Invitation to Bid

LSUHSC New Orleans

LSU Health Sciences Center

BIDS WILL BE PUBLICLY OPENED:

April 28,2026 12:00 PM

VENDOR NO. :
SOLICITATION : 002973
OPENING DATE : 04/28/2026

Return Sealed Bid to:
Purchasing Department

BUYER : Malter, Mark Wade
BUYER EMAIL : mmalte@lsuhsc.edu
BUYER PHONE :
DATE ISSUED : 04/13/2026
REQ. NO :
FISCAL YEAR : 0

MEIC AV System Upgrades

To be Completed by Vendor:

BUSINESS NAME _____

ADDRESS _____

TAX ID NUMBER _____

_____ % CASH DISCOUNT FOR PROMPT PAYMENT IF MADE WITHIN THIRTY 30 DAYS. CASH DISCOUNTS FOR LESS THAN 30 DAYS OR LESS THAN 1% WILL BE ACCEPTED, BUT WILL NOT BE CONSIDERED IN DETERMINING AWARDS. ON INDEFINITE QUANTITY TERM CONTRACTS, CASH DISCOUNTS WILL BE ACCEPTED AND TAKEN BUT WILL NOT BE CONSIDERED IN DETERMINING AWARDS.

INSTRUCTION TO BIDDERS

1. READ THE ENTIRE BID(INCLUDING ALL TERMS AND CONDITIONS AND SPECIFICATIONS).
   DIVERSE SUPPLIER
   (A) SUPPLIER UNDERSTANDS THAT LSU, AS THE STATE'S FLAGSHIP UNIVERSITY, HAS AN INTEREST IN PROVIDING ENTREPRENEURIAL OPPORTUNITIES TO DIVERSITY-OWNED BUSINESSES. THE UNIVERSITY IS DEDICATED TO PROMOTING THE GROWTH AND DEVELOPMENT OF MINORITY, WOMEN, AND SMALL AND HISTORICALLY UNDERUTILIZED BUSINESSES ("DIVERSE BUSINESSES") BY PROVIDING OPPORTUNITIES TO PARTICIPATE IN UNIVERSITY CONTRACTS.
   (B) IN SUPPORT OF THIS COMMITMENT, THE SUPPLIER SHALL USE GOOD FAITH AND BEST EFFORTS TO PROVIDE OPPORTUNITIES TO DIVERSE BUSINESSES THAT ARE EITHER CERTIFIED BY THE STATE OR ANOTHER CERTIFYING AGENCY IN A DIVERSE CATEGORY, AS A SUBCONTRACTOR OR SUPPLIER UNDER THIS AGREEMENT.
   (C) IF APPLICABLE, SUPPLIER SHALL PROVIDE LSU WITH A LIST OF DIVERSITY-OWNED BUSINESSES DURING EACH CONTRACT YEAR, THE LIST OF BUSINESSES SHOULD IDENTIFY:
      (1) THE NAME OF THE BUSINESS;
      (2) ITS PRINCIPAL OFFICE OR ADDRESS;
      (3) THE OWNER(S); AND
      (4) THE SERVICES OR GOODS THAT IT MAY PROVIDE OR SUPPLY AND THE VALUE OF THE GOODS OR SERVICES PROCURED FROM THE BUSINESSES INCLUDED ON SUPPLIER'S LIST.
   (D) TO THE EXTENT THAT ANY FEDERAL OR STATE LAW, RULE, OR REGULATION WOULD REQUIRE THAT THIS SECTION BE MODIFIED OR VOIDED, THE PARTIES AGREE THAT SUCH PROVISION CAN BE AMENDED OR SEVERED FROM THE AGREEMENT WITHOUT AFFECTING ANY OF THE OTHER TERMS OF THE AGREEMENT.

2. ALL BID PRICES MUST BE TYPED OR WRITTEN IN INK. ANY CORRECTIONS, ERASURES OR OTHER FORMS OF ALTERATION TO UNIT PRICES SHOULD BE INITIALIZED BY THE BIDDER.

3. THIS BID IS TO BE MANUALLY SIGNED IN INK BY A PERSON AUTHORIZED TO BIND THE VENDOR (See No.9).

VENDOR PHONE NUMBER: EMAIL ADDRESS:	TITLE	DATE
SIGNATURE OF AUTHORIZED BIDDER (MUST BE SIGNED)	NAME OF BIDDER (TYPED OR PRINTED)	

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4. BID PRICES SHALL INCLUDE DELIVERY OF ALL ITEMS F.O.B. DESTINATION OR AS OTHERWISE PROVIDED. BIDS CONTAINING "PAYMENT IN ADVANCE" OR "C.O.D." REQUIREMENTS MAY BE REJECTED. PAYMENT IS TO BE MADE WITHIN 30 DAYS AFTER RECEIPT OF A PROPERLY EXECUTED INVOICE THAT IS APPROVED BY LSUHSC OR DELIVERY, WHICHEVER IS LATER.

5. DESIRED DELIVERY: 10 DAYS AFTER RECEIPT OF ORDER, UNLESS SPECIFIED ELSEWHERE.

6. TO ASSURE CONSIDERATION OF YOUR BID, SEE HEADER FOR RETURN INSTRUCTIONS. ALL BIDS AND ADDENDA SHOULD BE RETURNED IN AN ENVELOPE OR PACKAGE AND CLEARLY ENDORSED WITH THE BID OPENING DATE, BID OPENING TIME, BID NUMBER, AND BID TITLE. ALL REQUEST FOR QUOTATIONS AND ADDENDA SHOULD BE SUBMITTED VIA FAX, EMAIL OR PLACED IN AN ENVELOPE AND DELIVERED.

7. BIDS SUBMITTED ARE SUBJECT TO PROVISIONS OF THE LAWS OF THE STATE OF LOUISIANA INCLUDING BUT NOT LIMITED TO L.R.S. 39:1551-1736; PURCHASING RULES AND REGULATIONS; EXECUTIVE ORDERS; STANDARD TERMS AND CONDITIONS; SPECIAL CONDITIONS; AND SPECIFICATIONS LISTED IN THIS SOLICITATION.
PROHIBITION OF DISCRIMINATORY BOYCOTTS OF ISRAEL:
IN ACCORDANCE WITH EXECUTIVE ORDER NUMBER JBE 2018-15, EFFECTIVE MAY 22, 2018, FOR ANY CONTRACT FOR $100,000 OR MORE AND FOR ANY CONTRACTOR WITH FIVE OR MORE EMPLOYEES, CONTRACTOR, OR ANY SUBCONTRACTOR, SHALL CERTIFY IT IS NOT ENGAGING IN A BOYCOTT OF ISRAEL, AND SHALL, FOR THE DURATION OF THIS CONTRACT, REFRAIN FROM A BOYCOTT OF ISRAEL. THE STATE RESERVES THE RIGHT TO TERMINATE THIS CONTRACT IF THE CONTRACTOR, OR ANY SUBCONTRACTOR, ENGAGES IN A BOYCOTT OF ISRAEL DURING THE TERM OF THE CONTRACT.

8. IMPORTANT:
BY SIGNING THIS BID, THE BIDDER CERTIFIES COMPLIANCE WITH ALL INSTRUCTIONS TO BIDDERS, TERMS, CONDITIONS, AND SPECIFICATIONS AND FURTHER CERTIFIES THAT THIS BID IS MADE WITHOUT COLLUSION OR FRAUD. ALL BID INFORMATION SHALL BE MADE WITH INK OR TYPEWRITTEN.

9. SIGNATURE AUTHORITY:
SUBMIT EVIDENCE WITH THE BID OR UPON REQUEST
R.S. 39:1594 (C) (4) EVIDENCE OF AGENCY, CORPORATE, OR PARTNERSHIP AUTHORITY SHALL BE REQUIRED FOR SUBMISSION OF A BID TO PURCHASING AGENCIES OF THE STATE OF LOUISIANA.

THE AUTHORITY OF THE SIGNATURE OF THE PERSON SUBMITTING THE BID SHALL BE DEEMED SUFFICIENT AND ACCEPTABLE IF ANY OF THE FOLLOWING CONDITIONS ARE MET:

(A) THE SIGNATURE ON THE BID IS THAT OF ANY CORPORATE OFFICER LISTED ON THE MOST CURRENT ANNUAL REPORT ON FILE WITH THE SECRETARY OF STATE, OR THE SIGNATURE ON THE BID IS THAT OF ANY MEMBER OF A PARTNERSHIP OR PARTNERSHIP IN COMMENDAM LISTED IN THE MOST CURRENT PARTNERSHIP RECORDS ON FILE WITH THE SECRETARY OF STATE.

(B) THE SIGNATURE ON THE BID IS THAT OF AN AUTHORIZED REPRESENTATIVE OF THE CORPORATION, PARTNERSHIP, OR OTHER LEGAL ENTITY AND THE BIDDER SUBMITS OR PROVIDES UPON REQUEST A CORPORATE RESOLUTION, CERTIFICATION AS TO THE CORPORATE PRINCIPAL, OR OTHER DOCUMENTS INDICATING AUTHORITY WHICH ARE ACCEPTABLE TO THE PUBLIC ENTITY, INCLUDING REGISTRATION ON AN ELECTRONIC INTERNET DATABASE MAINTAINED BY THE PUBLIC ENTITY.

(C) THE CORPORATION, PARTNERSHIP, OR OTHER LEGAL ENTITY HAS FILED IN THE APPROPRIATE RECORDS OF THE SECRETARY OF STATE IN WHICH THE PUBLIC ENTITY IS LOCATED, AN AFFIDAVIT, RESOLUTION, OR OTHER ACKNOWLEDGED OR

AUTHENTIC DOCUMENT INDICATING THE NAMES OF ALL PARTIES AUTHORIZED TO SUBMIT BIDS FOR PUBLIC CONTRACTS. SUCH DOCUMENT ON FILE WITH THE SECRETARY OF STATE SHALL REMAIN IN EFFECT AND SHALL BE BINDING UPON THE PRINCIPAL UNTIL SPECIFICALLY RESCINDED AND CANCELED FROM THE RECORDS OF THE RESPECTIVE OFFICES.

IT IS ACCEPTABLE FOR THE SIGNATURE ON THE BID TO BE LISTED AS A VENDOR CONTACT ON LAPAC (LOUISIANA PROCUREMENT AND CONTRACT NETWORK)

10. INQUIRIES:
ADDRESS ALL INQUIRIES AND CORRESPONDENCE TO THE BUYER AT THE PHONE NUMBER AND ADDRESS SHOWN ABOVE.

11. BID FORMS:
ALL WRITTEN BIDS, UNLESS OTHERWISE PROVIDED FOR, MUST BE SUBMITTED ON, AND IN ACCORDANCE WITH FORMS PROVIDED AND PROPERLY SIGNED. BIDS SUBMITTED IN THE FOLLOWING MANNER WILL NOT BE ACCEPTED:
A. BID CONTAINS NO SIGNATURE INDICATING INTENT TO BE BOUND
B. BID FILLED OUT IN PENCIL; AND
C. BID NOT SUBMITTED PER THE SOLICITATION DOCUMENT.

BIDS MUST BE RECEIVED AT THE ADDRESS SPECIFIED IN THE SOLICITATION PRIOR TO BID OPENING TIME IN ORDER TO BE CONSIDERED.

