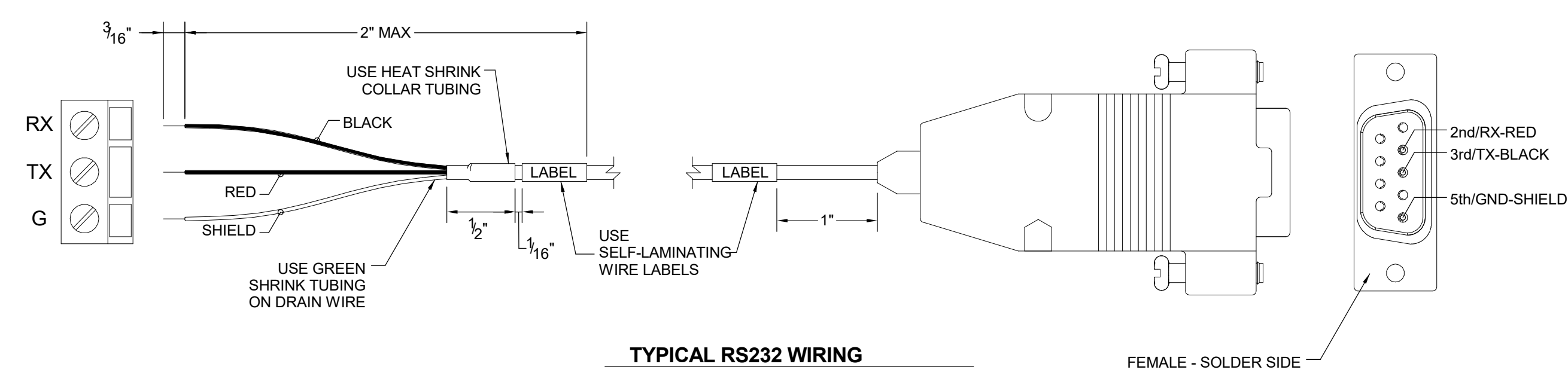
SCREW TERMINAL CONNECTOR



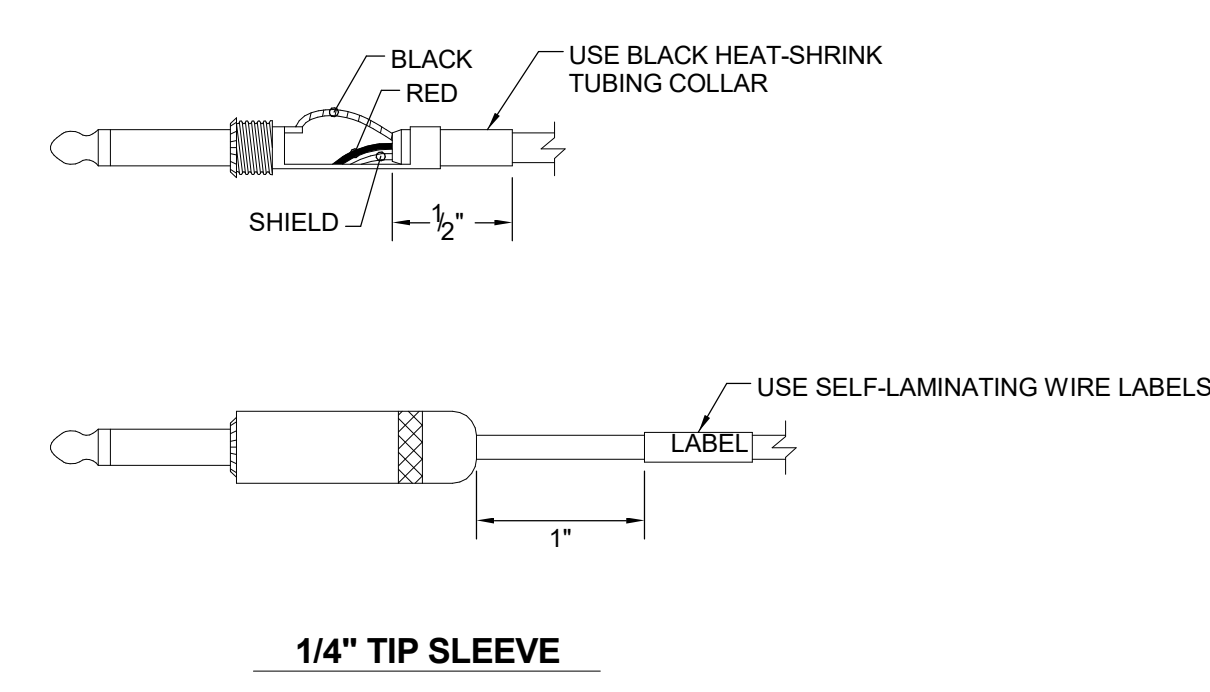
**SCREW TERMINAL CONNECTOR
SHIELD LIFTED**



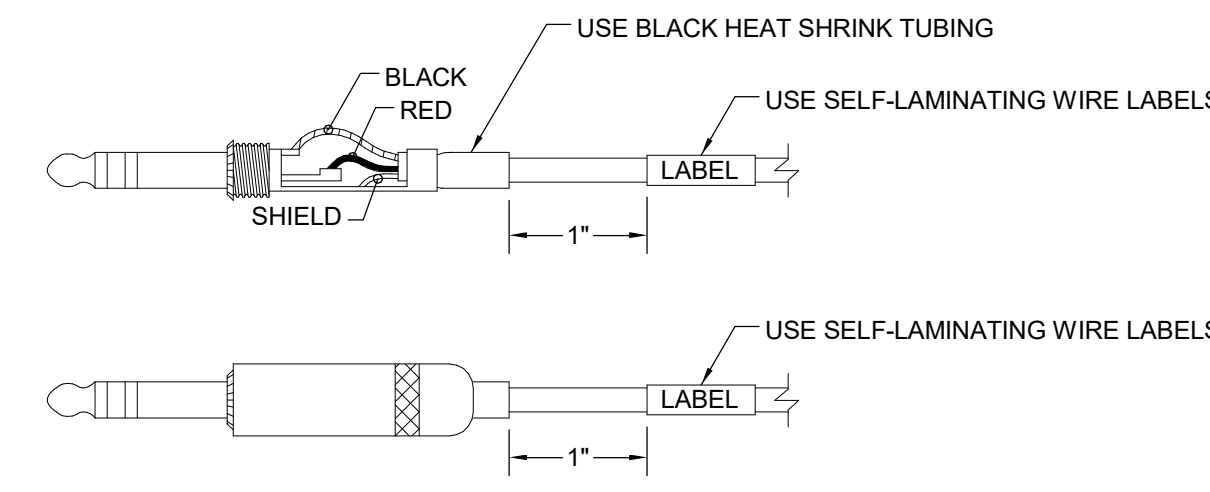
1/8\"/>



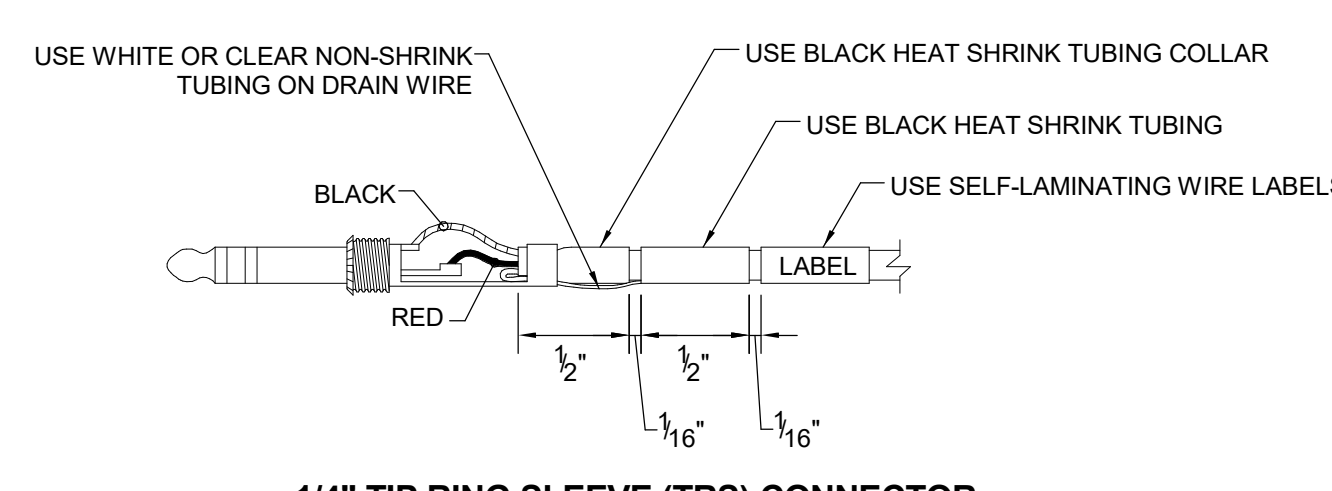
TYPICAL RS232 WIRING



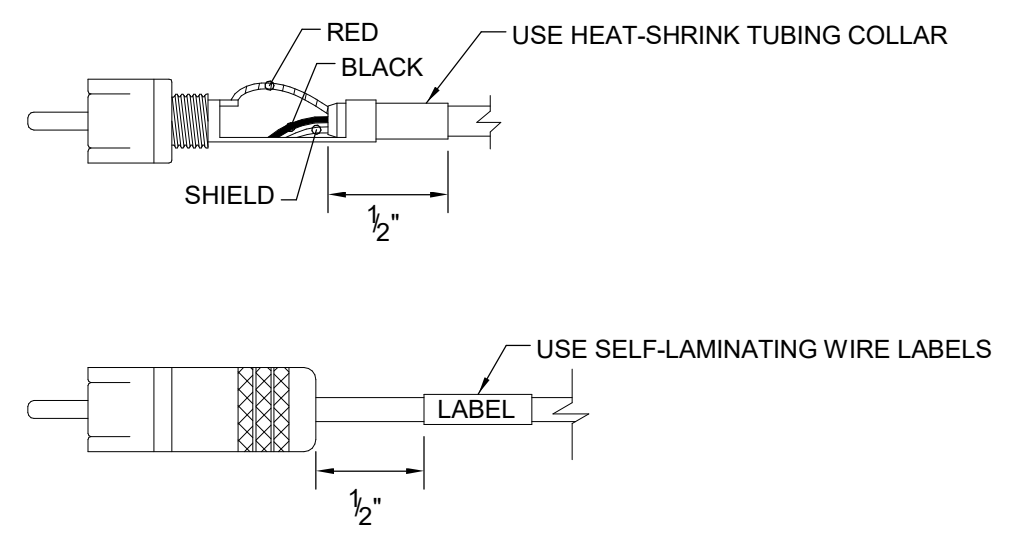
1/4\"/>



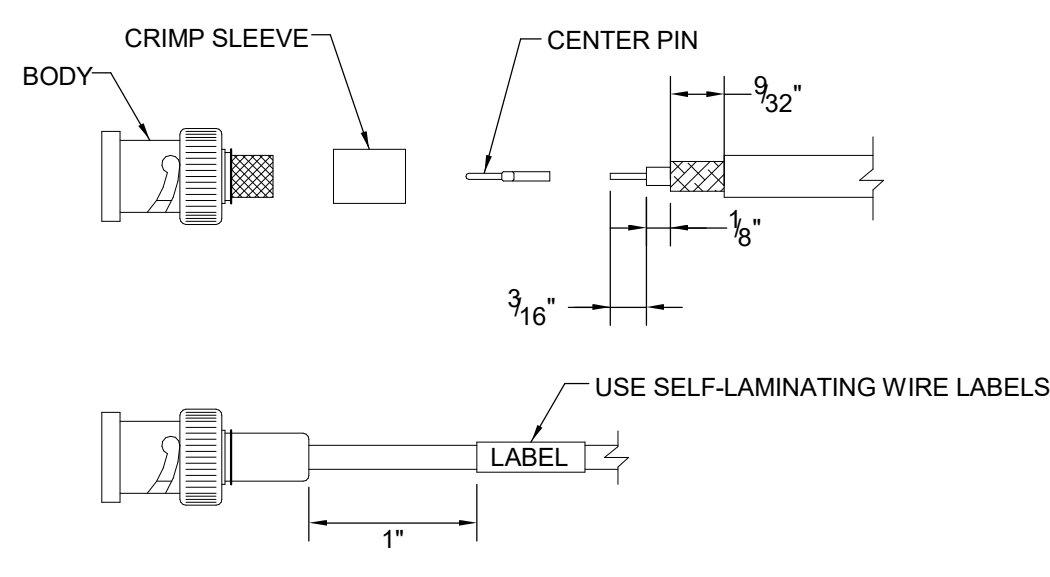
1/4\"/>



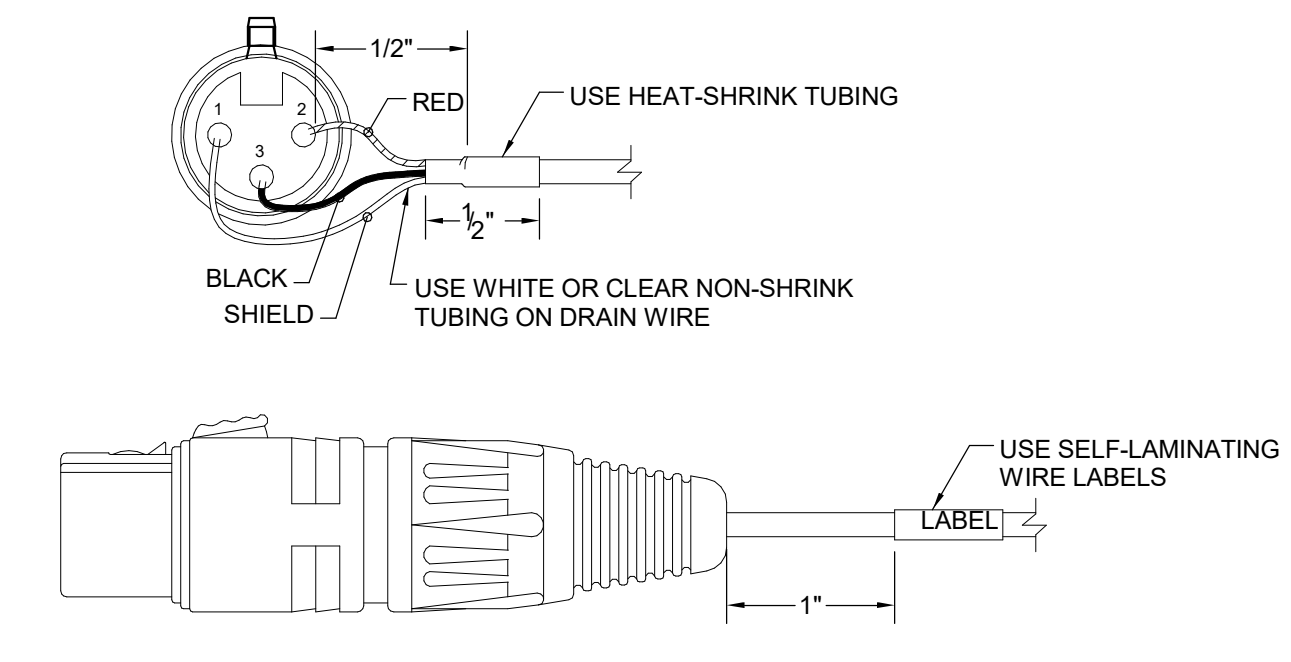
1/4\"/>



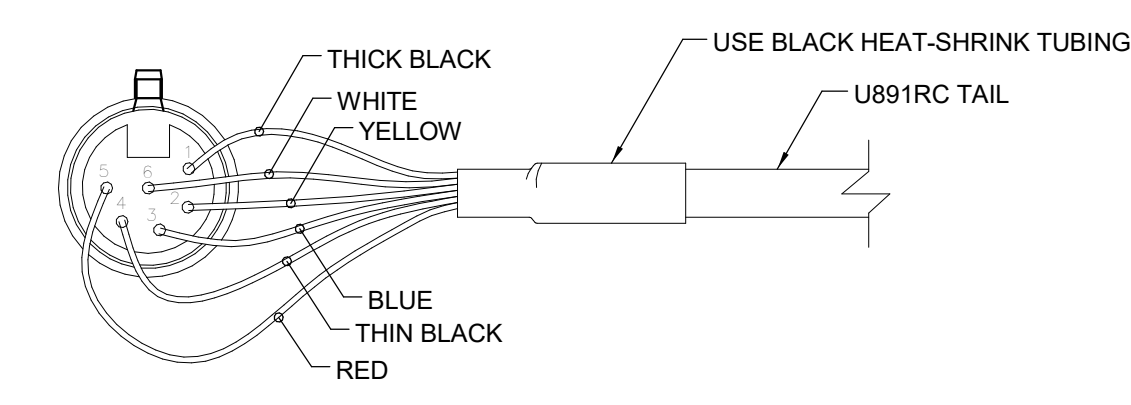
MALE PHONO (RCA) CONNECTOR



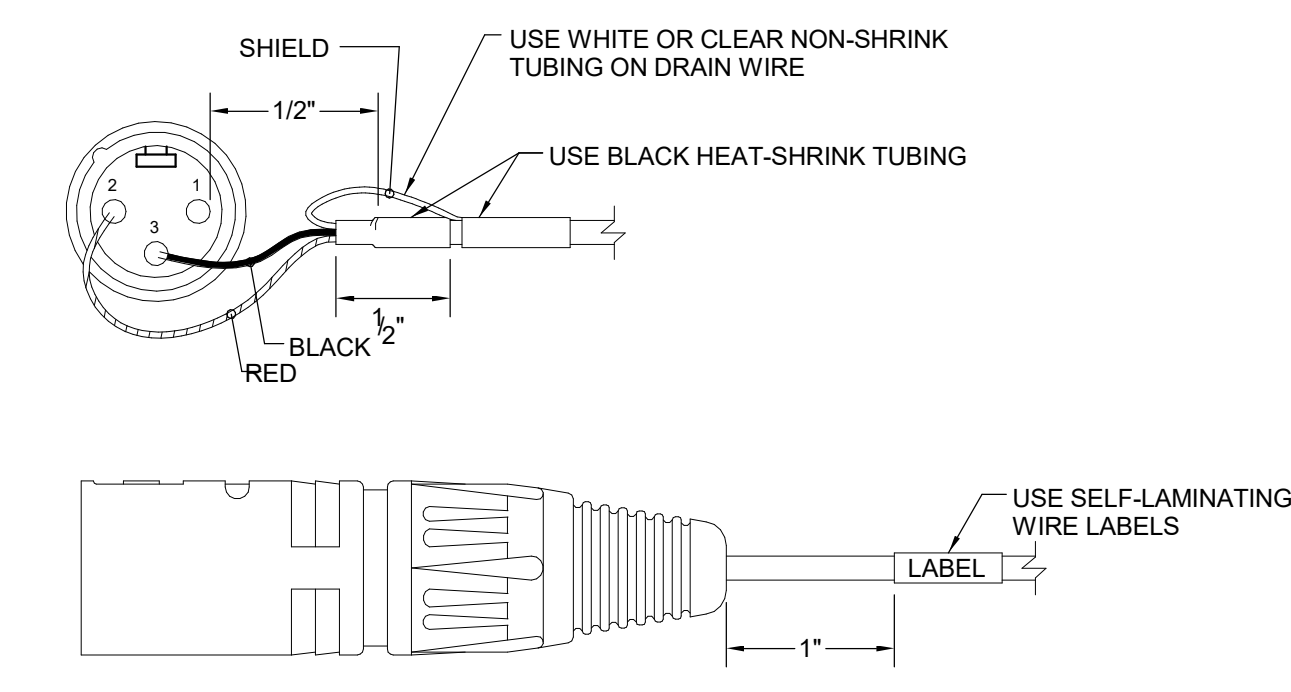
BNC CONNECTOR (TYPICAL 3 PIECE)



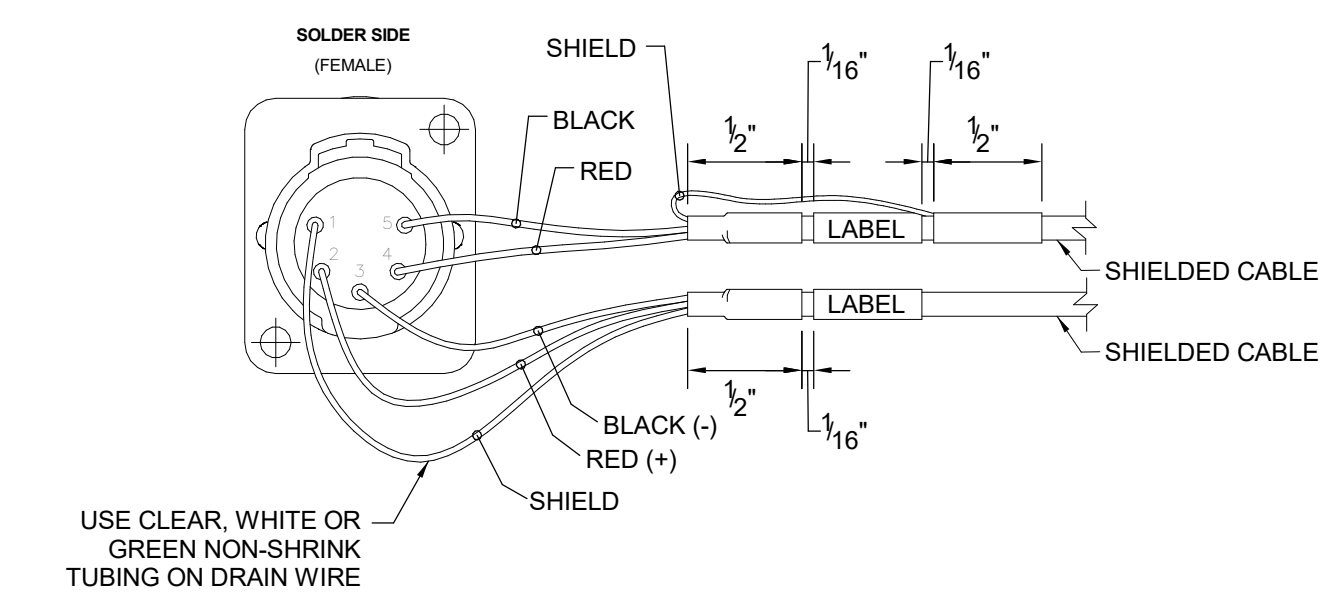
FEMALE XLR CONNECTOR



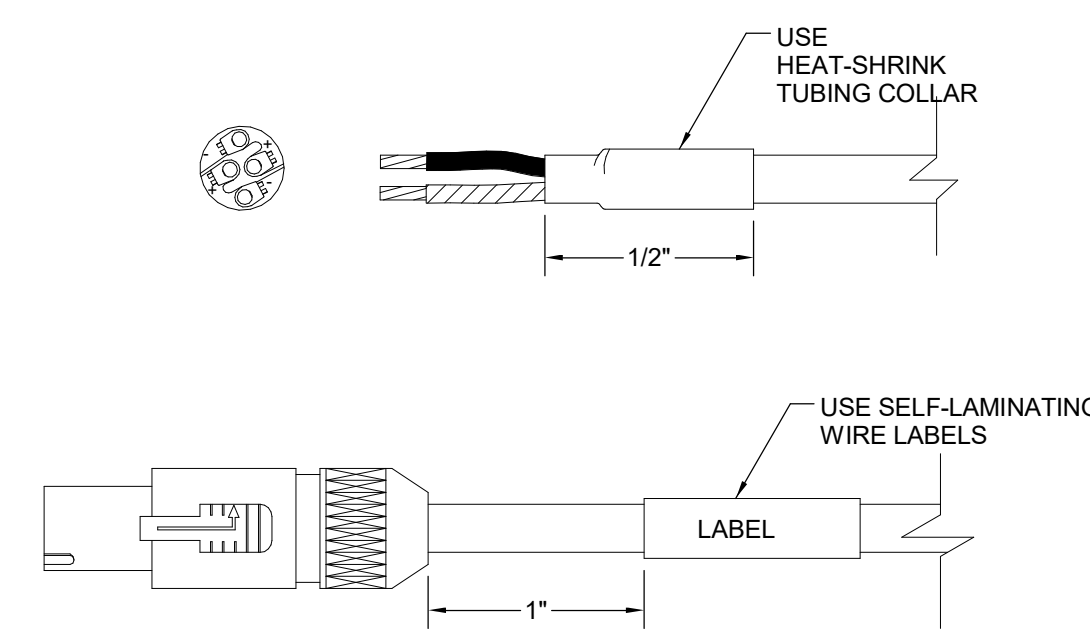
**FEMALE XLR CONNECTOR
6 PIN**



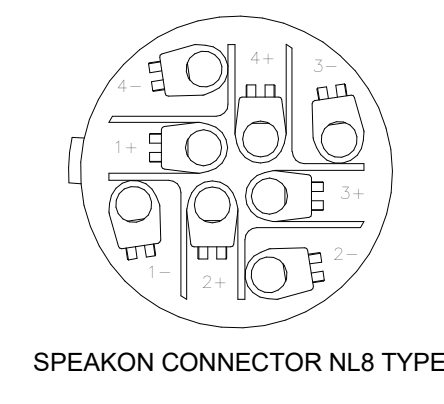
**MALE XLR CONNECTOR
SHIELD LIFTED**



**PAGING MIC PANEL SIDE
5 PIN**



NL4 CONNECTOR

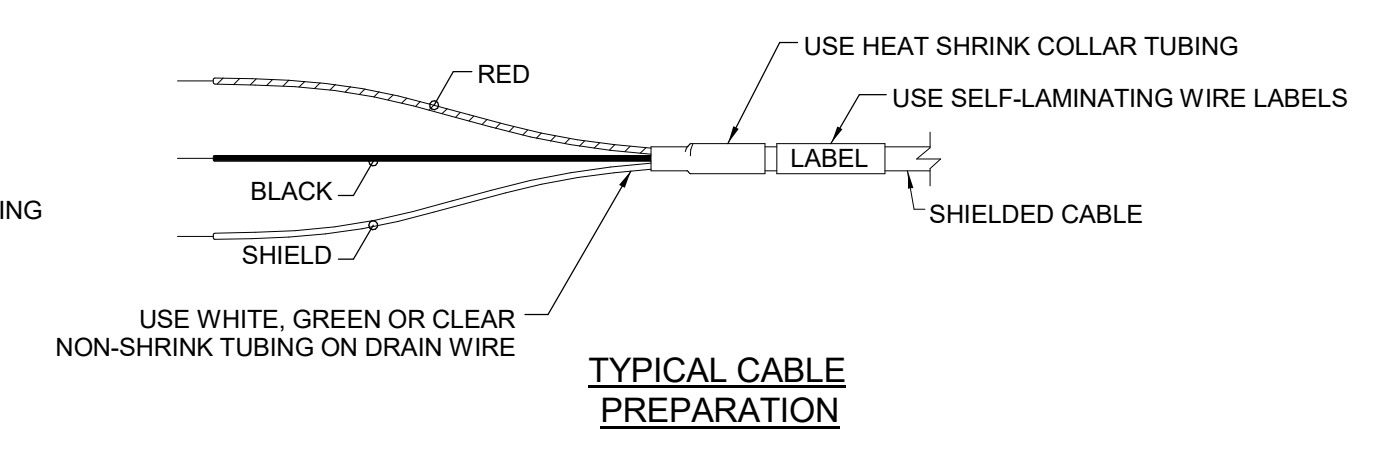


**SPEAKON CONNECTOR
8 CONTACT**

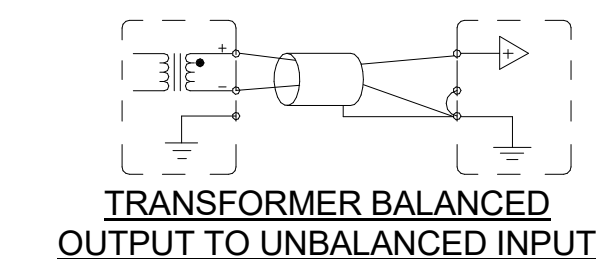
- NOTE:
1. WIRE LABEL SHALL BE APPLIED TO CABLE WITH TEXT STARTING CLOSEST TO CONNECTOR.
 2. RCA AND 1/4" PHONE CONNECTORS SHALL BE CLAMPED ON HEAT-SHRINK TUBING OVER CABLE JACKET.
 3. SHIELD IS TIED AT BOTH ENDS FOR ALL MICROPHONE LINES. SHIELD IS TIED AT BOTH ENDS FOR ALL INTERCOM SYSTEMS.
 4. SHIELD IS LIFTED AT ONE END FOR ALL LINE LEVEL AUDIO LINES.

RJ45 PINOUT		
PIN #	TIA/EIA 568B	TIA/EIA 568A
1	ORANGE / WHITE	GREEN / WHITE
2	ORANGE	GREEN
3	GREEN / WHITE	ORANGE / WHITE
4	BLUE	BLUE
5	BLUE/WHITE	BLUE / WHITE
6	GREEN	ORANGE
7	BROWN / WHITE	BROWN / WHITE
8	BROWN	BROWN

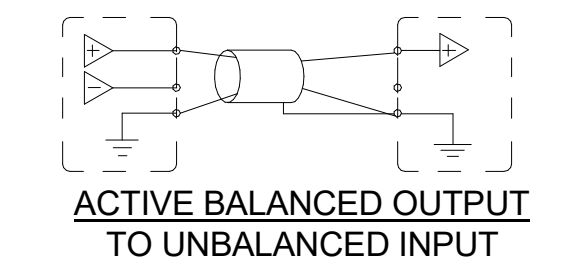
NOTE: TIA/EIA 568B SHALL BE USED UNLESS NOTED OTHERWISE



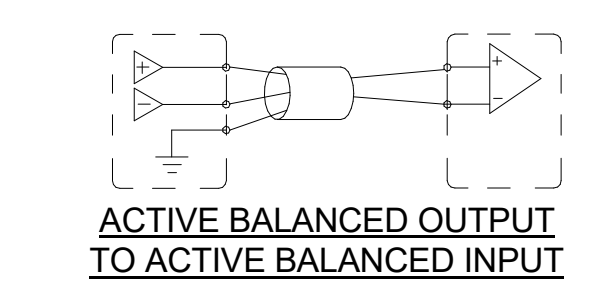
**TYPICAL CABLE
PREPARATION**



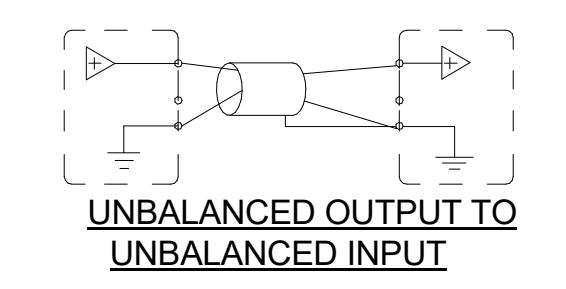
**TRANSFORMER BALANCED
OUTPUT TO UNBALANCED INPUT**



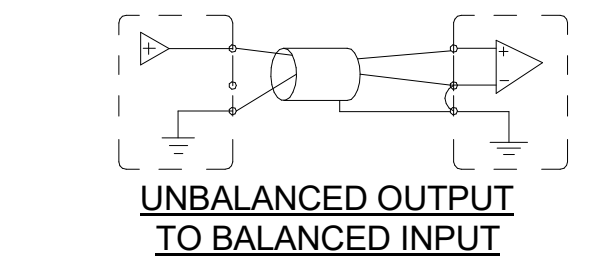
**ACTIVE BALANCED OUTPUT
TO UNBALANCED INPUT**



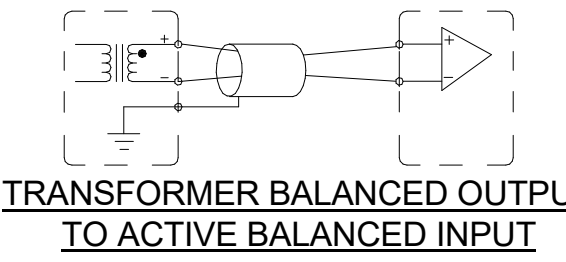
**ACTIVE BALANCED OUTPUT
TO ACTIVE BALANCED INPUT**



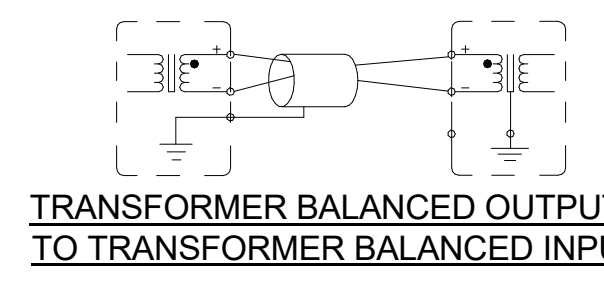
**UNBALANCED OUTPUT TO
UNBALANCED INPUT**



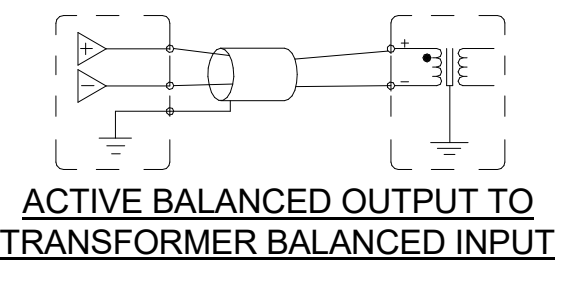
**UNBALANCED OUTPUT
TO BALANCED INPUT**



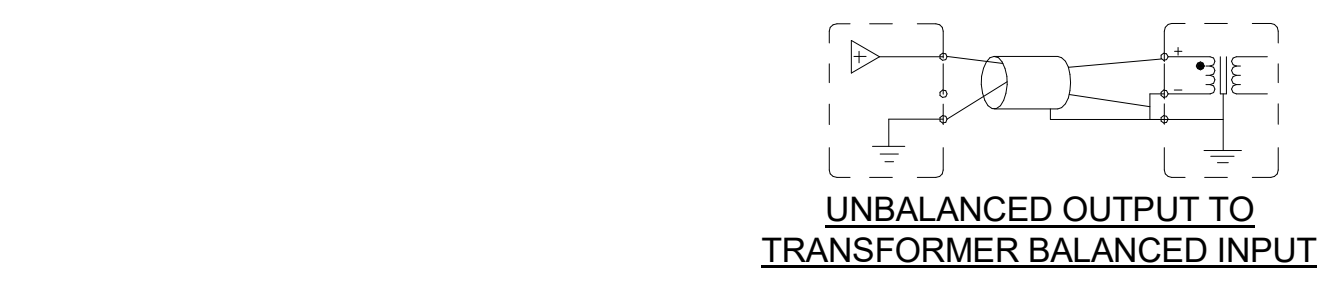
**TRANSFORMER BALANCED OUTPUT
TO ACTIVE BALANCED INPUT**



**TRANSFORMER BALANCED OUTPUT
TO TRANSFORMER BALANCED INPUT**



**ACTIVE BALANCED OUTPUT TO
TRANSFORMER BALANCED INPUT**

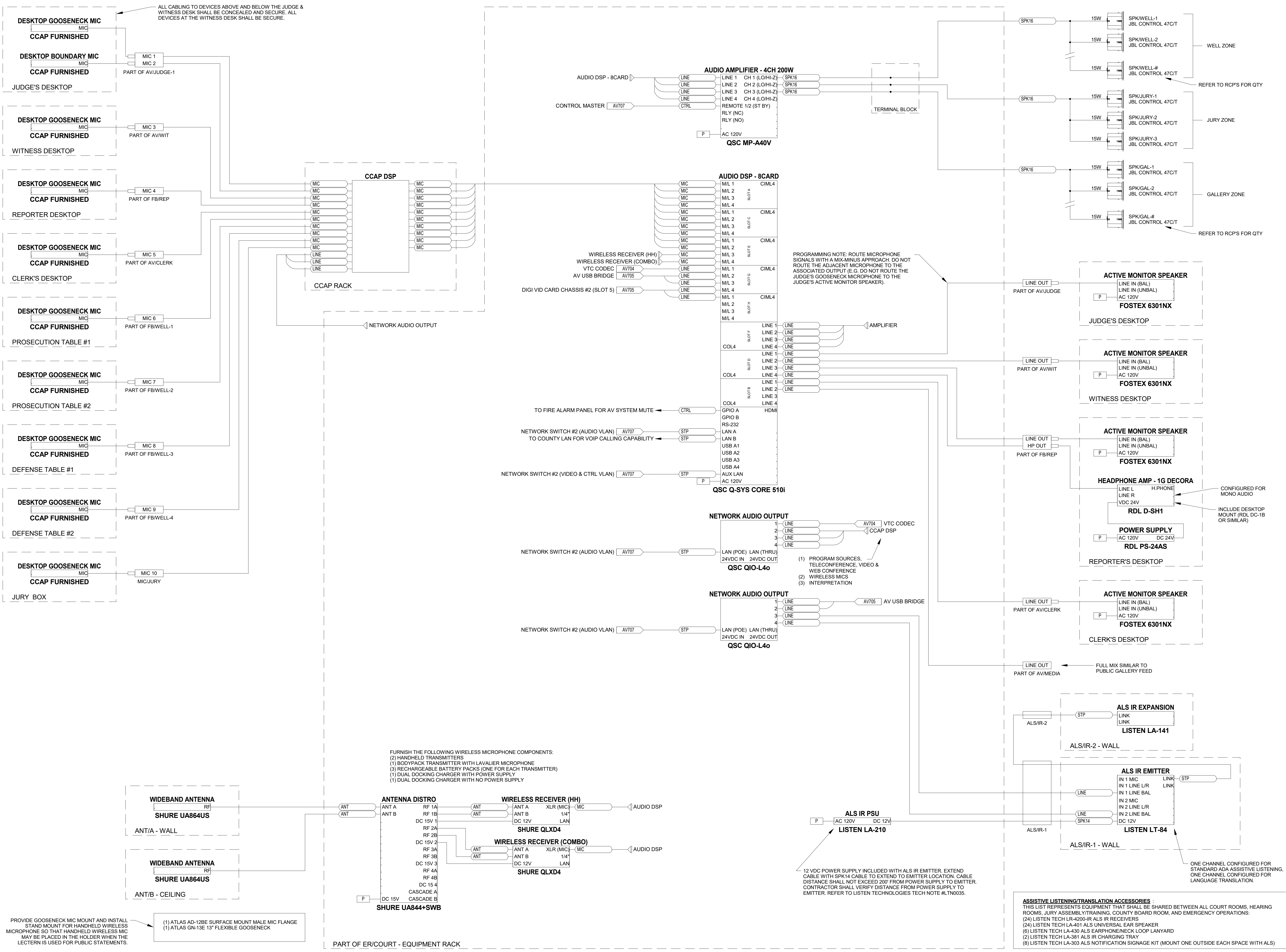


**UNBALANCED OUTPUT TO
TRANSFORMER BALANCED INPUT**

DESIGNER: EDK	PROJECT MANAGER: PDR
SCALE: NTS	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISION:	DATE: DESCRIPTION:
1	09/30/2022 AV SYSTEM BID DOCUMENTS

SHEET TITLE:
**AUDIO
TERMINATIONS
WIRING**

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: NTS	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISION: 1	DATE: 10/14/2022
DESCRIPTION: AV SYSTEM BID DOCUMENTS	
SHEET TITLE: BRANCH COURTROOM - TYPICAL AV SCHEMATICS	
SHEET NUMBER: AV701	REV: 1