12. STANDARDS OR QUALITY:
ANY PRODUCT OR SERVICE BID SHALL CONFORM TO ALL APPLICABLE FEDERAL AND STATE LAWS AND REGULATIONS AND THE SPECIFICATIONS CONTAINED IN THE SOLICITATION. UNLESS OTHERWISE SPECIFIED IN THE SOLICITATION, ANY MANUFACTURER'S NAME, TRADE NAME, BRAND NAME, OR CATALOG NUMBER USED IN THE SPECIFICATION IS FOR THE PURPOSE OF DESCRIBING THE STANDARD OF QUALITY, PERFORMANCE, AND CHARACTERISTICS DESIRED AND IS NOT INTENDED TO LIMIT OR RESTRICT COMPETITION. BIDDER MUST SPECIFY THE BRAND AND MODEL NUMBER OF THE PRODUCT OFFERED IN HIS/HER BID. BIDS NOT SPECIFYING BRAND AND MODEL NUMBER SHALL BE CONSIDERED AS OFFERING THE EXACT PRODUCTS SPECIFIED IN THE SOLICITATION. LSUHSC RESERVES THE RIGHT TO INSPECT AND TEST THE DELIVERED ITEMS FOR COMPLIANCE WITH THE BID SPECIFICATIONS. IF THE ITEM FAILS TO MEET THE SPECIFICATIONS, THE COST OF TEST AND INSPECTION WILL BE PAID BY THE CONTRACTOR. IF THE ITEM IS IN COMPLIANCE, COST OF ALL TESTS WILL BE PAID BY LSUHSC.

13. DESCRIPTIVE INFORMATION:
BIDDERS PROPOSING AN EQUIVALENT BRAND OR MODEL SHOULD SUBMIT WITH THE BID, INFORMATION (SUCH AS ILLUSTRATIONS, DESCRIPTIVE LITERATURE, AND TECHNICAL DATA) SUFFICIENT FOR LSUHSC TO EVALUATE QUALITY, SUITABILITY, AND COMPLIANCE WITH THE SPECIFICATIONS IN THE SOLICITATION. FAILURE TO SUBMIT DESCRIPTIVE INFORMATION MAY CAUSE BID TO BE REJECTED. ANY CHANGE MADE TO A MANUFACTURER'S PUBLISHED SPECIFICATION SUBMITTED FOR A PRODUCT SHALL BE VERIFIABLE BY THE MANUFACTURER. IF ITEM(S) BID DO NOT FULLY COMPLY WITH SPECIFICATIONS (INCLUDING BRAND AND/OR PRODUCT NUMBER), BIDDER MUST STATE IN WHAT RESPECT ITEMS(S) DEVIATE. FAILURE TO NOTE EXCEPTIONS ON THE BID FORM WILL NOT RELIEVE THE SUCCESSFUL BIDDER(S) FROM SUPPLYING THE ACTUAL PRODUCTS REQUESTED.

14. BID OPENING:
BIDDERS MAY ATTEND THE BID OPENING, BUT NO INFORMATION OR OPINIONS CONCERNING THE ULTIMATE CONTRACT AWARD WILL BE GIVEN AT THE BID OPENING OR DURING THE EVALUATION PROCESS. BIDS MAY BE EXAMINED WITHIN 72 HOURS AFTER BID OPENING. INFORMATION PERTAINING TO COMPLETED FILES MAY BE SECURED BY VISITING LSUHSC DURING NORMAL

WORKING HOURS. WRITTEN BID TABULATIONS WILL NOT BE FURNISHED.

15. AWARDS:
AWARD WILL BE MADE TO THE LOWEST RESPONSIBLE AND RESPONSIVE BIDDER. LSUHSC RESERVES THE RIGHT TO AWARD ITEMS SEPARATELY, GROUPED, OR ON AN ALL OR NONE BASIS , AND TO REJECT ANY OR ALL BIDS AND WAIVE ANY INFORMALITIES.

16. PRICES:
UNLESS OTHERWISE SPECIFIED BY LSUHSC IN THE SOLICITATION, BID PRICES MUST BE COMPLETE, INCLUDING TRANSPORTATION PREPAID BY BIDDER TO DESTINATION AND FIRM FOR ACCEPTANCE FOR A MINIMUM OF 30 DAYS. IF ACCEPTED, PRICES MUST BE FIRM FOR THE CONTRACTUAL PERIOD. BIDS OTHER THAN F.O.B. DESTINATION MAY BE REJECTED. PRICES SHOULD BE QUOTED IN THE UNIT (EACH, BOX, CASE, ETC.) AS SPECIFIED IN THE SOLICITATION.

17. TAXES:
VENDOR IS RESPONSIBLE FOR INCLUDING ALL APPLICABLE TAXES IN THE BID PRICE. LSUHSC AGENCIES ARE EXEMPT FROM ALL STATE AND LOCAL SALES AND USE TAXES.

18. NEW PRODUCTS:
UNLESS SPECIFICALLY CALLED FOR IN THE SOLICITATION, ALL PRODUCTS FOR PURCHASE MUST BE NEW, NEVER PREVIOUSLY USED, AND THE CURRENT MODEL AND/OR PACKAGING. NO REMANUFACTURED, DEMONSTRATOR, USED OR IRREGULAR PRODUCT WILL BE CONSIDERED FOR PURCHASE UNLESS OTHERWISE SPECIFIED IN THE SOLICITATION. THE MANUFACTURER'S STANDARD WARRANTY WILL APPLY UNLESS OTHERWISE SPECIFIED IN THE SOLICITATION.

19. CONTRACT RENEWALS:
UPON AGREEMENT OF LSUHSC AND THE CONTRACTOR , A TERM CONTRACT MAY BE EXTENDED FOR 4 (FOUR) ADDITIONAL 12 MONTH PERIODS AT THE SAME PRICES, TERMS AND CONDITIONS. IN SUCH CASES, THE TOTAL CONTRACT TERM CANNOT EXCEED 60 MONTHS. RS 39:1615

20. CONTRACT CANCELLATION:
TERMINATION FOR NONCOMPLIANCE:
LSUHSC HAS THE RIGHT TO CANCEL ANY CONTRACT, IN ACCORDANCE WITH PURCHASING RULES AND REGULATIONS, FOR CAUSE INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
(1) FAILURE TO DELIVER WITHIN THE TIME SPECIFIED IN THE CONTRACT;
(2) FAILURE OF THE PRODUCT OR SERVICE TO MEET SPECIFICATIONS, CONFORM TO SAMPLE QUALITY OR TO BE DELIVERED IN GOOD CONDITION;
(3) MISREPRESENTATION BY THE CONTRACTOR;
(4) FRAUD, COLLUSION , CONSPIRACY OR OTHER UNLAWFUL MEANS OF OBTAINING ANY CONTRACT WITH THE STATE;
(5) CONFLICT OF CONTRACT PROVISIONS WITH CONSTITUTIONAL OR STATUTORY PROVISIONS OF STATE OR FEDERAL LAW;
(6) ANY OTHER BREACH OF CONTRACT.
FURTHER, LSUHSC MAY TERMINATE THIS CONTRACT FOR CAUSE BASED UPON THE FAILURE OF THE CONTRACTOR TO COMPLY WITH THE TERMS AND/OR CONDITIONS OF THE CONTRACT; PROVIDED THAT LSUHSC SHALL GIVE THE CONTRACTOR WRITTEN NOTICE SPECIFYING THE FAILURE. IF WITHIN THIRTY (30) DAYS AFTER RECEIPT OF SUCH NOTICE, THE CONTRACTOR SHALL NOT HAVE EITHER CORRECTED SUCH FAILURE OR, IN THE CASE WHICH CANNOT BE CORRECTED IN THIRTY (30) DAYS, BEGUN IN GOOD FAITH TO CORRECT SAID FAILURE AND THEREAFTER PROCEEDED DILIGENTLY TO COMPLETE SUCH CORRECTION, THEN LSUHSC MAY, AT ITS OPTION, PLACE THE CONTRACTOR IN DEFAULT AND THE CONTRACT SHALL TERMINATE ON THE DATE

SPECIFIED IN SUCH NOTICE. THE CONTRACTOR MAY EXERCISE ANY RIGHTS AVAILABLE TO IT UNDER LOUISIANA LAW TO TERMINATE FOR CAUSE UPON THE FAILURE OF LSUHSC TO COMPLY WITH THE TERMS AND CONDITIONS OF THIS CONTRACT; PROVIDED THAT THE CONTRACTOR SHALL GIVE LSUHSC WRITTEN NOTICE SPECIFYING LSUHSC'S FAILURE AND A REASONABLE OPPORTUNITY FOR LSUHSC TO CURE THE DEFECT

TERMINATION FOR CONVENIENCE:
LSUHSC MAY, AT ANY TIME, TERMINATE THE CONTRACT FOR THEIR CONVENIENCE AND WITHOUT CAUSE. UPON RECEIPT OF WRITTEN NOTICE FROM LSUHSC OF SUCH TERMINATION FOR THEIR CONVENIENCE, THE CONTRACTOR SHALL: CEASE OPERATIONS AS DIRECTED BY LSUHSC IN THE NOTICE; TAKE ACTIONS NECESSARY, OR THAT LSUHSC MAY DIRECT, FOR THE PROTECTION AND PRESERVATION OF THE WORK; AND EXCEPT FOR WORK DIRECTED TO BE PERFORMED PRIOR TO THE EFFECTIVE DATE OF TERMINATION STATED IN THE NOTICE, TERMINATE ALL EXISTING SUBCONTRACTS AND PURCHASE ORDERS AND ENTER INTO NO FURTHER SUBCONTRACTS AND PURCHASE ORDERS. IN CASE OF SUCH TERMINATION FOR LSUHSC'S CONVENIENCE, THE CONTRACTOR SHALL BE ENTITLED TO RECEIVE PAYMENT FOR WORK EXECUTED. LSUHSC SHALL NOT BE RESPONSIBLE OR OTHERWISE LIABLE FOR ANY DEMOBILIZATION COSTS OR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM SUCH TERMINATION.

TERMINATION FOR NON-APPROPRIATION OF FUNDS:
THE CONTINUATION OF THIS CONTRACT IS CONTINGENT UPON THE APPROPRIATION OF FUNDS TO FULFILL THE REQUIREMENTS OF THE CONTRACT.

21. DEFAULT OF CONTRACT:
FAILURE TO DELIVER WITHIN THE TIME SPECIFIED IN THE BID WILL CONSTITUTE A DEFAULT AND MAY CAUSE CANCELLATION OF THE CONTRACT. WHERE THE UNIVERSITY HAS DETERMINED THE CONTRACTOR TO BE IN DEFAULT, THE UNIVERSITY RESERVES THE RIGHT TO PURCHASE ANY OR ALL PRODUCTS OR SERVICES COVERED BY THE CONTRACT ON THE OPEN MARKET AND TO CHARGE THE CONTRACTOR WITH COST IN EXCESS OF THE CONTRACT PRICE. UNTIL SUCH ASSESSED CHARGES HAVE BEEN PAID, NO SUBSEQUENT BID FROM THE DEFAULTING CONTRACTOR WILL BE CONSIDERED.

22. ORDER OF PRIORITY:
IN THE EVENT THERE IS A CONFLICT BETWEEN THE INSTRUCTIONS TO BIDDERS OR STANDARD CONDITIONS AND THE SPECIAL CONDITIONS, THE SPECIAL CONDITIONS SHALL GOVERN.

23. APPLICABLE LAW:
ALL CONTRACTS SHALL BE CONSTRUED IN ACCORDANCE WITH AND GOVERNED BY THE LAWS OF THE STATE OF LOUISIANA.