BRANCH COURTROOM - TYPICAL AUDIO SCHEMATICS

TYPICAL FOR BRANCH A COURTROOM C1220, BRANCH B COURTROOM C1200, BRANCH C COURTROOM C2260 AND BRANCH D COURTROOM C2230

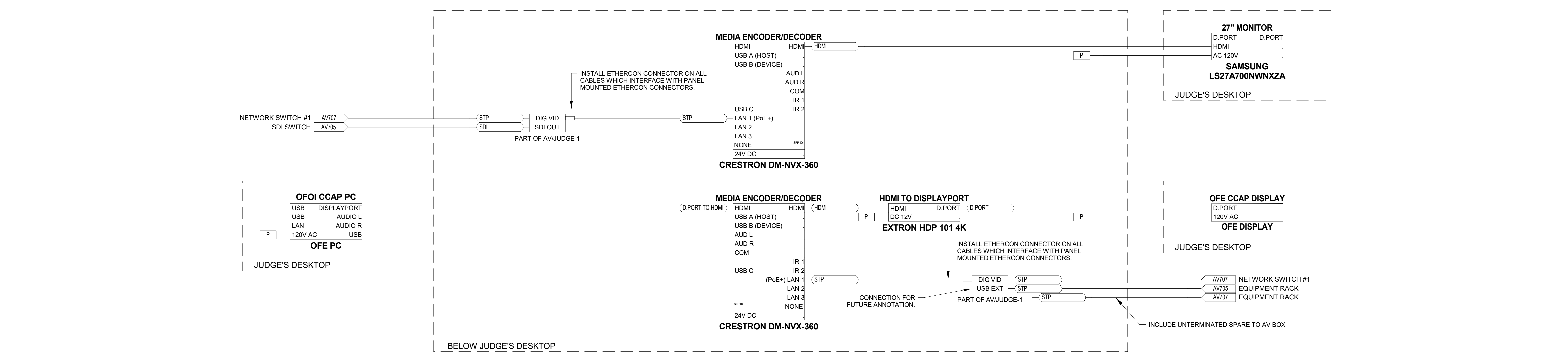
NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

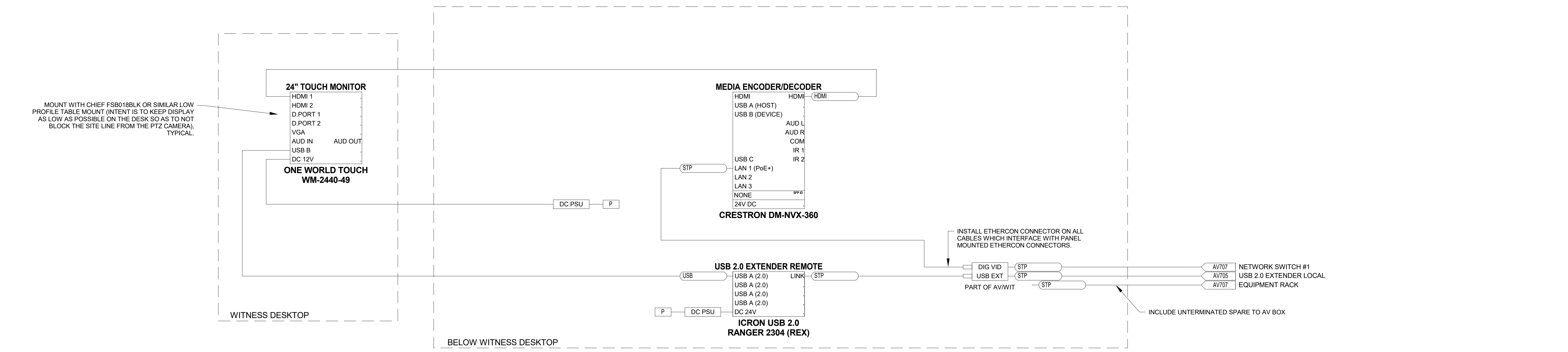
DESIGNER: EDK	PROJECT MANAGER: PBR	
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"	
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502	
DOCUMENT SET: AV BID DOCUMENTS R1		
REV	DATE	DESCRIPTION
1	08/26/2022	AV SYSTEM BID DOCUMENTS

SHEET TITLE:
**BRANCH
COURTROOM -
TYPICAL AV
SCHEMATICS**

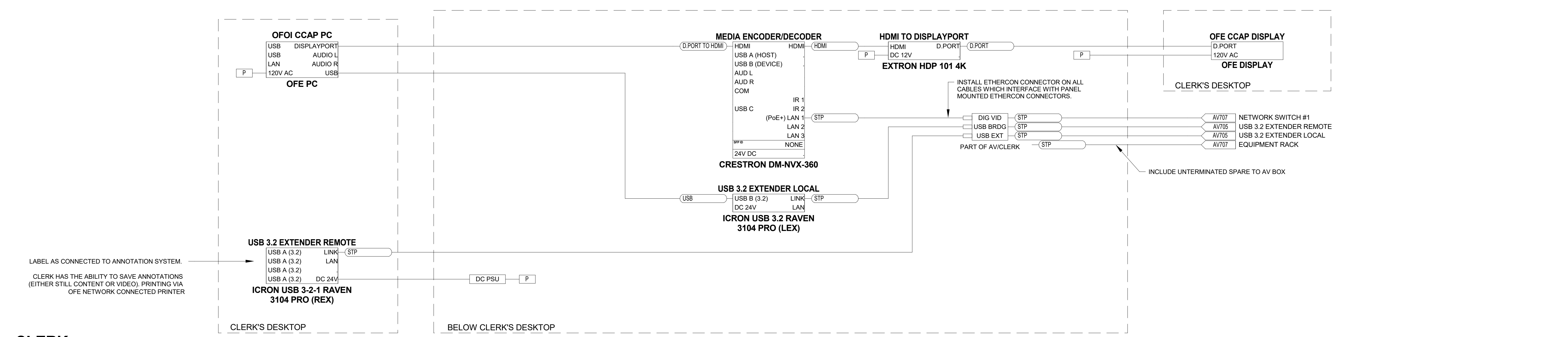
SHEET NUMBER: AV702	REV: 1
-------------------------------	------------------



JUDGE



WITNESS



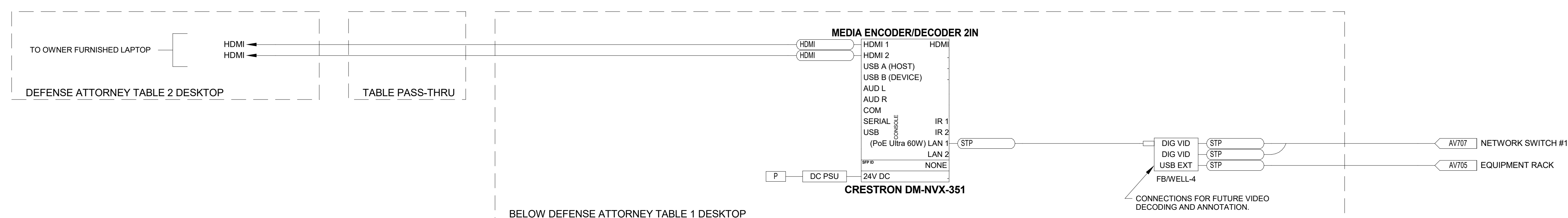
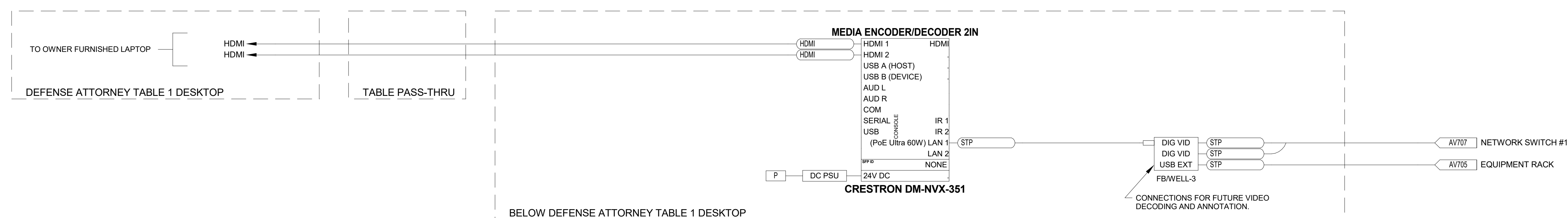
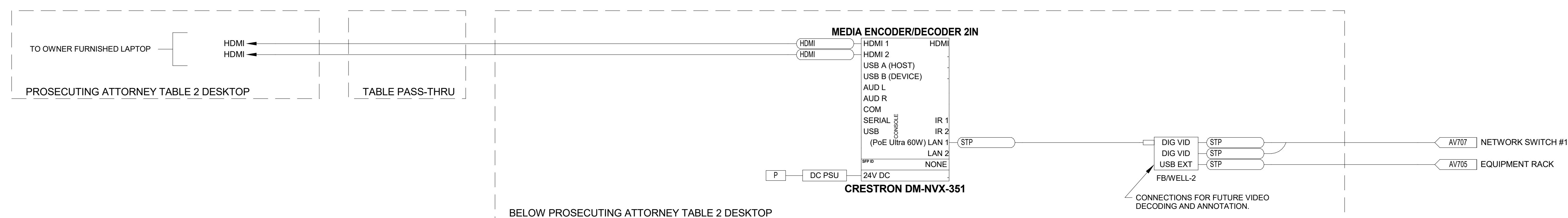
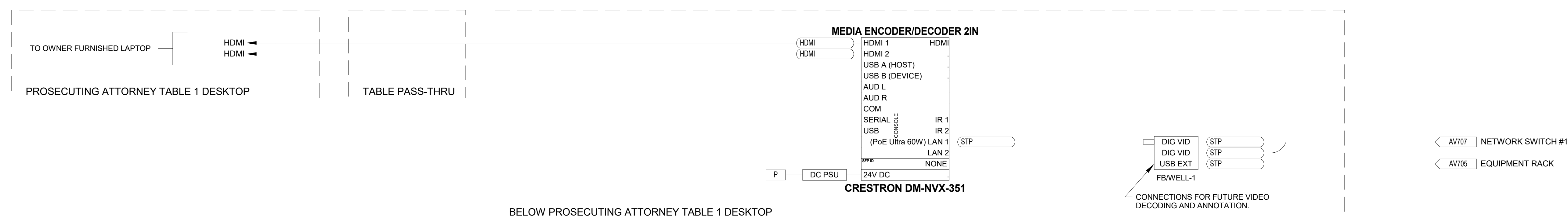
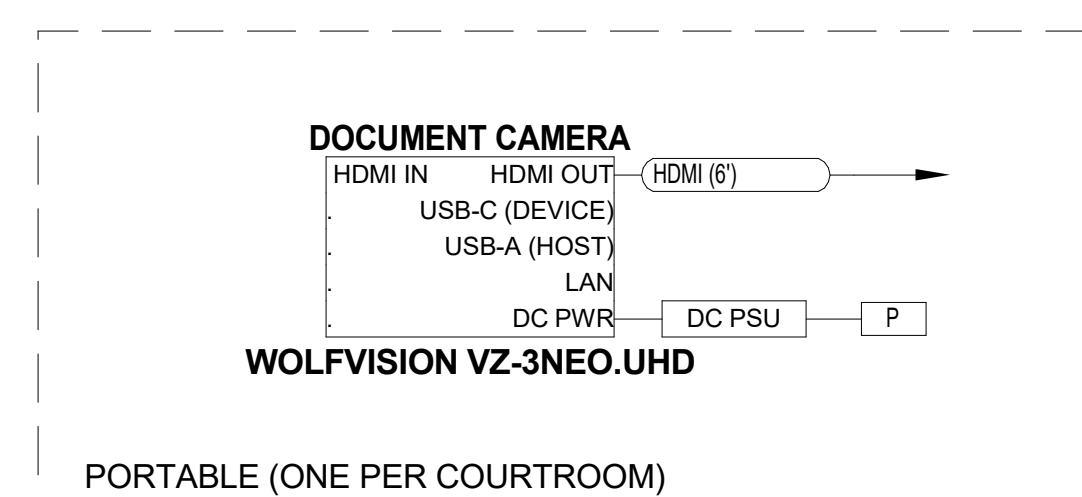
CLERK

BRANCH COURTROOM - TYPICAL JUDGE, WITNESS, & CLERK VIDEO - AV SCHEMATICS

TYPICAL FOR BRANCH A COURTROOM C1220, BRANCH B COURTROOM C1200, BRANCH C COURTROOM C2260 AND BRANCH D COURTROOM C2230

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**



BRANCH COURTROOM - TYPICAL ATTORNEY TABLES VIDEO - AV SCHEMATICS

TYPICAL FOR BRANCH A COURTROOM C1220, BRANCH B COURTROOM C1200, BRANCH C COURTROOM C2260 AND BRANCH D COURTROOM C2230

DESIGNER:	EDK	PROJECT MANAGER:	FBR
SCALE:	12" = 1'-0"	DRAWING SET SIZE:	30" X 42"
SHEET ISSUE DATE:	10/14/2022	PROJECT NUMBER:	1502
DOCUMENT SET:	AV BID DOCUMENTS R1		

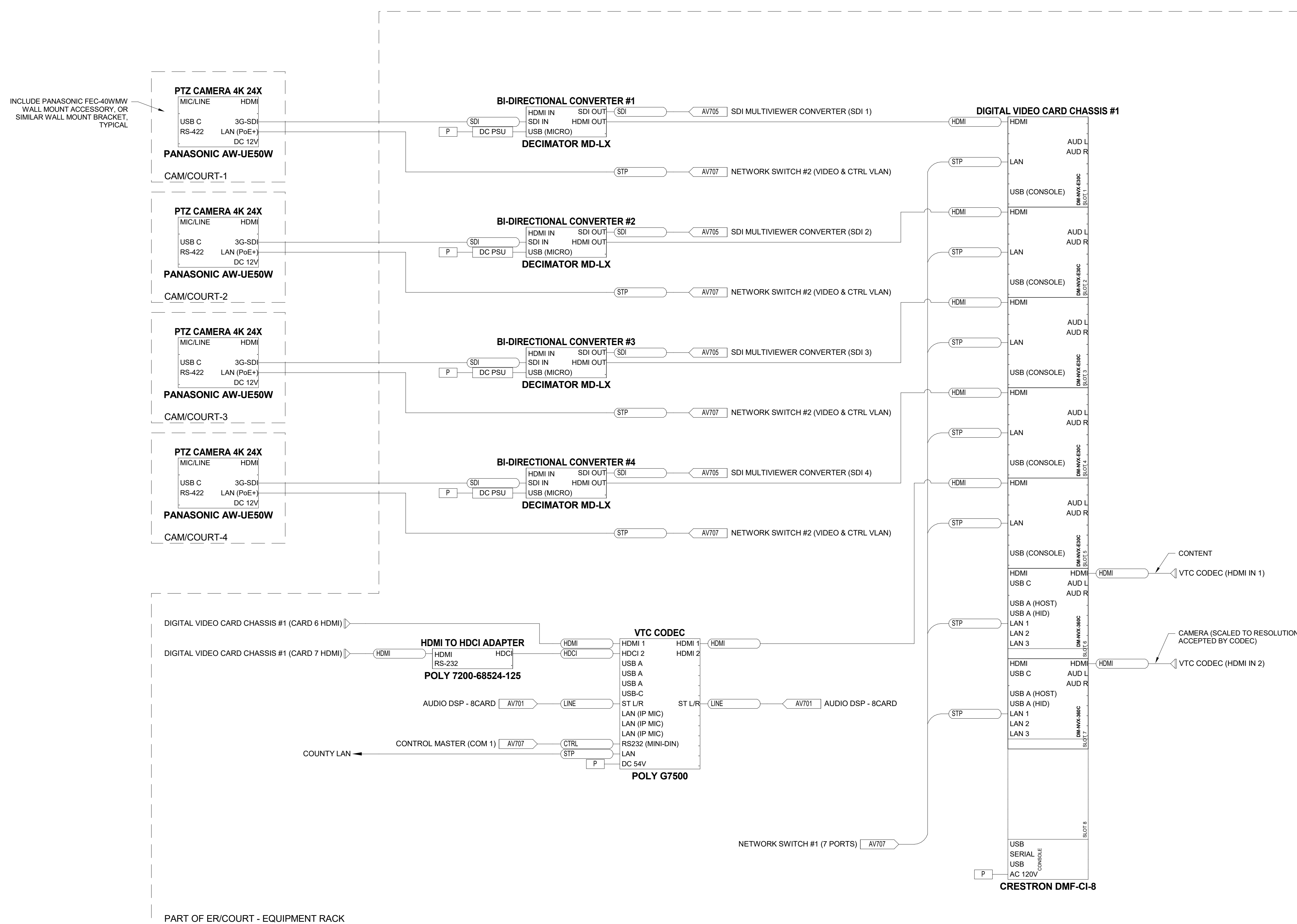
REV	DATE	DESCRIPTION
1	10/14/2022	AV SYSTEM BID DOCUMENTS

SHEET TITLE:
BRANCH COURTROOM - TYPICAL AV SCHEMATICS

SHEET NUMBER:	AV703	REV:	1
---------------	-------	------	---

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**



BRANCH COURTROOM - TYPICAL RACK VIDEO - AV SCHEMATICS

TYPICAL FOR BRANCH A COURTROOM C1220, BRANCH B COURTROOM C1200, BRANCH C COURTROOM C2260 AND BRANCH D COURTROOM C2230

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REV: 1	DATE: 10/30/2022
DESCRIPTION: AV SYSTEM BID DOCUMENTS	

SHEET TITLE:
**BRANCH
COURTROOM -
TYPICAL AV
SCHEMATICS**

SHEET NUMBER: AV704	REV: 1
-------------------------------	------------------

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

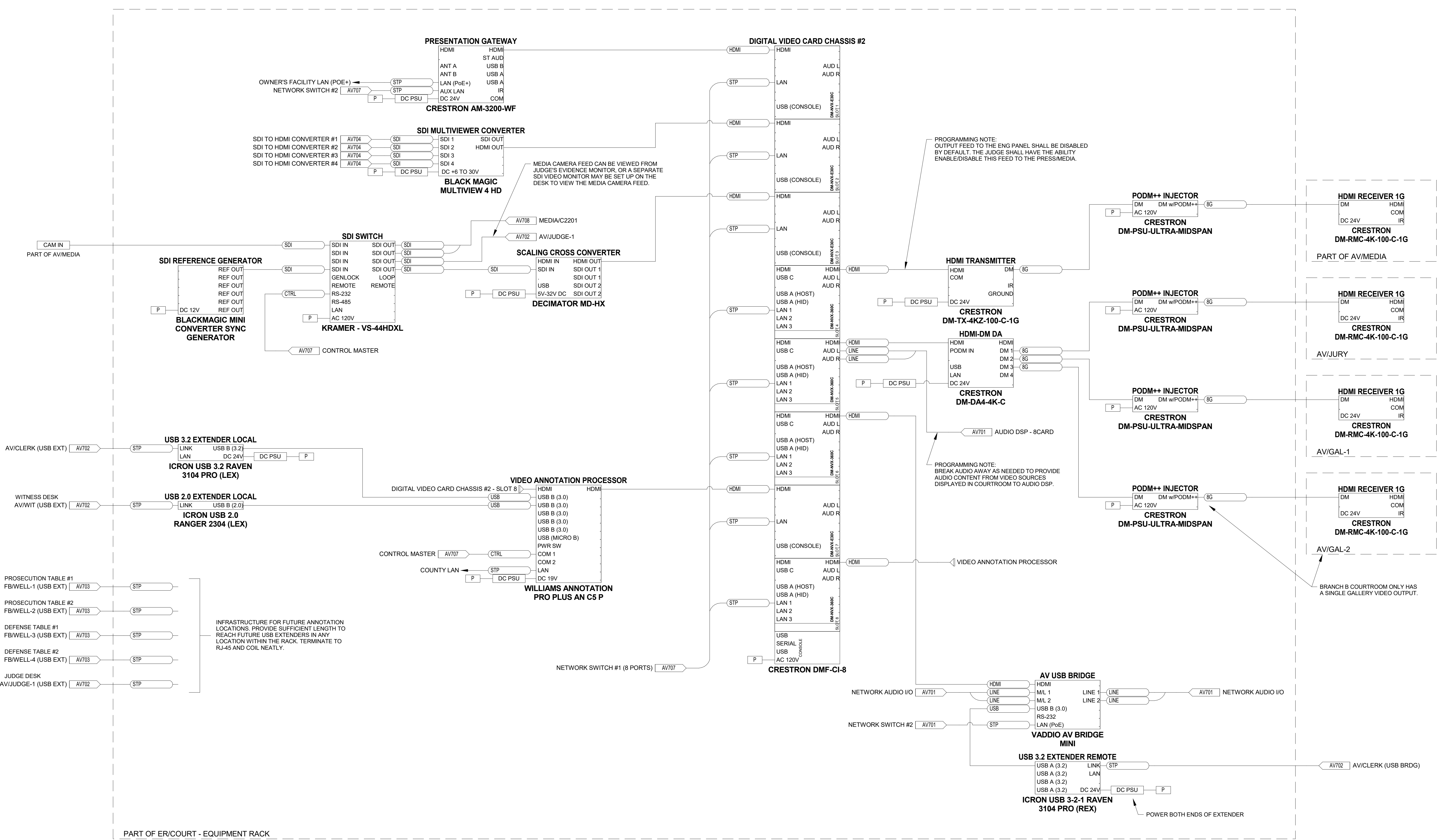
**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	

REV	DATE	DESCRIPTION
1	10/14/2022	AV SYSTEM BID DOCUMENTS

SHEET TITLE:
BRANCH COURTROOM - TYPICAL AV SCHEMATICS

SHEET NUMBER: AV705	REV: 1
----------------------------	---------------

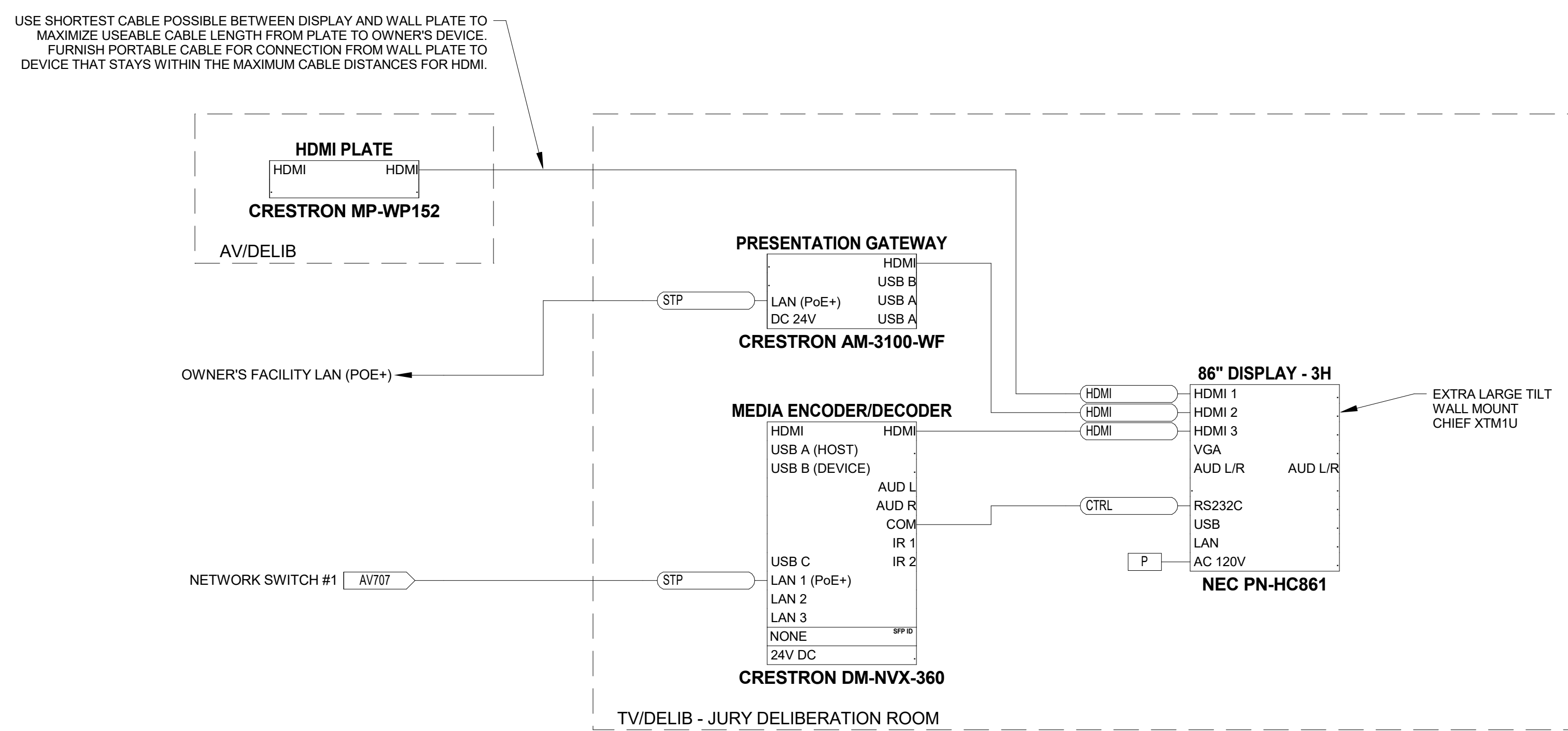
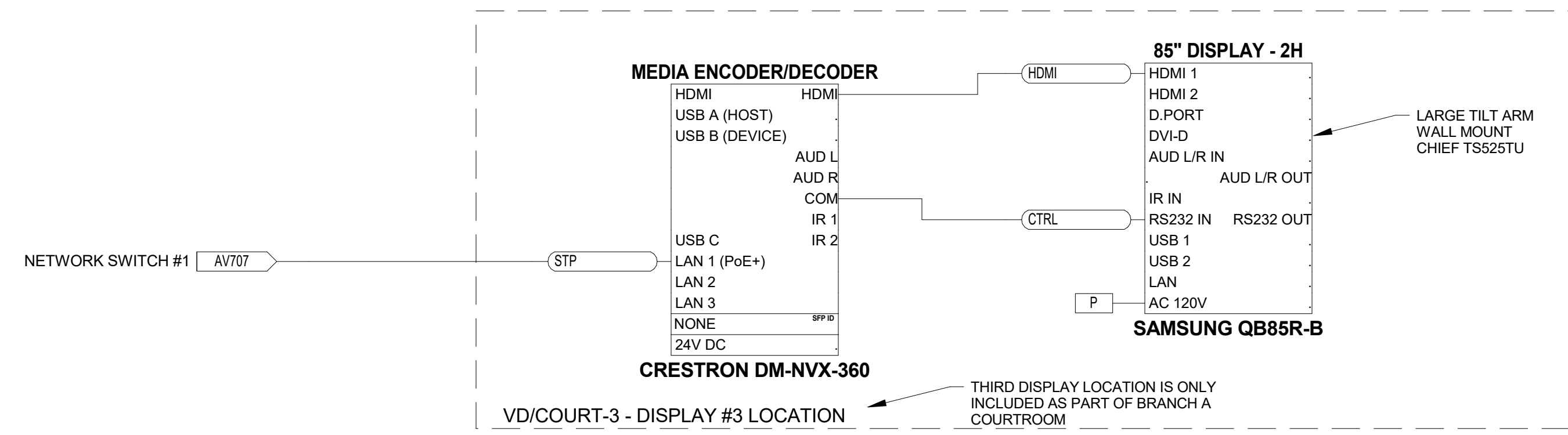
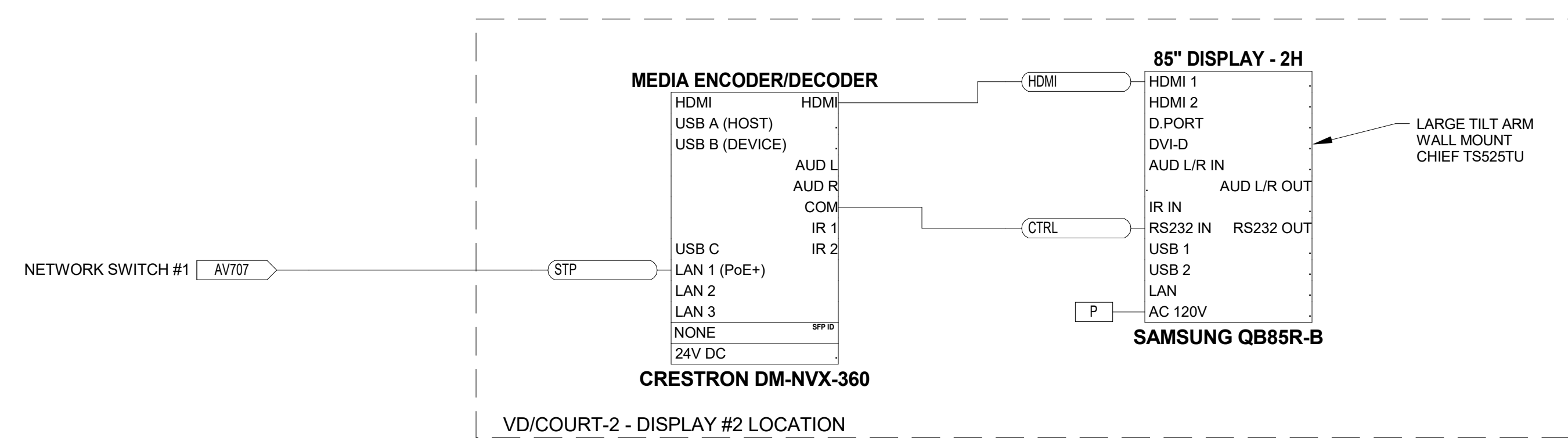
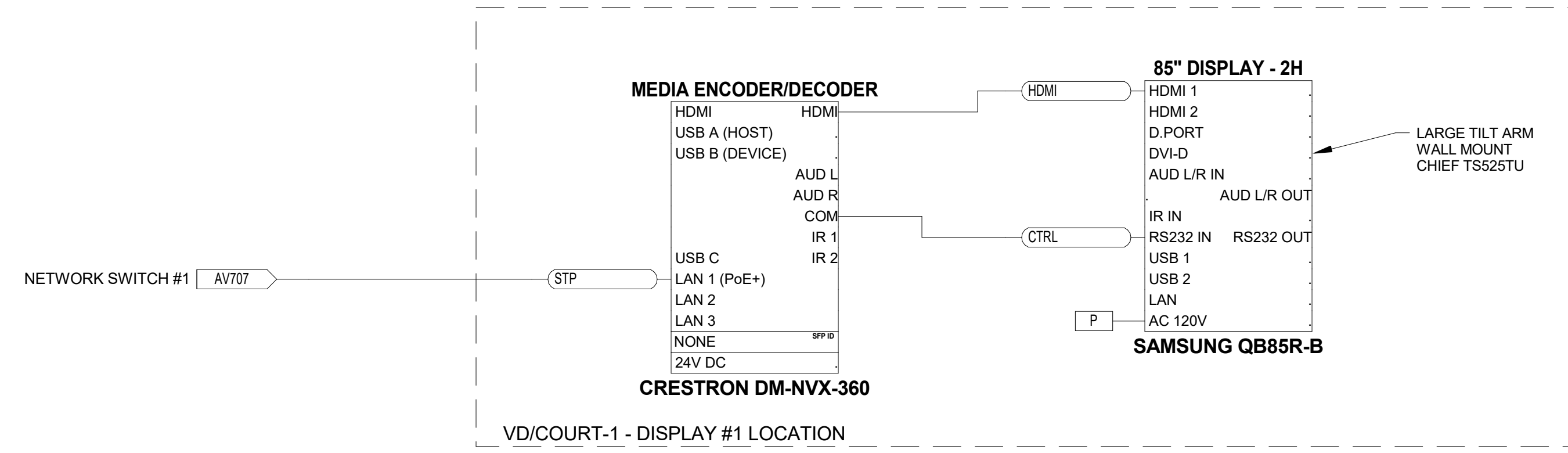
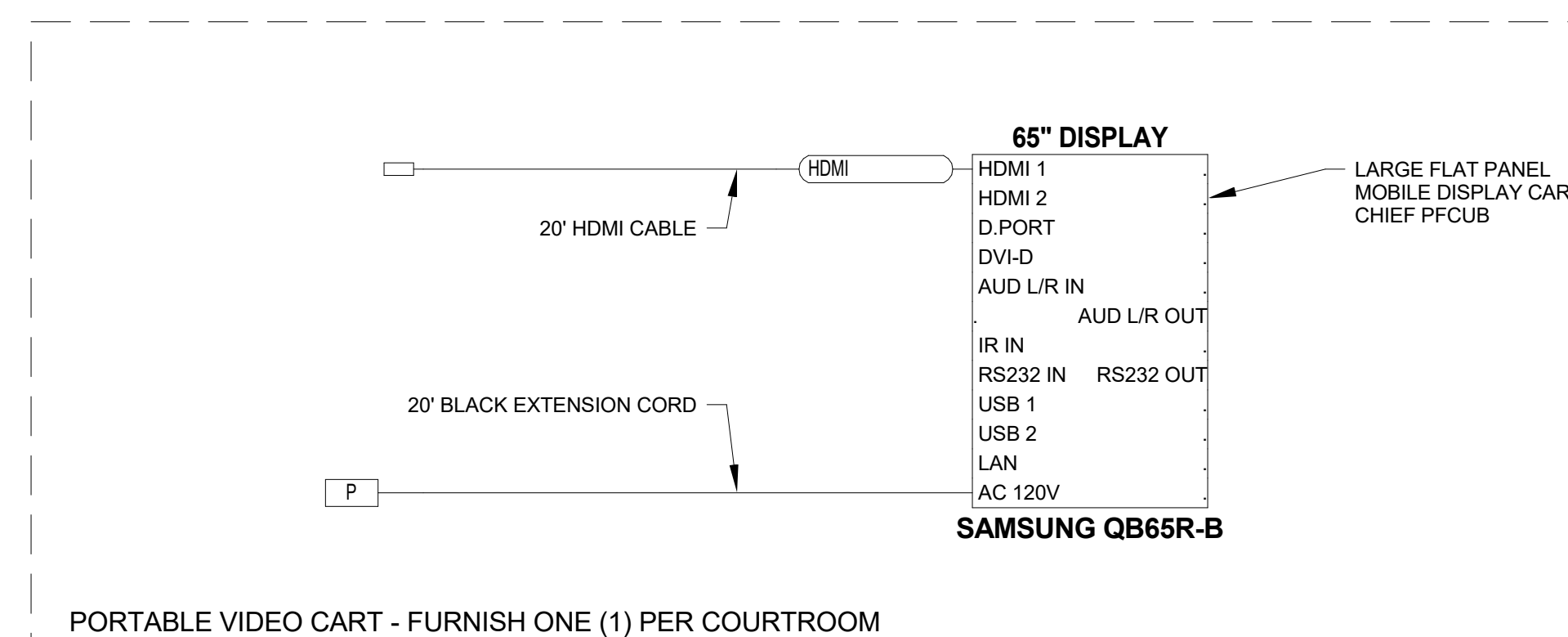


BRANCH COURTROOM - TYPICAL RACK VIDEO - AV SCHEMATICS

TYPICAL FOR BRANCH A COURTROOM C1220, BRANCH B COURTROOM C1200, BRANCH C COURTROOM C2260 AND BRANCH D COURTROOM C2230

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**



USE SHORTEST CABLE POSSIBLE BETWEEN DISPLAY AND WALL PLATE TO MAXIMIZE USEABLE CABLE LENGTH FROM PLATE TO OWNER'S DEVICE. FURNISH PORTABLE CABLE FOR CONNECTION FROM WALL PLATE TO DEVICE THAT STAYS WITHIN THE MAXIMUM CABLE DISTANCES FOR HDMI.

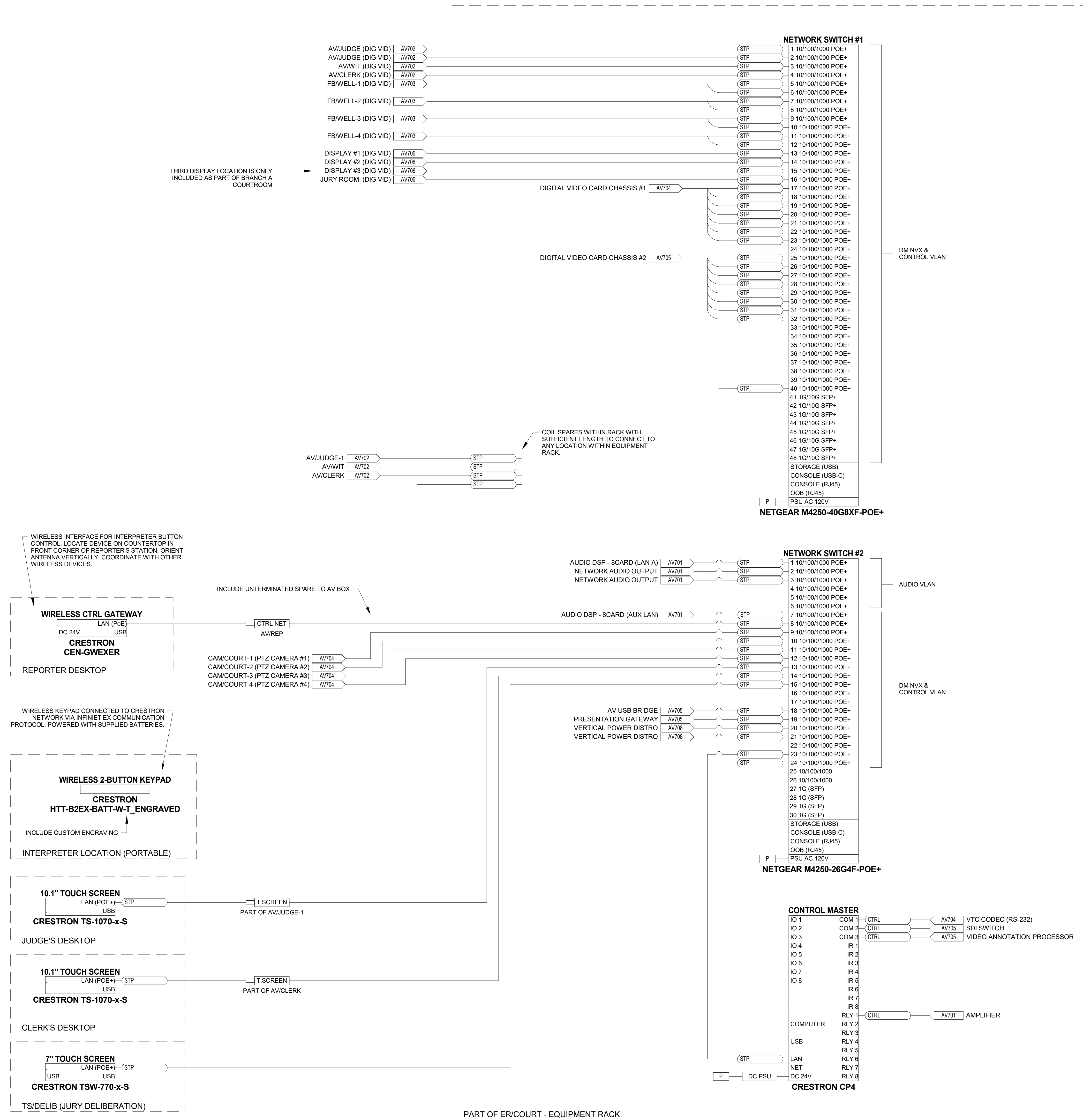
BRANCH COURTROOM - TYPICAL VIDEO OUTPUTS - AV SCHEMATICS

TYPICAL FOR BRANCH A COURTROOM C1220, BRANCH B COURTROOM C1200, BRANCH C COURTROOM C2260 AND BRANCH D COURTROOM C2230

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 1/2" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REV: 1	DATE: 10/14/2022
DESCRIPTION: AV SYSTEM BID DOCUMENTS	

SHEET TITLE:
BRANCH COURTROOM - TYPICAL AV SCHEMATICS

SHEET NUMBER: AV706	REV: 1
---------------------	--------



BRANCH COURTROOM - TYPICAL AV NETWORK AND CONTROL - AV SCHEMATICS

TYPICAL FOR BRANCH A COURTROOM C1220, BRANCH B COURTROOM C1200, BRANCH C COURTROOM C2260 AND BRANCH D COURTROOM C2230

DESIGNER: EDK PROJECT MANAGER: PBR

SCALE: 12" = 1'-0" DRAWING SET SIZE: 30" X 42"

SHEET ISSUE DATE: 10/14/2022 PROJECT NUMBER: 1502

DOCUMENT SET: AV BID DOCUMENTS R1

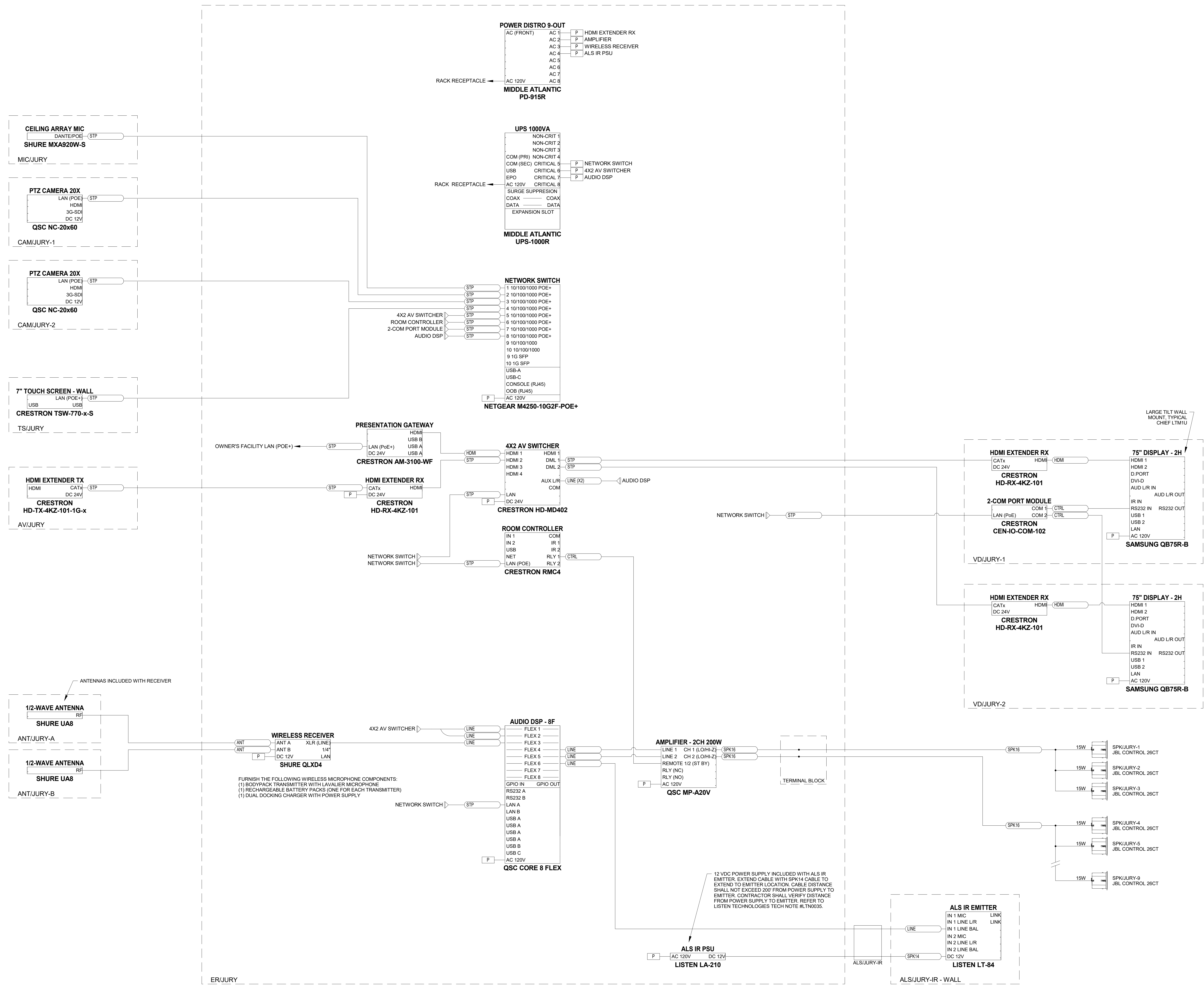
REVISION: 1 DATE: 10/30/2022 DESCRIPTION: AV SYSTEM BID DOCUMENTS

SHEET TITLE:
**BRANCH
COURTROOM -
TYPICAL AV
SCHEMATICS**

SHEET NUMBER: AV707 REV: 1

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**



FURNISH THE FOLLOWING WIRELESS MICROPHONE COMPONENTS:
(1) BODYPACK TRANSMITTER WITH LAVALIER MICROPHONE
(1) RECHARGEABLE BATTERY PACKS (ONE FOR EACH TRANSMITTER)
(1) DUAL DOCKING CHARGER WITH POWER SUPPLY

12 VDC POWER SUPPLY INCLUDED WITH ALS IR EMITTER. EXTEND CABLE WITH SPK14 CABLE TO EXTEND TO EMITTER LOCATION. CABLE DISTANCE SHALL NOT EXCEED 200' FROM POWER SUPPLY TO EMITTER. CONTRACTOR SHALL VERIFY DISTANCE FROM POWER SUPPLY TO EMITTER. REFER TO LISTEN TECHNOLOGIES TECH NOTE #LTM0036.

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISION:	DESCRIPTION:
1	10/30/2022 AV SYSTEM BID DOCUMENTS
SHEET TITLE: JURY ASSEMBLY - TRAINING C2190 - AV SCHEMATICS	
SHEET NUMBER: AV709	REV: 1

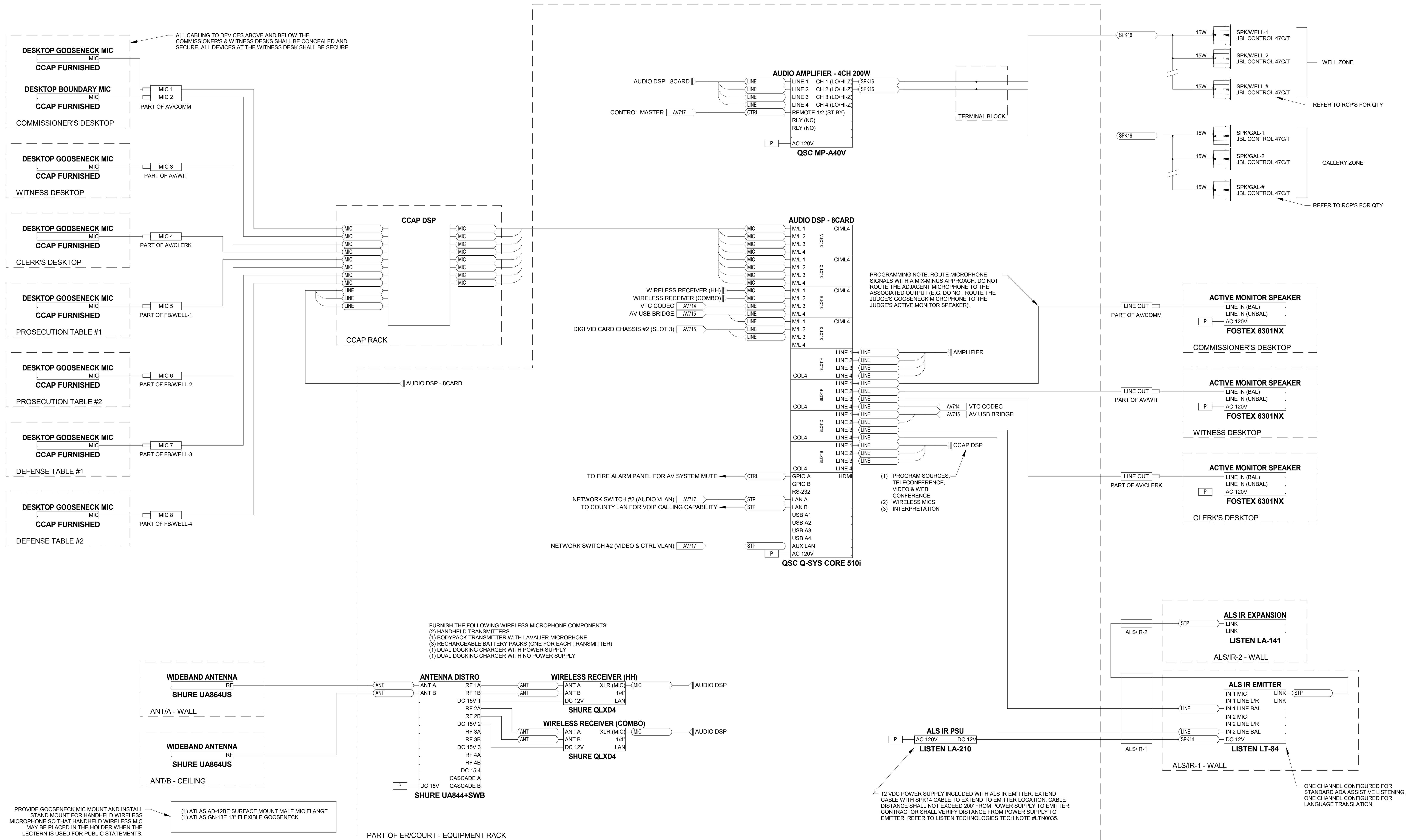
NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISION:	DESCRIPTION:
1	10/30/2022 AV SYSTEM BID DOCUMENTS

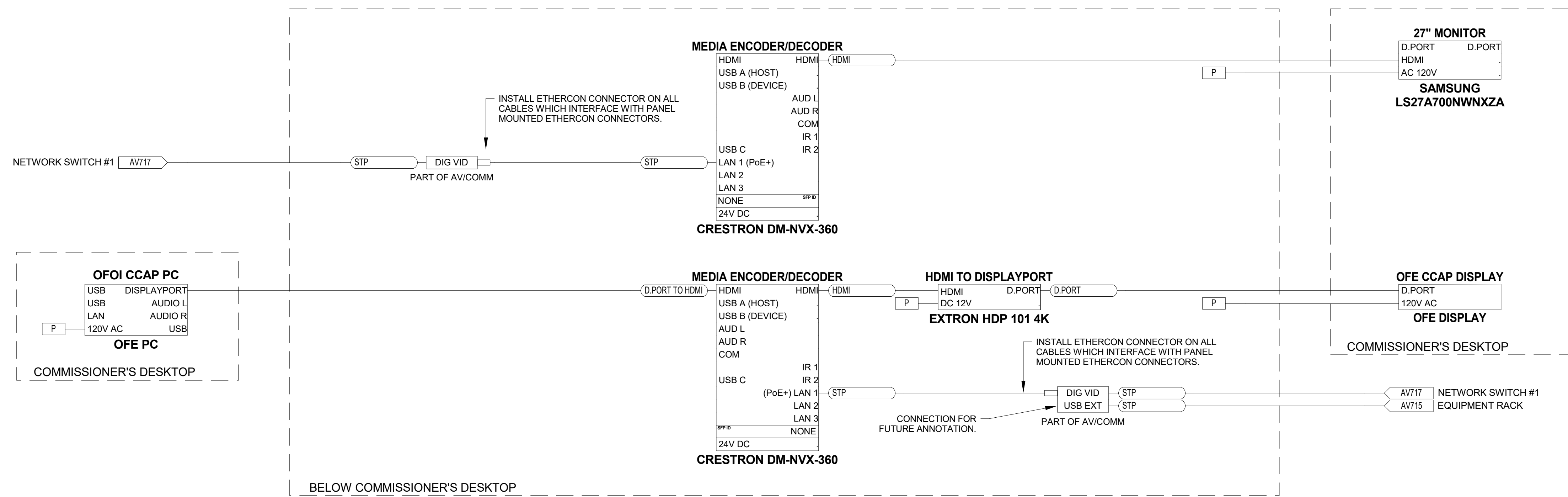
SHEET TITLE:
**HEARING ROOM -
TYPICAL AV
SCHEMATICS**

SHEET NUMBER: **AV711** REV: **1**



HEARING ROOM - TYPICAL AUDIO SCHEMATICS

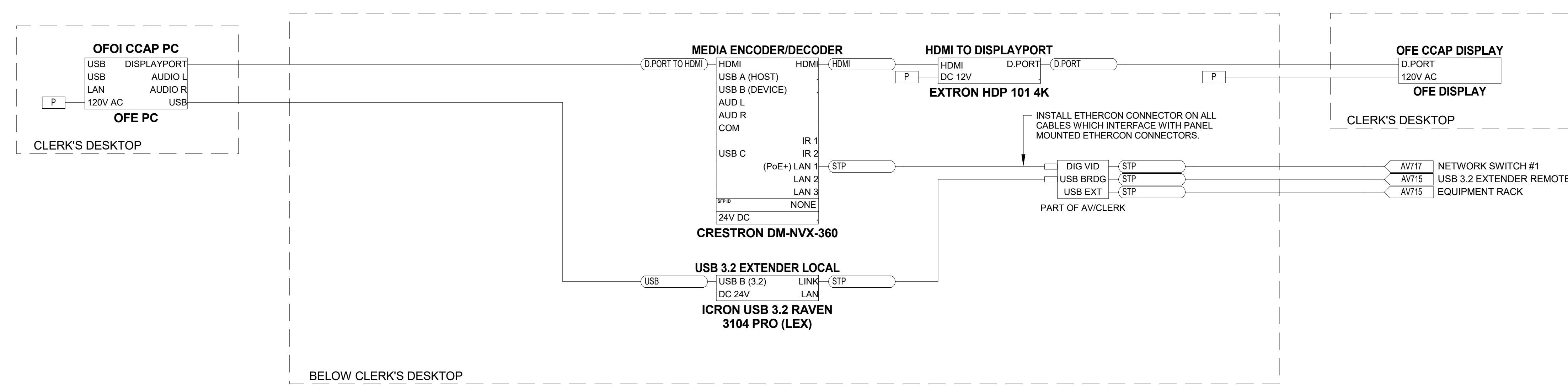
TYPICAL FOR HEARING ROOM 1 C1150 AND HEARING ROOM 2 (FAMILY COURT) C1140



COMMISSIONER



WITNESS



CLERK

HEARING ROOM - TYPICAL COMMISSIONER, WITNESS & CLERK VIDEO - AV SCHEMATICS

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

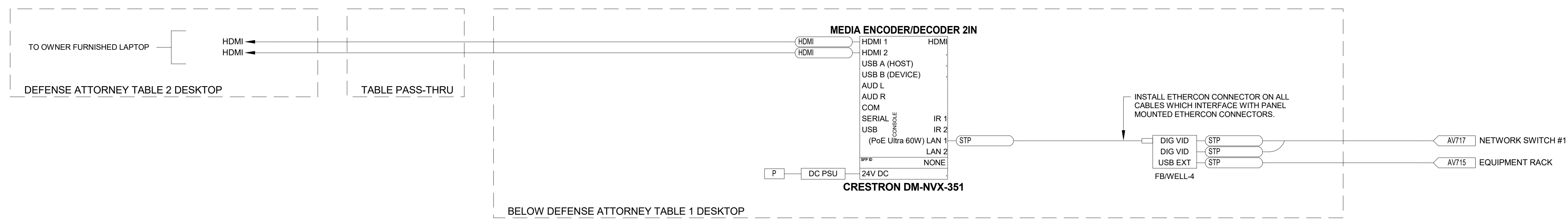
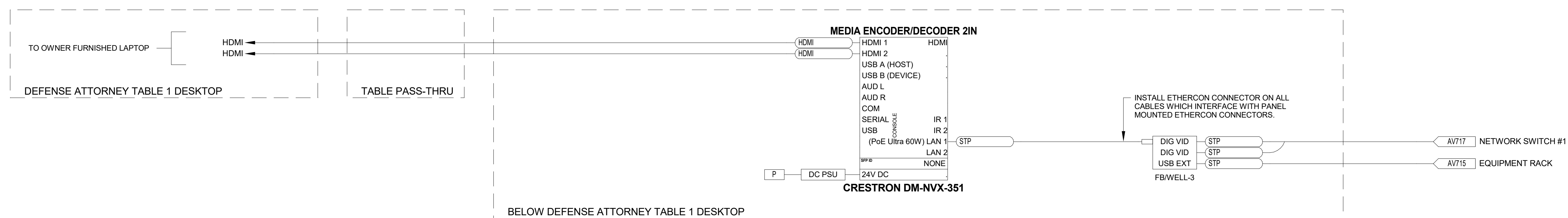
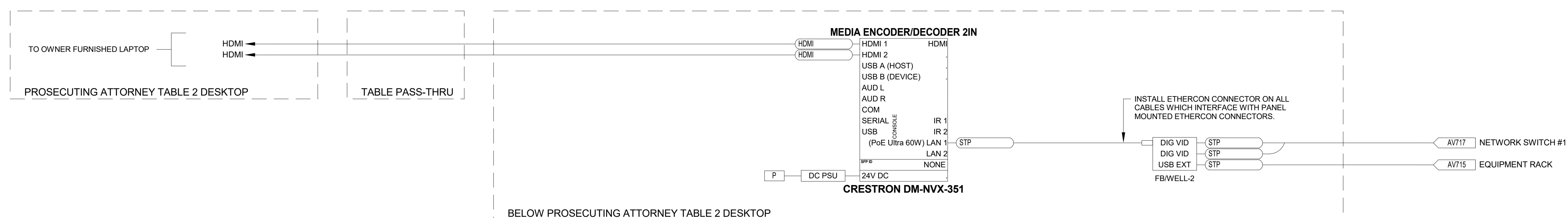
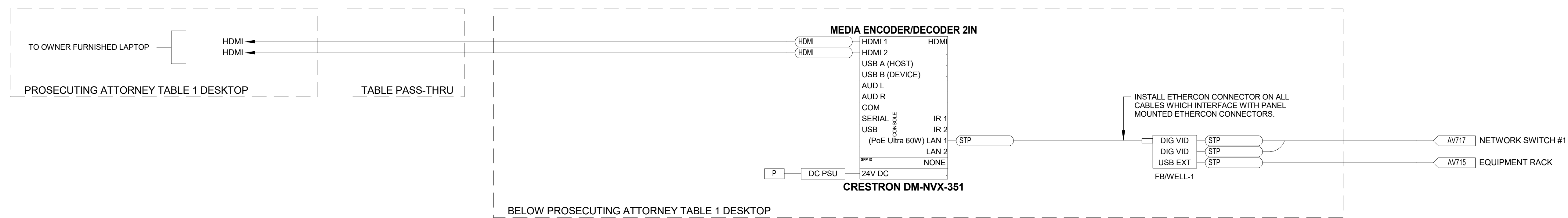
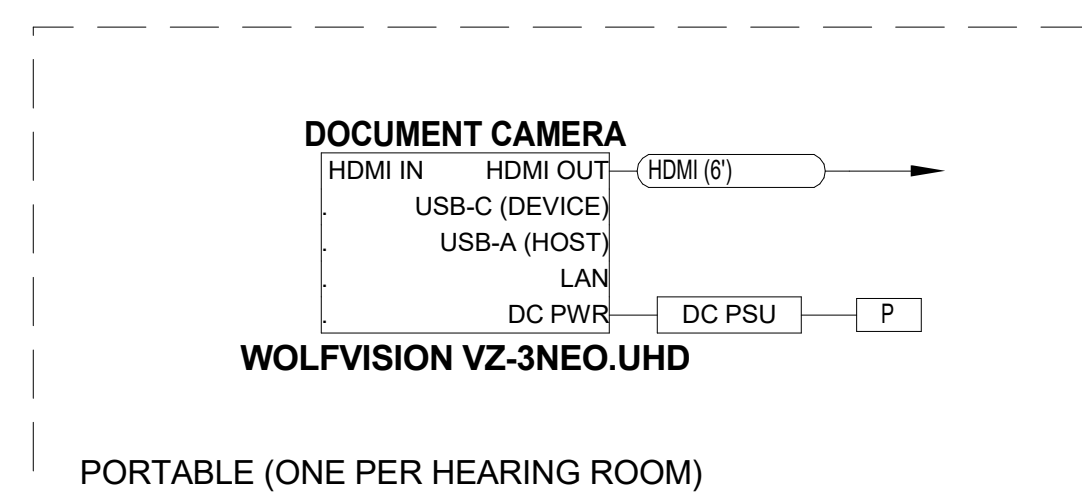
DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 1/2" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISION:	DESCRIPTION:
1	10/30/2022 AV SYSTEM BID DOCUMENTS

SHEET TITLE:
HEARING ROOM - TYPICAL AV SCHEMATICS

SHEET NUMBER: AV712	REV: 1
-------------------------------	------------------

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**



HEARING ROOM - TYPICAL ATTORNEY TABLES VIDEO - AV SCHEMATICS

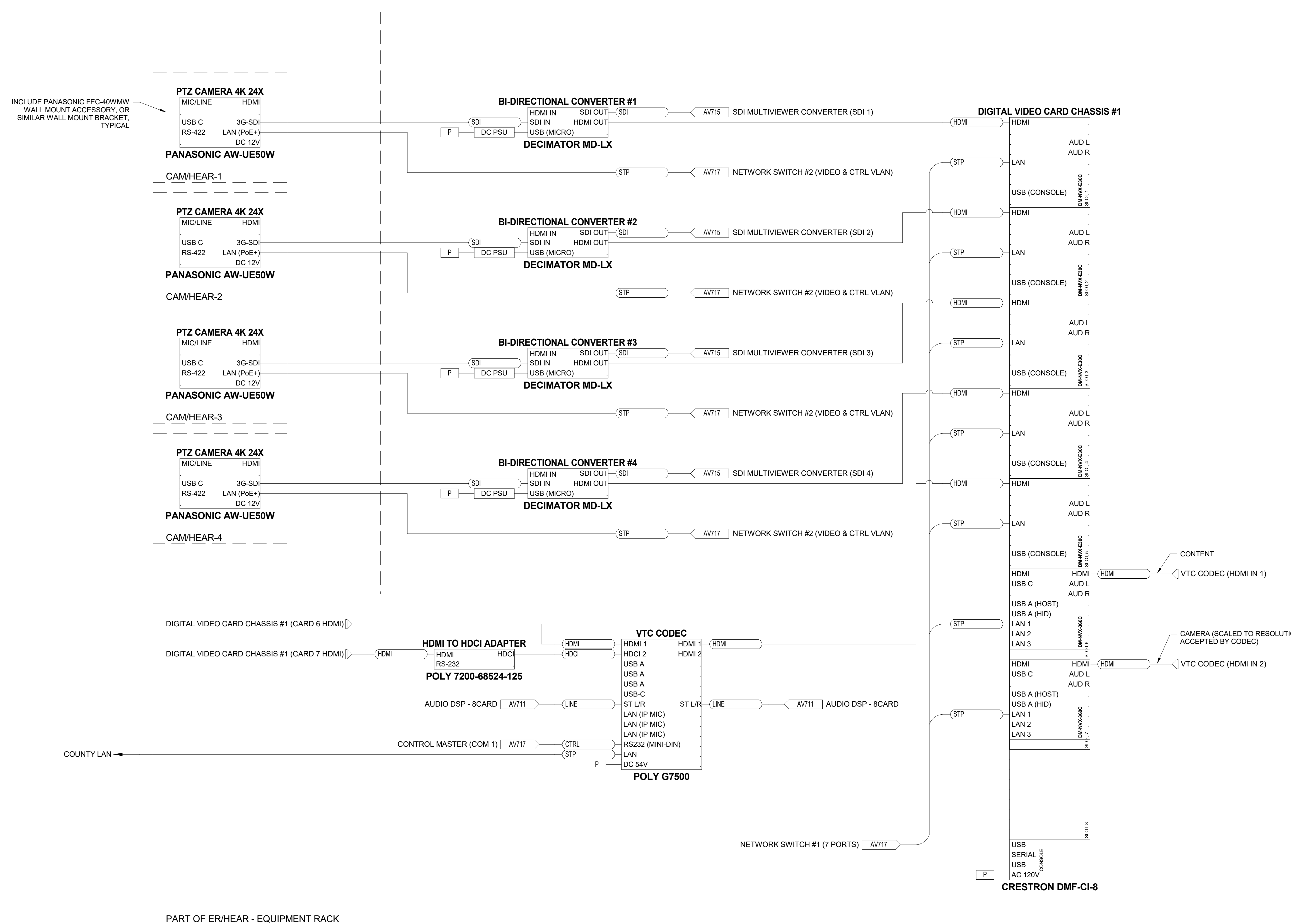
DESIGNER: EDK	PROJECT MANAGER: FBR
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REV: 1	DATE: 10/14/2022
DESCRIPTION: AV SYSTEM BID DOCUMENTS	

SHEET TITLE:
HEARING ROOM - TYPICAL AV SCHEMATICS

SHEET NUMBER: AV713	REV: 1
-------------------------------	------------------

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**



HEARING ROOM - TYPICAL RACK VIDEO - AV SCHEMATICS

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 1/2" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REV: 1	DATE: 10/14/2022
DESCRIPTION: AV SYSTEM BID DOCUMENTS	

SHEET TITLE:
**HEARING ROOM -
TYPICAL AV
SCHEMATICS**

SHEET NUMBER: AV714	REV: 1
-------------------------------	------------------

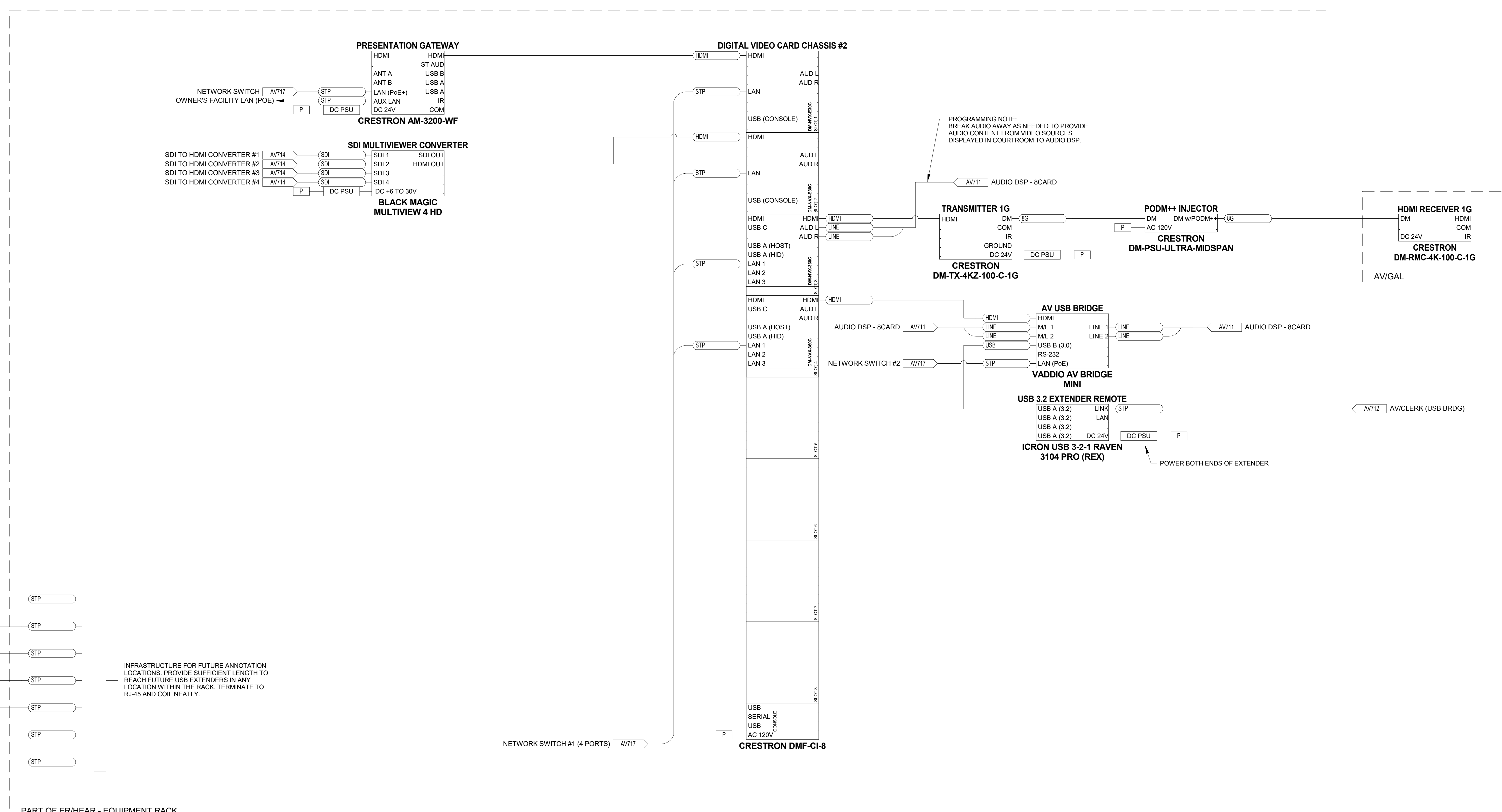
NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PBR	
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"	
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502	
DOCUMENT SET: AV BID DOCUMENTS R1		
REVISIONS:		
REV	DATE	DESCRIPTION
1	10/14/2022	AV SYSTEM BID DOCUMENTS

SHEET TITLE:
**HEARING ROOM -
TYPICAL AV
SCHEMATICS**

SHEET NUMBER: AV715	REV: 1
-------------------------------	------------------

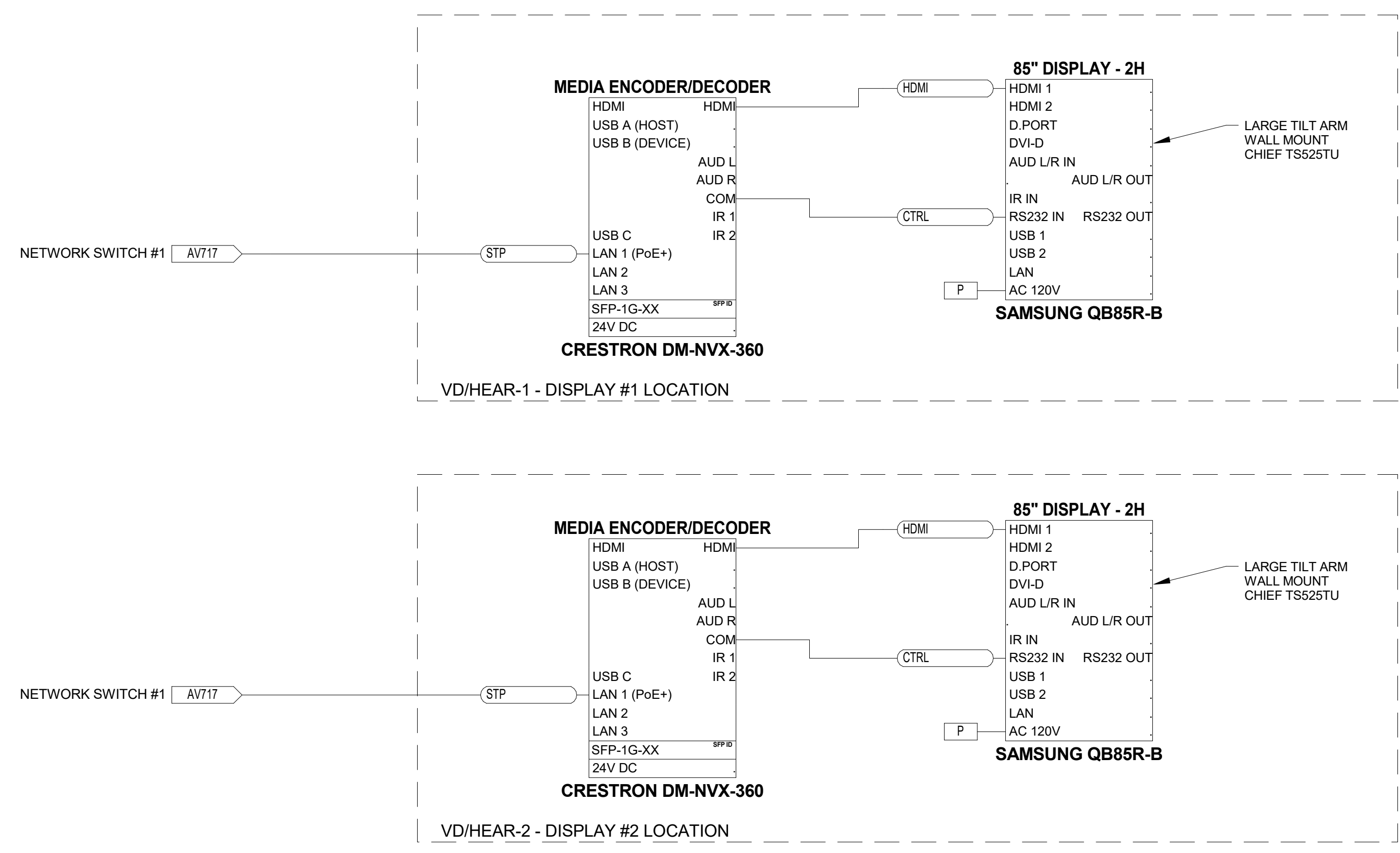


HEARING ROOM - TYPICAL RACK VIDEO - AV SCHEMATICS

P:\2022\112526 - Documents\2022\112526 - Hearing Room, AV - AV715.dwg

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**



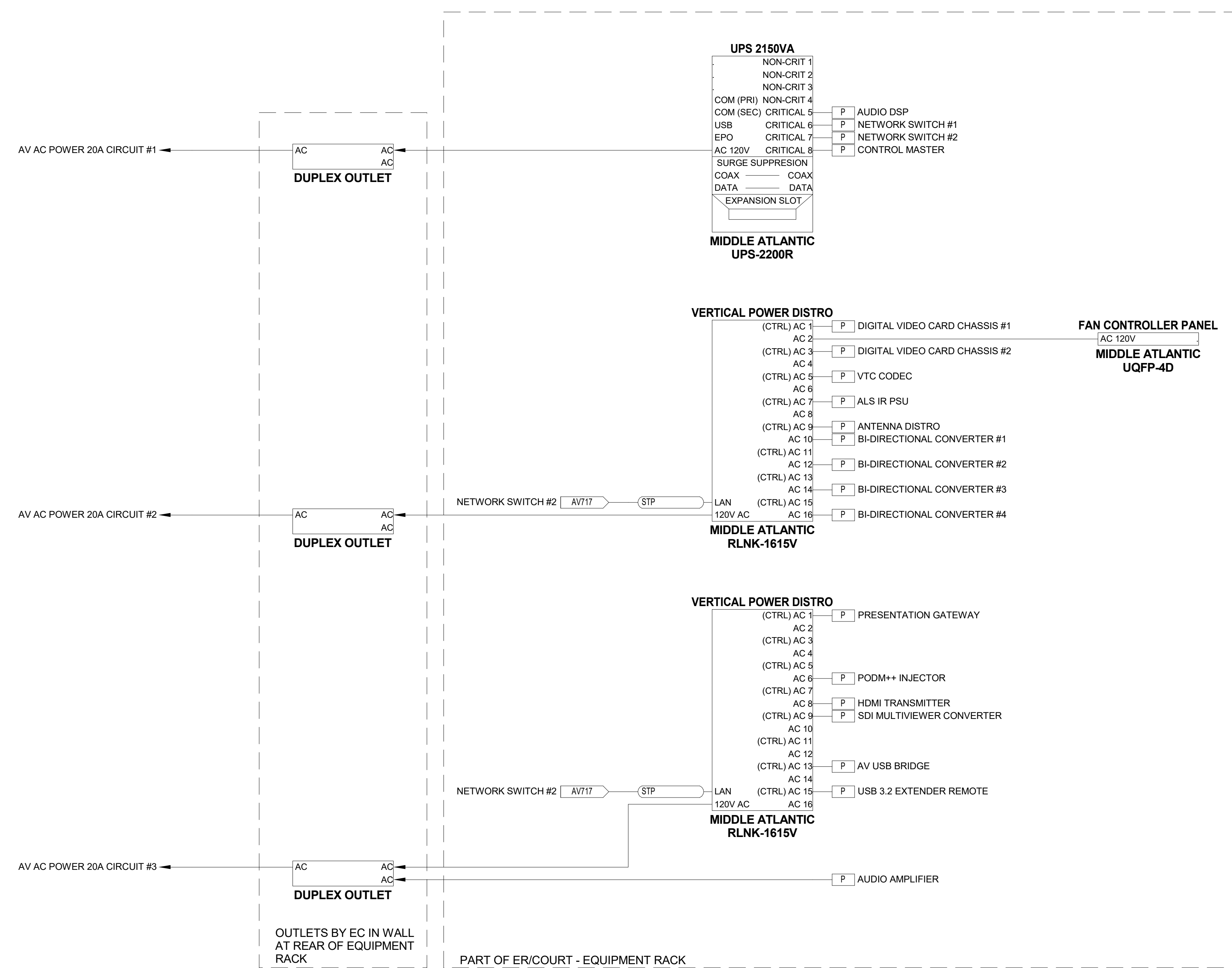
DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISION:	DESCRIPTION:
1	10/14/2022 AV SYSTEM BID DOCUMENTS

SHEET TITLE:
**HEARING ROOM -
TYPICAL AV
SCHEMATICS**

SHEET NUMBER: **AV716** REV: **1**

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**



HEARING ROOM - TYPICAL AV SYSTEM EQUIPMENT RACK AC POWER - AV SCHEMATICS

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISION:	AV SYSTEM BID DOCUMENTS
REV	DATE DESCRIPTION
1	10/14/2022 AV SYSTEM BID DOCUMENTS

SHEET TITLE:
HEARING ROOM - TYPICAL AV SCHEMATICS

SHEET NUMBER: AV718	REV: 1
-------------------------------	------------------

D:\Documents\2023\10 - JeffCo County, WI - 10/14/2022

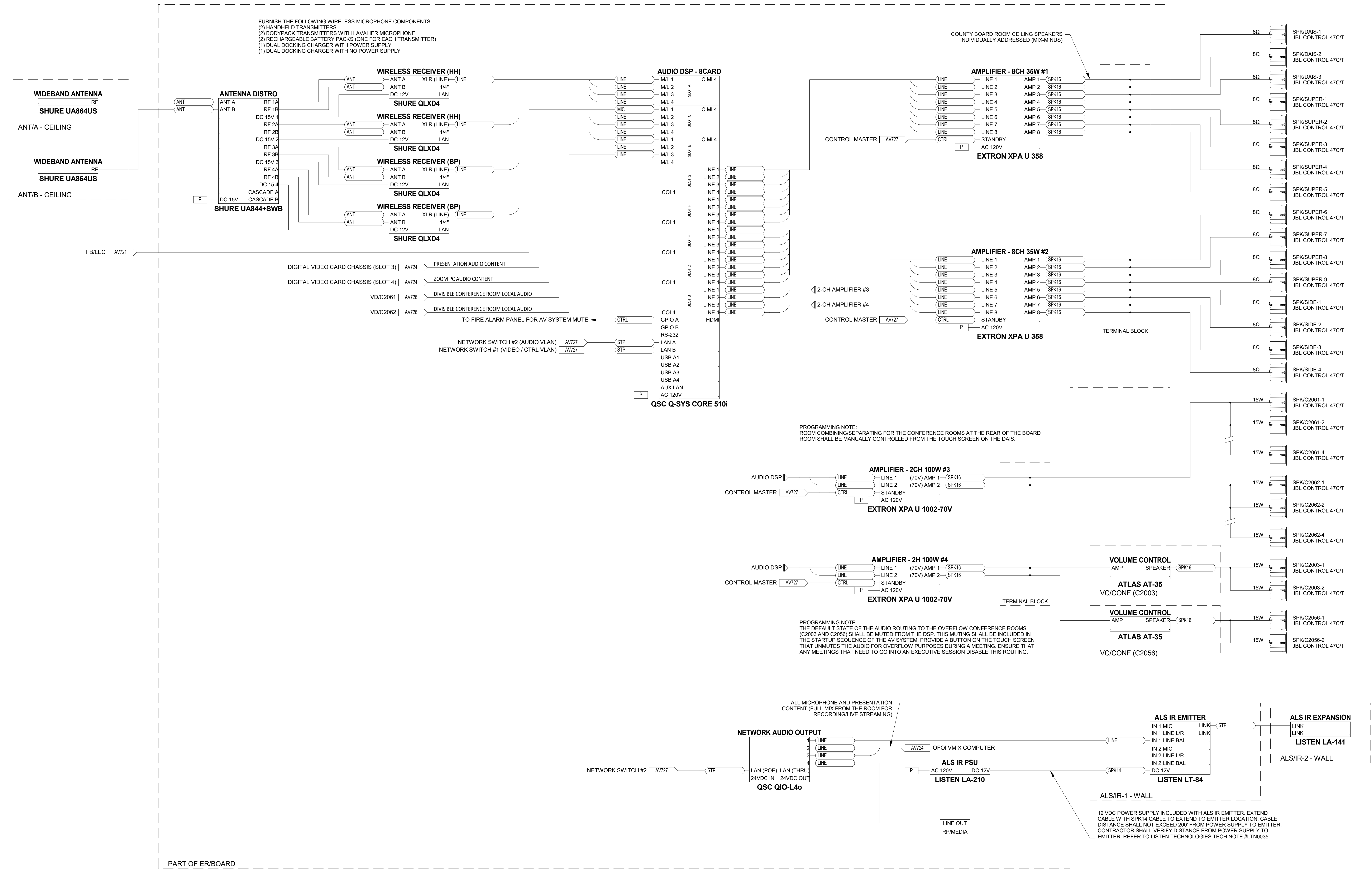
NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISION:	DESCRIPTION:
1	10/30/2022 AV SYSTEM BID DOCUMENTS