24. COMPLIANCE WITH CIVIL RIGHTS LAWS:
BY SUBMITTING AND SIGNING THIS BID, BIDDER AGREES TO ABIDE BY THE REQUIREMENTS OF THE FOLLOWING AS APPLICABLE: TITLE VI AND VII OF THE CIVIL RIGHTS ACT OF 1964, AS AMENDED BY THE EQUAL OPPORTUNITY ACT OF 1972, FEDERAL EXECUTIVE ORDER 11246, FEDERAL REHABILITATION ACT OF 1973, AS AMENDED, THE VETERAN'S READJUSTMENT ASSISTANCE ACT OF 1974, TITLE IX OF THE EDUCATION AMENDMENTS OF 1972, THE AGE ACT OF 1975, AND BIDDER AGREES TO ABIDE BY THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT OF 1990. BIDDER AGREES NOT TO DISCRIMINATE IN ITS EMPLOYMENT PRACTICES AND WILL RENDER SERVICES UNDER ANY CONTRACT ENTERED INTO AS A RESULT OF THIS SOLICITATION WITHOUT REGARD TO RACE, COLOR, RELIGION, SEX, AGE, NATIONAL ORIGIN, POLITICAL AFFILIATION, DISABILITY, VETERAN STATUS, OR ANY OTHER NON-MERIT FACTOR. ANY ACT OF DISCRIMINATION COMMITTED BY BIDDER, OR FAILURE TO COMPLY WITH THESE STATUTORY OBLIGATIONS WHEN APPLICABLE, SHALL BE GROUNDS FOR TERMINATION OF ANY CONTRACT ENTERED INTO AS A RESULT OF THIS SOLICITATION.

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25. SPECIAL ACCOMMODATIONS:
ANY "QUALIFIED INDIVIDUAL WITH A DISABILITY" AS DEFINED BY THE AMERICANS WITH DISABILITIES ACT WHO HAS SUBMITTED A BID AND DESIRES TO ATTEND THE BID OPENING, MUST NOTIFY THIS OFFICE IN WRITING NOT LATER THAN SEVEN DAYS PRIOR TO THE BID OPENING DATE OF THEIR NEED FOR SPECIAL ACCOMMODATIONS. IF THE REQUEST CANNOT BE REASONABLY PROVIDED, THE INDIVIDUAL WILL BE INFORMED PRIOR TO THE BID OPENING.

26. INDEMNITY:
CONTRACTOR AGREES, UPON RECEIPT OF WRITTEN NOTICE OF A CLAIM OR ACTION, TO DEFEND THE CLAIM OR ACTION, OR TAKE OTHER APPROPRIATE MEASURE, TO INDEMNIFY, AND HOLD HARMLESS, LSUHSC, ITS OFFICERS, ITS AGENTS AND ITS EMPLOYEES FROM AND AGAINST ALL CLAIMS AND ACTIONS FOR BODILY INJURY, DEATH OR PROPERTY DAMAGES CAUSED BY THE FAULT OF THE CONTRACTOR, OFFICERS, ITS AGENTS, OR ITS EMPLOYEES. CONTRACTOR IS OBLIGATED TO INDEMNIFY ONLY TO THE EXTENT OF THE FAULT OF THE CONTRACTOR, ITS OFFICERS, ITS AGENTS, OR ITS EMPLOYEES. HOWEVER, THE CONTRACTOR SHALL HAVE NO OBLIGATION AS SET FORTH ABOVE WITH RESPECT TO ANY CLAIM OR ACTION FROM BODILY INJURY, DEATH OR PROPERTY DAMAGES ARISING OUT OF THE FAULT OF THE UNIVERSITY, ITS OFFICERS, ITS AGENTS OR ITS EMPLOYEES.

27. IN ACCORDANCE WITH THE PROVISIONS OF (RS 39:2192):
IN AWARDING CONTRACTS, ANY PUBLIC ENTITY IS AUTHORIZED TO REJECT THE LOWEST BID FROM, OR NOT AWARD THE CONTRACT TO, A BUSINESS IN WHICH ANY INDIVIDUAL WITH AN OWNERSHIP INTEREST OF FIVE PERCENT OR MORE HAS BEEN CONVICTED OF, OR HAS ENTERED A PLEA OF GUILTY OR NOLO CONTENDERE TO ANY STATE FELONY CRIME OR EQUIVALENT FEDERAL FELONY CRIME COMMITTED IN THE SOLICITATION OR EXECUTION OF A CONTRACT OR BID AWARDED UNDER THE LAWS GOVERNING PUBLIC CONTRACTS UNDER THE PROVISIONS OF CHAPTER 10 OF TITLE 38 OF THE LOUISIANA REVISED STATUTES OF 1950, PROFESSIONAL, PERSONAL, CONSULTING, AND SOCIAL SERVICES PROCUREMENT UNDER THE PROVISIONS OF CHAPTER 16 OF TITLE 39, OR THE LOUISIANA PROCUREMENT CODE UNDER THE PROVISIONS OF CHAPTER 17 OF TITLE 39.

28. CERTIFICATION OF NO SUSPENSION OR DEBARMENT:
BY SIGNING AND SUBMITTING THIS BID, THE BIDDER CERTIFIES THAT THEIR BUSINESS ENTITY , ANY SUBCONTRACTORS OR PRINCIPALS ARE NOT SUSPENDED OR DEBARRED BY EITHER THE DEPARTMENT OF HEALTH AND HUMAN SERVICES, OFFICE OF INSPECTOR GENERAL (OIG) OR THE GENERAL SERVICES ADMINISTRATION (GSA) IN ACCORDANCE WITH THE REQUIREMENTS IN "AUDIT REQUIREMENTS IN SUBPART F OF THE OFFICE OF MANAGEMENT AND BUDGET'S UNIFORM ADMINISTRATIVE REQUIREMENTS, COST PRINCIPLES AND AUDIT REQUIREMENTS FOR FEDERAL AWARDS."

A LIST OF PARTIES WHO HAVE BEEN SUSPENDED OR DEBARRED CAN BE VIEWED VIA THE INTERNET AT HTTPS://SAM.GOV

IF AT ANY TIME DURING THE TERM OF THE CONTRACT AWARDED AS A RESULT OF THIS INVITATION TO BID, THIS ENTITY OR ANY OF ITS EMPLOYEES OR SUBCONTRACTORS APPEARS ON EITHER LISTING, THIS ENTITY WILL NOTIFY THE CONTRACTING AGENCY, AND THE CONTRACT WILL BE TERMINATED. THE CONTRACTING AGENCY WILL NOT BE LIABLE FOR ANY DAMAGES RESULTING FROM SAID TERMINATION.

29. FEDERAL CLAUSES(IF APPLICABLE):
ANTI-KICKBACK CLAUSE. THE CONTRACTOR HEREBY AGREES TO ADHERE TO THE MANDATE DICTATED BY THE COPELAND "ANTI-KICKBACK" ACT WHICH PROVIDES THAT EACH CONTRACTOR OR SUB GUARANTEE SHALL BE PROHIBITED FROM INDUCING BY ANY MEANS, ANY PERSON EMPLOYED IN THE COMPLETION OF WORK, TO GIVE UP ANY PART OF THE COMPENSATION TO WHICH HE IS OTHERWISE ENTITLED.

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CLEAN AIR ACT:
THE CONTRACTOR HEREBY AGREES TO ADHERE TO THE PROVISIONS WHICH REQUIRE COMPLIANCE WITH ALL APPLICABLE STANDARDS, ORDERS OR REQUIREMENTS ISSUED UNDER SECTION 306 OF THE CLEAN WATER ACT, WHICH PROHIBITS THE USE UNDER NON-EXEMPT FEDERAL CONTRACTS, GRANTS, OR LOANS OF FACILITIES INCLUDED ON THE EPA LIST OF VIOLATING FACILITIES.

ENERGY POLICY AND CONSERVATION ACT:
THE CONTRACTOR HEREBY RECOGNIZES THE MANDATORY STANDARDS AND POLICIES RELATING TO ENERGY EFFICIENCY WHICH ARE CONTAINED IN THE STATE ENERGY CONSERVATION PLAN ISSUED IN COMPLIANCE WITH THE ENERGY POLICY AND CONSERVATION ACT (P.L. 94-163)

CLEAN WATER ACT:
THE CONTRACTOR HERBY AGREES TO ADHERE TO THE PROVISIONS WHICH REQUIRE COMPLIANCE WITH ALL APPLICABLE STANDARDS, ORDERS, OR REQUIREMENTS ISSUED UNDER SECTION 508 OF THE CLEAN WATER ACT WHICH PROHIBITS THE USE UNDER NON-EXEMPT FEDERAL CONTRACTS, GRANTS, OR LOANS OF FACILITIES INCLUDED ON THE EPA LIST OF VIOLATING FACILITIES.

ANTI-LOBBYING AND DEBARMENT ACT:
THE CONTRACTOR WILL BE EXPECTED TO COMPLY WITH FEDERAL STATUES REQUIRED IN THE ANTI-LOBBYING ACT AND THE DEBARMENT ACT.

30. ADHERENCE TO JCAHO STANDARDS:
WHERE APPLICABLE, LSUHSC IS ACCREDITED BY THE JOINT COMMISSION ON ACCREDITATION OF HEALTHCARE ORGANIZATIONS AND AS SUCH ALL CONTRACTORS, SUBCONTRACTORS, AND VENDORS AGREE TO ADHERE TO THE APPLICABLE STANDARDS PROMULGATED BY THE COMMISSION

31. IN ACCORDANCE WITH LOUISIANA LAW, ALL CORPORATIONS (RS 12:163) AND LIMITED LIABILITY COMPANIES (RS 12:1308.2) MUST BE IN GOOD STANDING WITH THE LOUISIANA SECRETARY OF STATE IN ORDER TO HOLD A CONTRACT WITH THE STATE.

32. INTERPRETATION OF DOCUMENT:
ANY INTERPRETATION OF THE BID OR QUOTATION DOCUMENT WILL ONLY BE MADE BY AN ADDENDUM ISSUED IN WRITING BY THE PURCHASING DEPARTMENT. SUCH ADDENDUM WILL BE MAILED OR DELIVERED TO EACH PERSON RECEIVING A SET OF THE ORIGINAL BID OR QUOTATION DOCUMENTS. LSUHSC WILL NOT BE RESPONSIBLE FOR ANY OTHER EXPLANATION OR INTERPRETATION OF THE DOCUMENTS.

33. THIS SOLICITATION CONTAINS ALL TERMS AND CONDITIONS WITH RESPECT TO THE PURCHASE OF THE GOODS AND OR SERVICES SPECIFIED HEREIN. SUBMITTAL OF ANY CONTRARY TERMS AND CONDITIONS MAY CAUSE YOUR BID TO BE REJECTED. BY SIGNING AND SUBMITTING A BID, VENDOR AGREES THAT CONTRARY TERMS AND CONDITIONS WHICH MAY BE INCLUDED IN ITS BID ARE NULLIFIED AND AGREES THAT THIS CONTRACT SHALL BE CONSTRUED IN ACCORDANCE WITH THIS SOLICITATION.

34. VENDORS FORMS:
THE PURCHASE/RELEASE ORDER IS THE ONLY BINDING DOCUMENT TO BE ALLOWED AGAINST THIS CONTRACT. SIGNING OF VENDOR'S FORMS IS NOT ALLOWED.

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35. PUBLICIZING AWARDS:
IN ACCORDANCE WITH L.A.C 34:I.535, UNSUCCESSFUL BIDDERS WILL BE NOTIFIED OF THE AWARD PROVIDED THEY SUBMIT WITH THEIR BID A SELF-ADDRESSED STAMPED ENVELOPE REQUESTING THIS INFORMATION.

36. PREFERENCE:
IN ACCORDANCE WITH LOUISIANA REVISED STATUTES 39:1595, A PREFERENCE MAY BE ALLOWED FOR PRODUCTS MANUFACTURED, PRODUCED, GROWN, OR ASSEMBLED IN LOUISIANA OF EQUAL QUALITY. DO YOU CLAIM THIS PREFERENCE?

YES _____
SPECIFY THE LINE NUMBER (S) _____
SPECIFY LOCATION WITHIN LOUISIANA WHERE THIS PRODUCT IS MANUFACTURED, PRODUCED, GROWN OR ASSEMBLED _____
(NOTE: IF MORE SPACE IS REQUIRED, INCLUDE ON SEPARATE SHEET.)

DO YOU HAVE A LOUISIANA BUSINESS WORK FORCE? YES _____ NO _____
IF SO, DO YOU CERTIFY THAT AT LEAST FIFTY PERCENT (50%) OF YOUR LOUISIANA WORKFORCE IS COMPRISED OF LOUISIANA RESIDENTS?
YES_____ NO_____
FAILURE TO SPECIFY ABOVE INFORMATION MAY CAUSE ELIMINATION FROM PREFERENCES.
PREFERENCES SHALL NOT APPLY TO SERVICE CONTRACTS.

37. AUDIT OF RECORDS: THE STATE LEGISLATIVE AUDITOR, FEDERAL AUDITORS, AND INTERNAL AUDITORS OF THE STATE SHALL HAVE THE RIGHT TO INSPECT AND AUDIT ALL TIMEKEEPING AND EXPENSE RECORDS OF THE CONTRACTING ENTITY OR ANY SUBCONTRACTOR OF THE CONTRACTING ENTITY TO SUBSTANTIATE AMOUNTS INVOICED BY SUPPLIER WITH RESPECT TO THIS AGREEMENT. THE RIGHTS OF INSPECTION AND AUDIT SHALL COMMENCE AS OF THE DATE OF THIS AGREEMENT AND SHALL CONTINUE FOR A PERIOD OF FIVE (5) YEARS AFTER PROJECT ACCEPTANCE OR AS REQUIRED BY APPLICABLE STATE AND FEDERAL LAW. THE CONTRACTING ENTITY AND ANY SUBCONTRACTOR OF THE CONTRACTING ENTITY SHALL MAINTAIN ALL TIMEKEEPING AND EXPENSE RECORDS RELATED TO THIS AGREEMENT FOR THE ENUMERATED FIVE (5) YEAR PERIOD.

38. CONFIDENTIALITY: CONTRACTOR SHALL PROTECT FROM UNAUTHORIZED USE AND DISCLOSURE ALL INFORMATION RELATING TO THE STATE'S OPERATIONS AND DATA (E.G. FINANCIAL, STATISTICAL, PERSONAL, TECHNICAL, ETC.) THAT BECOMES AVAILABLE TO THE CONTRACTOR IN CARRYING OUT THIS CONTRACT. CONTRACTOR SHALL USE PROTECTING MEASURES THAT ARE THE SAME OR MORE EFFECTIVE THAN THOSE USED BY THE STATE. CONTRACTOR IS NOT REQUIRED TO PROTECT INFORMATION OR DATA THAT IS PUBLICLY AVAILABLE OUTSIDE THE SCOPE OF THIS CONTRACT; ALREADY RIGHTFULLY IN THE CONTRACTOR'S POSSESSION; INDEPENDENTLY DEVELOPED BY THE CONTRACTOR OUTSIDE THE SCOPE OF THIS CONTRACT; OR RIGHTFULLY OBTAINED FROM THIRD PARTIES.

39. CYBERSECURITY TRAINING: IN ACCORDANCE WITH LA. R.S. 42:1267(B)(3) AND THE STATE OF LOUISIANA'S INFORMATION SECURITY POLICY, IF THE CONTRACTOR, ANY OF ITS EMPLOYEES, AGENTS, OR SUBCONTRACTORS WILL HAVE ACCESS TO STATE GOVERNMENT INFORMATION TECHNOLOGY ASSETS, THE CONTRACTOR'S EMPLOYEES, AGENTS, OR SUBCONTRACTORS WITH SUCH ACCESS MUST COMPLETE CYBERSECURITY TRAINING ANNUALLY, AND THE CONTRACTOR MUST PRESENT EVIDENCE OF SUCH COMPLIANCE ANNUALLY AND UPON REQUEST. THE CONTRACTOR MAY USE THE CYBERSECURITY TRAINING COURSE OFFERED BY THE LOUISIANA DEPARTMENT OF STATE CIVIL SERVICE WITHOUT ADDITIONAL COST OR MAY USE ANY ALTERNATE COURSE APPROVED IN WRITING BY THE OFFICE OF TECHNOLOGY SERVICES.

Invitation to Bid

STANDARD TERMS & CONDITIONS	Page 9 of 10
NUMBER : 002973 **OPEN DATE : 04/28/2026 TIME: 12:00 PM**	**BIDDER:**

FOR PURPOSES OF THIS SECTION, "ACCESS TO STATE GOVERNMENT INFORMATION TECHNOLOGY ASSETS" MEANS THE POSSESSION OF CREDENTIALS, EQUIPMENT, OR AUTHORIZATION TO ACCESS THE INTERNAL WORKINGS OF STATE INFORMATION TECHNOLOGY SYSTEMS OR NETWORKS. EXAMPLES WOULD INCLUDE BUT NOT BE LIMITED TO STATE-ISSUED LAPTOPS, VPN CREDENTIALS TO ACCESS THE STATE NETWORK, BADGING TO ACCESS THE STATE'S TELECOMMUNICATIONS CLOSETS OR SYSTEMS, OR PERMISSIONS TO MAINTAIN OR MODIFY IT SYSTEMS USED BY THE STATE. FINAL DETERMINATION OF SCOPE INCLUSIONS OR EXCLUSIONS RELATIVE TO ACCESS TO STATE GOVERNMENT INFORMATION TECHNOLOGY ASSETS WILL BE MADE BY THE OFFICE OF TECHNOLOGY SERVICES.

Invitation to Bid

PRICE SHEET

NUMBER : 002973
OPEN DATE : 04/28/2026 TIME: 12:00 PM

BIDDER:

UNLESS SPECIFIED ELSEWHERE SHIP TO:

433 Bolivar St
New Orleans LA 70112

Line No.	Description	Qty	UOM	Unit Price	Extended Amount
1	MEIC AV System Upgrades Specify brand, model bid(if applicable) MEIC AV System Upgrades - Baton Rouge ****** Michael May mmay2@lsuhsc.edu	1.00	EA		

LSU HEALTH
MEDICAL EDUCATION & INNOVATION CENTER (MEIC)
AUDIO VISUAL PACKAGE UPGRADES

COMPLIMENTARY
SCOPE OF WORK

LSU Health New Orleans
MEIC AV Package Upgrades

MEDICAL EDUCATION AND INNOVATION CENTER
5246 BRITTANY DRIVE
BATON ROUGE, LA 70808

April 9, 2026

LSU Health
NEW ORLEANS
Property and Facilities

01010 – Scope of Work

This work is to be performed at the **LSU Health – Baton Rouge Medical Education & Innovation Center (MEIC) at 5246 Brittany Drive, Baton Rouge LA., 70808.**

It is the intent to provide a 100% turnkey project ready for use upon completion. Items not specifically mentioned in this scope of work, nor illustrated on the accompanying drawings, but clearly necessary for a complete and usable system, must be provided in good working order and 100% operational.

Provide all labor, material, equipment and expertise necessary to build-out and upgrade Audio/Visual System in the designated areas of the MEIC in accordance with the attached drawings and/or coordinating documents.

PHASE 1

1. 1st Floor AV Closet (Room 107):
    a. Remove existing AV cabinets in room 107 while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
        i. Coordinate removal of cabinets and devices with Owner Representative prior to removal.
        ii. Remove existing cabinets and equipment and return to the Owner Representative for surplus.
        iii. Provide and install new equipment scheduled for rack installation.
        iv. Mount and install new equipment at the AV Rack in room 107.
            1. Coordinate equipment and device placements with Owner Representative prior to installation.
        v. Connect and integrate all new rack equipment.

2. 1st Floor Divisible Classrooms (101, 102, 103, 104):
    a. Replace wall-mounted touchscreen scheduling panels while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
        i. Remove the existing wall-mounted scheduling panels (Crestron – TSS-1050) and electrical box mounting brackets.
            1. Return removed devices to Owner Representative for surplus.
        ii. Remove the existing CAT 5e wiring back to existing Crestron PoE Switch at the AV Rack in room 107.
        iii. Install new electrical box mounting brackets and connect new scheduling panels (Crestron – TSS-1070) via new (yellow) AV network cable.

    b. Replace wall-mounted touchscreen room control panels while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software,

programming, components, and accessories required to facilitate replacement, system upgrades, and integration.

i. Remove the existing wall-mounted room control panels (Crestron – TS-750) and electrical box mounting brackets.
    1. Return removed devices to Owner Representative for surplus.
ii. Remove the existing CAT 5e wiring back to existing Crestron PoE Switch at the AV Rack in room 107.
iii. Install new electrical box mounting brackets and connect new room control panels (Crestron – TS-770) via new (yellow) AV network cable.

c. Replace ceiling-mounted speakers while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
    i. Remove the existing ceiling-mounted speakers (JBL – Control 47) and associated wiring back to AV Rack in room 107.
        1. Return removed devices to Owner Representative for surplus.
    ii. Install owner-furnished Q-Sys – NL-C4 ceiling-mounted speakers.
        1. Install and connect new ceiling-mounted speakers (Q-Sys – NL-C4) via new (yellow) AV network cables and patch cables.

d. Replace ceiling-mounted microphones while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
    i. Remove the existing ceiling-mounted microphones (Shure – MX202W) and associated wiring back to AV Rack in room 107.
        1. Return removed devices to Owner Representative for surplus.
    ii. Install Sennheiser – Team Connect Ceiling 2 ceiling-mounted microphone arrays and Sennheiser – SpeechLine (SL MCR 4 DW-4) receivers *(Note: Sennheiser – SpeechLine receiver installations in Rooms 101 and 104 only).*
        1. Install microphone suspension kit (Sennheiser – SL CM SK).
        2. Install and connect new ceiling-mounted microphone arrays (Sennheiser – TCC 2) via new (yellow) AV network cables and patch cables.
        3. Install and connect new ceiling-mounted microphone receivers (Sennheiser – SL MCR 4 DW-4) via new (yellow) AV network cables and patch cables.

e. Provide and install new ceiling-mounted room occupancy sensors. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
    i. Mount and configure new Crestron – CEN-ODT-C-POE ceiling-mounted occupancy sensors.
        1. Install and connect new ceiling-mounted occupancy sensors (Crestron – CEN-ODT-C-POE) via new (yellow) AV network cables.

f. Replace room projectors while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
    i. Provide Projectors (4xChristie – DWU630-GS) to replace (4xChristie – LWU-505):
        1. Remove the existing pole-mounted Christie – LWU-505 projector.
        2. Mount new Christie – DWU630-GS on existing pole.
        3. Remove the existing above-ceiling mounted controller (Crestron – DM-RMC-SCALER-C) near the projector and all associated wiring back to AV Rack Room 107.
        4. Mount a new high-definition decoder (Crestron DM-NVX-D30) in the ceiling above each new projector.
        5. Install and connect new high-definition decoder devices (Crestron – DM-NVX-D30) via new (yellow) AV network cable and patch cables.
        6. Connect new Christie – DWU630-GS via power cord and integrate with associated high-definition decoder device.
    ii. Return removed devices to Owner Representative for surplus.