SHEET TITLE:
COUNTY BOARD ROOM C2063 - AV SCHEMATICS

SHEET NUMBER: AV722
REV: 1



NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

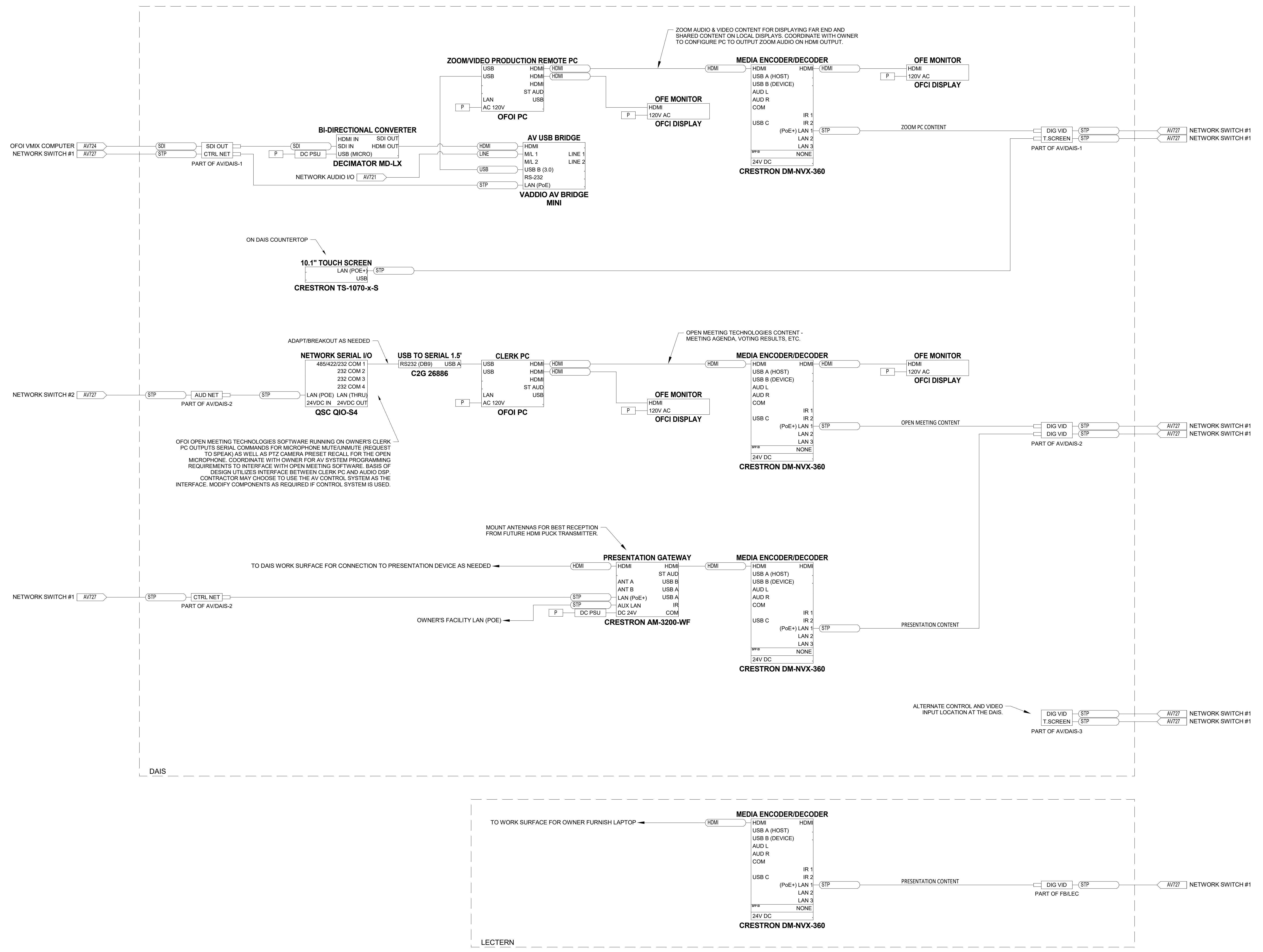
**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISION:	DESCRIPTION:
1	10/30/2022 AV SYSTEM BID DOCUMENTS

SHEET TITLE:
COUNTY BOARD ROOM C2063 - AV SCHEMATICS

SHEET NUMBER:
AV723

REV:
1



COUNTY BOARD ROOM C2063 - VIDEO SOURCES & INPUTS - AV SCHEMATICS

10/14/2022 11:28:08 C:\Documents\202311\00 - Jeffco County, WI -\AVS\2063.rvt

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	

REV	DATE	DESCRIPTION
1	10/30/2022	AV SYSTEM BID DOCUMENTS

SHEET TITLE:
COUNTY BOARD ROOM C2063 - AV SCHEMATICS

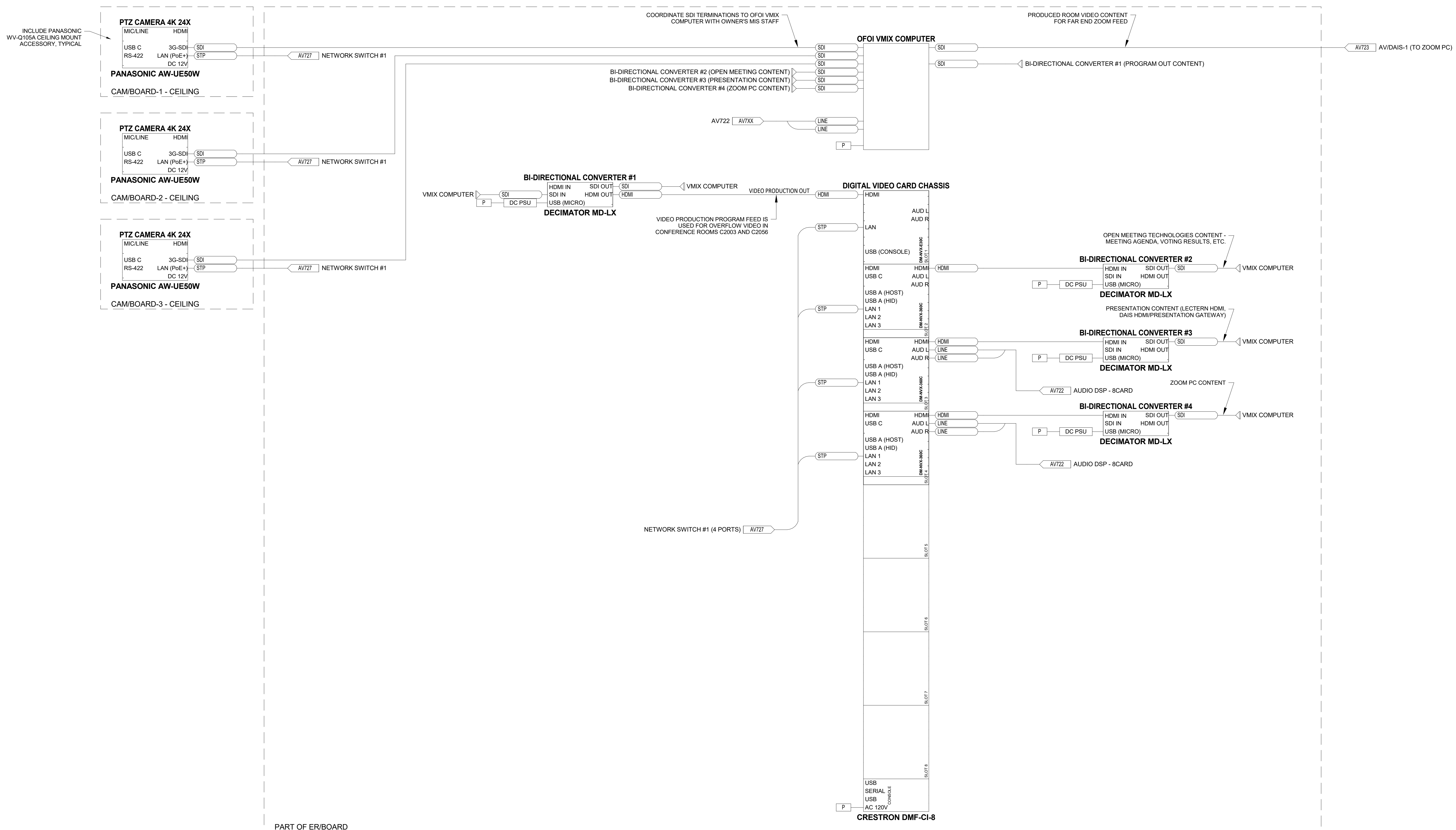
SHEET NUMBER: AV724	REV: 1
-------------------------------	------------------

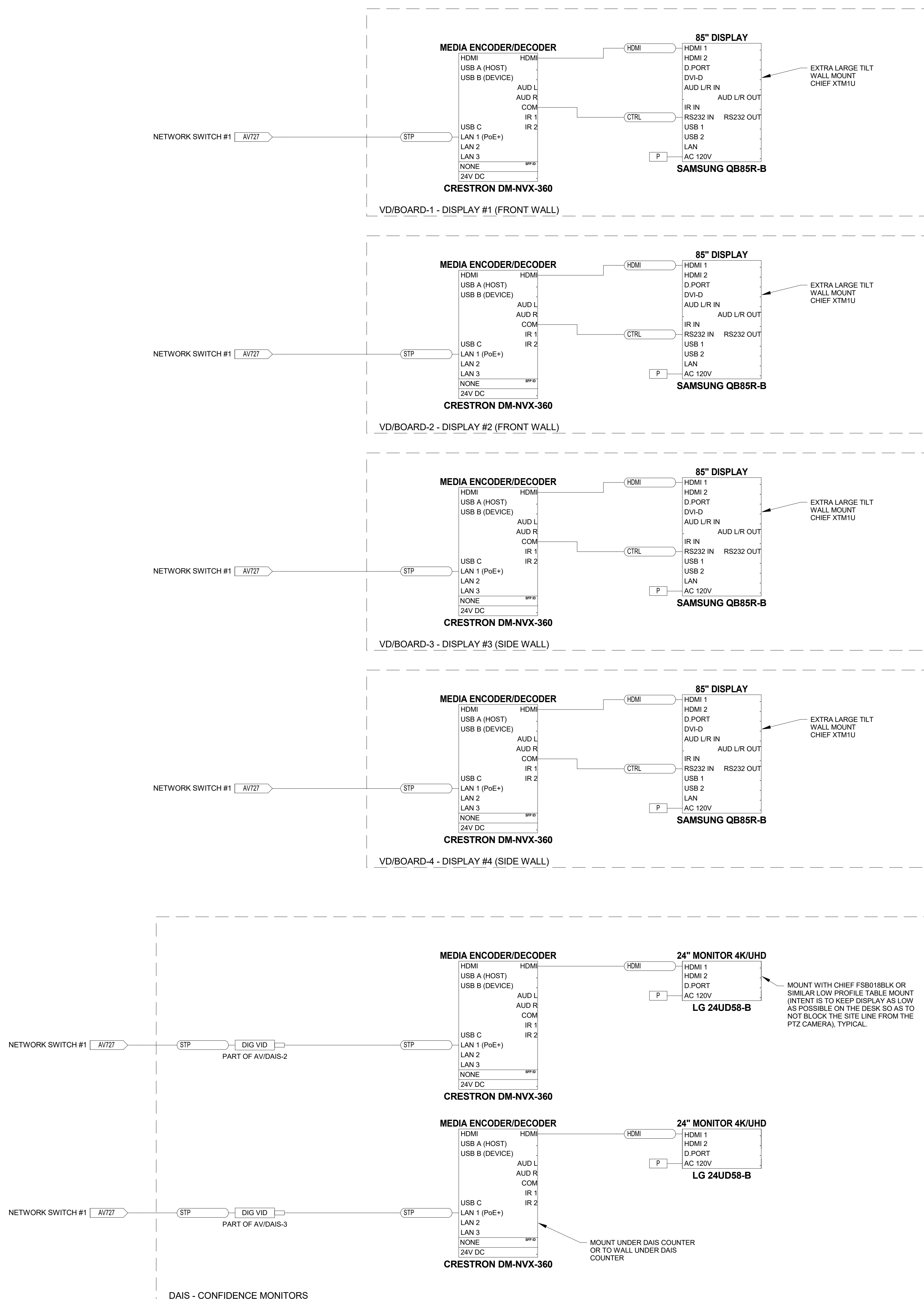
PROGRAMMING NOTE:
THE OWNER IS USING OPEN MEETING TECHNOLOGIES SOFTWARE FOR MEETING AGENDA, VOTING, MANAGEMENT, ETC. THIS SYSTEM INCLUDES A "REQUEST TO TALK" QUEUE. WHEN THE CHAIR RECOGNIZES A SUPERVISOR TO SPEAK AND SELECTS THEM FROM THE QUEUE, A SERIAL CONTROL SIGNAL WILL BE SENT FROM THE OPEN MEETING SOFTWARE RUNNING ON THE CLERK'S PC TO THE AV SYSTEM. THIS SERIAL SIGNAL SHALL BE USED TO MUTE ANY PREVIOUSLY OPEN SUPERVISOR MICROPHONE AND UNMUTE THE SELECTED SUPERVISOR'S MICROPHONE. IT SHALL ALSO TRIGGER A PTZ CAMERA PRESET WHICH ZOOMS IN ON THE SELECTED SUPERVISOR.

VIDEO SWITCHING BETWEEN CAMERA SOURCES IN THE OWNER'S VMIX SYSTEM WILL STILL BE MANUALLY CONTROLLED FROM THE OWNER'S CUSTOM USER INTERFACE ON THE WEB CONFERENCE PC AT THE DAIS. CREATE PRESETS IN BOTH FRONT CAMERAS FOR EACH SUPERVISOR SEAT. PROGRAM AV SYSTEM SUCH THAT WHEN A CONTROL SIGNAL IS RECEIVED FROM THE OPEN MEETING SYSTEM, THE AV SYSTEM WILL ALTERNATE BETWEEN FRONT CAMERAS FOR RECALLING THE PRESET. THE INTENT IS TO AVOID SEEING THE CAMERA MOVE IN THE PROGRAM CONTENT IN THE VMIX SYSTEM, WITH A SINGLE CAMERA ON THE DAIS, SEEING SOME CAMERA MOVEMENT BETWEEN INDIVIDUALS ON THE DAIS MAY BE UNAVOIDABLE.

IN ADDITION TO TIGHT SHOT PRESETS ON THE SUPERVISOR SEATING AND DAIS SEATING POSITIONS, ALSO PROVIDE WIDE ANGLE PRESETS OF THE SUPERVISOR SEATING AS WELL AS THE DAIS.

THE ABILITY SHALL BE MAINTAINED FOR THE OWNER'S VMIX CUSTOM USER INTERFACE TO OVERRIDE ANY CAMERA POSITIONS (DUAL CONTROL), OVERRIDE OF MICROPHONE MUTING/UNMUTING SHALL ALSO BE PROVIDED FROM THE TOUCH SCREEN AT THE DAIS.





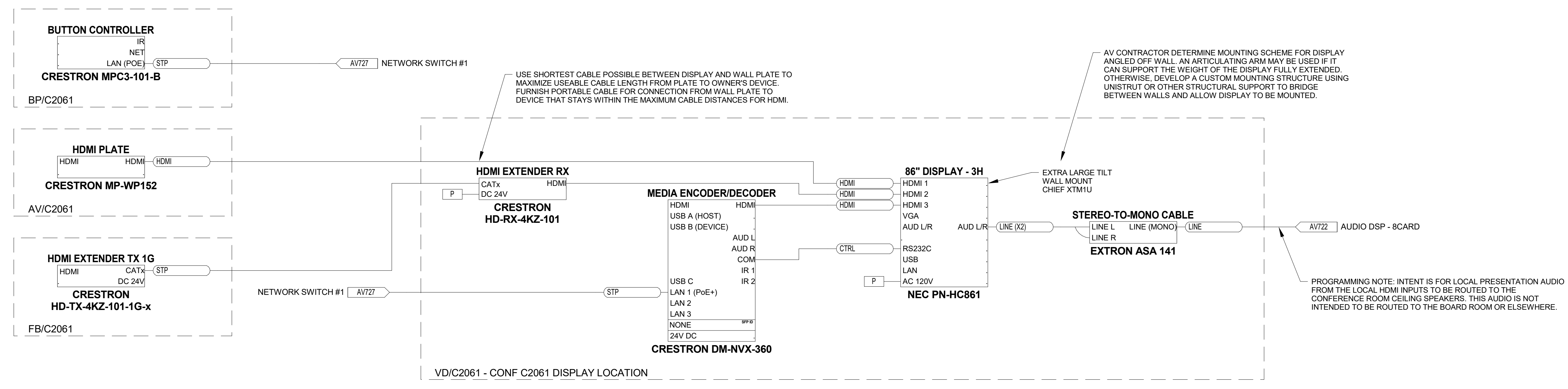
NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

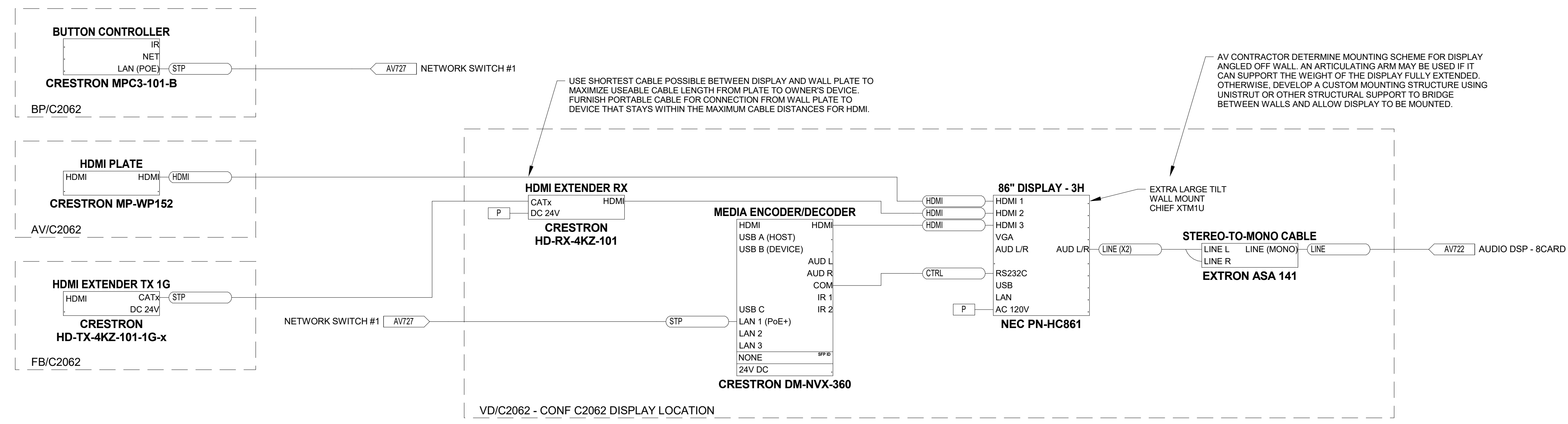
DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISION:	DATE: DESCRIPTION:
1	10/30/2022 AV SYSTEM BID DOCUMENTS

SHEET TITLE:
COUNTY BOARD ROOM C2063 - AV SCHEMATICS

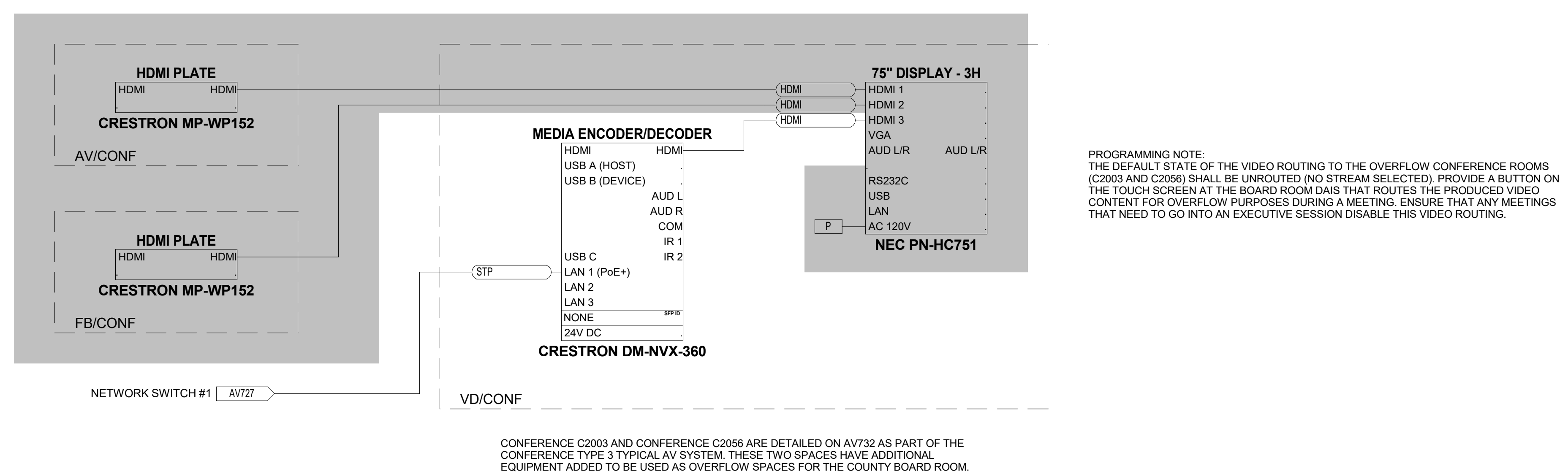
SHEET NUMBER: AV725	REV: 1
-------------------------------	------------------



COUNTY BOARD ROOM - CONFERENCE C2061 - AV SCHEMATICS



COUNTY BOARD ROOM - CONFERENCE C2062 - AV SCHEMATICS



COUNTY BOARD ROOM - CONFERENCE C2003 & C2056 OVERFLOW - TYPICAL AV SCHEMATICS

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISION:	DATE: DESCRIPTION:
1	10/30/2022 AV SYSTEM BID DOCUMENTS

SHEET TITLE:
COUNTY BOARD ROOM C2063 - AV SCHEMATICS

SHEET NUMBER: AV726	REV: 1
-------------------------------	------------------

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

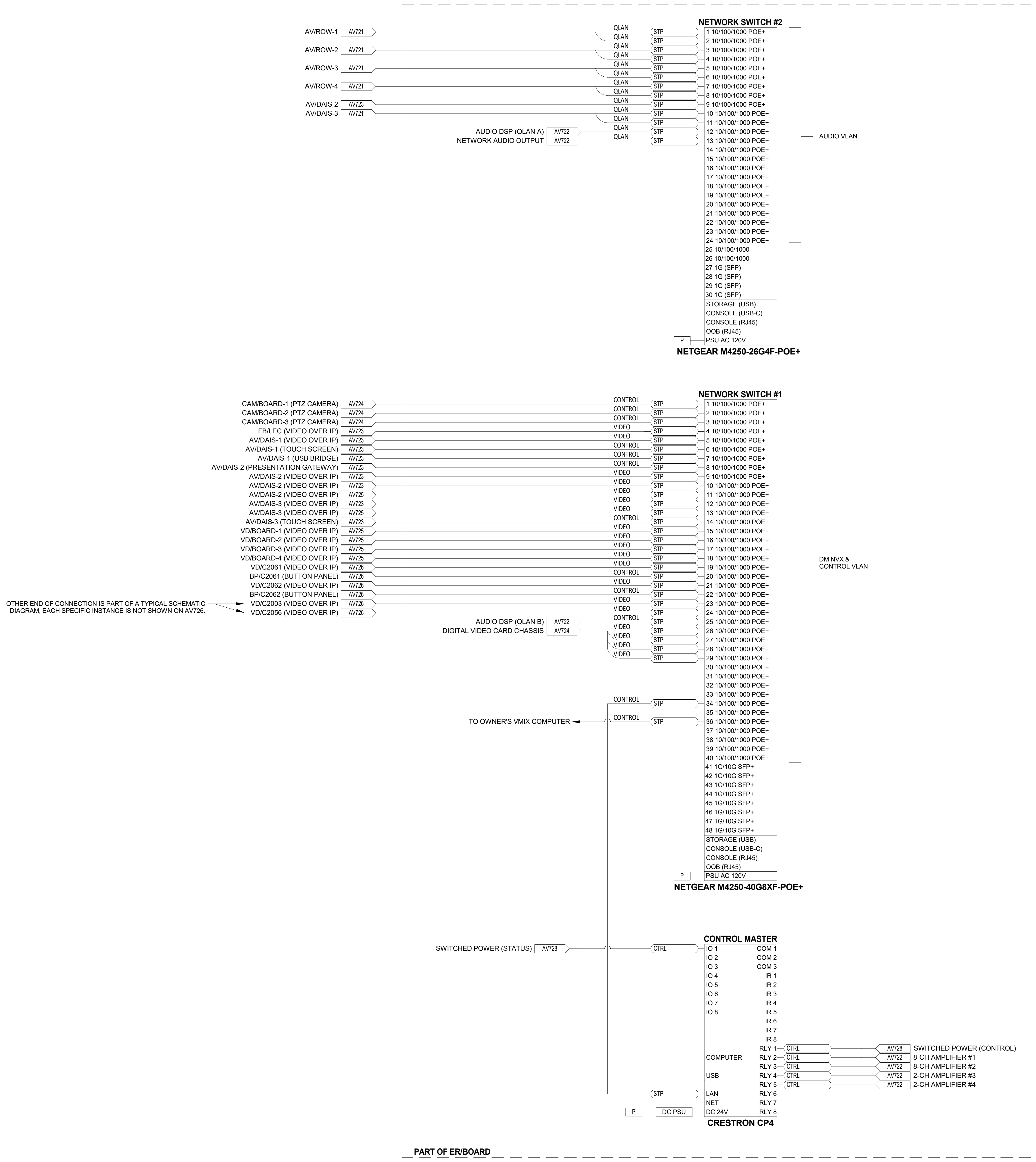
DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REV: 1	DATE: 10/14/2022
DESCRIPTION: AV SYSTEM BID DOCUMENTS	

SHEET TITLE:
COUNTY BOARD ROOM C2063 - AV SCHEMATICS

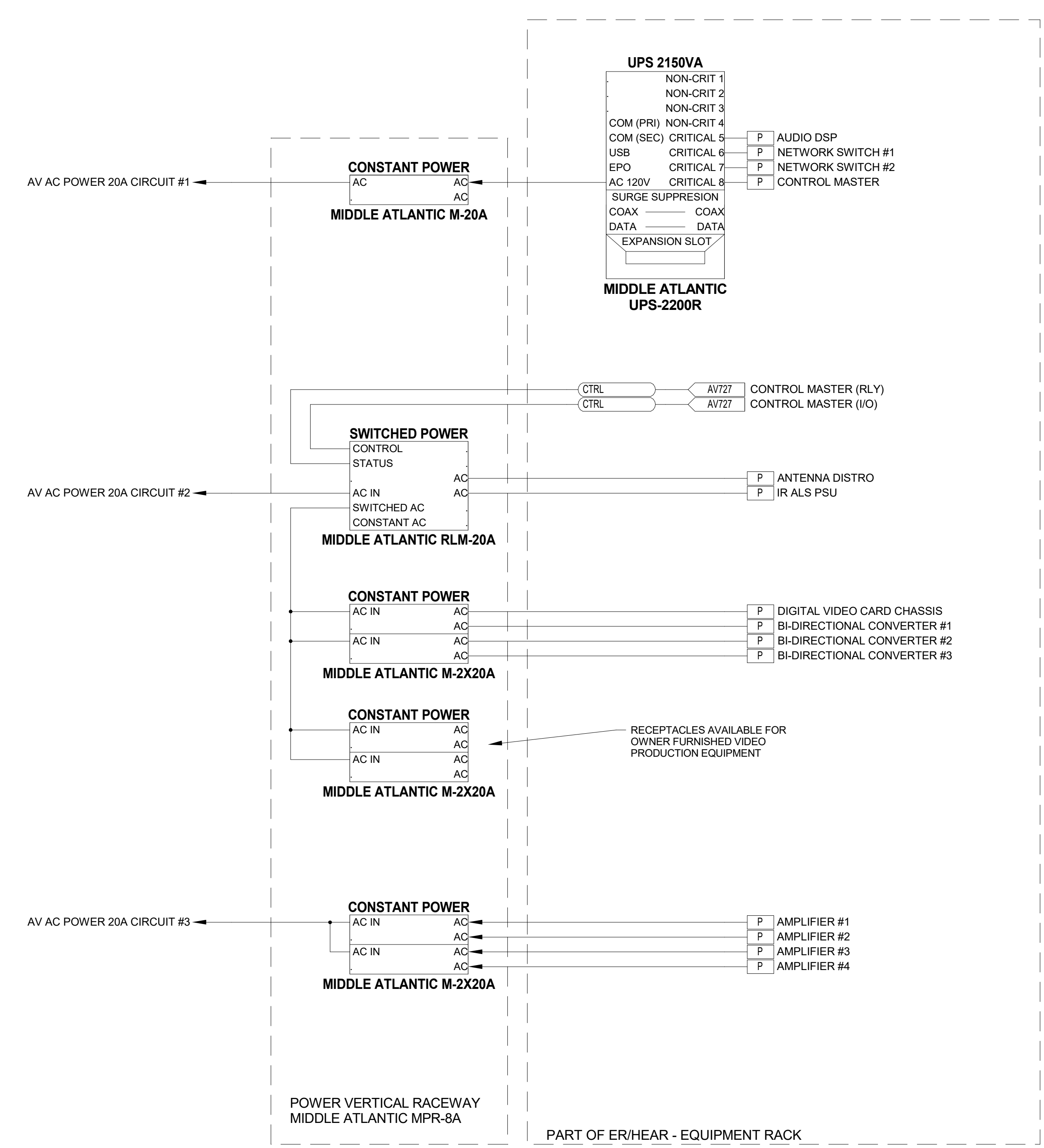
SHEET NUMBER: **AV727** REV: 1

P:\2022\11-25-22\0 - Documents\202311-06 - Jeffco County, WI - av\av3204.dwg

COUNTY BOARD ROOM C2063 - NETWORK & CONTROL - AV SCHEMATICS



NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS



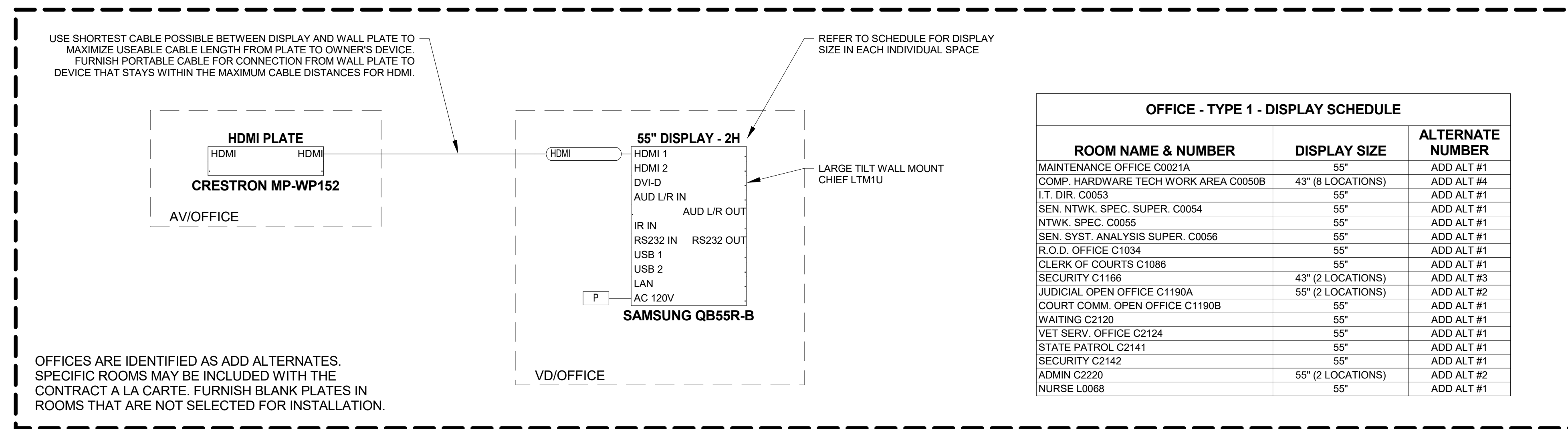
**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REV: 1	DATE: 10/14/2022
DESCRIPTION: AV SYSTEM BID DOCUMENTS	

SHEET TITLE:
COUNTY BOARD ROOM C2063 - AV SCHEMATICS

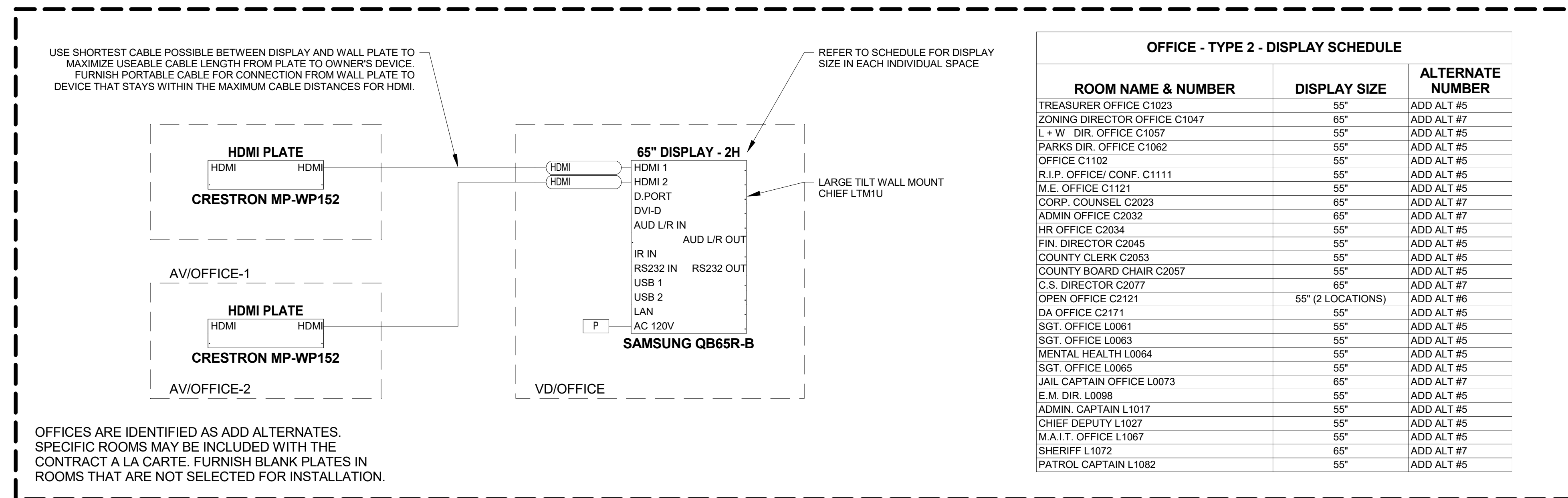
SHEET NUMBER: AV728	REV: 1
-------------------------------	------------------

P:\2022\11-25-24 - Documents\2022\11-25-24 - Jefferson County, WI - AV\AV728.rvt



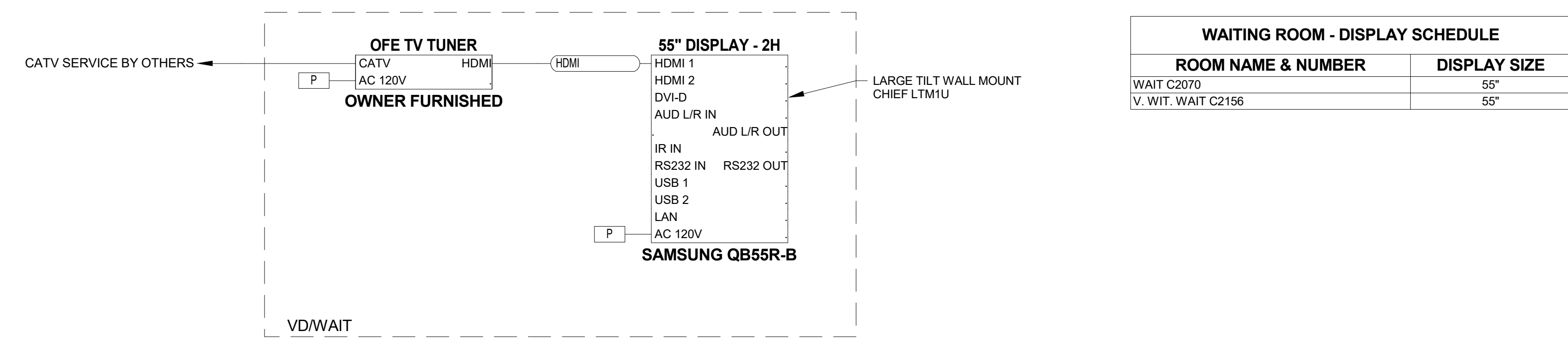
OFFICE - TYPE 1 - TYPICAL AV SCHEMATICS

TYPICAL MULTIPLE LOCATIONS - REFER TO SCHEDULE



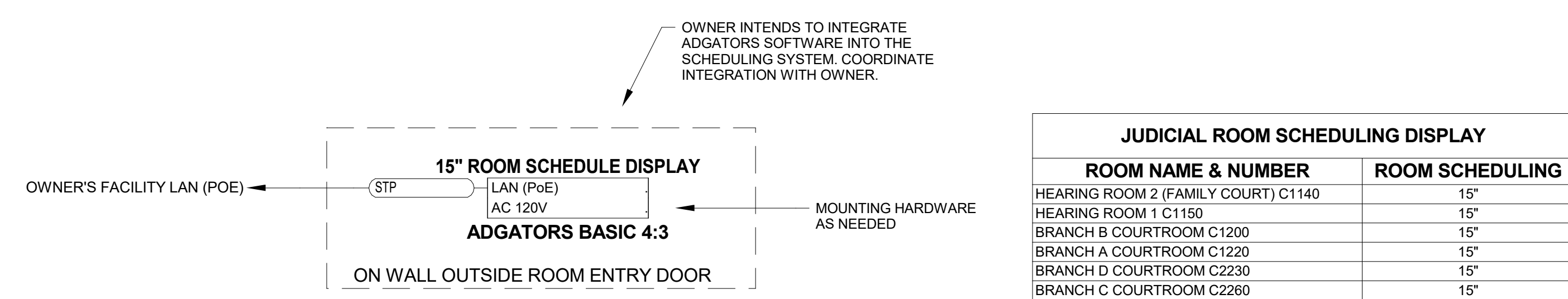
OFFICE - TYPE 2 - TYPICAL AV SCHEMATICS

TYPICAL MULTIPLE LOCATIONS - REFER TO SCHEDULE



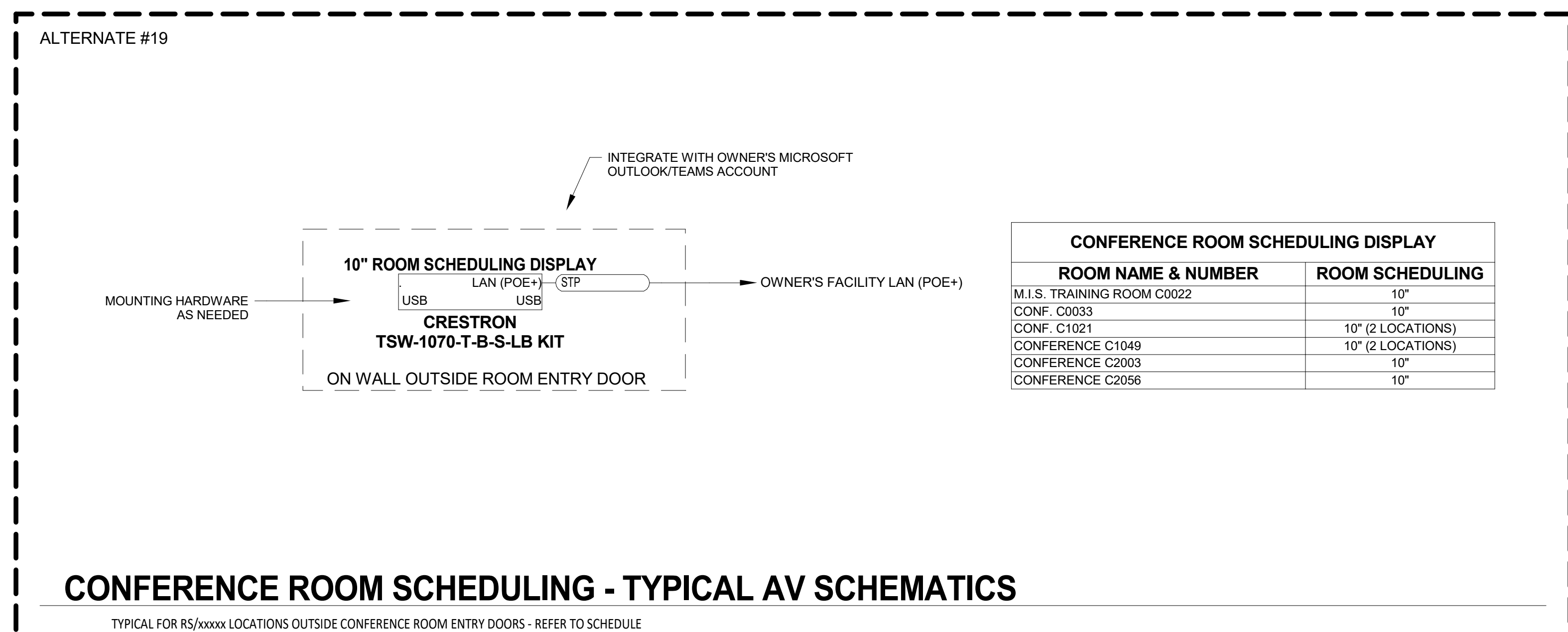
WAITING ROOM DISPLAY - TYPICAL AV SCHEMATICS