g. Replace Head End Projectors in Classrooms 101 and 104 while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
    i. Provide Head End Projectors (2xChristie – 4K13-HS) to replace (2xChristie – LWU-755-DS):
        1. Remove the existing pole-mounted Christie – LWU-755-DS projector.
        2. Mount new Christie – 4K13-HS on existing pole.
        3. Remove the existing above-ceiling mounted controller (Crestron – DM-RMC-SCALER-C) near the projector and all associated wiring back to AV Rack Room 107.
        4. Mount a new high-definition decoder (Crestron DM-NVX-D30) in the ceiling above each new projector.
    ii. Install and connect new high-definition decoder devices (Crestron – DM-NVX-D30) via new (yellow) AV network cables and patch cables.
    iii. Connect new Christie – 4K13-HS via power cord and integrate with associated high-definition decoder device.
    iv. Return removed devices to Owner Representative for surplus.

h. Replace Mediasite cameras in Classrooms 101 and 104 while decommissioning the existing Crestron AV System cameras in Classrooms 101, 102, 103, and 104. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
    i. Remove four (4) existing ceiling-mounted cameras (Vaddio – 999-7250-000) and associated wiring back to AV Rack in room 107.
        1. Remove ceiling-mount camera support.

ii. For Classrooms 101 and 104 only, also remove the two (2) existing pole-mounted Mediasite camera (Vaddio – 999-7250-000) and associated wiring back to AV Rack in room 107.
    1. Provide Mediasite cameras (2x AVer CAM550) to replace (2x Vaddio – 999-7250-000).
    2. Mount new Mediasite camera – AVer CAM550 to existing pole.
    3. Mount a new high-definition encoder (Crestron – DM-NVX-E30) in the ceiling above the new Mediasite camera.
    4. Install and connect new high-definition encoder (DM-NVX-E30) via new (yellow) AV network cables and patch cables.
    5. Install and connect new Mediasite camera (AVer CAM550) via network patch cable and associated NVX device.
    6. Connect new high-definition encoder (DM-NVX-E30) to new Mediasite camera (AVer CAM550) via HDMI cable ports.
iii. Return removed devices to Owner Representative for surplus.

i. Replace Motorized Shade Controls while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
    i. Remove four (4) existing above-ceiling mounted control port expansion modules (Crestron – C2N-IO) and all associated wiring back to the Crestron PAC2 Controller in the AV Room (room 107).
        1. Provide IP-to-RS 232 interface (4x Global Cache – IP2SL-P) to replace (4x Crestron – C2N-IO) devices.
        2. Mount new interface device (Global Cache – IP2SL-P) above bridged motorized shade assemblies.
        3. Install and connect new IP-to-RS 232 interface (Global Cache – IP2SL-P) via new AV network cables and patch cables.
        4. Connect new interface (Global Cache – IP2SL-P) to existing motorized shade bridge via RS 232 connection ports and integrate assemblies.
    ii. Provide new Ethernet-to-Cresnet bridge (Crestron DIN-CENCN-2-POE) and install at the AV Rack in room 107.
        1. Mount new Ethernet-to-Crestnet bridge (Crestron DIN-CENCN-2-POE) to the existing cabinet assembly as coordinated with owner.
        2. Install and configure new Crestron DIN-CENCN-2-POE bridge for integration and connection with Crestron motorized shade controls via patch cables and/or Cresnet ports.
    iii. Return removed devices to Owner Representative for surplus.

j. Replace Lectern and Accessories (Classroom 101 and 104 only) while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
    i. Remove existing lectern and equipment and return to the LSUH-NO Representative for surplus.

ii. Remove existing Crestron System wiring back to AV Rack in room 107.
iii. Provide and install a new custom lectern (Marshall Furniture – LSU-MWSGR-32), complete with the following devices and accessories:
    1. 1 Crestron DM-NVX-384
    2. 1 Crestron DM-NVX-D30
    3. 1 Crestron AM-3200-WF
    4. 1 "Plugable" USBC-CAP60 Capture Card
    5. 1 Pluggable USB hub (Anker A7515 or Plugable – HUB7BC)
    6. Crestron TS-770 with swivel mount
    7. Audinate ADP-USB-AU-2x2
    8. Owner Furnished All-In-One PC
    9. Crestron FlipTop2 with power module and cable pass through
    10. J5Create (JVCU435) webcam with security attachment device
    11. Sennheiser (MEG 14-40 B) gooseneck microphone with shock mount
    12. Sennheiser (CHG 4N US) battery charger and spare batteries
    13. Furman (M-8x2) power conditioner

k. Replace Room 102 Floor Box#1 and 2 AV-over-IP wall plate encoders while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
    i. Remove the two existing AV-over-IP wall plate encoders (Crestron – DM-NVX-E20-2G-W-T) and electrical box mounting brackets.
        1. Return removed devices to Owner Representative for surplus.
    ii. Remove existing Crestron System wiring back to AV Rack in room 107.
    iii. Install new electrical box mounting brackets, new AV-over-IP wall plate encoders (Crestron – DM-NVX-E20-2G-X-T), and connect via new (yellow) AV network cables.

l. Replace Room 103 Floor Box#1 and 2 AV-over-IP wall plate encoders while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
    i. Remove the two existing AV-over-IP wall plate encoders (Crestron – DM-NVX-E20-2G-W-T) and electrical box mounting brackets.
        1. Return removed devices to Owner Representative for surplus.
    ii. Remove existing Crestron System wiring back to AV Rack in room 107.
    iii. Install new electrical box mounting brackets, new AV-over-IP wall plate encoders (Crestron – DM-NVX-E20-2G-X-T), and connect via new (yellow) AV network cables.

End Of Phase 1

PHASE 2

3. Conference Rooms (201, 301, 320, 401, & 420):
    a. Replace wall-mounted touchscreen scheduling panels while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
        i. Remove the existing wall-mounted scheduling panels (Crestron – TSS-1050) and electrical box mounting brackets.
            1. Return removed devices to Owner Representative for surplus.
        ii. Remove the existing CAT 5e wiring back to existing Crestron PoE Switch at the AV Rack in room 218.
        iii. Install new electrical box mounting brackets and connect new scheduling panels (Crestron – TSS-1070) via new AV network cable.

    b. Replace wall-mounted touchscreen room control panels while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
        i. Remove the existing wall-mounted room control panels (Crestron – TS-750) and electrical box mounting brackets.
            1. Return removed devices to Owner Representative for surplus.
        ii. Remove the existing CAT 5e wiring back to existing Crestron PoE Switch at the AV Rack in room 218.
        iii. Install new electrical box mounting brackets and connect new room control panels (Crestron – TS-770) via new AV network cable.

    c. Provide and install new ceiling-mounted room occupancy sensors while integrating and upgrading new AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
        i. Install Crestron – CEN-ODT-C-POE ceiling-mounted occupancy sensors.
            1. Connect and configure new ceiling-mounted occupancy sensors (Crestron – CEN-ODT-C-POE) via new AV network cables.

    d. Provide and install new high-definition encoder/decoder devices (Crestron DM-NVX-360) while integrating and upgrading new AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
        i. Mount a new high-definition encoder/decoder devices (Crestron DM-NVX-360) below the conference room tables as directed by LSUHSC Representative.
        ii. Connect and configure new high-definition encoder/decoder devices (Crestron – DM-NVX-360) via new (yellow) AV network cable and patch cables.

iii. Provide and install new HDMI and USB cable connection ports at the conference table (Frost-Barber).
    1. Provide and install new HDMI and USB cables, routed from the high-definition encoder/decoder (Crestron – DM-NVX-360) below the table, through the table's cable management compartment, to the new connection ports.

e. Replace wall-mounted monitor and peripherals while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
    i. Disconnect and remove existing digital media controller (Crestron – DM-RMC-SCALER-C).
        1. Remove existing digital media controller device wiring back to AV Rack in room 218.
    ii. Disconnect and remove existing sound bar (Crestron – UC-SB1-CAM).
        1. Remove existing sound bar wiring back to AV Rack in room 218.
    iii. Disconnect and remove existing video bar/camera.
        1. Remove existing video bar/camera wiring back to source (existing PC).
    iv. Disconnect and remove existing monitor (LG – 60PN530P).
    v. Remove existing monitor mount.
    vi. Disconnect and remove existing Owner-furnished PC.
    vii. Provide and install new monitor mount (Chief – LTM1U).
        1. Include pullout accessory (Chief – FCAV1U).
        2. Confirm installation elevation with Owner Representative.
    viii. Provide and install new monitor (Sharp – 4P-B65EJ2U).
        1. Provide and install new air media device (Crestron – AM-3200-WF) secured to monitor.
            a. Secure new air media device (Crestron – AM-3200-WF) to monitor as directed by Owner Representative.
            b. Connect and configure new air media device (Crestron – AM-3200-WF) via new (yellow) AV network drop and patch cables.
        2. Provide and install new high-definition encoder/decoder device (Crestron – DM-NVX-360) secured to new monitor.
            a. Secure new high-definition encoder/decoder device (Crestron – DM-NVX-360) to monitor as directed by Owner Representative.
            b. Connect and configure new high-definition encoder/decoder device (Crestron – DM-NVX-360) via new (yellow) AV network drop and patch cables.
        3. Provide and install new video/sound bar (AVer – VB342 Pro).
            a. Mount new video/sound bar (AVer – VB342 Pro) to monitor via new mounting bracket (AVer – COMVBTMNT).

b. Connect and configure device via new (yellow) AV network drop and patch cables.

4. Install Owner-furnished PC.
    a. Secure new Owner-furnished PC to monitor as directed by Owner Representative.
    b. Connect Owner-furnished PC via power cord.
5. Integrate and connect all monitor AV peripherals (PC, AM-3200-WF, NVX-360, and VB342) via the required HDMI, AV/LAN, and USB connection ports and accessory cables.

ix. Return removed devices to Owner Representative for surplus.

f. Remove existing ceiling-mounted speakers/wires while decommissioning the existing Crestron AV System.
    i. For rooms 201, 301, and 401, remove the existing ceiling-mounted speakers (JBL – Control 47) and associated wiring back to AV Rack in room 218.
        1. Removed speakers shall be returned to the Owner Representative for surplus.
    ii. For rooms 320 and 420, remove only the existing speaker wires back to the AV Rack in room 218.

End Of Phase 2

PHASE 3

4. 2nd Floor AV Closet (Room 218):
    a. Remove existing AV cabinets/components in room 218 while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
        i. Coordinate removal of cabinets and devices with Owner Representative prior to removal.
        ii. Remove existing cabinets and equipment and return to the Owner Representative for surplus.
        iii. Provide and install new equipment scheduled for rack installation.
        iv. Mount and install new equipment at the AV/IT Rack as designated by Owner.
            1. Coordinate equipment and device placements with Owner Representative prior to installation.
        v. Connect and integrate all new rack equipment.

5. Reconciliation Room (211):
    a. Replace wall-mounted touchscreen scheduling panel while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
        i. Remove the existing wall-mounted scheduling panel (Crestron – TSS-1050) and electrical box mounting bracket.
            1. Return removed devices to Owner Representative for surplus.
        ii. Remove the existing CAT 5e wiring back to existing Crestron PoE Switch at the AV Rack in room 218.
        iii. Install new electrical box mounting bracket and connect new scheduling panel (Crestron – TSS-1070) via new AV network cable.

    b. Replace wall-mounted touchscreen room control panel while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
        i. Remove the existing wall-mounted room control panel (Crestron – TS-750) and electrical box mounting bracket.
            1. Return removed devices to Owner Representative for surplus.
        ii. Remove the existing CAT 5e wiring back to existing Crestron PoE Switch at the AV Rack in room 218.
        iii. Install new electrical box mounting bracket and connect new room control panel (Crestron – TS-770) via new AV network cable.

    c. Remove and replace existing monitor peripherals while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming,

components, and accessories required to facilitate replacement, system upgrades, and integration. (*Note: existing monitor removed by others*)

i. Disconnect and remove existing digital media controller (Crestron – DM-RMC-SCALER-C).
    1. Remove existing digital media controller device wiring back to AV Rack in room 218.
ii. Disconnect and remove existing Owner-furnished PC in storage cabinet.
iii. Disconnect and remove existing air media device (Crestron – AM-200).
    1. Remove existing digital media controller device wiring back to AV Rack in room 218.
iv. Disconnect and remove existing digital media wall plate transmitter (Crestron – DM-TX-200-C-2G-W-T) and line level audio input.
    1. Remove existing digital media transmitter and associated line level audio input wiring back to AV Rack in room 218.
v. Provide and install new monitor (Sony – FW-55BZ40L).
    1. Provide and install new air media device (Crestron – AM-3200-WF) in storage cabinet.
        a. Secure new air media device (Crestron – AM-3200-WF) in storage cabinet as directed by Owner Representative.
        b. Connect and configure new air media device (Crestron – AM-3200-WF) via new (yellow) AV network drop and patch cables.
    2. Provide and install new video/sound bar (Bose – VBS).
        a. Mount new video/sound bar (Bose – VBS) to monitor via new mounting bracket (Bose – 869196-0010).
        b. Connect new video/sound bar via power cord.
    3. Install Owner-furnished PC.
        a. Secure new Owner-furnished PC in storage cabinet as directed by Owner Representative.
        b. Connect Owner-furnished PC via power cord.
    4. Connect new monitor via power cord and integrate all monitor AV peripherals (PC, AM-3200-WF, and VBS) via the required HDMI, AV/LAN, and USB connection ports and accessory cables.
vi. Return removed devices to Owner Representative for surplus.

6. Skills Assessment Rooms (204, 205):
    a. Replace wall-mounted touchscreen scheduling panels while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
        i. Remove the existing wall-mounted scheduling panels (Crestron – TSS-1050) and electrical box mounting brackets.
            1. Return removed devices to Owner Representative for surplus.
        ii. Remove the existing CAT 5e wiring back to existing Crestron PoE Switch at the AV Rack in room 218.

iii. Install new electrical box mounting brackets and connect new scheduling panels (Crestron – TSS-1070) via new AV network cable.

b. Replace wall-mounted touchscreen room control panels while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
   i. Remove the existing wall-mounted room control panels (Crestron – TS-750) and electrical box mounting brackets.
      1. Return removed devices to Owner Representative for surplus.
   ii. Remove the existing CAT 5e wiring back to existing Crestron PoE Switch at the AV Rack in room 218.
   iii. Install new electrical box mounting brackets and connect new room control panels (Crestron – TS-770) via new AV network cable.

c. Provide and install new ceiling-mounted room occupancy sensors while integrating and upgrading new AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
   i. Install Crestron – CEN-ODT-C-POE ceiling-mounted occupancy sensors.
      1. Connect and configure new ceiling-mounted occupancy sensors (Crestron – CEN-ODT-C-POE) via new AV network cables.

d. Replace wall-mounted monitor and peripherals while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
   i. Disconnect and remove existing digital media controller (Crestron – DM-RMC-SCALER-C).
      1. Remove existing digital media controller device wiring back to AV Rack in room 218.
   ii. Disconnect and remove existing monitor (LG – 50PA550C-UG).
   iii. Provide and install new monitor (Sharp – 4P-B55EJ2U).
      1. Mount new monitor to existing wall-mount assembly.
      2. Provide and install new high-definition encoder/decoder device (Crestron – DM-NVX-360) secured to new monitor.
         a. Secure new high-definition encoder/decoder device (Crestron – DM-NVX-360) to monitor as directed by Owner Representative.
         b. Connect and configure new high-definition encoder/decoder device (Crestron – DM-NVX-360) via new (yellow) AV network drop and patch cables.
      3. Provide and install new video/sound bar (AVer – VB342 Pro).
         a. Mount new video/sound bar (AVer – VB342 Pro) to monitor via new mounting bracket (AVer – COMVBTMNT).

b. Connect and configure device via new (yellow) AV network drops and patch cables.
4. Connect new monitor via power cord and integrate all monitor AV peripherals (DM-NVX-360 and VB342) via the required HDMI, AV/LAN, and USB connection ports and accessory cables.

iv. Return removed devices to Owner Representative for surplus.

7. Innovation Rooms (206, 207):
   a. Replace wall-mounted touchscreen scheduling panels while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
      i. Remove the existing wall-mounted scheduling panels (Crestron – TSS-1050) and electrical box mounting brackets.
         1. Return removed devices to Owner Representative for surplus.
      ii. Remove the existing CAT 5e wiring back to existing Crestron PoE Switch at the AV Rack in room 218.
      iii. Install new electrical box mounting brackets and connect new scheduling panels (Crestron – TSS-1070) via new AV network cable.

   b. Replace wall-mounted touchscreen room control panels while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
      i. Remove the existing wall-mounted room control panels (Crestron – TS-750) and electrical box mounting brackets.
         1. Return removed devices to Owner Representative for surplus.
      ii. Remove the existing CAT 5e wiring back to existing Crestron PoE Switch at the AV Rack in room 218.
      iii. Install new electrical box mounting brackets and connect new room control panels (Crestron – TS-770) via new AV network cable.

   c. Provide and install new ceiling-mounted room occupancy sensors while integrating and upgrading new AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
      i. Install Crestron – CEN-ODT-C-POE ceiling-mounted occupancy sensors.
         1. Connect and configure new ceiling-mounted occupancy sensors (Crestron – CEN-ODT-C-POE) via new AV network cables.

   d. Replace wall-mounted monitor and peripherals while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
      i. Disconnect and remove existing digital media controller (Crestron – DM-RMC-SCALER-C).

1. Remove existing digital media controller device wiring back to AV Rack in room 218.

ii. Disconnect and remove existing monitor (LG – 50PA550C-UG).

iii. Provide and install new monitor (Sharp – 4P-B55EJ2U).
   1. Mount new monitor to existing wall-mount assembly.
   2. Provide and install new air media device (Crestron – AM-3200-WF) secured to monitor in Innovation Room 206 only.
      a. Secure new air media device (Crestron – AM-3200-WF) to monitor as directed by Owner Representative.
      b. Connect and configure new air media device (Crestron – AM-3200-WF) via new (yellow) AV network drop and patch cables.
   3. Provide and install new high-definition encoder/decoder device (Crestron – DM-NVX-360) secured to new monitor.
      a. Secure new high-definition encoder/decoder device (Crestron – DM-NVX-360) to monitor as directed by Owner Representative.
      b. Connect and configure new high-definition encoder/decoder device (Crestron – DM-NVX-360) via new (yellow) AV network drop and patch cables.
   4. Provide and install new video/sound bar (AVer – VB342 Pro).
      a. Mount new video/sound bar (AVer – VB342 Pro) to monitor via new mounting bracket (AVer – COMVBTMNT).
      b. Connect and configure device via new (yellow) AV network drops and patch cables.
   5. Install Owner-furnished PC in Innovation Room 206 only.
      a. Secure new Owner-furnished PC to monitor as directed by Owner Representative.
      b. Connect Owner-furnished PC via power cord.
   6. Connect new monitor via power cord and integrate all monitor AV peripherals (PC, AM-3200-WF, NVX-360, and VB342) via the required HDMI, AV/LAN, and USB connection ports and accessory cables.

iv. Return removed devices to Owner Representative for surplus.

e. Provide and install AIO PC peripherals while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
   i. Provide and install new high-definition encoder/decoder device (Crestron – DM-NVX-E30) secured to the wall behind AIO PC.
      1. Secure new high-definition encoder/decoder device (Crestron – DM-NVX-E30) as directed by Owner Representative.
      2. Connect and configure new high-definition encoder/decoder device (Crestron – DM-NVX-E30) via new (yellow) AV network drop and patch cables.

ii. Provide and install new high-definition encoder/decoder device (Crestron – DM-NVX-360) for portable use.
    1. Connect and configure new high-definition encoder/decoder device (Crestron – DM-NVX-360) via new (yellow) AV network drop and patch cables.
iii. Integrate all AIO PC peripherals (NVX-360 and NVX-E30) via the required HDMI, AV/LAN, and USB connection ports and accessory cables.
    1. Deliver new high-definition encoder/decoder device (Crestron – DM-NVX-360) for portable use to Owner Representative.

f. Remove eight (8) ceiling-mounted speakers while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
    i. Remove the existing ceiling-mounted speakers (JBL – Control 47) and associated wiring back to AV Rack in room 218.
        1. Removed speakers shall be returned to the Owner Representative for surplus.

8. Simulation Room 1 (213):
    a. Replace wall-mounted touchscreen scheduling panel while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
        i. Remove the existing wall-mounted scheduling panel (Crestron – TSS-1050) and electrical box mounting bracket.
            1. Return removed devices to Owner Representative for surplus.
        ii. Remove the existing CAT 5e wiring back to existing Crestron PoE Switch at the AV Rack in room 218.
        iii. Install new electrical box mounting bracket and connect new scheduling panel (Crestron – TSS-1070) via new AV network cable.

    b. Replace wall-mounted touchscreen room control panel while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
        i. Remove the existing wall-mounted room control panel (Crestron – TS-750) and electrical box mounting bracket.
            1. Return removed devices to Owner Representative for surplus.
        ii. Remove the existing CAT 5e wiring back to existing Crestron PoE Switch at the AV Rack in room 218.
        iii. Install new electrical box mounting bracket and connect new room control panel (Crestron – TS-770) via new AV network cable.

c. Provide and install new ceiling-mounted room occupancy sensor while integrating and upgrading new AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
    i. Install Crestron – CEN-ODT-C-POE ceiling-mounted occupancy sensor.
        1. Connect and configure new ceiling-mounted occupancy sensor (Crestron – CEN-ODT-C-POE) via new AV network cables.

d. Replace wall-mounted monitors and peripherals while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
    i. Disconnect and remove existing digital media controller (Crestron – DM-RMC-SCALER-C).
        1. Remove existing digital media controller device wiring back to AV Rack in room 218.
    ii. Disconnect and remove existing monitor (LG – 50PA550C-UG).
    iii. Provide and install new monitor (Sharp – 4P-B55EJ2U).
        1. Mount new monitor to existing wall-mount assembly.
        2. Provide and install new high-definition encoder/decoder device (Crestron – DM-NVX-D30) secured to new monitor.
            a. Secure new high-definition encoder/decoder device (Crestron – DM-NVX-D30) to monitor as directed by Owner Representative.
            b. Connect and configure new high-definition encoder/decoder device (Crestron – DM-NVX-D30) via new (yellow) AV network drop and patch cables.
        3. Provide and install new high-definition encoder/decoder device (Crestron – DM-NVX-360) for portable use.
            a. Connect and configure new high-definition encoder/decoder device (Crestron – DM-NVX-360) via new (yellow) AV network drop and patch cables.
        4. Connect new monitor via power cord and integrate all monitor AV peripherals (NVX-360 and NVX-D30) via the required HDMI, AV/LAN, and USB connection ports and accessory cables.
            a. Deliver new high-definition encoder/decoder device (Crestron – DM-NVX-360) for portable use to Owner Representative.
    iv. Return removed devices to Owner Representative for surplus.

e. Provide and install AIO PC peripherals while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
    i. Provide and install new high-definition encoder/decoder device (Crestron – DM-NVX-E30) secured to the wall behind AIO PC.