TYPICAL MULTIPLE LOCATIONS - REFER TO SCHEDULE



JUDICIAL SCHEDULING - TYPICAL AV SCHEMATICS

TYPICAL FOR RS/xxxx LOCATIONS OUTSIDE COURT ROOM AND HEARING ROOM ENTRY DOORS - REFER TO SCHEDULE



CONFERENCE ROOM SCHEDULING - TYPICAL AV SCHEMATICS

TYPICAL FOR RS/xxxx LOCATIONS OUTSIDE CONFERENCE ROOM ENTRY DOORS - REFER TO SCHEDULE

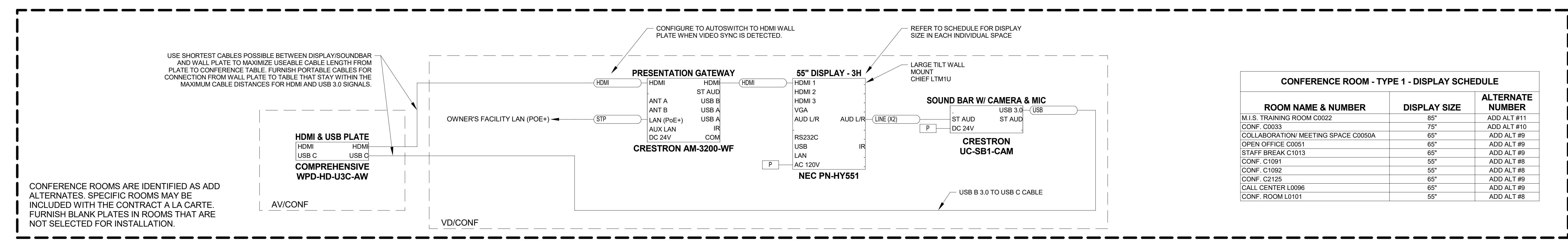
NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549

DESIGNER: EDK	PROJECT MANAGER: PBR	
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"	
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502	
DOCUMENT SET: AV / BID DOCUMENTS R1		
REVISIONS:		
REV: 1	DATE: 10/30/2022	DESCRIPTION: AV SYSTEM BID DOCUMENTS

SHEET TITLE:
OFFICE & ROOM SCHEDULING - TYPICAL AV SCHEMATICS

SHEET NUMBER: AV731

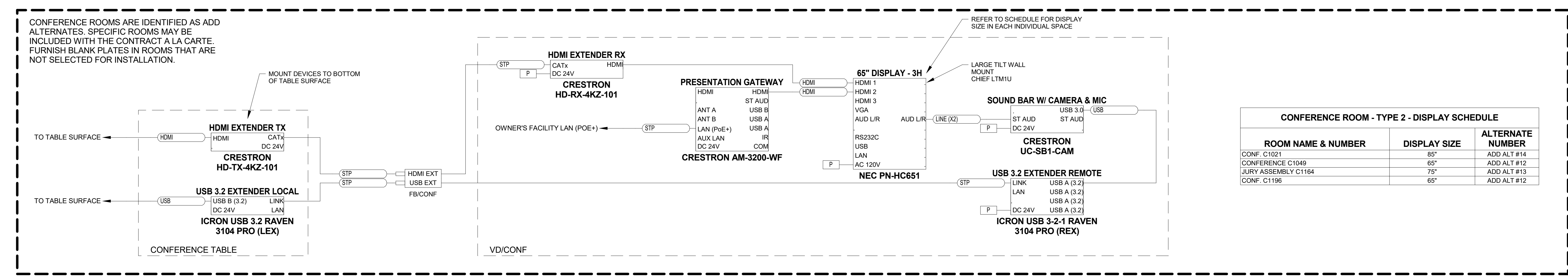


CONFERENCE ROOM - TYPE 1 - DISPLAY SCHEDULE

ROOM NAME & NUMBER	DISPLAY SIZE	ALTERNATE NUMBER
M.I.S. TRAINING ROOM C0022	85"	ADD ALT #11
CONF. C0033	75"	ADD ALT #10
COLLABORATION/ MEETING SPACE C0050A	65"	ADD ALT #9
OPEN OFFICE C0051	65"	ADD ALT #9
STAFF BREAK C1013	65"	ADD ALT #9
CONF. C1091	55"	ADD ALT #8
CONF. C1092	55"	ADD ALT #8
CONF. C2125	65"	ADD ALT #9
CALL CENTER L0096	65"	ADD ALT #9
CONF. ROOM L0101	55"	ADD ALT #8

CONFERENCE ROOM - TYPE 1 - TYPICAL AV SCHEMATICS

TYPICAL FOR 10 LOCATIONS.

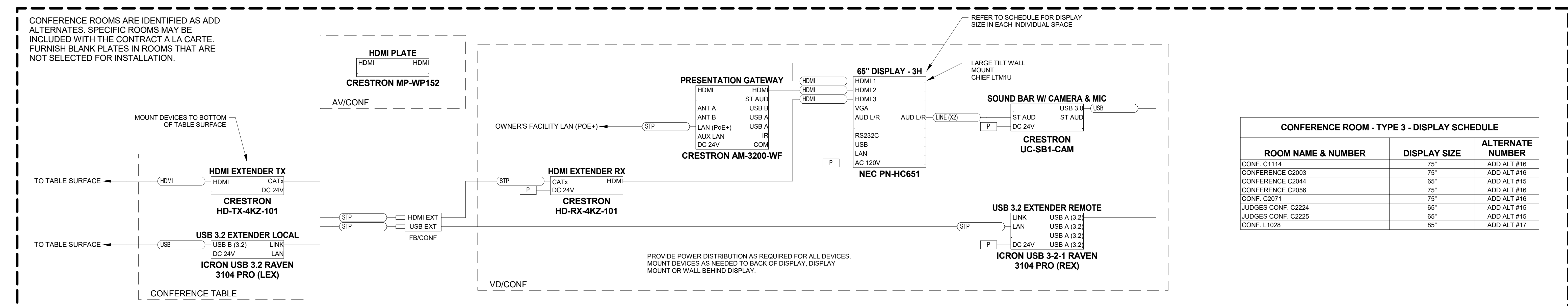


CONFERENCE ROOM - TYPE 2 - DISPLAY SCHEDULE

ROOM NAME & NUMBER	DISPLAY SIZE	ALTERNATE NUMBER
CONF. C1021	85"	ADD ALT #14
CONFERENCE C1049	65"	ADD ALT #12
JURY ASSEMBLY C1164	75"	ADD ALT #13
CONF. C1196	65"	ADD ALT #12

CONFERENCE ROOM - TYPE 2 - TYPICAL AV SCHEMATICS

TYPICAL FOR 4 LOCATIONS.

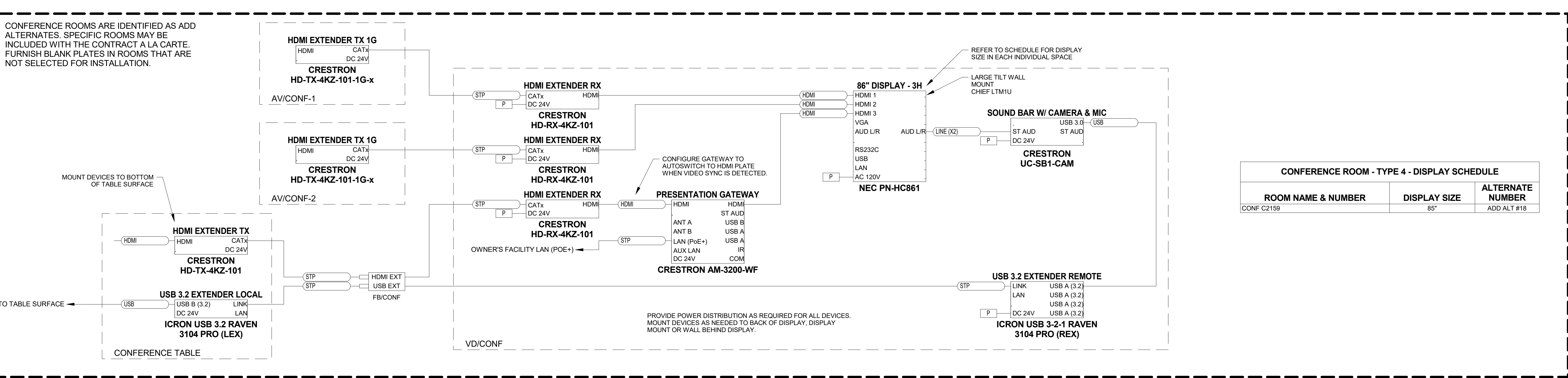


CONFERENCE ROOM - TYPE 3 - DISPLAY SCHEDULE

ROOM NAME & NUMBER	DISPLAY SIZE	ALTERNATE NUMBER
CONF. C1114	75"	ADD ALT #16
CONFERENCE C2003	75"	ADD ALT #16
CONFERENCE C2044	65"	ADD ALT #15
CONFERENCE C2056	75"	ADD ALT #16
CONF. C2071	75"	ADD ALT #16
JUDGES CONF. C2224	65"	ADD ALT #15
JUDGES CONF. C2225	65"	ADD ALT #15
CONF. L1028	85"	ADD ALT #17

CONFERENCE ROOM - TYPE 3 - TYPICAL AV SCHEMATICS

TYPICAL FOR 8 LOCATIONS.



CONFERENCE ROOM - TYPE 4 - DISPLAY SCHEDULE

ROOM NAME & NUMBER	DISPLAY SIZE	ALTERNATE NUMBER
CONF C2159	85"	ADD ALT #18

CONFERENCE ROOM - TYPE 4 - TYPICAL AV SCHEMATICS

TYPICAL FOR 1 LOCATION.

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 1/2" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISION:	AV SYSTEM BID DOCUMENTS
REV	DATE DESCRIPTION
1	10/30/2022

SHEET TITLE:
CONFERENCE ROOMS - TYPICAL AV SCHEMATICS

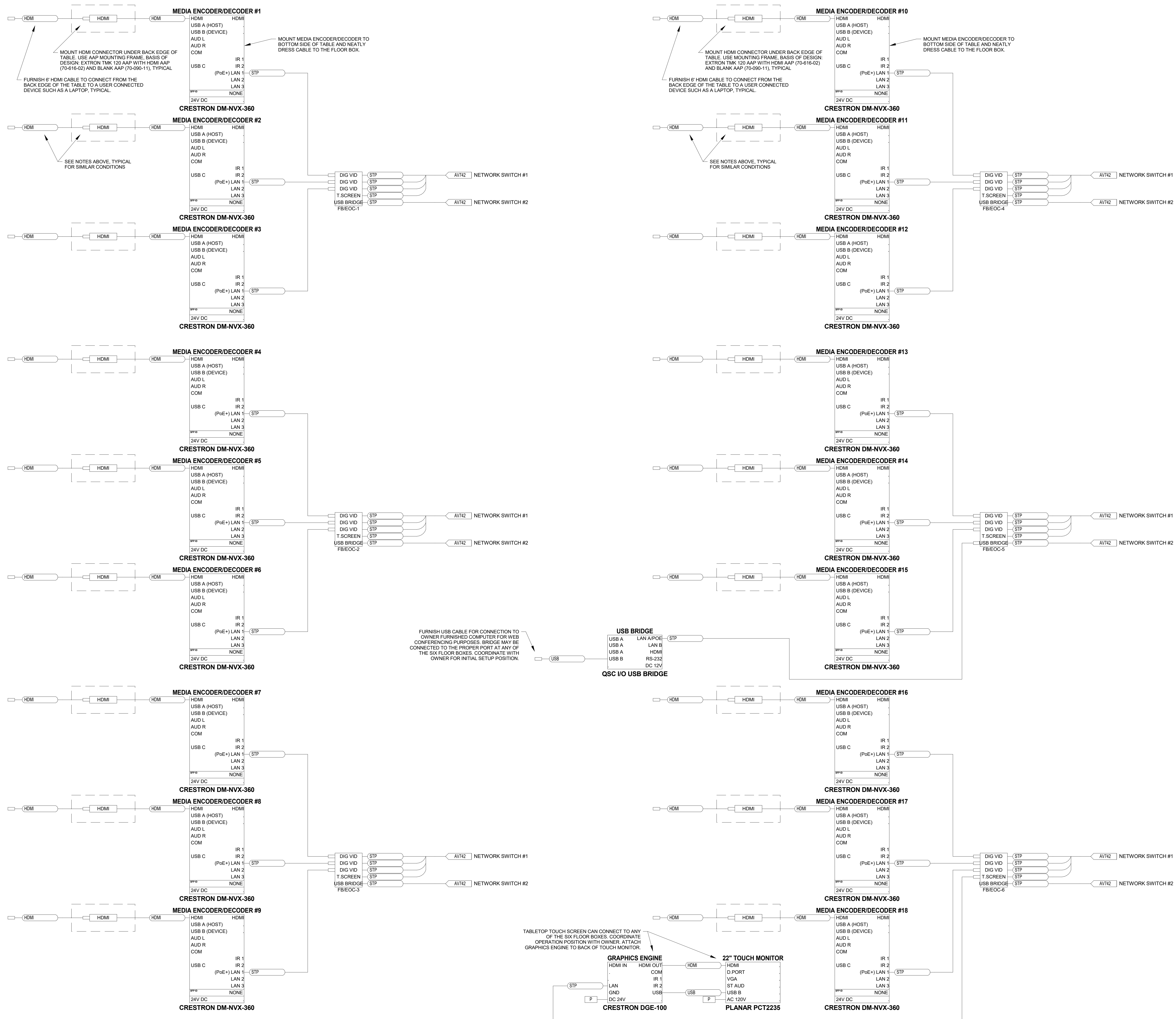
NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
 311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISION:	DATE: DESCRIPTION:
1	10/26/2022 AV SYSTEM BID DOCUMENTS

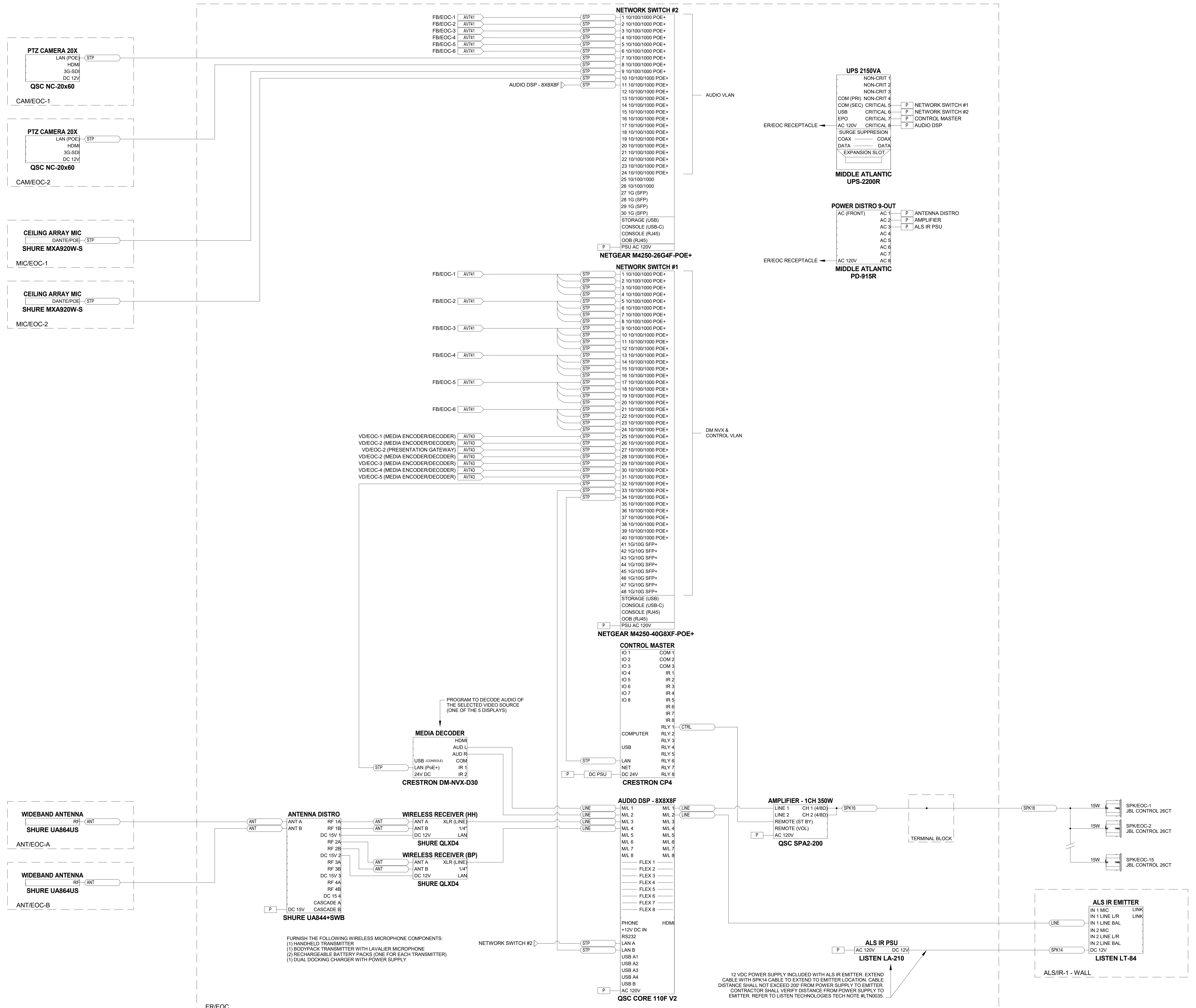
SHEET TITLE:
EMERGENCY OPERATIONS L0091 - AV SCHEMATICS

SHEET NUMBER: **AV741** REV: **1**



EMERGENCY OPERATIONS L0091 - VIDEO INPUTS - AV SCHEMATICS

10/14/2022 11:28:19 D:\Documents\20231010 - JeffCo County, WI - AV BID DOCUMENTS



EMERGENCY OPERATIONS L0091 - AV SCHEMATICS

FURNISH THE FOLLOWING WIRELESS MICROPHONE COMPONENTS:
 (1) HANDHELD TRANSMITTER
 (2) BODYPACK TRANSMITTER WITH LAVALIER MICROPHONE
 (3) RECHARGEABLE BATTERY PACKS (ONE FOR EACH TRANSMITTER)
 (4) DUAL DOCKING CHARGER WITH POWER SUPPLY

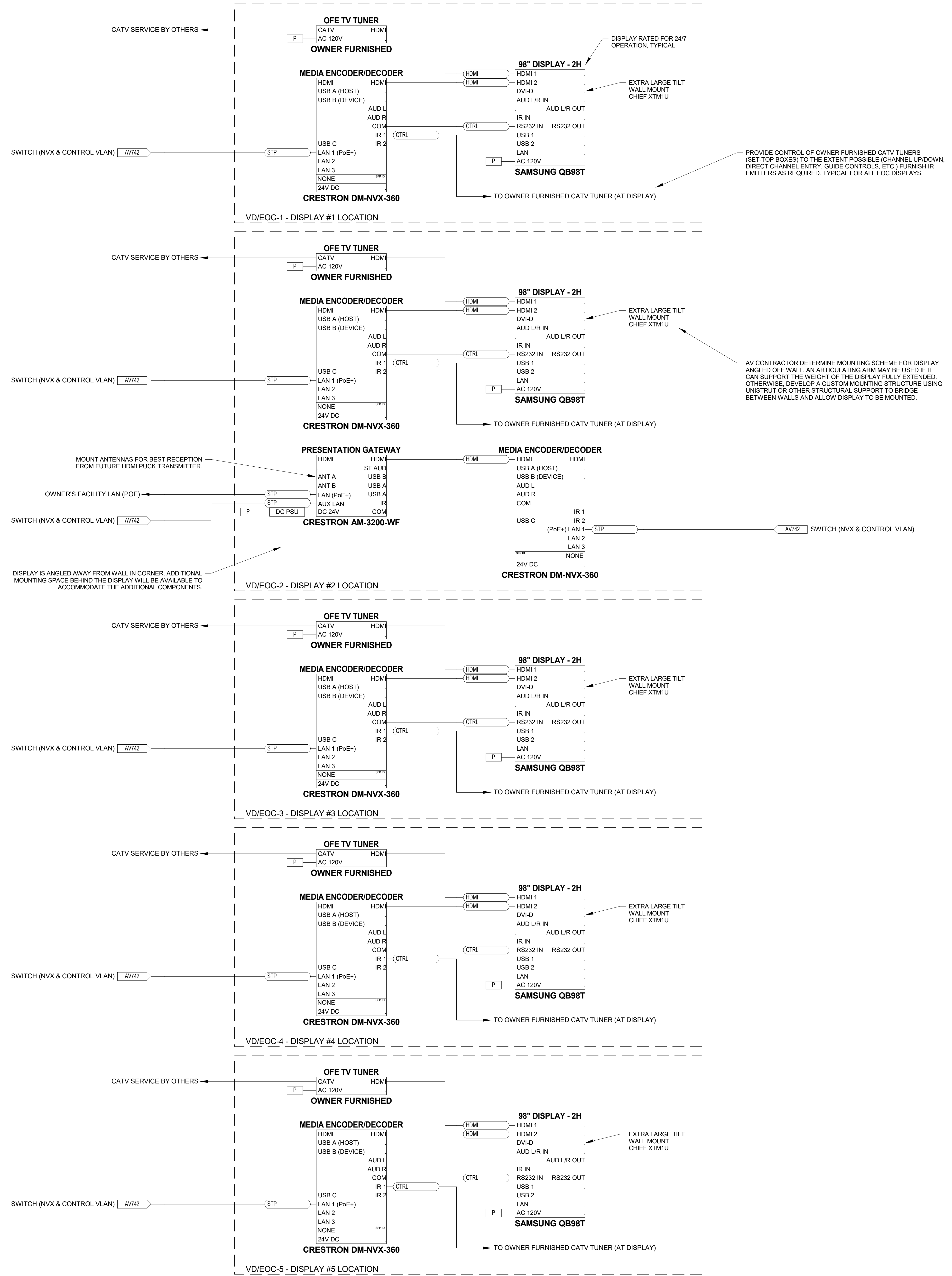
12 VDC POWER SUPPLY INCLUDED WITH ALS IR EMITTER. EXTEND CABLE WITH SPK14 CABLE TO EXTEND TO EMITTER LOCATION. CABLE DISTANCE SHALL NOT EXCEED 200' FROM POWER SUPPLY TO EMITTER. CONTRACTOR SHALL VERIFY DISTANCE FROM POWER SUPPLY TO EMITTER. REFER TO LISTEN TECHNOLOGIES TECH NOTE #LTN0035.

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISION: 1	DATE: 10/14/2022
DESCRIPTION: AV SYSTEM BID DOCUMENTS	

SHEET TITLE:
EMERGENCY OPERATIONS L0091 - AV SCHEMATICS

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**



EMERGENCY OPERATIONS L0091 - VIDEO OUTPUTS - AV SCHEMATICS

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REV: 1	DATE: 10/30/2022
DESCRIPTION: AV SYSTEM BID DOCUMENTS	
SHEET TITLE: EMERGENCY OPERATIONS L0091 - AV SCHEMATICS	
SHEET NUMBER: AV743	REV: 1

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

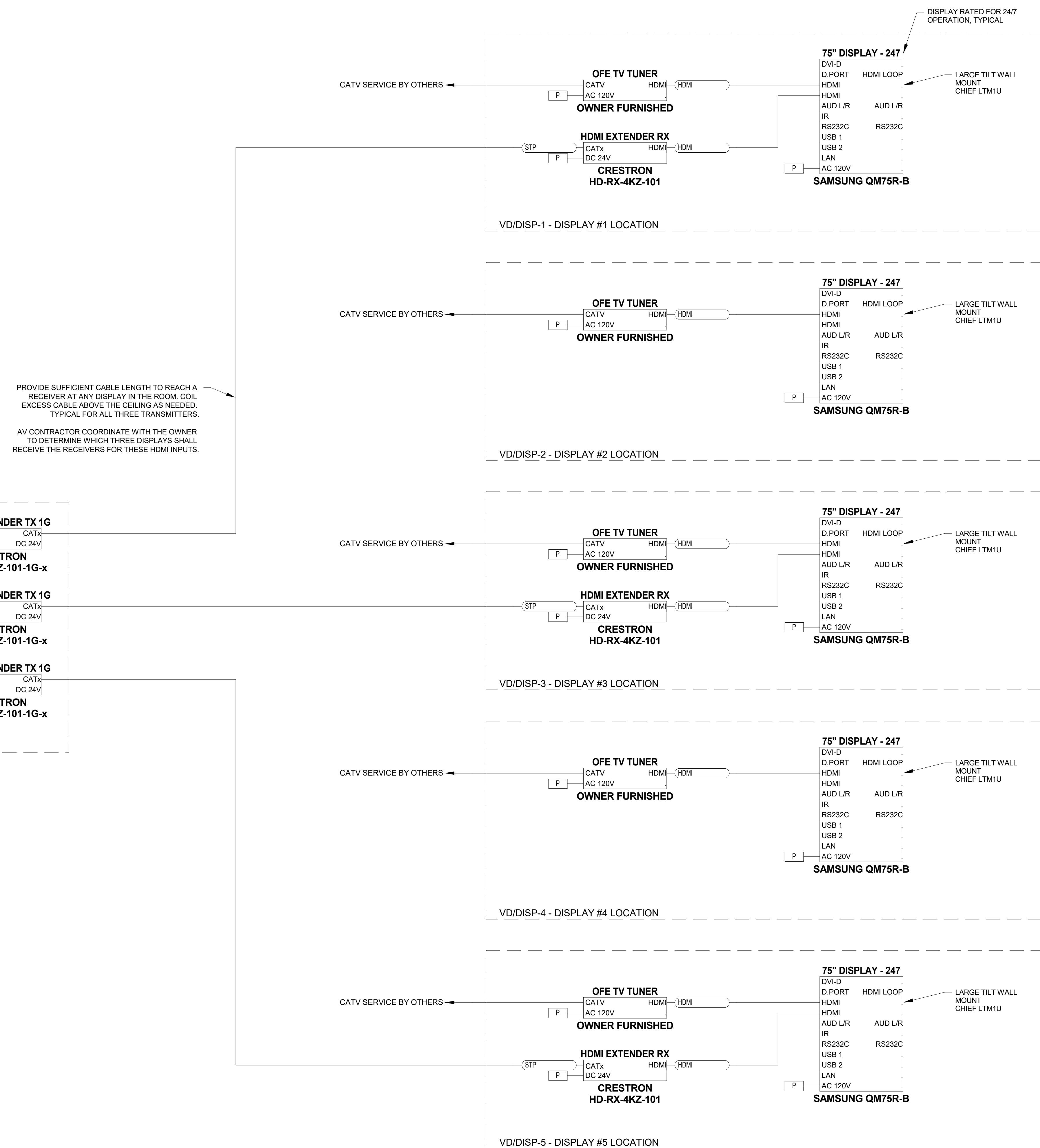
**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	

REV	DATE	DESCRIPTION
1	10/14/2022	AV SYSTEM BID DOCUMENTS

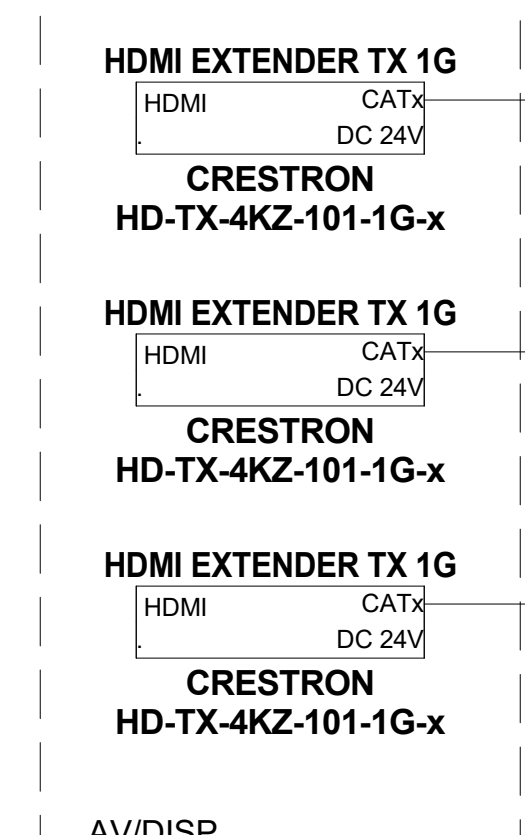
SHEET TITLE:
**DISPATCH L1078 -
AV SCHEMATICS**

SHEET NUMBER: AV744	REV: 1
-------------------------------	------------------



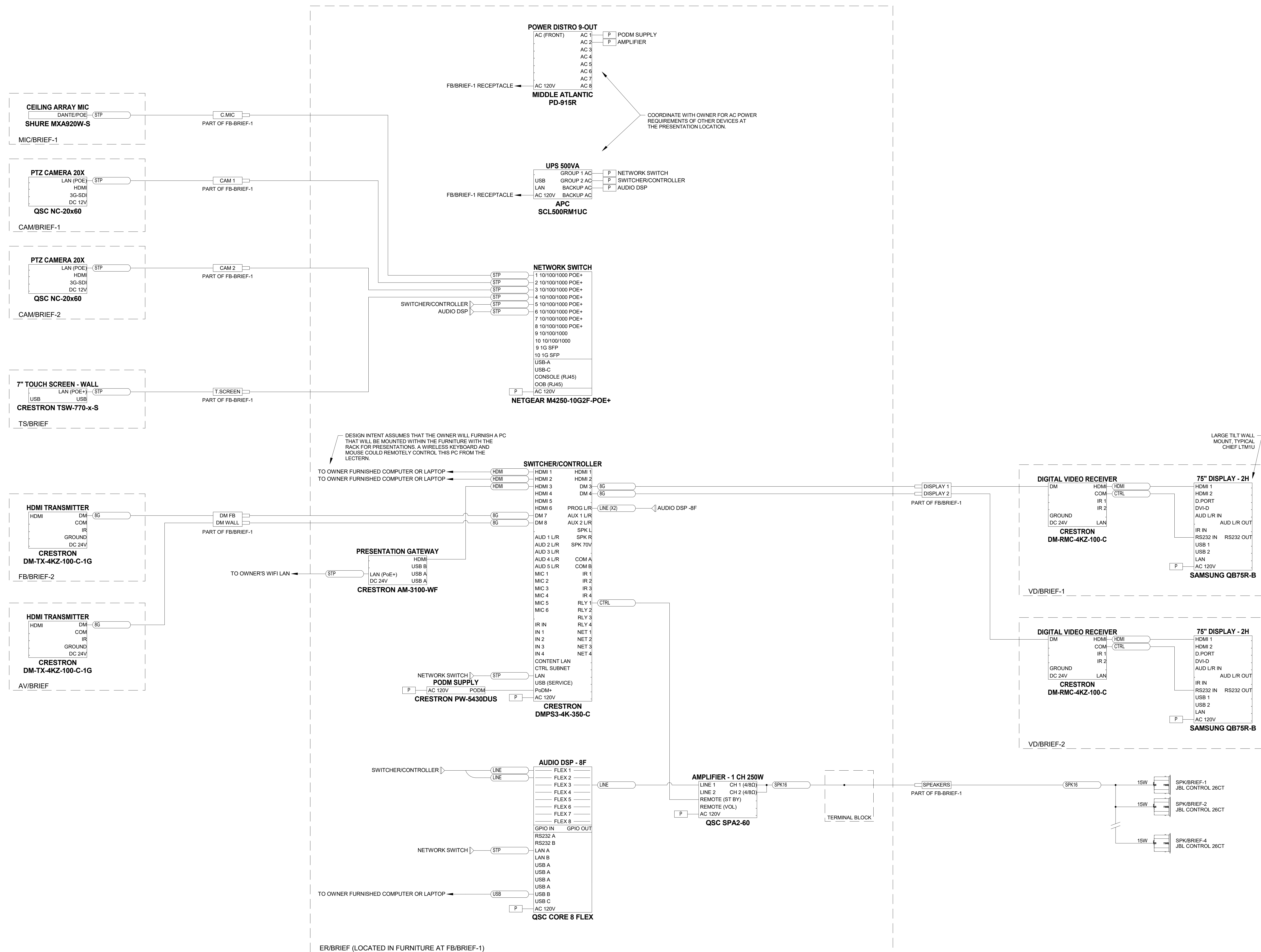
PROVIDE SUFFICIENT CABLE LENGTH TO REACH A RECEIVER AT ANY DISPLAY IN THE ROOM. COIL EXCESS CABLE ABOVE THE CEILING AS NEEDED. TYPICAL FOR ALL THREE TRANSMITTERS.

AV CONTRACTOR COORDINATE WITH THE OWNER TO DETERMINE WHICH THREE DISPLAYS SHALL RECEIVE THE RECEIVERS FOR THESE HDMI INPUTS.



NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

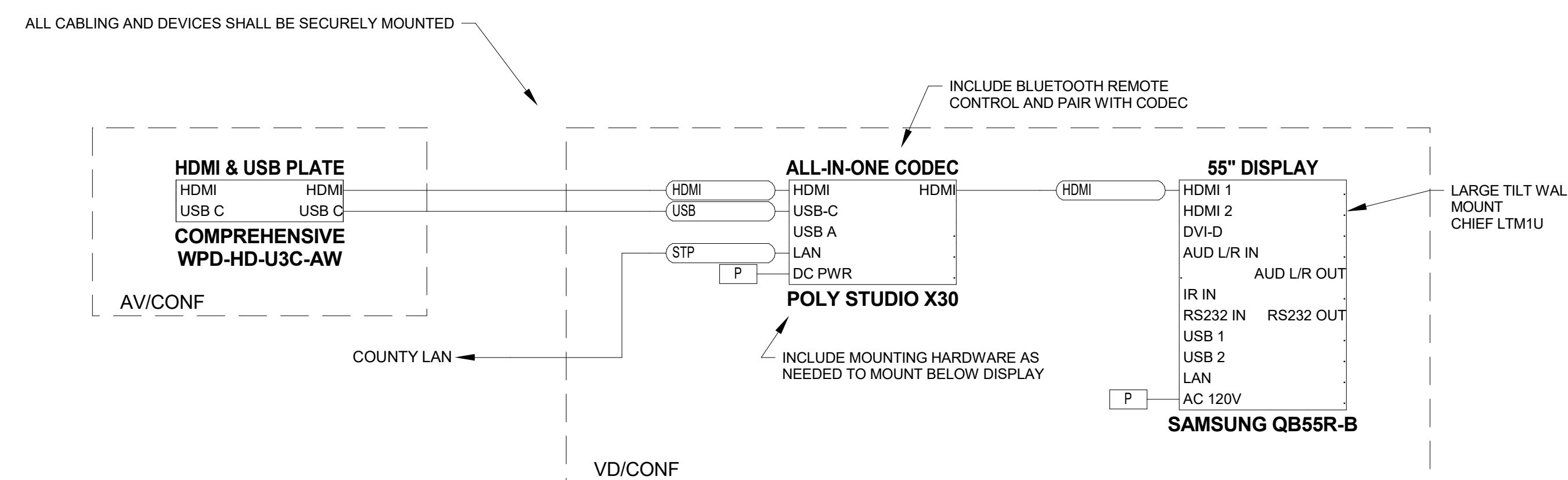
**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**



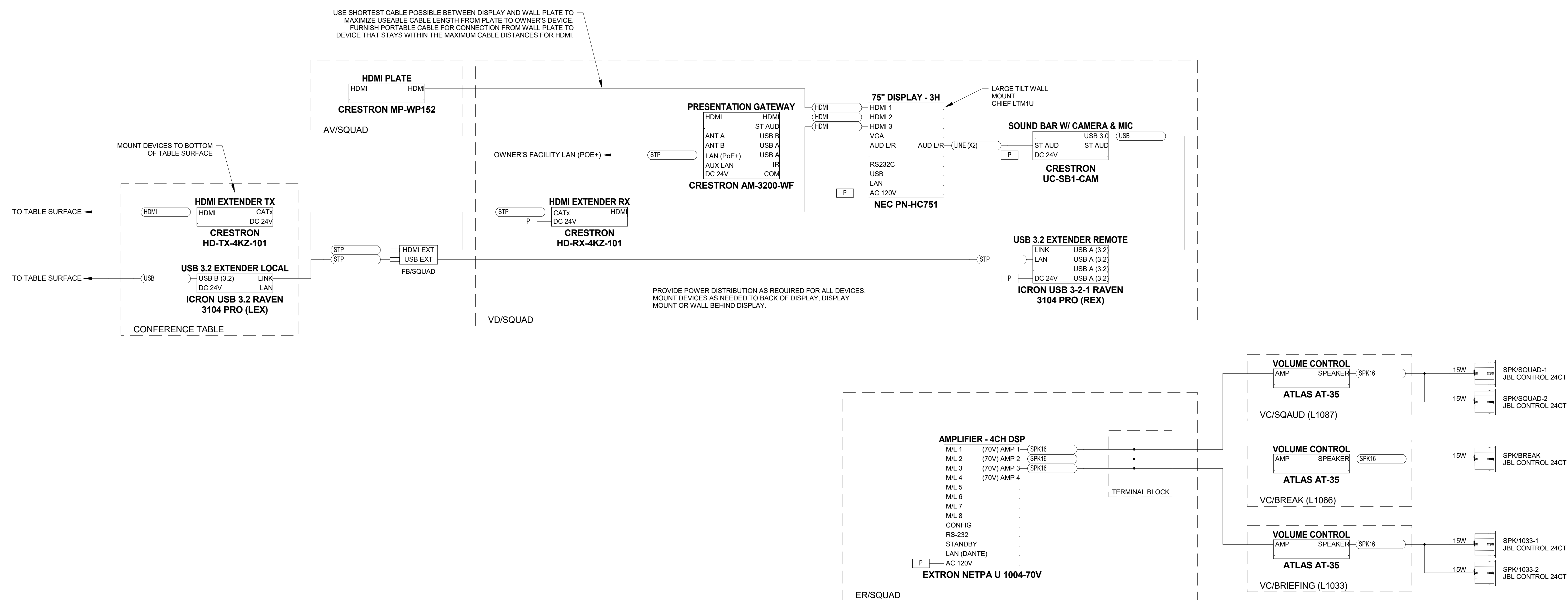
DESIGNER: EDK	PROJECT MANAGER: FDR
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REVISION:	DESCRIPTION:
1	10-20-2022 AV SYSTEM BID DOCUMENTS
SHEET TITLE: BRIEFING L1033 - AV SCHEMATICS	
SHEET NUMBER: AV745	REV: 1

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549



VIDEO CONF. (PROBATION PATROL) L0032 - AV SCHEMATICS



SQUAD ROOM L1087 - AV SCHEMATICS

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REV: 1	DATE: 10/30/2022
DESCRIPTION: AV SYSTEM BID DOCUMENTS	

SHEET TITLE:
**SQUAD ROOM
L1087 & VID CONF
L0032 - AV
SCHEMATICS**

SHEET NUMBER: **AV746** REV: **1**

STANDARD BOX SCHEDULE WITH DESCRIPTIONS - (BY ELECTRICAL CONTRACTOR)		
QUANTITY	BOX TYPE	ASSOCIATED BOX DESCRIPTION
33	AB-1	REFER TO DIV 26 SPEC AND ACTIVATION BOX SCHEDULE ON E510
85	AB-2	REFER TO DIV 26 SPEC AND ACTIVATION BOX SCHEDULE ON E510
10	AB-3	REFER TO DIV 26 SPEC AND ACTIVATION BOX SCHEDULE ON E510
6	AB-4	REFER TO DIV 26 SPEC AND ACTIVATION BOX SCHEDULE ON E510
33	AB-10	REFER TO DIV 26 SPEC AND ACTIVATION BOX SCHEDULE ON E510
4	AB-11	REFER TO DIV 26 SPEC AND ACTIVATION BOX SCHEDULE ON E510
2	WB-2	2-GANG BOX (STANDARD OR MASONRY DEPENDING ON WALL TYPE)
21	WB-4	4-GANG BOX (STANDARD OR MASONRY DEPENDING ON WALL TYPE)
3	WB-6B	6" X 6" X 6" JUNCTION BOX - NO KNOCKOUTS
104	WB-61	GARVIN 6" X 6" X 3-1/2" JUNCTION BOX W/ 1-GANG DEVICE COVER
96	WB-62	GARVIN 6" X 6" X 3-1/2" JUNCTION BOX W/ 2-GANG DEVICE COVER
1	WB-660	GARVIN 6" X 6" X 2-1/2" JUNCTION BOX W/ NO DEVICE COVER
20	WB-661	GARVIN 6" X 6" X 2-1/2" JUNCTION BOX W/ 1-GANG DEVICE COVER
10	WB-662	GARVIN 6" X 6" X 2-1/2" JUNCTION BOX W/ 2-GANG DEVICE COVER
1	WB-663	GARVIN 6" X 6" X 2-1/2" JUNCTION BOX W/ 3-GANG DEVICE COVER
4	WB-X3-GNG	FSR WB-X3-GNG W/ COVER
1	WB-X3-XLR	FSR WB-X3-XLR W/ COVER

SPECIALTY BOX SCHEDULE WITH DESCRIPTIONS - (BY AV CONTRACTOR)		
QUANTITY	BOX TYPE	ASSOCIATED BOX DESCRIPTION
NO SPECIALTY BOXES INCLUDED AS PART OF THIS PROJECT		

AV SYSTEM TYPE QUANTITIES	
QUANTITY	AV SYSTEM TYPE
4	BRANCH COURTROOM
1	BRIEFING ROOM
10	CONFERENCE ROOM - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
4	CONFERENCE ROOM - TYPE 2 (DISPLAY W/ (1) FLOOR INPUT)
8	CONFERENCE ROOM - TYPE 3 (DISPLAY W/ (1) WALL AND (1) FLOOR INPUT)
1	CONFERENCE ROOM - TYPE 4 (DISPLAY W/ (2) WALL AND (1) FLOOR INPUT)
1	COUNTY BOARD ROOM
1	DISPATCH
1	EMERGENCY OPERATIONS
2	HEARING ROOM
1	JURY ASSEMBLY / TRAINING
17	OFFICE - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
27	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
1	SQUAD ROOM
1	VIDEO CONFERENCE ROOM
2	WAITING ROOM

AV POWER REQUIREMENTS - TYPICAL COURTROOM					
DEVICE ID	CIRCUIT QTY	RECEPTACLE TYPE	RECEPTACLE QTY PER CCT	LOCATION	NOTES
AV/DELIB	1	DUPLEX	1	ADJACENT	
AV/GAL	1	DUPLEX	1	ADJACENT	
AV/MEDIA	1	DUPLEX	1	ADJACENT	
ER/CCAP	4	DUPLEX	1	ADJACENT	
ER/COURT	3	DUPLEX	1	ADJACENT	COORDINATE ACTUAL POWER REQUIREMENTS WITH CCAP. QUANTITY SHOWN FOR BIDDING PURPOSES. ONE RACK PER FLOOR SERVES THE COURTROOMS AND HEARING ROOMS. FOR HINGED RACKS, TERMINATED TO DUPLEX RECEPTACLES CENTERED IN CUTOUT IN RACK BACKPAN, FOR FREE-STANDING RACKS, TERMINATED TO VERTICAL RACKWAY WITHIN EQUIPMENT RACK. SEE AV501 AND AV502
FB/REP	1	DUPLEX	2	IN AV BOX	
FB/WELL-1	1	DUPLEX	2	IN AV BOX	
FB/WELL-2	1	DUPLEX	2	IN AV BOX	
FB/WELL-3	1	DUPLEX	2	IN AV BOX	
FB/WELL-4	1	DUPLEX	2	IN AV BOX	
VD/COURT-1	1	DUPLEX	1	IN AV BOX	
VD/COURT-2	1	DUPLEX	1	IN AV BOX	
VD/COURT-3	1	DUPLEX	1	IN AV BOX	
VD/DELIB	1	DUPLEX	1	IN AV BOX	

AV POWER REQUIREMENTS - TYPICAL OFFICE 2 (DISPLAY W/ (2) WALL INPUTS)					
DEVICE ID	CIRCUIT QTY	RECEPTACLE TYPE	RECEPTACLE QTY PER CCT	LOCATION	NOTES
VD/CONF	1	DUPLEX	1	IN AV BOX	
VD/OFFICE	1	DUPLEX	1	IN AV BOX	

AV POWER REQUIREMENTS - DISPATCH					
DEVICE ID	CIRCUIT QTY	RECEPTACLE TYPE	RECEPTACLE QTY PER CCT	LOCATION	NOTES
VD/DISP-1	1	DUPLEX	1	IN AV BOX	
VD/DISP-2	1	DUPLEX	1	IN AV BOX	
VD/DISP-3	1	DUPLEX	1	IN AV BOX	
VD/DISP-4	1	DUPLEX	1	IN AV BOX	
VD/DISP-5	1	DUPLEX	1	IN AV BOX	

AV POWER REQUIREMENTS - TYPICAL CONFERENCE ROOM 1 (DISPLAY W/ (1) WALL INPUT)					
DEVICE ID	CIRCUIT QTY	RECEPTACLE TYPE	RECEPTACLE QTY PER CCT	LOCATION	NOTES
VD/CONF	1	DUPLEX	1	IN AV BOX	

AV POWER REQUIREMENTS - TYPICAL HEARING ROOM					
DEVICE ID	CIRCUIT QTY	RECEPTACLE TYPE	RECEPTACLE QTY PER CCT	LOCATION	NOTES
ER/HEAR	3	DUPLEX	1	ADJACENT	TERMINATED TO DUPLEX RECEPTACLES CENTERED IN CUTOUT IN RACK BACKPAN. SEE AV502
FB/WELL-1	1	DUPLEX	2	IN AV BOX	
FB/WELL-2	1	DUPLEX	2	IN AV BOX	
FB/WELL-3	1	DUPLEX	2	IN AV BOX	
FB/WELL-4	1	DUPLEX	2	IN AV BOX	
VD/HEAR-1	1	DUPLEX	1	IN AV BOX	
VD/HEAR-2	1	DUPLEX	1	IN AV BOX	

AV POWER REQUIREMENTS - TYPICAL CONFERENCE ROOM 2 (DISPLAY W/ (1) FLOOR INPUT)					
DEVICE ID	CIRCUIT QTY	RECEPTACLE TYPE	RECEPTACLE QTY PER CCT	LOCATION	NOTES
FB/CONF	1	DUPLEX	1	IN AV BOX	
VD/CONF	1	DUPLEX	1	IN AV BOX	

AV POWER REQUIREMENTS - TYPICAL CONFERENCE ROOM 3 - (DISPLAY W/ (1) WALL AND (1) FLOOR INPUT)					
DEVICE ID	CIRCUIT QTY	RECEPTACLE TYPE	RECEPTACLE QTY PER CCT	LOCATION	NOTES
FB/CONF	1	DUPLEX	2	IN AV BOX	
VD/CONF	1	DUPLEX	1	IN AV BOX	

AV POWER REQUIREMENTS - COUNTY BOARD ROOM					
DEVICE ID	CIRCUIT QTY	RECEPTACLE TYPE	RECEPTACLE QTY PER CCT	LOCATION	NOTES
AV/C2061	1	DUPLEX	1	ADJACENT	
ER/BOARD	3	HARDWIRED	1	IN AV BOX	TERMINATED TO VERTICAL RACEWAY IN RACK
FB/C2061	1	DUPLEX	2	IN AV BOX	
FB/C2062	1	DUPLEX	2	IN AV BOX	
FB/LEC	1	DUPLEX	2	IN AV BOX	
VD/BOARD-1	1	DUPLEX	1	IN AV BOX	
VD/BOARD-2	1	DUPLEX	1	IN AV BOX	
VD/BOARD-3	1	DUPLEX	1	IN AV BOX	
VD/BOARD-4	1	DUPLEX	1	IN AV BOX	
VD/C2061	1	DUPLEX	1	IN AV BOX	
VD/C2062	1	DUPLEX	1	IN AV BOX	

AV POWER REQUIREMENTS - TYPICAL CONFERENCE ROOM 4 (DISPLAY W/ (2) WALL AND (1) FLOOR INPUT)					
DEVICE ID	CIRCUIT QTY	RECEPTACLE TYPE	RECEPTACLE QTY PER CCT	LOCATION	NOTES
FB/CONF	1	DUPLEX	2	IN AV BOX	
VD/CONF	1	DUPLEX	1	IN AV BOX	

AV POWER REQUIREMENTS - BRIEFING					
DEVICE ID	CIRCUIT QTY	RECEPTACLE TYPE	RECEPTACLE QTY PER CCT	LOCATION	NOTES
FB/BRIEF-1	1	DUPLEX	1	IN AV BOX	
FB/BRIEF-2	1	DUPLEX	1	IN AV BOX	
VD/BRIEF-1	1	DUPLEX	1	IN AV BOX	
VD/BRIEF-2	1	DUPLEX	1	IN AV BOX	

AV POWER REQUIREMENTS - EMERGENCY OPERATIONS					
DEVICE ID	CIRCUIT QTY	RECEPTACLE TYPE	RECEPTACLE QTY PER CCT	LOCATION	NOTES
ER/EOC	2	DUPLEX	1	IN AV BOX	
FB/EOC-1	1	DUPLEX	1	IN AV BOX	
FB/EOC-2	1	DUPLEX	1	IN AV BOX	
FB/EOC-3	1	DUPLEX	1	IN AV BOX	
FB/EOC-4	1	DUPLEX	1	IN AV BOX	
FB/EOC-5	1	DUPLEX	1	IN AV BOX	
FB/EOC-6	1	DUPLEX	1	IN AV BOX	
VD/EOC-1	1	DUPLEX	1	IN AV BOX	
VD/EOC-2	1	DUPLEX	1	IN AV BOX	
VD/EOC-3	1	DUPLEX	1	IN AV BOX	
VD/EOC-4	1	DUPLEX	1	IN AV BOX	
VD/EOC-5	1	DUPLEX	1	IN AV BOX	

AV POWER REQUIREMENTS - JURY ASSEMBLY/TRANING ROOM					
DEVICE ID	CIRCUIT QTY	RECEPTACLE TYPE	RECEPTACLE QTY PER CCT	LOCATION	NOTES
ER/JURY	3		1	IN AV BOX	TERMINATED TO VERTICAL RACEWAY IN RACK
VD/JURY-1	1	DUPLEX	1	IN AV BOX	
VD/JURY-2	1	DUPLEX	1	IN AV BOX	

AV POWER REQUIREMENTS - SQUAD ROOM					
DEVICE ID	CIRCUIT QTY	RECEPTACLE TYPE	RECEPTACLE QTY PER CCT	LOCATION	NOTES
ER/SQUAD	1	DUPLEX	1	IN AV BOX	
VD/SQUAD	1	DUPLEX	1	IN AV BOX	

AV POWER REQUIREMENTS - TYPICAL OFFICE 1 (DISPLAY W/ (1) WALL INPUT)					
DEVICE ID	CIRCUIT QTY	RECEPTACLE TYPE	RECEPTACLE QTY PER CCT	LOCATION	NOTES
VD/OFFICE	1	DUPLEX	1	IN AV BOX	

NOTE: AC POWER RECEPTACLES SHOWN IN THE SCHEDULE ABOVE ARE PRIMARILY SHOWN FOR BOXES THAT ARE SHARED BETWEEN MULTIPLE DISCIPLINES (ELECTRICAL, TELECOM, AV) SUCH AS FLOOR BOXES AND DISPLAY BACKBOXES. THE POWER LOCATIONS ARE IDENTIFIED ON THESE AV DRAWINGS FOR REFERENCE. REFER TO E-SERIES POWER DRAWINGS FOR DETAILS. DO NOT DUPLICATE BOXES OR QUANTITIES. FOR AV/xxxxx WALL BOX INPUT LOCATIONS SHOWN ON PLANS, IT IS ASSUMED THAT DEVICE CONNECTING TO THESE LOCATIONS WILL UTILIZE ADJACENT CONVENIENCE POWER IF A DEVICE SUCH AS A LAPTOP NEEDS SUPPLEMENTAL POWER FOR PRESENTATIONS.

DESIGNER: EDK PROJECT MANAGER: PBR

SCALE: DRAWING SET SIZE: 30" X 42"

SHEET ISSUE DATE: 10/14/2022 PROJECT NUMBER: 1502

DOCUMENT SET: AV BID DOCUMENTS R1

REVISION: REV DATE DESCRIPTION

1 07-20-2022 AV INFRASTRUCTURE SET

1 09-30-2022 AV SYSTEM BID DOCUMENTS

SHEET TITLE:
**AV POWER & BOX
SCHEDULES**

SHEET NUMBER: **AV901** REV: **1**

AV SYSTEM TYPE QUANTITIES	
QUANTITY	AV SYSTEM TYPE
4	BRANCH COURTROOM
1	BRIEFING ROOM
10	CONFERENCE ROOM - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
4	CONFERENCE ROOM - TYPE 2 (DISPLAY W/ (1) FLOOR INPUT)
8	CONFERENCE ROOM - TYPE 3 (DISPLAY W/ (1) WALL AND (1) FLOOR INPUT)
1	CONFERENCE ROOM - TYPE 4 (DISPLAY W/ (2) WALL AND (1) FLOOR INPUT)
1	COUNTY BOARD ROOM
1	DISPATCH
1	EMERGENCY OPERATIONS
2	HEARING ROOM
1	JURY ASSEMBLY / TRAINING
17	OFFICE - TYPE 1 (DISPLAY W/ (1) WALL INPUT)
27	OFFICE - TYPE 2 (DISPLAY W/ (2) WALL INPUTS)
1	SQUAD ROOM
1	VIDEO CONFERENCE ROOM
2	WAITING ROOM

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

AV DATA DROP REQUIREMENTS - TYPICAL COURTROOM			
DEVICE ID	DROP QTY	LOCATION	NOTES
ER/CCAP	12	ADJACENT	COORDINATE ACTUAL REQUIREMENTS WITH CCAP. QUANTITY SHOWN FOR BIDDING PURPOSES
ER/COURT	6	ADJACENT	TERMINATED WITHIN RACK OR ON WALL BOX ABOVE RACK
FB/REP	2	IN AV BOX	
FB/WELL-1	2	IN AV BOX	
FB/WELL-2	2	IN AV BOX	
FB/WELL-3	2	IN AV BOX	
FB/WELL-4	2	IN AV BOX	
VD/COURT-1	2	IN AV BOX	
VD/COURT-2	2	IN AV BOX	
VD/COURT-3	2	IN AV BOX	
VD/DELIB	2	IN AV BOX	

AV DATA DROP REQUIREMENTS - TYPICAL HEARING ROOM			
DEVICE ID	DROP QTY	LOCATION	NOTES
ER/HEAR	6	IN AV BOX	TERMINATED WITHIN RACK OR ON WALL BOX ABOVE RACK
FB/WELL-1	2	IN AV BOX	
FB/WELL-2	2	IN AV BOX	
FB/WELL-3	2	IN AV BOX	
FB/WELL-4	2	IN AV BOX	
VD/HEAR-1	2	IN AV BOX	
VD/HEAR-2	2	IN AV BOX	

AV DATA DROP REQUIREMENTS - COUNTY BOARD ROOM			
DEVICE ID	DROP QTY	LOCATION	NOTES
ER/BOARD	4	IN AV BOX	TERMINATED WITHIN RACK OR ON WALL BOX ABOVE RACK
FB/C2061	2	IN AV BOX	
FB/C2062	2	IN AV BOX	
FB/LEC	2	IN AV BOX	
VD/BOARD-1	1	IN AV BOX	
VD/BOARD-2	1	IN AV BOX	
VD/BOARD-3	1	IN AV BOX	
VD/BOARD-4	1	IN AV BOX	
VD/C2061	2	IN AV BOX	
VD/C2062	2	IN AV BOX	

AV DATA DROP REQUIREMENTS - EMERGENCY OPERATIONS			
DEVICE ID	DROP QTY	LOCATION	NOTES
ER/EOC	2	IN AV BOX	
FB/EOC-1	12	IN AV BOX	
FB/EOC-2	12	IN AV BOX	
FB/EOC-3	12	IN AV BOX	
FB/EOC-4	12	IN AV BOX	
FB/EOC-5	12	IN AV BOX	
FB/EOC-6	12	IN AV BOX	
VD/EOC-1	2	IN AV BOX	
VD/EOC-2	2	IN AV BOX	
VD/EOC-3	2	IN AV BOX	
VD/EOC-4	2	IN AV BOX	
VD/EOC-5	2	IN AV BOX	

AV DATA DROP REQUIREMENTS - TYPICAL OFFICE 1 (DISPLAY W/ (1) WALL INPUT)			
DEVICE ID	DROP QTY	LOCATION	NOTES
VD/OFFICE	2	IN AV BOX	

AV DATA DROP REQUIREMENTS - TYPICAL OFFICE 2 (DISPLAY W/ (2) WALL INPUTS)			
DEVICE ID	DROP QTY	LOCATION	NOTES
VD/CONF	2	IN AV BOX	
VD/OFFICE	2	IN AV BOX	

AV DATA DROP REQUIREMENTS - DISPATCH			
DEVICE ID	DROP QTY	LOCATION	NOTES
VD/DISP-1	2	IN AV BOX	
VD/DISP-2	2	IN AV BOX	
VD/DISP-3	2	IN AV BOX	
VD/DISP-4	2	IN AV BOX	
VD/DISP-5	2	IN AV BOX	

AV DATA DROP REQUIREMENTS - TYPICAL CONFERENCE ROOM 1 (DISPLAY W/ (1) WALL INPUT)			
DEVICE ID	DROP QTY	LOCATION	NOTES
VD/CONF	2	IN AV BOX	

AV DATA DROP REQUIREMENTS - TYPICAL CONFERENCE ROOM 2 (DISPLAY W/ (1) FLOOR INPUT)			
DEVICE ID	DROP QTY	LOCATION	NOTES
FB/CONF	2	IN AV BOX	
VD/CONF	2	IN AV BOX	

AV DATA DROP REQUIREMENTS - TYPICAL CONFERENCE ROOM 3 - (DISPLAY W/ (1) WALL AND (1) FLOOR INPUT)			
DEVICE ID	DROP QTY	LOCATION	NOTES
FB/CONF	2	IN AV BOX	
VD/CONF	2	IN AV BOX	

AV DATA DROP REQUIREMENTS - TYPICAL CONFERENCE ROOM 4 (DISPLAY W/ (2) WALL AND (1) FLOOR INPUT)			
DEVICE ID	DROP QTY	LOCATION	NOTES
FB/CONF	2	IN AV BOX	
VD/CONF	2	IN AV BOX	

AV DATA DROP REQUIREMENTS - BRIEFING ROOM			
DEVICE ID	DROP QTY	LOCATION	NOTES
FB/BRIEF-1	2	IN AV BOX	
FB/BRIEF-2	2	IN AV BOX	
VD/BRIEF-1	2	IN AV BOX	
VD/BRIEF-2	2	IN AV BOX	

AV DATA DROP REQUIREMENTS - JURY ASSEMBLY / TRAINING			
DEVICE ID	DROP QTY	LOCATION	NOTES
ER/JURY	2	ADJACENT	TERMINATED WITHIN RACK OR ON WALL BOX ABOVE RACK
VD/JURY-1	2	IN AV BOX	
VD/JURY-2	2	IN AV BOX	

AV DATA DROP REQUIREMENTS - SQUAD ROOM			
DEVICE ID	DROP QTY	LOCATION	NOTES
ER/SQUAD	2	ADJACENT	
VD/SQUAD	2	IN AV BOX	

NOTE: AV DATA DROPS SHOWN IN THE SCHEDULE ABOVE ARE PRIMARILY SHOWN FOR BOXES THAT ARE SHARED BETWEEN MULTIPLE DISCIPLINES (ELECTRICAL, TELECOM, AV) SUCH AS FLOOR BOXES AND DISPLAY BACKBOXES. THE DATA LOCATIONS ARE IDENTIFIED ON THESE AV DRAWINGS FOR REFERENCE. REFER TO T-SERIES TECHNOLOGY DRAWINGS FOR DETAILS. DO NOT DUPLICATE BOXES OR QUANTITIES.

DESIGNER: EDK	PROJECT MANAGER: FBR	
SCALE:	DRAWING SET SIZE: 30" X 42"	
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502	
DOCUMENT SET: AV BID DOCUMENTS R1		
REV#	DATE	DESCRIPTION
1	07-20-2022	AV INFRASTRUCTURE SET
1	09-30-2022	AV SYSTEM BID DOCUMENTS

SHEET TITLE:
**AV DATA
SCHEDULES**

SHEET NUMBER: **AV902** REV: **1**

CONDUITS AND CABLE TYPES FOR AV SYSTEMS MUST BE COORDINATED TO PREVENT ELECTRICAL INTERFERENCE.

ALL WIRING AND CABLING FOR AV SYSTEMS MUST BE CONTAINED IN CONTINUOUSLY GROUNDED FERROUS METALLIC CONDUITS, EXCEPT WHERE NOTED.

PVC CONDUITS ARE NOT AN ACCEPTABLE SUBSTITUTION EXCEPT WHERE USE OF PVC CONDUITS IS REQUIRED BY CODE. CONDUITS MUST BE SIZED, SPACED, AND UTILIZED ACCORDING TO CONDUIT SIZING REQUIREMENTS, ROUTING AND SEPARATION, AND GROUP DIVISIONS.

AV CABLING MAY NOT BE COMBINED IN RACEWAYS WITH WIRE AND CABLING FOR OTHER TRADES.

AV CABLES ARE DIVIDED INTO GROUPS BY SIGNAL LEVEL. CABLES FROM DIFFERENT GROUPS MAY NOT BE COMBINED TOGETHER IN THE SAME CONDUIT, UNLESS INDICATED ON DRAWINGS.

GROUP	CABLING TYPE
A	MICROPHONE LEVEL
B	LINE LEVEL
C	SPEAKER LEVEL (INCLUDES BOTH LOW & HIGH IMPEDANCE TYPES)
D	CONTROL & DATA
E	VIDEO
F	FIBER OPTIC
G	HEARING LOOP
R	RF

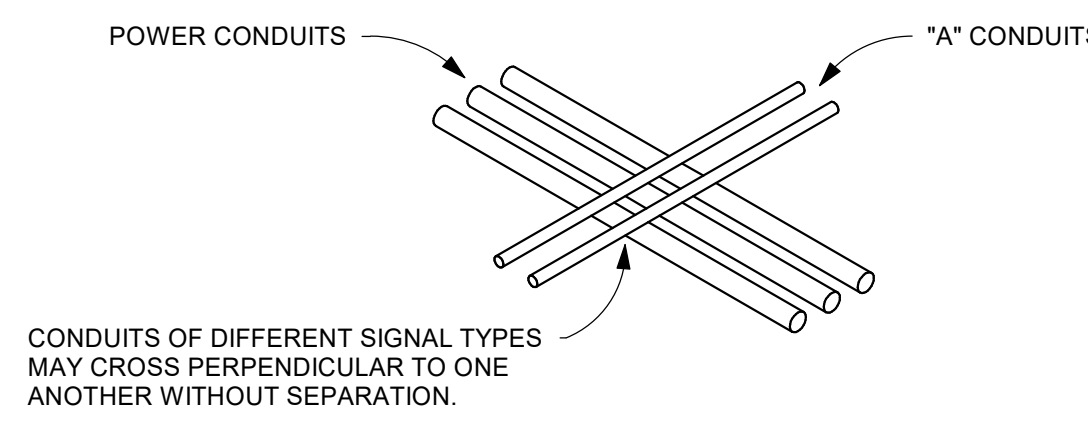
TO MINIMIZE NOISE AND INTERFERENCE WITHIN AV SYSTEMS, PATHS THROUGH THE BUILDING FOR AV WIRE, CABLE, AND CONDUITS SHALL BE COORDINATED BY REFERENCING THE TABLES TO THE RIGHT AGAINST THE GROUP DIVISIONS TABLE ABOVE.

SEPARATION OF NON-METALLIC CONDUIT & FREE AIR AV CABLING								
GROUP	A	B	C	D	E	F	G	R
A	ADJACENT	12"	18"	18"	18"	ADJACENT	36"	18"
B	-	ADJACENT	12"	12"	12"	ADJACENT	36"	12"
C	-	-	ADJACENT	12"	12"	ADJACENT	18"	12"
D	-	-	-	ADJACENT	12"	ADJACENT	36"	12"
E	-	-	-	-	ADJACENT	ADJACENT	36"	12"
F	-	-	-	-	-	ADJACENT	ADJACENT	ADJACENT
G	-	-	-	-	-	-	ADJACENT	18"
R	-	-	-	-	-	-	-	ADJACENT
POWER < 60A	36"	36"	36"	36"	36"	ADJACENT	36"	36"
POWER < 120A	72"	72"	72"	72"	72"	ADJACENT	72"	72"
POWER > 120A	96"	96"	96"	96"	96"	ADJACENT	96"	96"

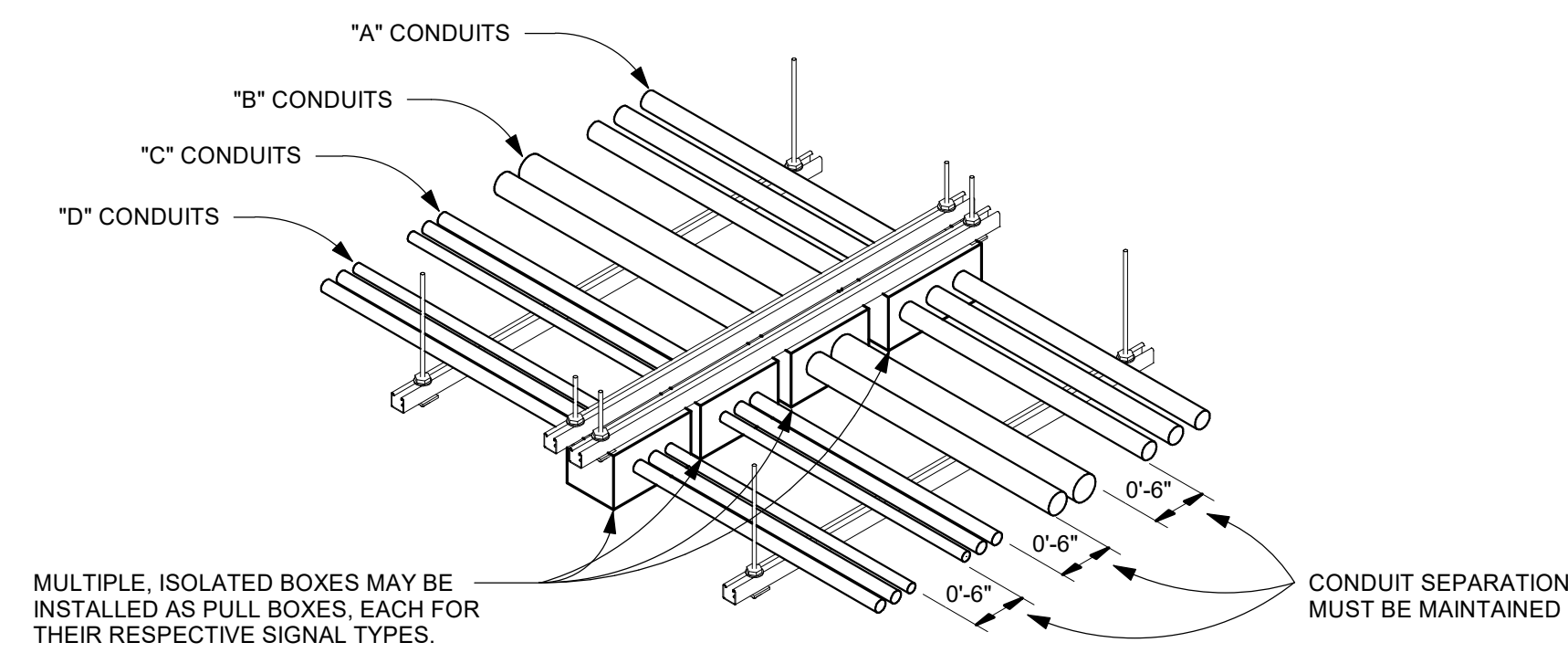
DUE TO SENSITIVITY OF AUDIO-VIDEO SYSTEMS, HIGH-CURRENT DEMANDS OR LONG PARALLEL CONDUIT RUNS MAY NECESSITATE LARGER SEPARATIONS BETWEEN CONDUITS.

SEPARATION OF METALLIC CONDUIT FOR AV CABLING								
GROUP	A	B	C	D	E	F	G	R
A	ADJACENT	6"	12"	12"	12"	ADJACENT	24"	12"
B	-	ADJACENT	6"	6"	6"	ADJACENT	24"	6"
C	-	-	ADJACENT	6"	6"	ADJACENT	12"	6"
D	-	-	-	ADJACENT	6"	ADJACENT	24"	6"
E	-	-	-	-	ADJACENT	ADJACENT	24"	6"
F	-	-	-	-	-	ADJACENT	ADJACENT	ADJACENT
G	-	-	-	-	-	-	ADJACENT	12"
R	-	-	-	-	-	-	-	ADJACENT
POWER < 60A	24"	24"	24"	24"	24"	ADJACENT	24"	24"
POWER < 120A	48"	48"	48"	48"	48"	ADJACENT	48"	48"
POWER > 120A	64"	64"	64"	64"	64"	ADJACENT	64"	64"

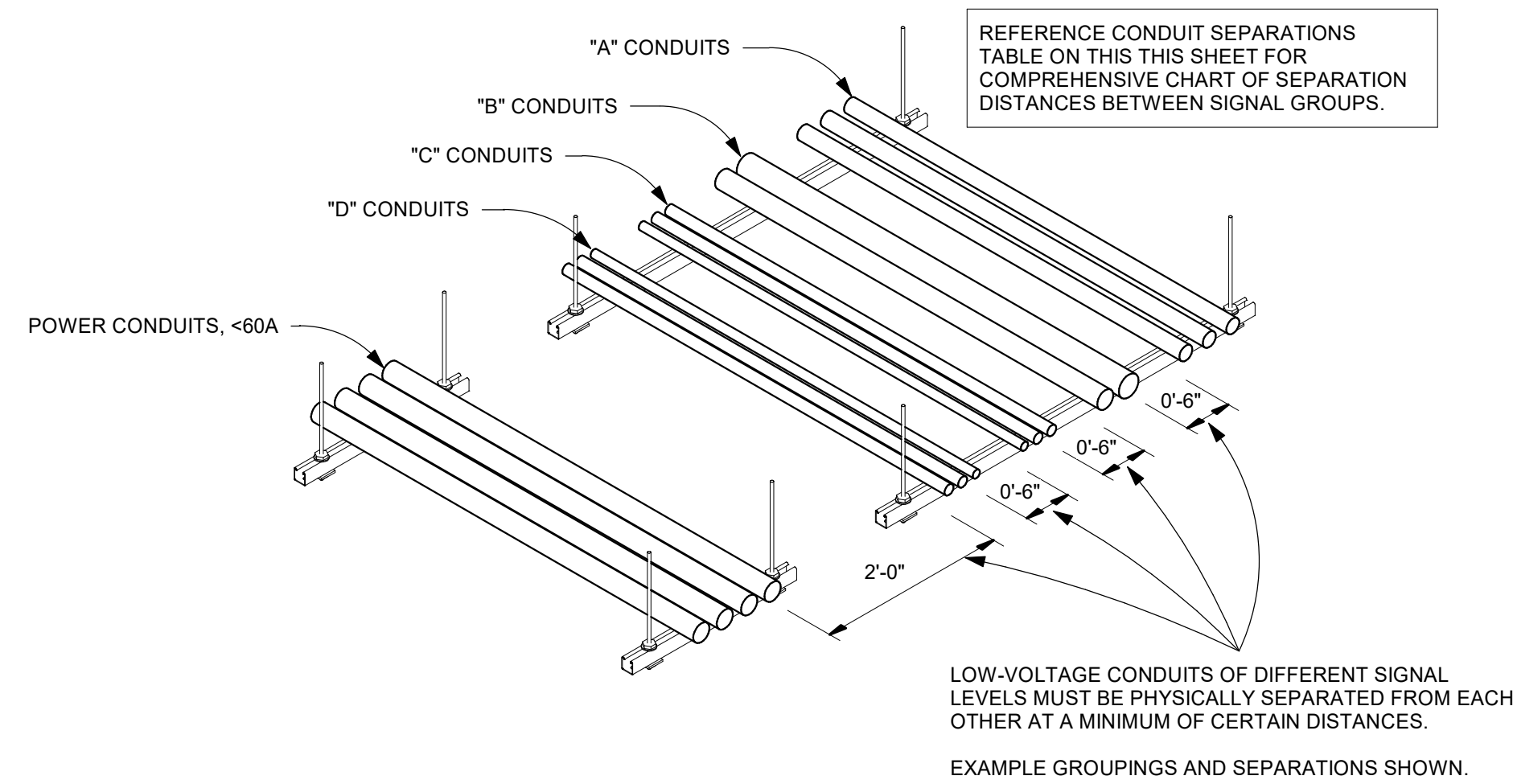
1 AV CONDUIT REQUIREMENTS & GROUP SEPARATION



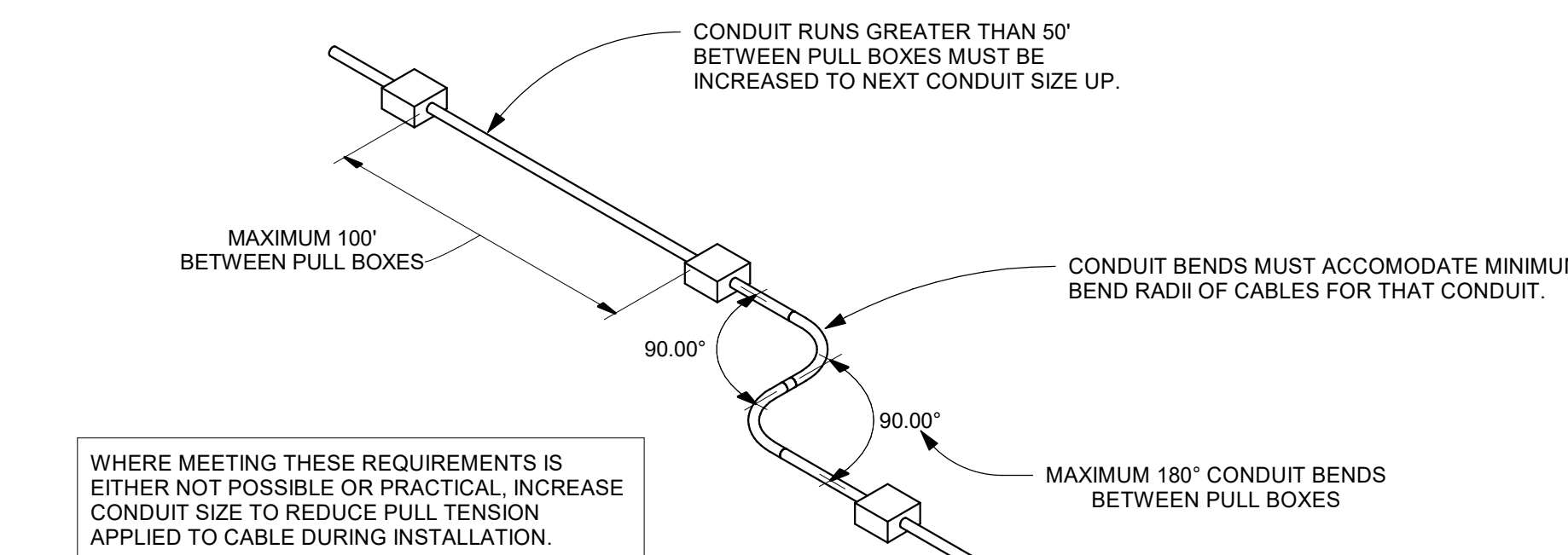
2 NO SEPARATION FOR PERPENDICULAR CONDUITS



5 PULL BOX PER GROUP EXAMPLE



8 CONDUIT SEPARATION EXAMPLE



10 PULL BOX REQUIREMENTS

THIS SHEET CONTAINS GENERAL CONDUIT REQUIREMENTS FOR AV IN THIS PROJECT.

ADDITIONAL CONDUIT RISERS AND DETAILS FOR CONDUIT AND PATHWAY REQUIREMENTS ARE PROVIDED ELSEWHERE IN THIS SHEET SET

SIZING OF CONDUIT TO BE BASED ON NEC (NATIONAL ELECTRICAL CODE) REQUIREMENTS.

MINIMUM CONDUIT SIZE FOR AV CABLING TO BE 3/4".

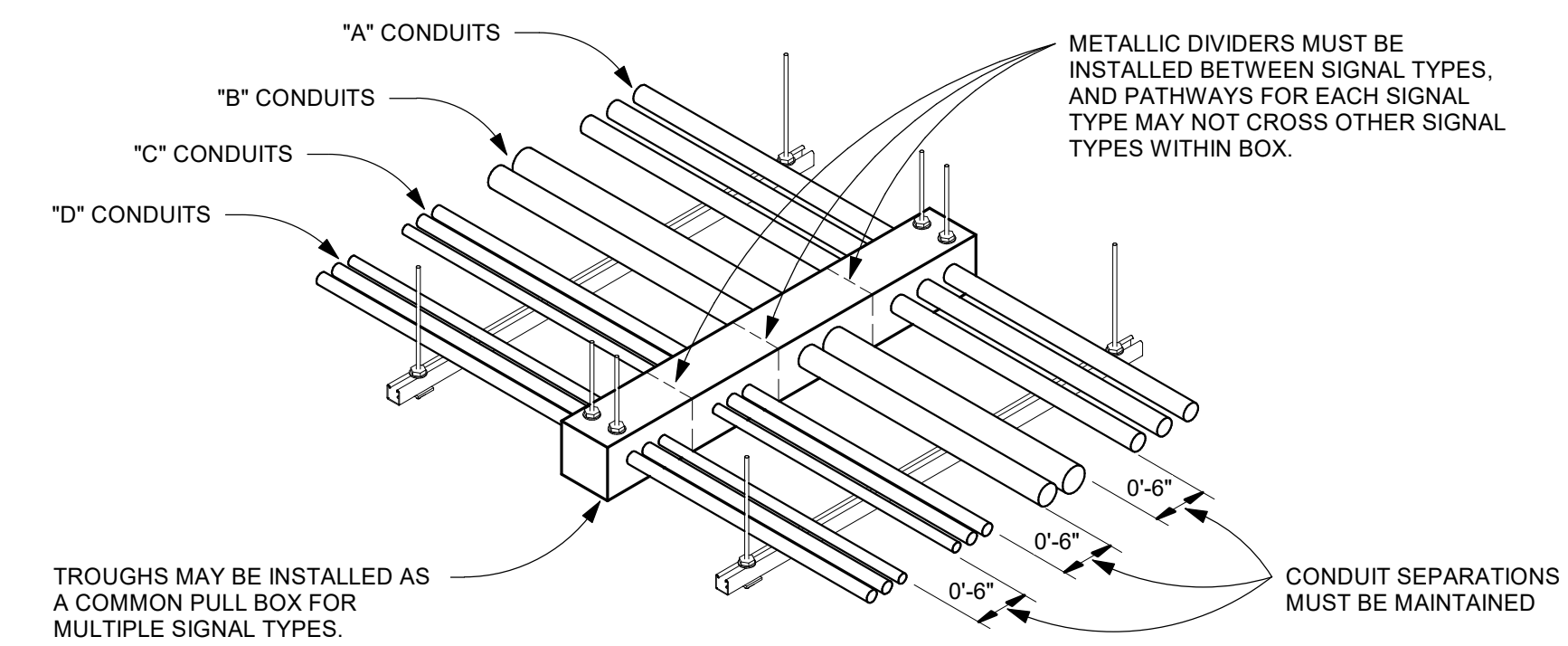
DETERMINATION OF CONDUIT SIZE FOR A PARTICULAR RUN OF AV CABLING SHALL BE MADE AS FOLLOWS: SEE ADDITIONAL REQUIREMENTS ON THIS SHEET FOR CIRCUMSTANCES WHERE CONDUITS SHALL BE UPSIZED.

- 1) SQUARE THE O.D. (OUTER DIAMETER) OF EACH CABLE AND TOTAL THE RESULTS (REFER TO CABLE MANUFACTURER'S SPECIFICATIONS FOR O.D.)
- 2) MULTIPLY THE TOTAL FROM STEP 1 BY THE FACTOR LISTED IN THE CONDUIT FILL TABLE:

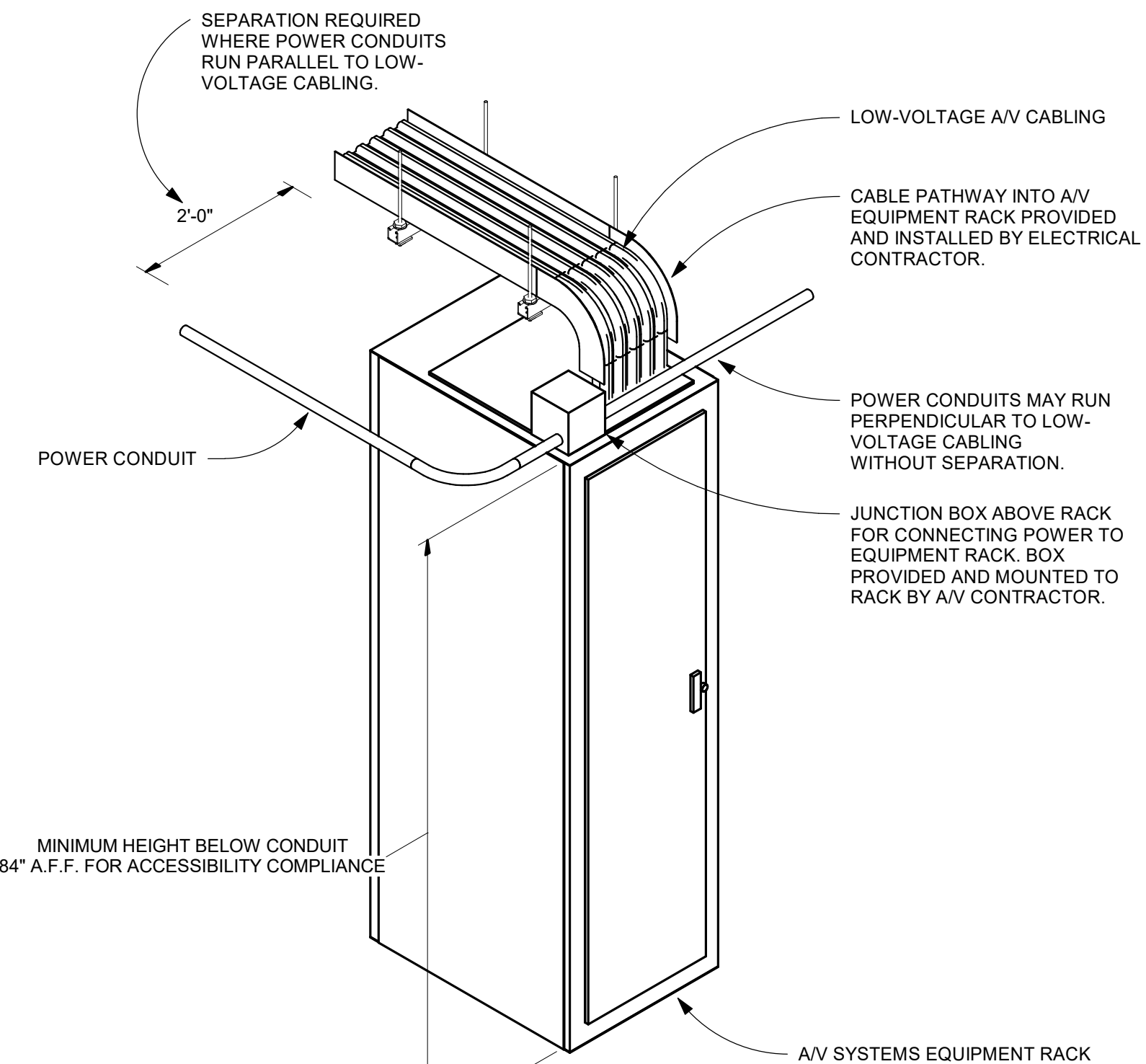
NO. OF CABLES	% OF CONDUIT CROSS-SECTION ALLOWED FOR CABLES	FACTOR
1	53	.5927
2	31	1.0134
3+	40	.7854

- 3) FIND THE PERMISSIBLE AREA OF THE CONDUIT TYPE USED THAT IS EQUAL TO OR GREATER THAN TOTAL AREA CALCULATED IN STEP 2. REFERENCE CHAPTER 9 OF NEC FOR PERMISSIBLE AREA OF VARIOUS CONDUIT TYPES AND SIZES.

3 AV CONDUIT SIZING

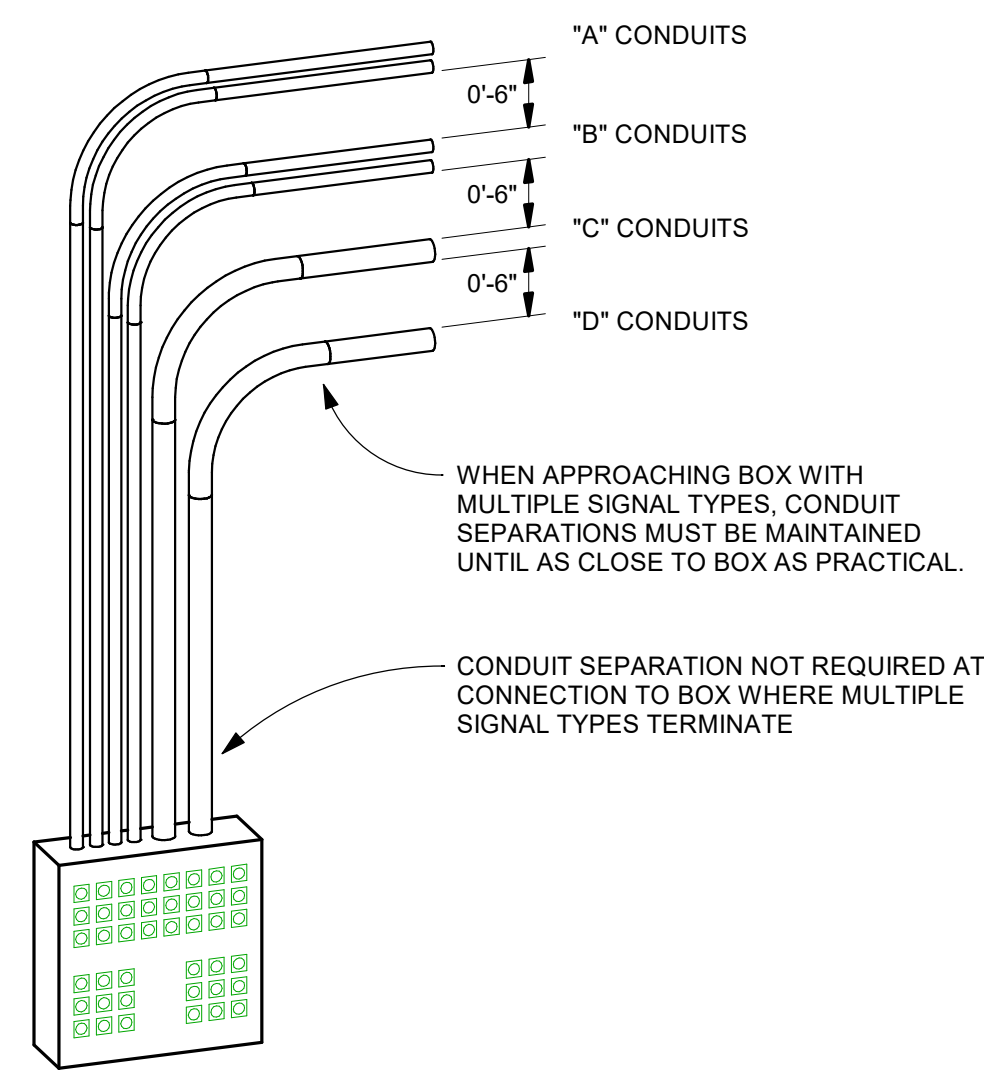


6 PULL TROUGH EXAMPLE

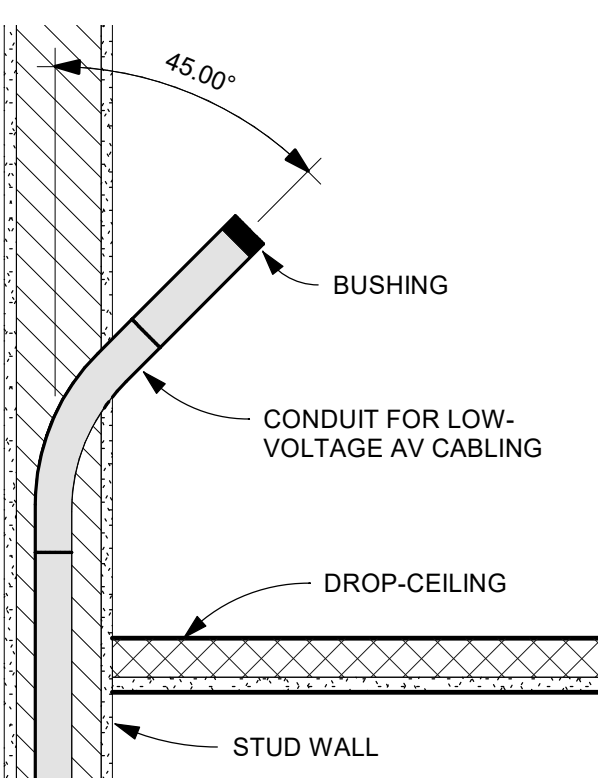


11 SEPARATION AT RACK EXAMPLE

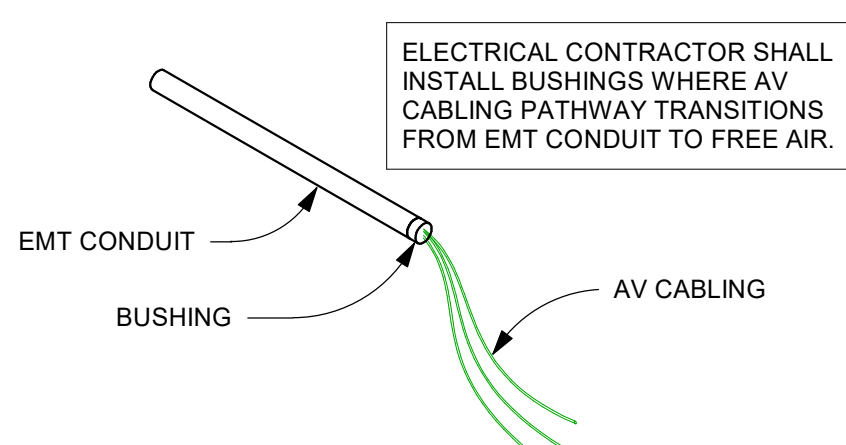
4 SEPARATION AT COMMON BOX



7 CONDUIT STUB DETAIL



9 TRANSITIONING EMT CONDUIT TO FREE AIR



NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: NTS	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	

REV	DATE	DESCRIPTION
1	07-20-2022	AV INFRASTRUCTURE SET
1	09-30-2022	AV SYSTEM BID DOCUMENTS

SHEET TITLE:
AV CONDUIT SPECIFICATIONS & DETAILS

SHEET NUMBER: **AV910** REV: **1**

CABLE TAG LEGEND	
TYPE: X"	TYPE: SIGNAL TYPE (REFER TO SIGNAL GROUP SEPARATION SCHEDULES ON AV9.10)
X	CONDUIT SIZE (INCHES)

CONDUIT NOTES

- 1 FINAL CONDUIT ROUTING & SIZING TO BE DETERMINED BY INSTALLING CONTRACTOR.
- 2 REFER TO AV CONDUIT SPECIFICATIONS & DETAILS ON SHEET AV910.
- 3 QUANTITIES INDICATED TO NOT INCLUDE SPARE RUNS.
- 4 DEVICE PLUG BOXES CANNOT BE USED FOR PULL BOXES OR JUNCTION BOXES. CONDUIT ROUTING SHOWN BETWEEN THE PLUG BOXES PRESUMES AN INTERMEDIARY PULL / JUNCTION BOX.
- 5 LIKE GROUPS CAN BE COMBINED AND THE SIZE OF THE CONDUIT INCREASED TO MINIMIZE THE QUANTITY OF SAME RUNS.
- 6 THE INSTALLING CONTRACTOR SHALL FIELD COORDINATE THE ACTUAL LAYOUT, GROUPING, AND SIZING WITH THE AV CONTRACTOR AND SUBMIT A CONDUIT ROUTING PLAN AS PART OF THE SUBMITTAL PROCESS FOR REVIEW AND APPROVAL.

GENERAL SHEET NOTES

- 1 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
- 2 COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
- 3 AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
- 4 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

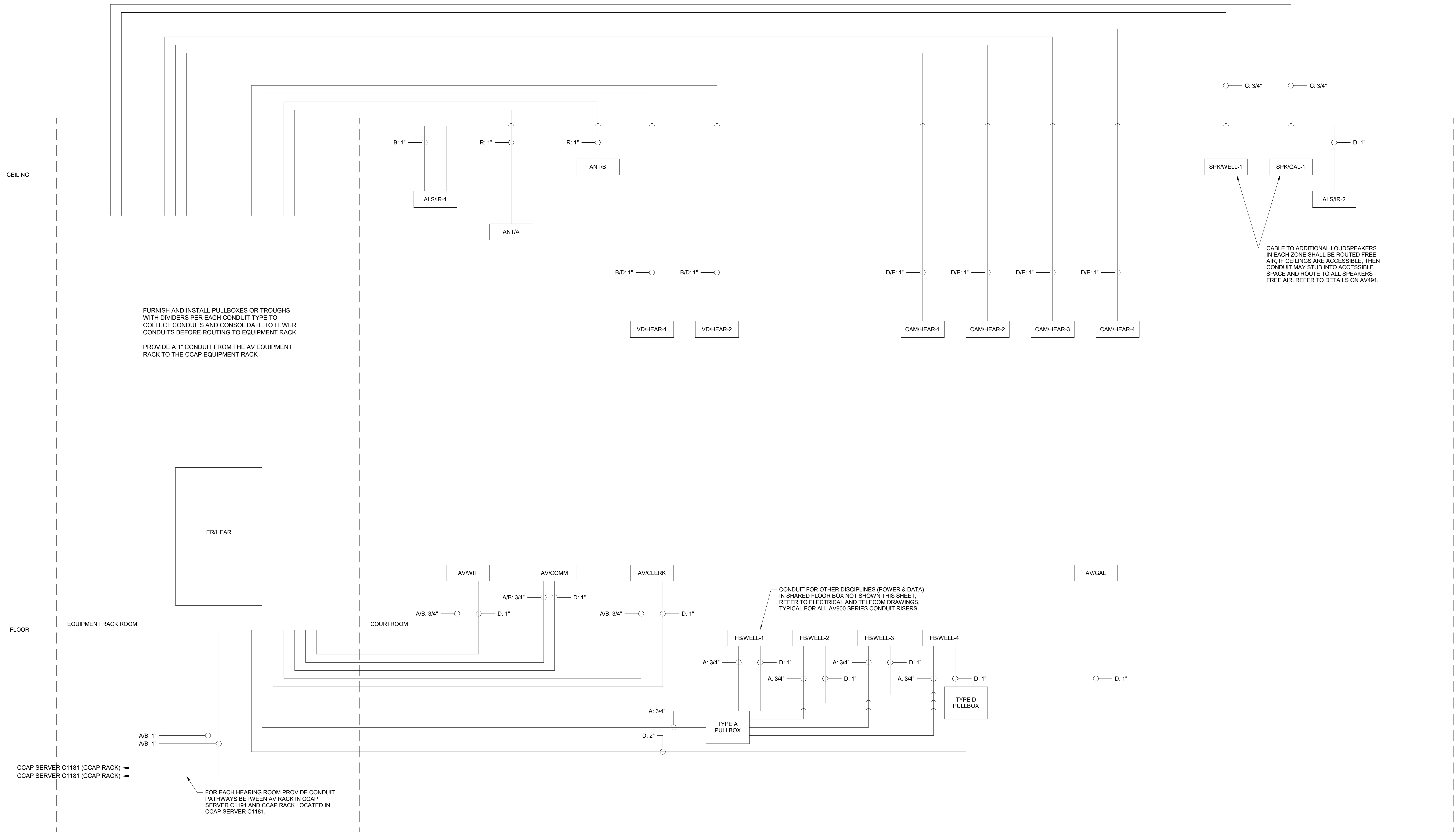
**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PDR
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	

REV	DATE	DESCRIPTION
1	07-20-2022	AV INFRASTRUCTURE SET
1	09-30-2022	AV SYSTEM BID DOCUMENTS

SHEET TITLE:
AV CONDUIT RISER

SHEET NUMBER: AV912	REV: 1
-------------------------------	------------------



TYPICAL HEARING ROOM - AV CONDUIT RISER

TYPICAL FOR HEARING ROOM 1 C1150 AND HEARING ROOM 2 (FAMILY COURT) C1140

CABLE TAG LEGEND	
TYPE: X"	TYPE: SIGNAL TYPE (REFER TO SIGNAL GROUP SEPARATION SCHEDULES ON AV9.10)
X	CONDUIT SIZE (INCHES)

CONDUIT NOTES

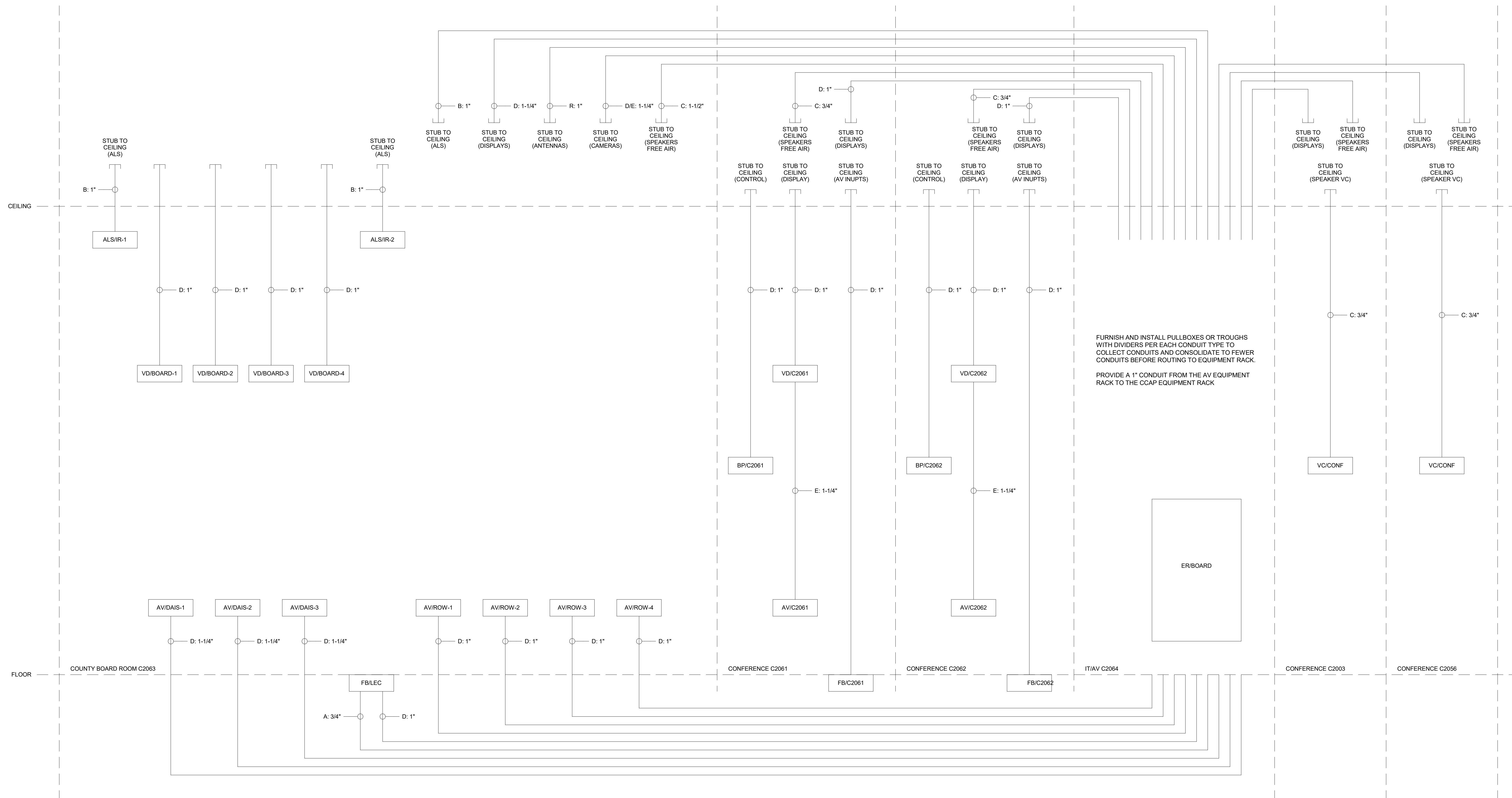
- 1 FINAL CONDUIT ROUTING & SIZING TO BE DETERMINED BY INSTALLING CONTRACTOR.
- 2 REFER TO AV CONDUIT SPECIFICATIONS & DETAILS ON SHEET AV910.
- 3 QUANTITIES INDICATED TO NOT INCLUDE SPARE RUNS.
- 4 DEVICE PLUG BOXES CANNOT BE USED FOR PULL BOXES OR JUNCTION BOXES. CONDUIT ROUTING SHOWN BETWEEN THE PLUG BOXES PRESUMES AN INTERMEDIARY PULL / JUNCTION BOX.
- 5 LIKE GROUPS CAN BE COMBINED AND THE SIZE OF THE CONDUIT INCREASED TO MINIMIZE THE QUANTITY OF SAME RUNS.
- 6 THE INSTALLING CONTRACTOR SHALL FIELD COORDINATE THE ACTUAL LAYOUT, GROUPING, AND SIZING WITH THE AV CONTRACTOR AND SUBMIT A CONDUIT ROUTING PLAN AS PART OF THE SUBMITTAL PROCESS FOR REVIEW AND APPROVAL.

GENERAL SHEET NOTES

- 1 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
- 2 COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
- 3 AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
- 4 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
 311S CENTER AVENUE, JEFFERSON, WI 53549**



COUNTY BOARD ROOM C2063 - AV CONDUIT RISER

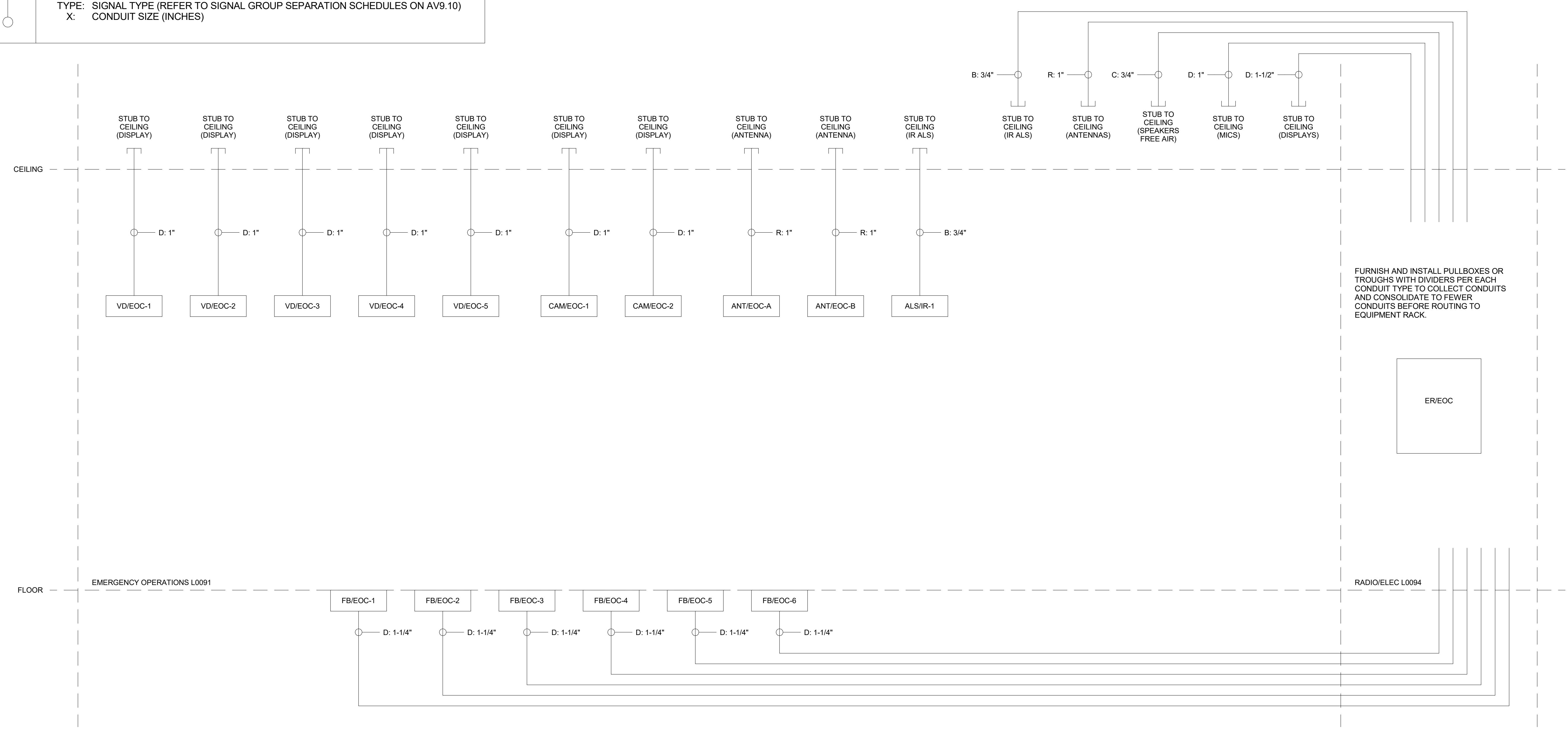
DESIGNER: EDK	PROJECT MANAGER: FDR	
SCALE: 1/2" = 1'-0"	DRAWING SET SIZE: 30" X 42"	
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502	
DOCUMENT SET: AV BID DOCUMENTS R1		
REVISIONS:		
REV: 1	DATE: 07-20-2022	DESCRIPTION: AV INFRASTRUCTURE SET
REV: 2	DATE: 09-30-2022	DESCRIPTION: AV SYSTEM BID DOCUMENTS
SHEET TITLE: AV CONDUIT RISER		
SHEET NUMBER: AV913	REV: 1	

P:\2022\1125-60 - Documents\2022\1125-60 - Jeffco County, WI - 1125-60.dwg

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

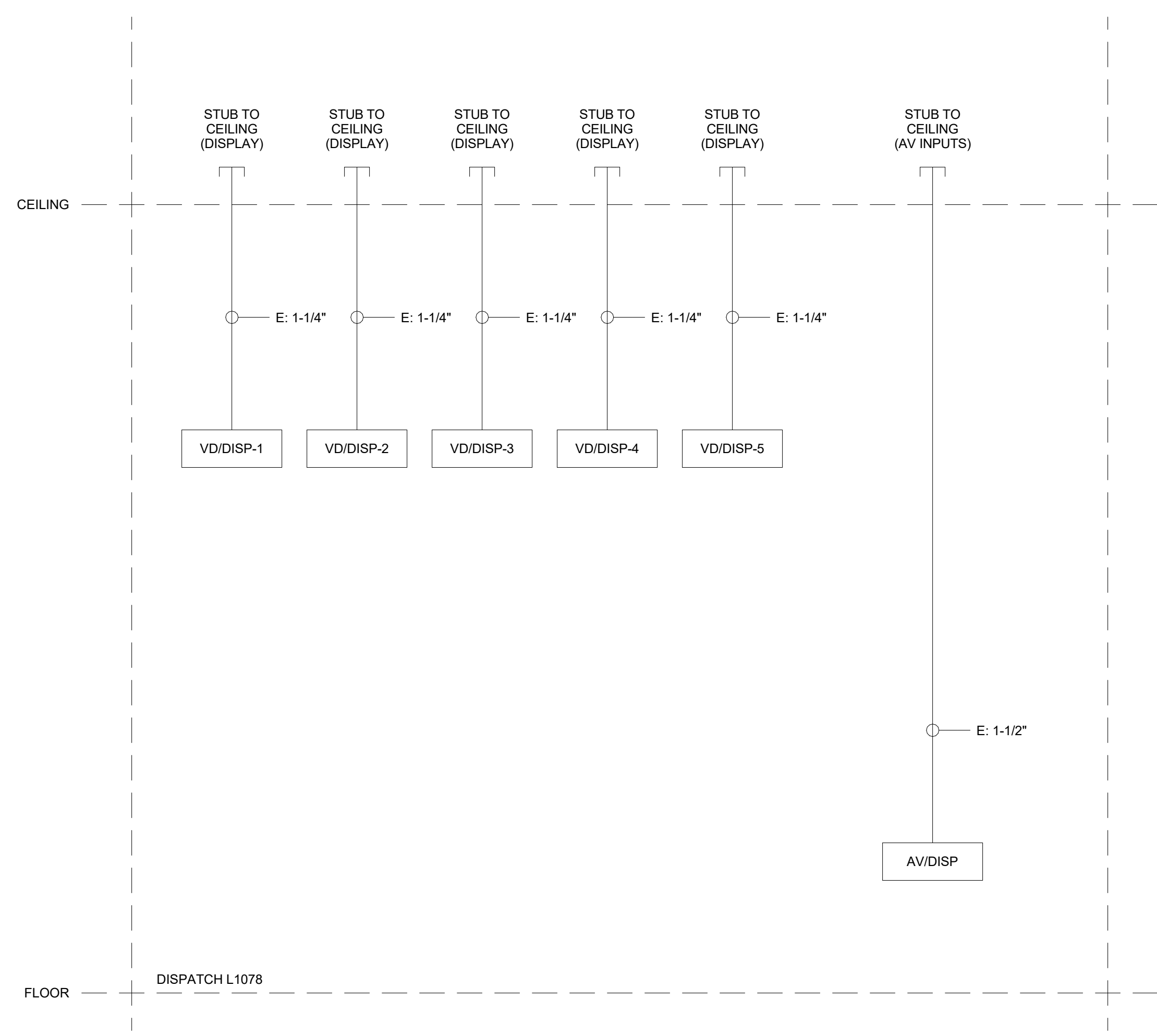
**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

CABLE TAG LEGEND	
TYPE: X"	TYPE: SIGNAL TYPE (REFER TO SIGNAL GROUP SEPARATION SCHEDULES ON AV9.10)
X:	CONDUIT SIZE (INCHES)



FURNISH AND INSTALL PULLBOXES OR TROUGHS WITH DIVIDERS PER EACH CONDUIT TYPE TO COLLECT CONDUITS AND CONSOLIDATE TO FEWER CONDUITS BEFORE ROUTING TO EQUIPMENT RACK.

EMERGENCY OPERATIONS L0091 - AV CONDUIT RISER



DISPATCH L1078 - AV CONDUIT RISER

CONDUIT NOTES

- 1 FINAL CONDUIT ROUTING & SIZING TO BE DETERMINED BY INSTALLING CONTRACTOR.
- 2 REFER TO AV CONDUIT SPECIFICATIONS & DETAILS ON SHEET AV910.
- 3 QUANTITIES INDICATED TO NOT INCLUDE SPARE RUNS.
- 4 DEVICE PLUG BOXES CANNOT BE USED FOR PULL BOXES OR JUNCTION BOXES. CONDUIT ROUTING SHOWN BETWEEN THE PLUG BOXES PRESUMES AN INTERMEDIARY PULL / JUNCTION BOX.
- 5 LIKE GROUPS CAN BE COMBINED AND THE SIZE OF THE CONDUIT INCREASED TO MINIMIZE THE QUANTITY OF SAME RUNS.
- 6 THE INSTALLING CONTRACTOR SHALL FIELD COORDINATE THE ACTUAL LAYOUT, GROUPING, AND SIZING WITH THE AV CONTRACTOR AND SUBMIT A CONDUIT ROUTING PLAN AS PART OF THE SUBMITTAL PROCESS FOR REVIEW AND APPROVAL.

GENERAL SHEET NOTES

- 1 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
- 2 COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
- 3 AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
- 4 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 1/2" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	

REV	DATE	DESCRIPTION
1	07-20-2022	AV INFRASTRUCTURE SET
1	09-30-2022	AV SYSTEM BID DOCUMENTS

SHEET TITLE:
AV CONDUIT RISER

SHEET NUMBER: AV914	REV: 1
-------------------------------	------------------

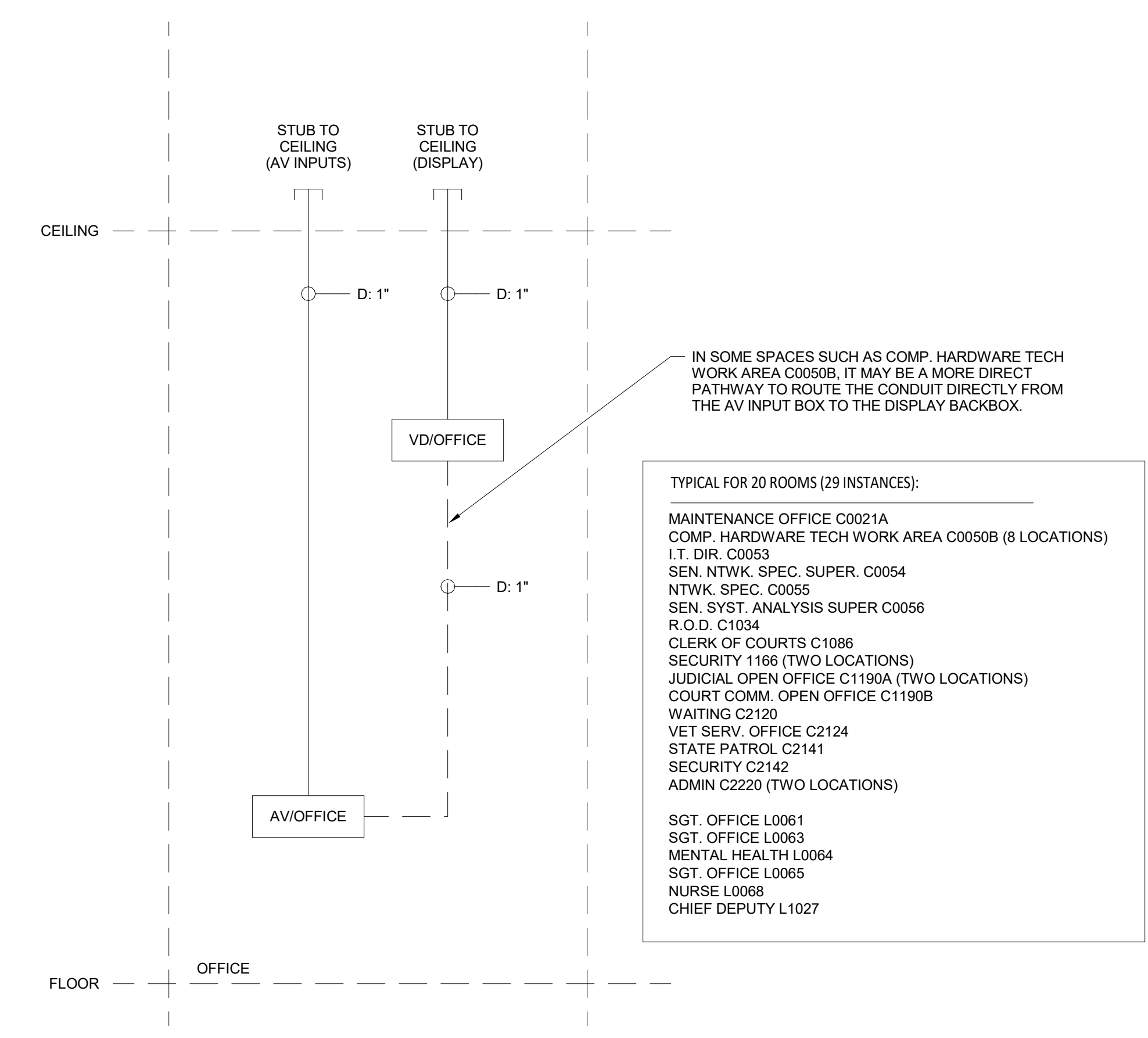
CABLE TAG LEGEND	
TYPE: X*	TYPE: SIGNAL TYPE (REFER TO SIGNAL GROUP SEPARATION SCHEDULES ON AV9.10) X: CONDUIT SIZE (INCHES)

CONDUIT NOTES

- 1 FINAL CONDUIT ROUTING & SIZING TO BE DETERMINED BY INSTALLING CONTRACTOR.
- 2 REFER TO AV CONDUIT SPECIFICATIONS & DETAILS ON SHEET AV9.10.
- 3 QUANTITIES INDICATED TO NOT INCLUDE SPARE RUNS.
- 4 DEVICE PLUG BOXES CANNOT BE USED FOR PULL BOXES OR JUNCTION BOXES. CONDUIT ROUTING SHOWN BETWEEN THE PLUG BOXES PRESUMES AN INTERMEDIARY PULL / JUNCTION BOX.
- 5 LIKE GROUPS CAN BE COMBINED AND THE SIZE OF THE CONDUIT INCREASED TO MINIMIZE THE QUANTITY OF SAME RUNS.
- 6 THE INSTALLING CONTRACTOR SHALL FIELD COORDINATE THE ACTUAL LAYOUT, GROUPING, AND SIZING WITH THE AV CONTRACTOR AND SUBMIT A CONDUIT ROUTING PLAN AS PART OF THE SUBMITTAL PROCESS FOR REVIEW AND APPROVAL.