1. Secure new high-definition encoder/decoder device (Crestron – DM-NVX-E30) as directed by Owner Representative.
2. Connect and configure new high-definition encoder/decoder device (Crestron – DM-NVX-E30) via new (yellow) AV network drop and patch cables.

ii. Provide and install new high-definition encoder/decoder device (Crestron – DM-NVX-360) for portable use.
1. Connect and configure new high-definition encoder/decoder device (Crestron – DM-NVX-360) via new (yellow) AV network drop and patch cables.

iii. Integrate all AIO PC peripherals (NVX-360 and NVX-E30) via the required HDMI, AV/LAN, and USB connection ports and accessory cables.
1. Deliver new high-definition encoder/decoder device (Crestron – DM-NVX-360) for portable use to Owner Representative.

f. Provide installation of owner-provided ceiling-mounted PTZ camera for simulation capture system. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
i. Mount and configure new owner-provided PTZ camera (Axis – M5525-E).
1. Ceiling-mount camera in location as directed by Owner Representative.
2. Install and connect new ceiling-mounted PTZ camera (Axis – M5525-E) via new (yellow) AV network cables.

g. Replace ceiling-mounted microphones while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
i. Remove the existing ceiling-mounted microphones (Shure – MX202W) and associated wiring back to AV Rack in room 218.
1. Return removed devices to Owner Representative for surplus.

ii. Install Sure – MXA902 ceiling-mounted microphones/loudspeakers.
1. Install microphone/loudspeaker accessories as required.
2. Configure and connect new ceiling-mounted microphones/loudspeakers (Shure – MXA902) via new (yellow) AV network cables and patch cables.
3. Integrate new ceiling-mounted microphones/loudspeakers with audio processor (Q-Sys – Core 8Flex) at the AV Rack in Room 218 or as directed by Owner Representative.

9. Simulation Control Room (214):
a. Provide and install wall-mounted monitors and peripherals while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software,

programming, components, and accessories required to facilitate replacement, system upgrades, and integration.

i. Provide and install new monitor mount (3x Chief – TS325TU).
    1. Confirm installation locations and elevations with Owner Representative.

ii. Provide and install new monitors (3x Sharp – 4P-B43EJ2U).
    1. Provide and install a new high-definition encoder/decoder device (Crestron – DM-NVX-D30) for each new monitor.
        a. Secure new high-definition encoder/decoder device (Crestron – DM-NVX-D30) to monitor as directed by Owner Representative.
        b. Connect and configure new high-definition encoder/decoder device (Crestron – DM-NVX-D30) via new (yellow) AV network drop and patch cables.
    2. Connect new monitor via power cord and integrate all monitor AV peripherals (NVX-D30) via the required HDMI, AV/LAN, and USB connection ports and accessory cables.

b. Provide and install Simulation Control Station peripherals while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.

i. Provide and install a new high-definition encoder/decoder device (Crestron – DM-NVX-E30) at each Simulation Control Station.
    1. Secure new high-definition encoder/decoder device (3x Crestron – DM-NVX-E30) as directed by Owner Representative.
    2. Connect and configure new high-definition encoder/decoder device (3x Crestron – DM-NVX-E30) via new (yellow) AV network drop and patch cables.

ii. Provide and install a new network audio monitor device (Attero Tech – unDNEMO) and headphone set (Shure – SRH240A) at each Simulation Control Station.
    1. Confirm installation locations with Owner Representative.
    2. Connect and configure new network audio monitor device (3x Attero Tech – unDNEMO) via new (yellow) AV network drop and patch cables.
        a. Integrate and configure network audio monitor devices to communicate with all audio devices in Simulation Rooms 213, 215, and 216 via the Q-Sys Core8 Flex located in 2nd floor AV/IT Closet as directed by Owner Representative.

iii. Provide and install a new high-definition encoder/decoder device (Crestron – DM-NVX-360) for connection to owner-furnished laptop.
    1. Mount new high-definition encoder/decoder device (Crestron – DM-NVX-360) as directed by Owner Representative.

2. Connect and configure new high-definition encoder/decoder device (Crestron – DM-NVX-360) via new (yellow) AV network drop and patch cables.

iv. Provide and install a new tabletop touchscreen control panel (Crestron – TS-1070).
   1. Confirm installation location with Owner Representative.
   2. Connect and configure new tabletop touchscreen control panel (Crestron – TS-1070) via new (yellow) AV network drop and patch cables.

v. Integrate all Simulation Control Station peripherals (TS-1070, NVX-360, NVX-D30, unDNEMO, and NVX-E30) via the required HDMI, AV/LAN, and USB connection ports and accessory cables.

vi. Deliver new high-definition encoder/decoder device (Crestron – DM-NVX-360) for portable use to Owner Representative.

vii. Deliver new headphone set (3x Shure – SRH240A) to Owner Representative for deployment.

10. Simulation Room 2 (215):

a. Replace wall-mounted touchscreen scheduling panel while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
   i. Remove the existing wall-mounted scheduling panel (Crestron – TSS-1050) and electrical box mounting bracket.
      1. Return removed devices to Owner Representative for surplus.
   ii. Remove the existing CAT 5e wiring back to existing Crestron PoE Switch at the AV Rack in room 218.
   iii. Install new electrical box mounting bracket and connect new scheduling panel (Crestron – TSS-1070) via new AV network cable.

b. Replace wall-mounted touchscreen room control panel while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
   i. Remove the existing wall-mounted room control panel (Crestron – TS-750) and electrical box mounting bracket.
      1. Return removed devices to Owner Representative for surplus.
   ii. Remove the existing CAT 5e wiring back to existing Crestron PoE Switch at the AV Rack in room 218.
   iii. Install new electrical box mounting bracket and connect new room control panel (Crestron – TS-770) via new AV network cable.

c. Provide and install new ceiling-mounted room occupancy sensor while integrating and upgrading new AV System. Provide all new AV System hardware, software,

programming, components, and accessories required to facilitate replacement, system upgrades, and integration.

i. Install Crestron – CEN-ODT-C-POE ceiling-mounted occupancy sensor.
    1. Connect and configure new ceiling-mounted occupancy sensor (Crestron – CEN-ODT-C-POE) via new AV network cables.

d. Replace wall-mounted monitors and peripherals while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
    i. Disconnect and remove existing digital media controller (Crestron – DM-RMC-SCALER-C).
        1. Remove existing digital media controller device wiring back to AV Rack in room 218.
    ii. Disconnect and remove existing monitor (LG – 50PA550C-UG).
    iii. Provide and install new monitor (Sharp – 4P-B55EJ2U).
        1. Mount new monitor to existing wall-mount assembly.
        2. Provide and install new high-definition encoder/decoder device (Crestron – DM-NVX-D30) secured to new monitor.
            a. Secure new high-definition encoder/decoder device (Crestron – DM-NVX-D30) to monitor as directed by Owner Representative.
            b. Connect and configure new high-definition encoder/decoder device (Crestron – DM-NVX-D30) via new (yellow) AV network drop and patch cables.
        3. Provide and install new high-definition encoder/decoder device (Crestron – DM-NVX-360) for portable use.
            a. Connect and configure new high-definition encoder/decoder device (Crestron – DM-NVX-360) via new (yellow) AV network drop and patch cables.
        4. Connect new monitor via power cord and integrate all monitor AV peripherals (NVX-360 and NVX-D30) via the required HDMI, AV/LAN, and USB connection ports and accessory cables.
            a. Deliver new high-definition encoder/decoder device (Crestron – DM-NVX-360) for portable use to Owner Representative.
    iv. Return removed devices to Owner Representative for surplus.

e. Provide and install AIO PC peripherals while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
    i. Provide and install new high-definition encoder/decoder device (Crestron – DM-NVX-E30) secured to the wall behind AIO PC.
        1. Secure new high-definition encoder/decoder device (Crestron – DM-NVX-E30) as directed by Owner Representative.

2. Connect and configure new high-definition encoder/decoder device (Crestron – DM-NVX-E30) via new (yellow) AV network drop and patch cables.

ii. Provide and install new high-definition encoder/decoder device (Crestron – DM-NVX-360) for portable use.
   1. Connect and configure new high-definition encoder/decoder device (Crestron – DM-NVX-360) via new (yellow) AV network drop and patch cables.

iii. Integrate all AIO PC peripherals (NVX-360 and NVX-E30) via the required HDMI, AV/LAN, and USB connection ports and accessory cables.
   1. Deliver new high-definition encoder/decoder device (Crestron – DM-NVX-360) for portable use to Owner Representative.

f. Replace ceiling-mounted microphones while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
   i. Remove the existing ceiling-mounted microphones (Shure – MX202W) and associated wiring back to AV Rack in room 218.
      1. Return removed devices to Owner Representative for surplus.
   ii. Install Sure – MXA902 ceiling-mounted microphone/loudspeaker in the location designated by the Owner Representative.
      1. Install microphone/loudspeaker accessories as required.
      2. Configure and connect new ceiling-mounted microphone/loudspeaker (Shure – MXA902) via new (yellow) AV network cable and patch cable.
   iii. Integrate new ceiling-mounted microphone/loudspeaker with audio processor (Q-Sys – Core 8Flex) at the AV Rack in Room 218 or as directed by Owner Representative.

11. Simulation Room 3 (216):
   a. Replace wall-mounted touchscreen scheduling panel while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
      i. Remove the existing wall-mounted scheduling panel (Crestron – TSS-1050) and electrical box mounting bracket.
         1. Return removed devices to Owner Representative for surplus.
      ii. Remove the existing CAT 5e wiring back to existing Crestron PoE Switch at the AV Rack in room 218.
      iii. Install new electrical box mounting bracket and connect new scheduling panel (Crestron – TSS-1070) via new AV network cable.

   b. Replace wall-mounted touchscreen room control panel while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software,

programming, components, and accessories required to facilitate replacement, system upgrades, and integration.

i. Remove the existing wall-mounted room control panel (Crestron – TS-750) and electrical box mounting bracket.
    1. Return removed devices to Owner Representative for surplus.
ii. Remove the existing CAT 5e wiring back to existing Crestron PoE Switch at the AV Rack in room 218.
iii. Install new electrical box mounting bracket and connect new room control panel (Crestron – TS-770) via new AV network cable.

c. Provide and install new ceiling-mounted room occupancy sensor while integrating and upgrading new AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
    i. Install Crestron – CEN-ODT-C-POE ceiling-mounted occupancy sensor.
        1. Connect and configure new ceiling-mounted occupancy sensor (Crestron – CEN-ODT-C-POE) via new AV network cables.

d. Replace wall-mounted monitors and peripherals while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
    i. Disconnect and remove existing digital media controller (Crestron – DM-RMC-SCALER-C).
        1. Remove existing digital media controller device wiring back to AV Rack in room 218.
    ii. Disconnect and remove existing monitor (LG – 50PA550C-UG).
    iii. Provide and install new monitor (Sharp – 4P-B55EJ2U).
        1. Mount new monitor to existing wall-mount assembly.
        2. Provide and install new high-definition encoder/decoder device (Crestron – DM-NVX-D30) secured to new monitor.
            a. Secure new high-definition encoder/decoder device (Crestron – DM-NVX-D30) to monitor as directed by Owner Representative.
            b. Connect and configure new high-definition encoder/decoder device (Crestron – DM-NVX-D30) via new (yellow) AV network drop and patch cables.
        3. Provide and install new high-definition encoder/decoder device (Crestron – DM-NVX-360) for portable use.
            a. Connect and configure new high-definition encoder/decoder device (Crestron – DM-NVX-360) via new (yellow) AV network drop and patch cables.
        4. Connect new monitor via power cord and integrate all monitor AV peripherals (NVX-360 and NVX-D30) via the required HDMI, AV/LAN, and USB connection ports and accessory cables.

a. Deliver new high-definition encoder/decoder device (Crestron – DM-NVX-360) for portable use to Owner Representative.