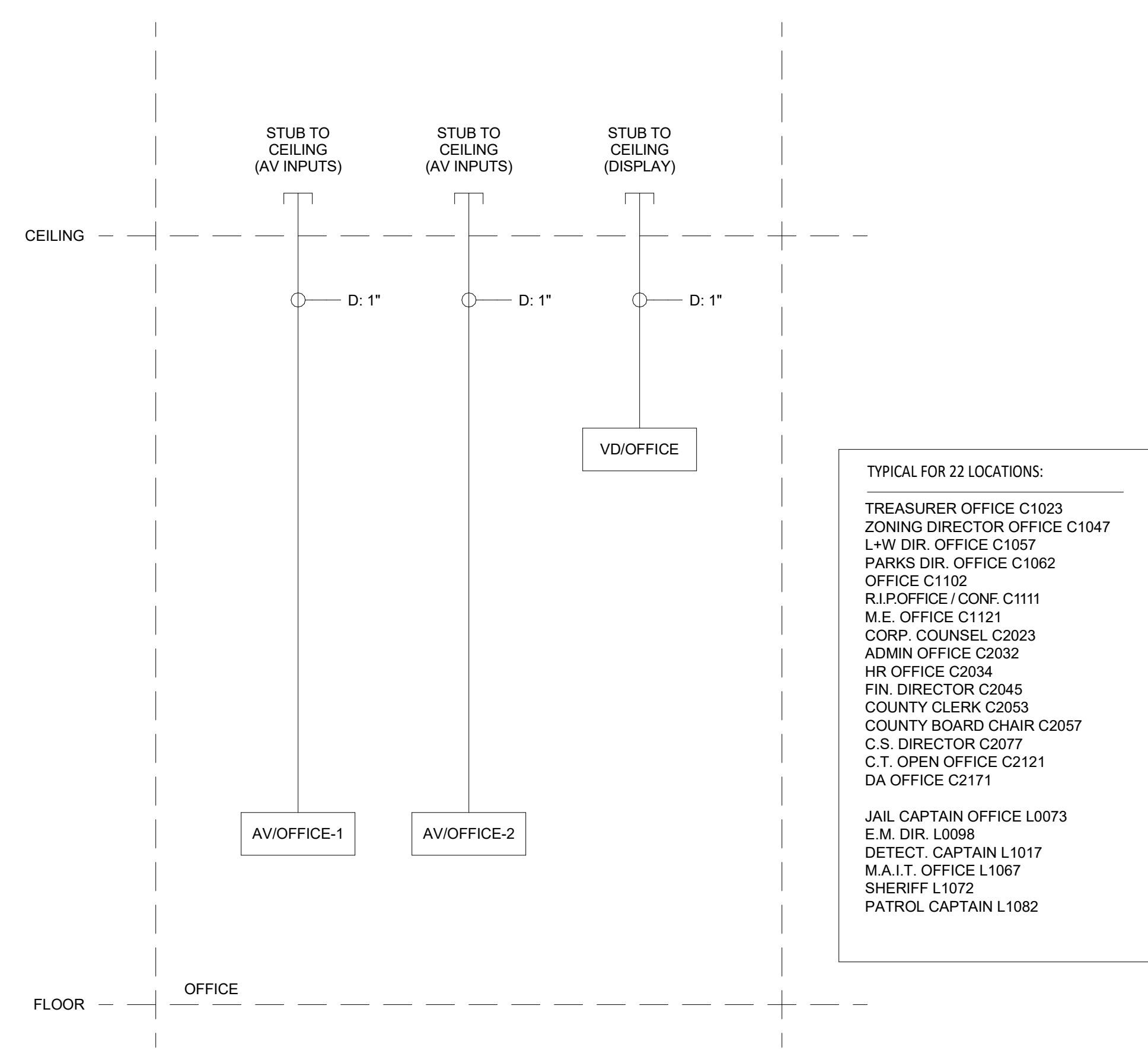
GENERAL SHEET NOTES

- 1 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
- 2 COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
- 3 AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
- 4 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.



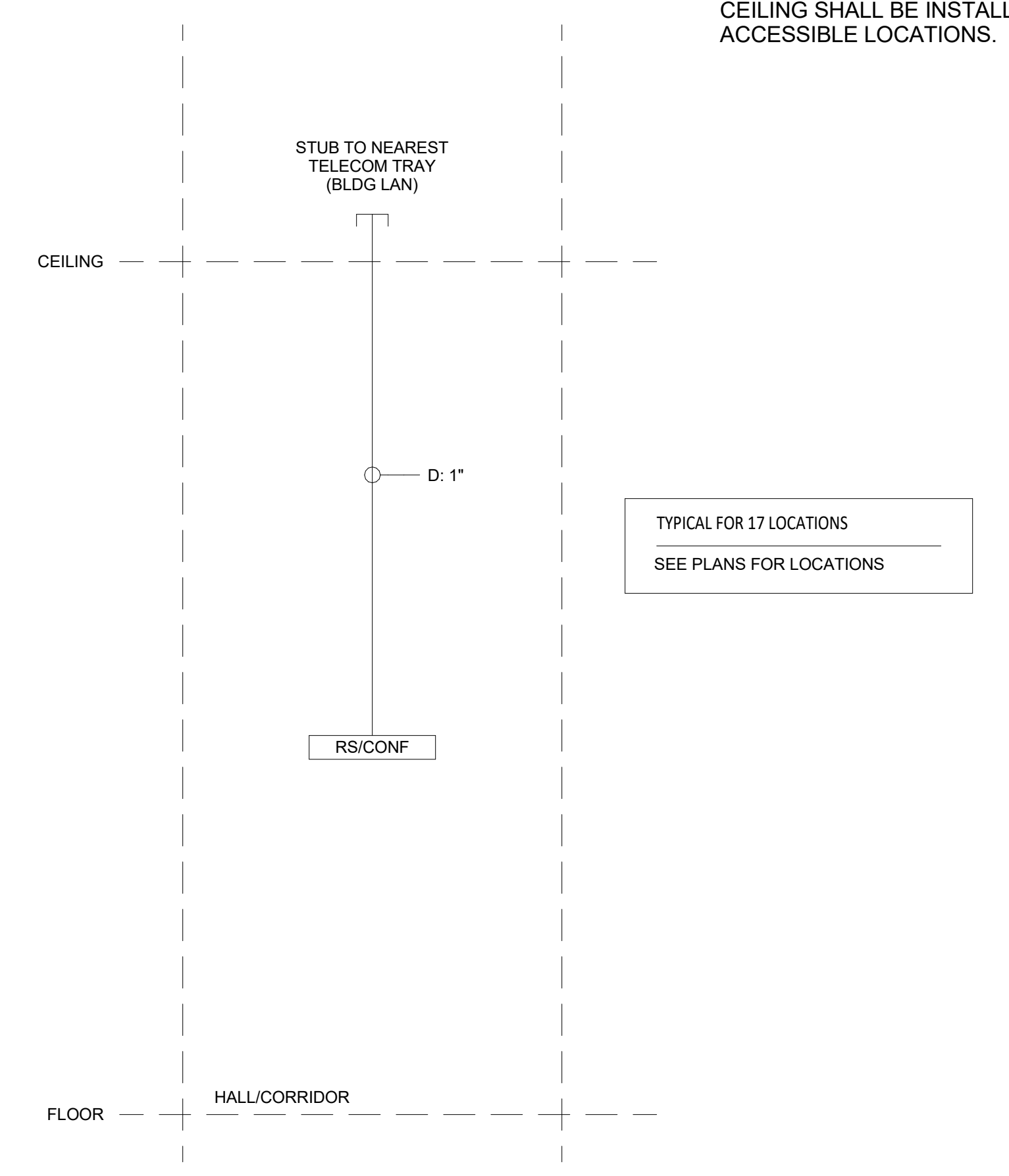
TYPICAL OFFICE - TYPE 1 - AV CONDUIT RISER

ONE (1) WALL MOUNTED INPUT LOCATION IN EACH SPACE

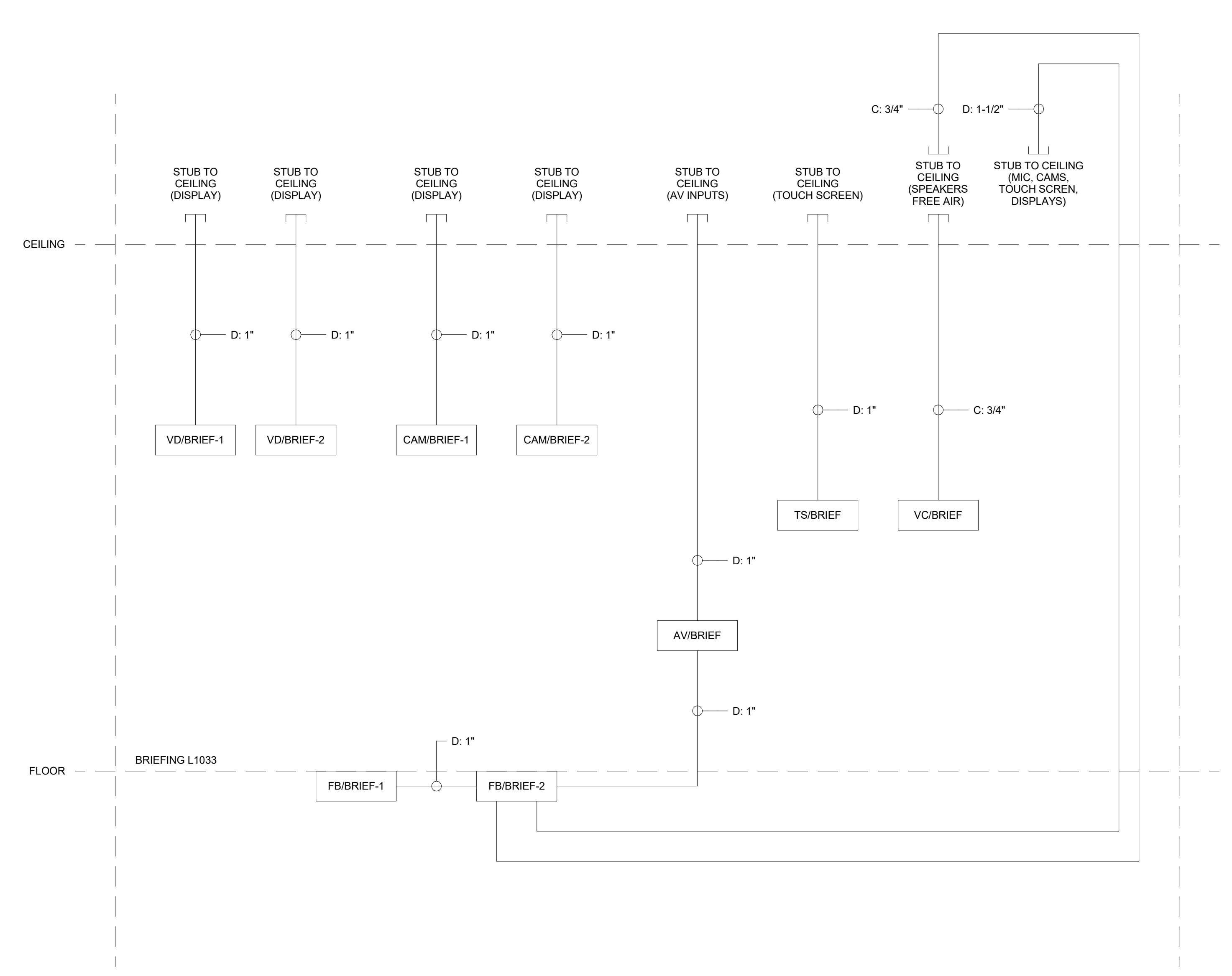


TYPICAL OFFICE - TYPE 2 - AV CONDUIT RISER

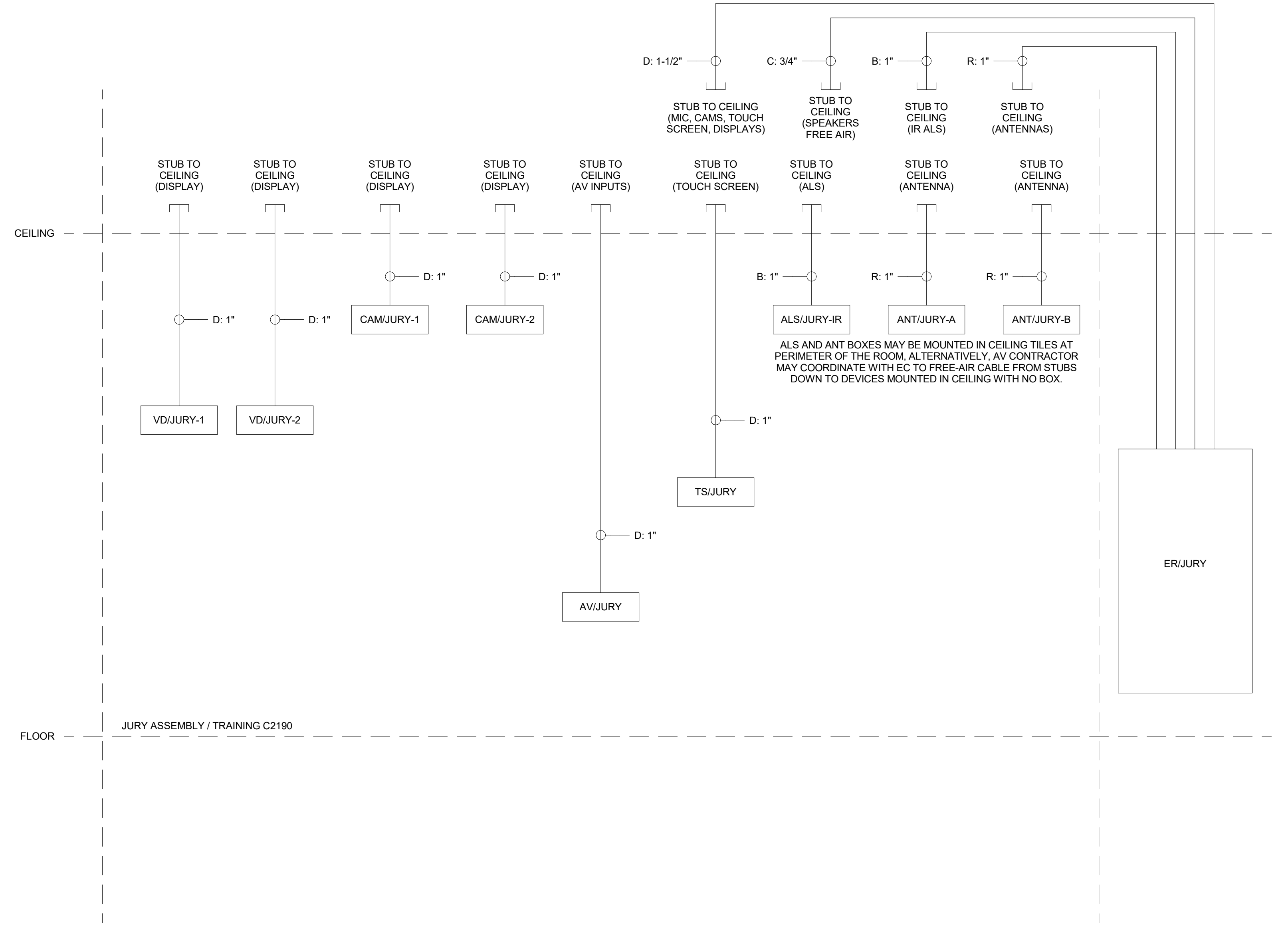
TWO (2) WALL MOUNTED INPUT LOCATION IN EACH SPACE



TYPICAL ROOM SCHEDULING - AV CONDUIT RISER



BRIEFING L1033 - AV CONDUIT RISER



JURY ASSEMBLY / TRAINING C2190 - AV CONDUIT RISER

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PDR
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	
REV. DATE DESCRIPTION	
1 07-20-2022 AV INFRASTRUCTURE SET	
2 09-30-2022 AV SYSTEM BID DOCUMENTS	

SHEET TITLE: AV CONDUIT RISER

CABLE TAG LEGEND	
TYPE: X"	TYPE: SIGNAL TYPE (REFER TO SIGNAL GROUP SEPARATION SCHEDULES ON AV9.10) X: CONDUIT SIZE (INCHES)

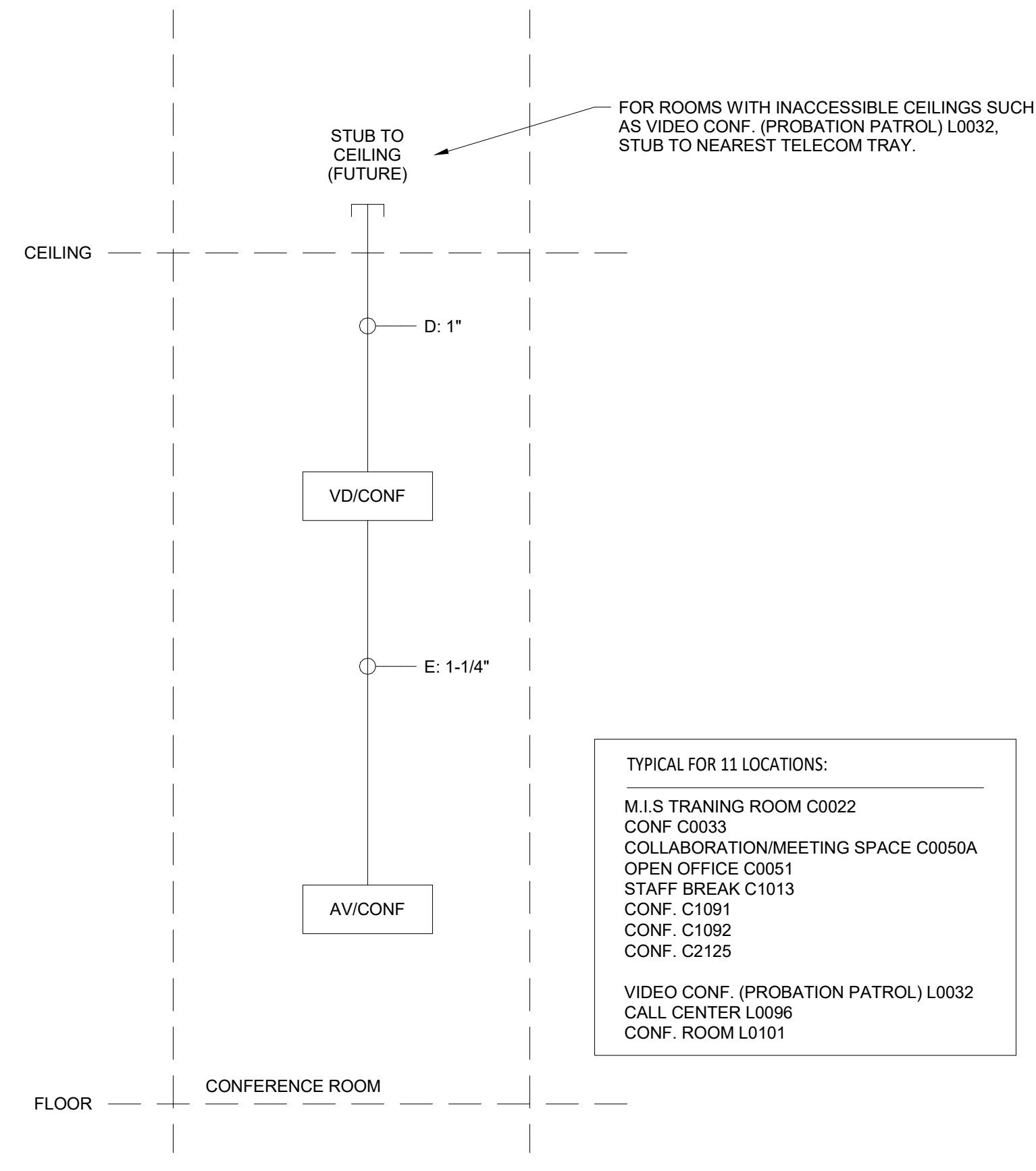
CONDUIT NOTES

- 1 FINAL CONDUIT ROUTING & SIZING TO BE DETERMINED BY INSTALLING CONTRACTOR.
- 2 REFER TO AV CONDUIT SPECIFICATIONS & DETAILS ON SHEET AV910.
- 3 QUANTITIES INDICATED TO NOT INCLUDE SPARE RUNS.
- 4 DEVICE PLUG BOXES CANNOT BE USED FOR PULL BOXES OR JUNCTION BOXES. CONDUIT ROUTING SHOWN BETWEEN THE PLUG BOXES PRESUMES AN INTERMEDIARY PULL / JUNCTION BOX.
- 5 LIKE GROUPS CAN BE COMBINED AND THE SIZE OF THE CONDUIT INCREASED TO MINIMIZE THE QUANTITY OF SAME RUNS.
- 6 THE INSTALLING CONTRACTOR SHALL FIELD COORDINATE THE ACTUAL LAYOUT, GROUPING, AND SIZING WITH THE AV CONTRACTOR AND SUBMIT A CONDUIT ROUTING PLAN AS PART OF THE SUBMITTAL PROCESS FOR REVIEW AND APPROVAL.

GENERAL SHEET NOTES

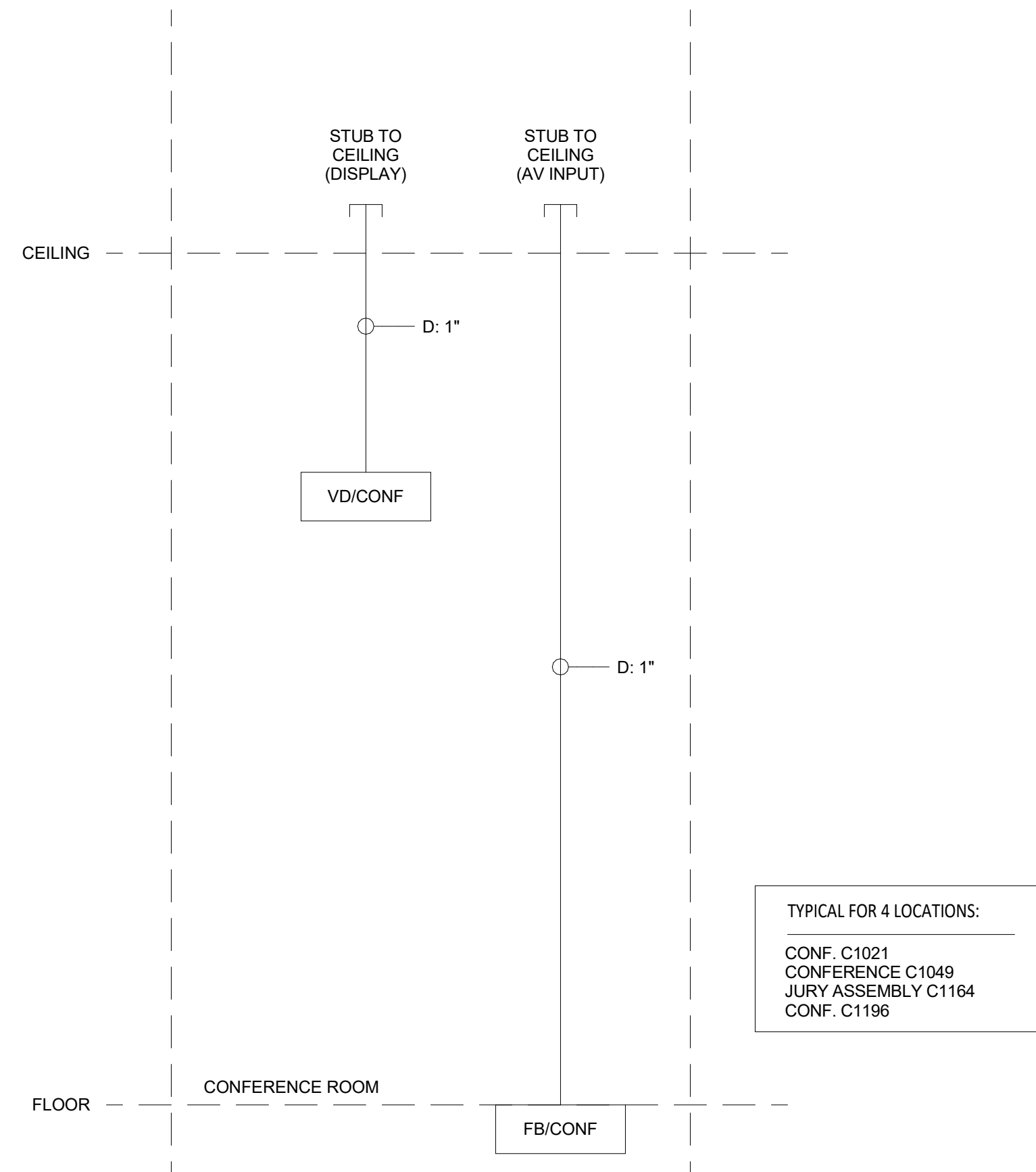
- 1 REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON DEVICE LOCATION.
- 2 COORDINATE ALL AV DEVICE LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT AND / OR OWNER & FURNITURE LAYOUT PRIOR TO ROUGH-IN.
- 3 AV FLOOR, WALL, & CEILING BOXES ARE SHARED BETWEEN AV, ELECTRICAL, & DATA. TRADES SHALL COORDINATE TO CONFIRM CONDUIT LANDS IN APPROPRIATE LOCATIONS IN AV BOXES.
- 4 REFER TO ARCHITECTURAL DRAWINGS FOR CEILING AND WALL TYPES. ALL JUNCTION BOXES AND STUBS ABOVE CEILING SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.

NOTE: THIS DRAWING SUPERSEDES ALL PREVIOUS DRAWINGS



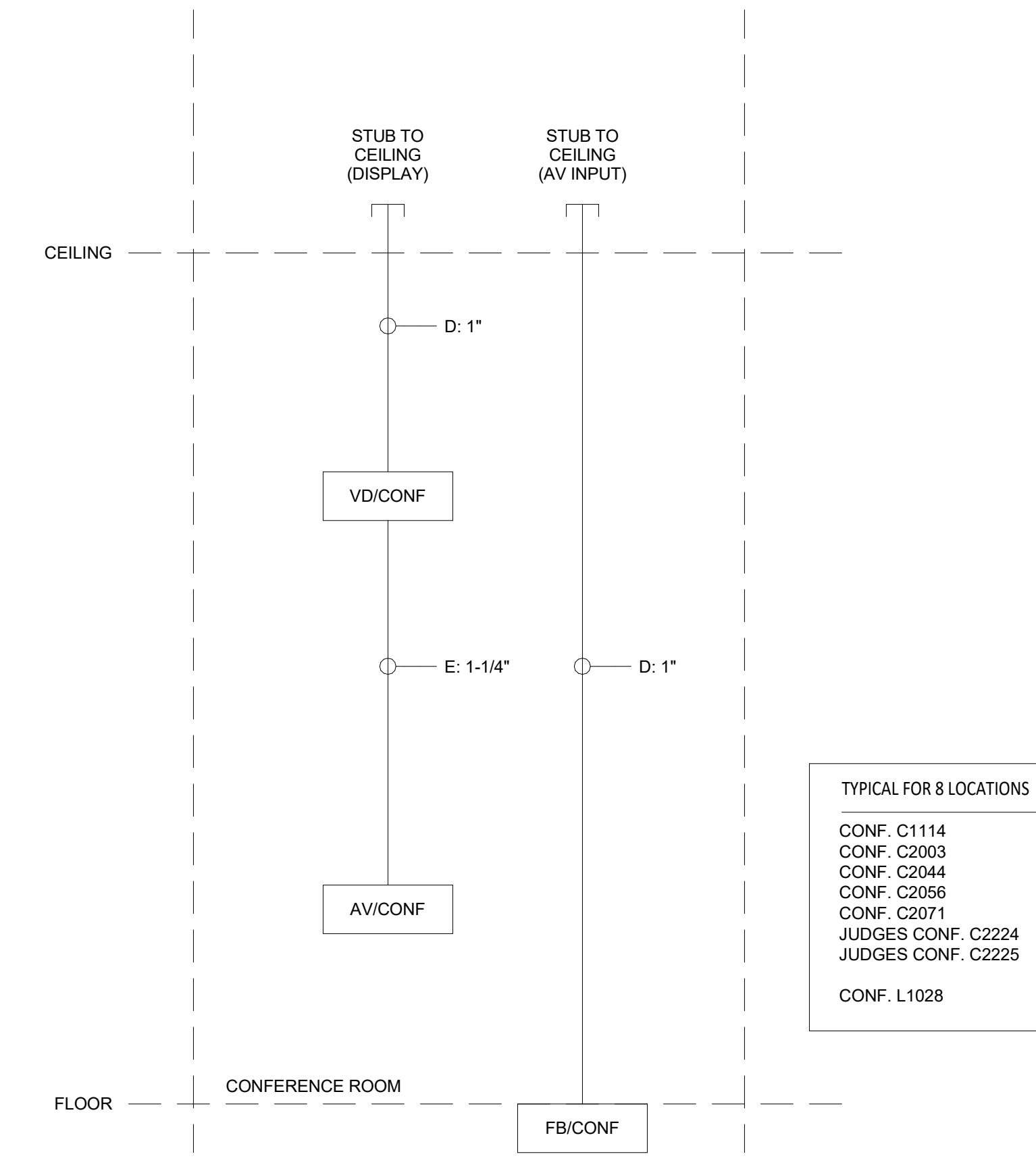
TYPICAL CONFERENCE ROOM - TYPE 1 - AV CONDUIT RISER

ONE (1) WALL MOUNTED INPUT LOCATION IN EACH SPACE



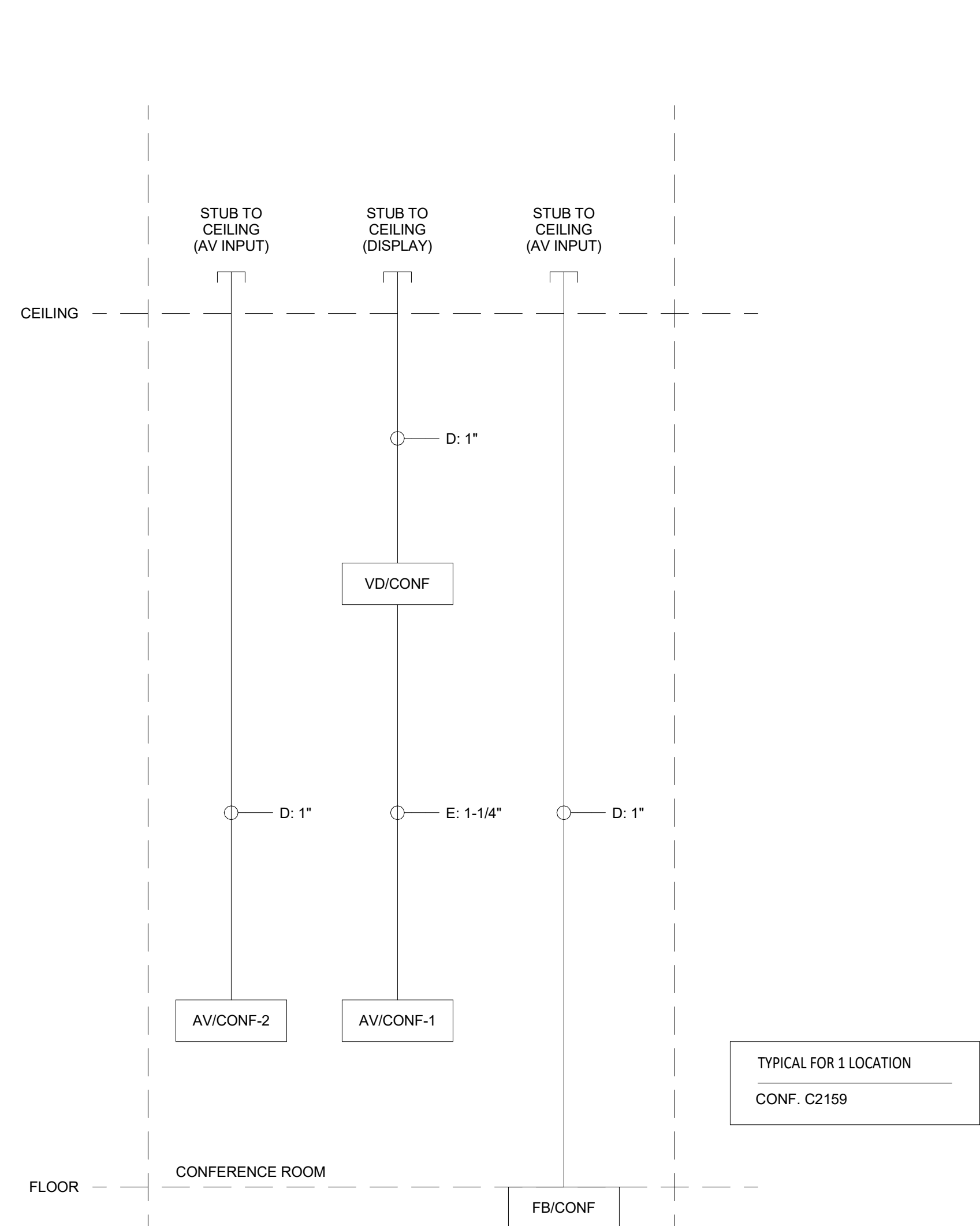
TYPICAL CONFERENCE ROOM - TYPE 2 - AV CONDUIT RISER

ONE (1) FLOOR MOUNTED INPUT LOCATION IN EACH SPACE



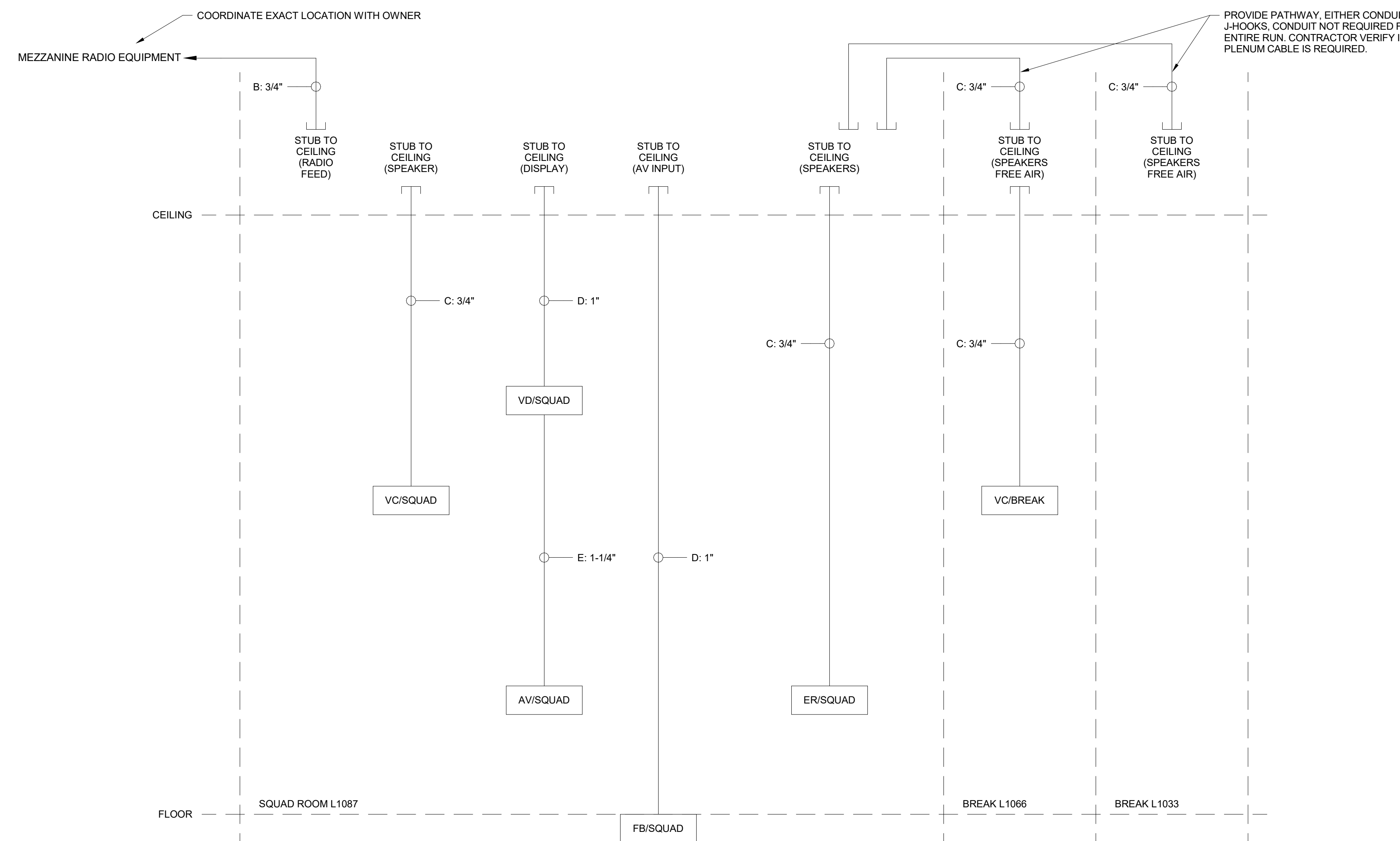
TYPICAL CONFERENCE ROOM - TYPE 3 - AV CONDUIT RISER

ONE (1) WALL MOUNTED INPUT AND ONE (1) FLOOR MOUNTED INPUT LOCATION IN EACH SPACE



TYPICAL CONFERENCE ROOM - TYPE 4 - AV CONDUIT RISER

TWO (2) WALL MOUNTED INPUTS AND ONE (1) FLOOR MOUNTED INPUT LOCATION IN EACH SPACE



SQUAD ROOM L1087 - AV CONDUIT RISER

**JEFFERSON COUNTY COURTHOUSE
311S CENTER AVENUE, JEFFERSON, WI 53549**

DESIGNER: EDK	PROJECT MANAGER: PBR
SCALE: 12" = 1'-0"	DRAWING SET SIZE: 30" X 42"
SHEET ISSUE DATE: 10/14/2022	PROJECT NUMBER: 1502
DOCUMENT SET: AV BID DOCUMENTS R1	

REV	DATE	DESCRIPTION
1	07-20-2022	AV INFRASTRUCTURE SET
1	09-30-2022	AV SYSTEM BID DOCUMENTS

SHEET TITLE:
AV CONDUIT RISER

SHEET NUMBER: AV916	REV: 1
-------------------------------	------------------