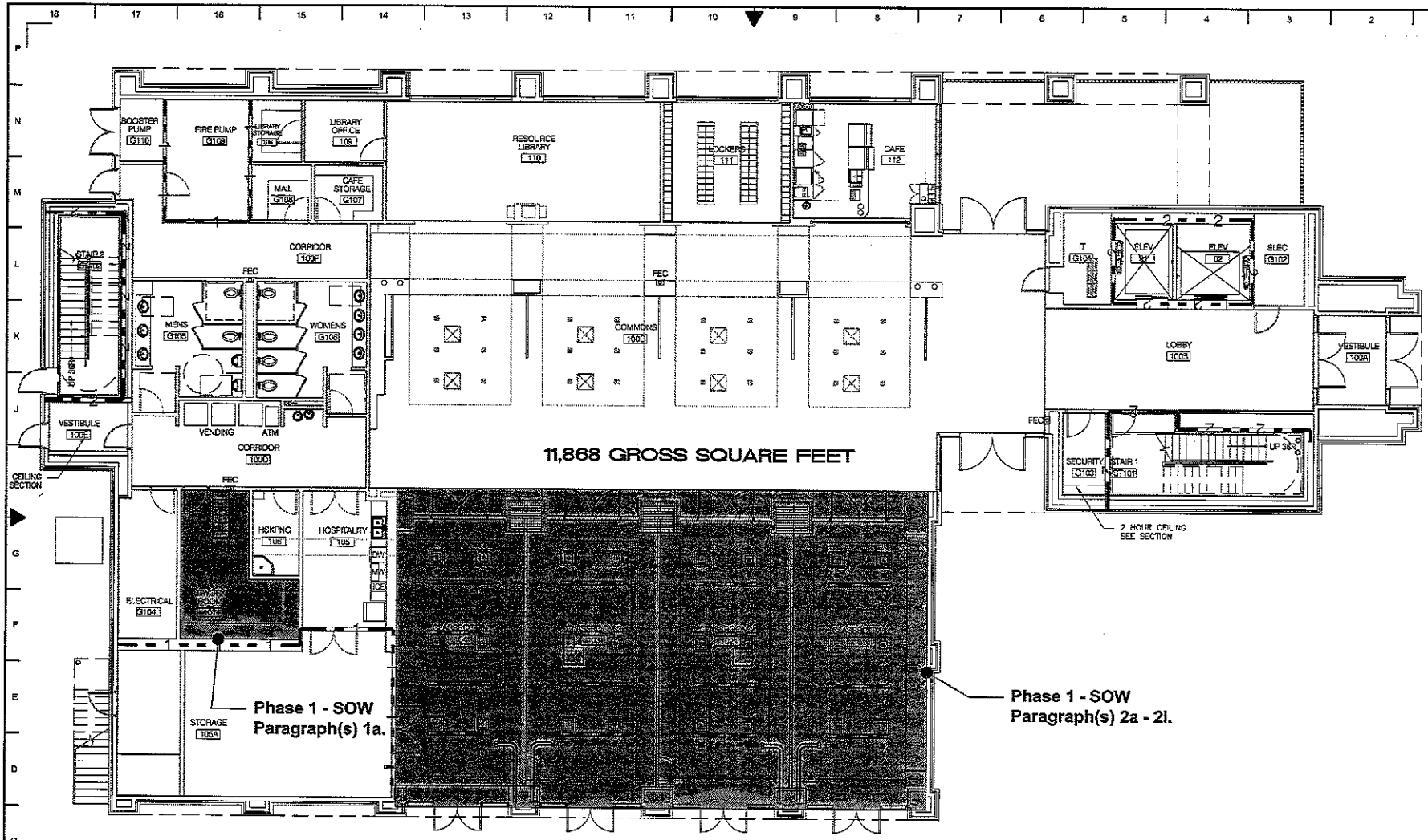
iv. Return removed devices to Owner Representative for surplus.

e. Provide and install AIO PC peripherals while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
   i. Provide and install new high-definition encoder/decoder device (Crestron – DM-NVX-E30) secured to the wall behind AIO PC.
      1. Secure new high-definition encoder/decoder device (Crestron – DM-NVX-E30) as directed by Owner Representative.
      2. Connect and configure new high-definition encoder/decoder device (Crestron – DM-NVX-E30) via new (yellow) AV network drop and patch cables.
   ii. Provide and install new high-definition encoder/decoder device (Crestron – DM-NVX-360) for portable use.
      1. Connect and configure new high-definition encoder/decoder device (Crestron – DM-NVX-360) via new (yellow) AV network drop and patch cables.
   iii. Integrate all AIO PC peripherals (NVX-360 and NVX-E30) via the required HDMI, AV/LAN, and USB connection ports and accessory cables.
      1. Deliver new high-definition encoder/decoder device (Crestron – DM-NVX-360) for portable use to Owner Representative.

f. Replace ceiling-mounted microphones while decommissioning the existing Crestron AV System. Provide all new AV System hardware, software, programming, components, and accessories required to facilitate replacement, system upgrades, and integration.
   i. Remove the existing ceiling-mounted microphones (Shure – MX202W) and associated wiring back to AV Rack in room 218.
      1. Return removed devices to Owner Representative for surplus.
   ii. Install Sure – MXA902 ceiling-mounted microphone/loudspeaker in the location designated by the Owner Representative.
      1. Install microphone/loudspeaker accessories as required.
      2. Configure and connect new ceiling-mounted microphone/loudspeaker (Shure – MXA902) via new (yellow) AV network cable and patch cable.
   iii. Integrate new ceiling-mounted microphone/loudspeaker with audio processor (Q-Sys – Core 8Flex) at the AV Rack in Room 218 or as directed by Owner Representative.

End Of Phase 3

END OF COMPLIMENTARY SCOPE OF WORK



1ST FLOOR - AREAS OF WORK
NTS

LSU health NEW ORLEANS
Planning & Construction

LSU HEALTH - NEW ORLEANS
MEIC AV PACKAGE UPGRADES

5246 BRITTANY DRIVE BATON ROUGE, LOUISIANA 70808

SHEET TITLE:

BUILDING NO. 23042

	INITLS.	DATE
DRAWN BY	MJM	4/2/26
CHECKED BY	AMF	4/2/26
UPDATED BY		
UPDATED BY		

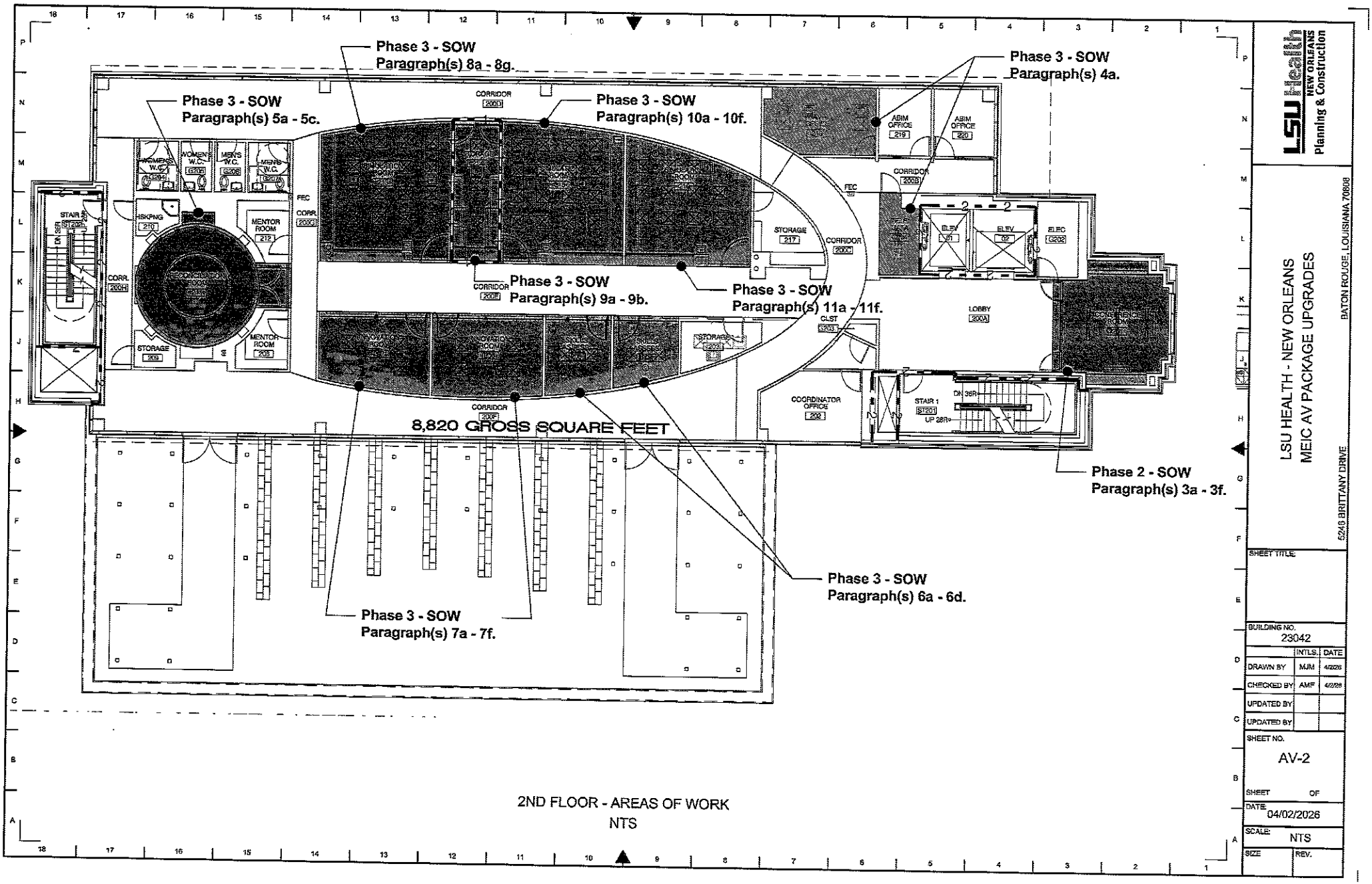
SHEET NO. AV-1

SHEET OF

DATE: 04/02/2026

SCALE: NTS

SIZE REV.



2ND FLOOR - AREAS OF WORK
NTS

LSU Health NEW ORLEANS
Planning & Construction

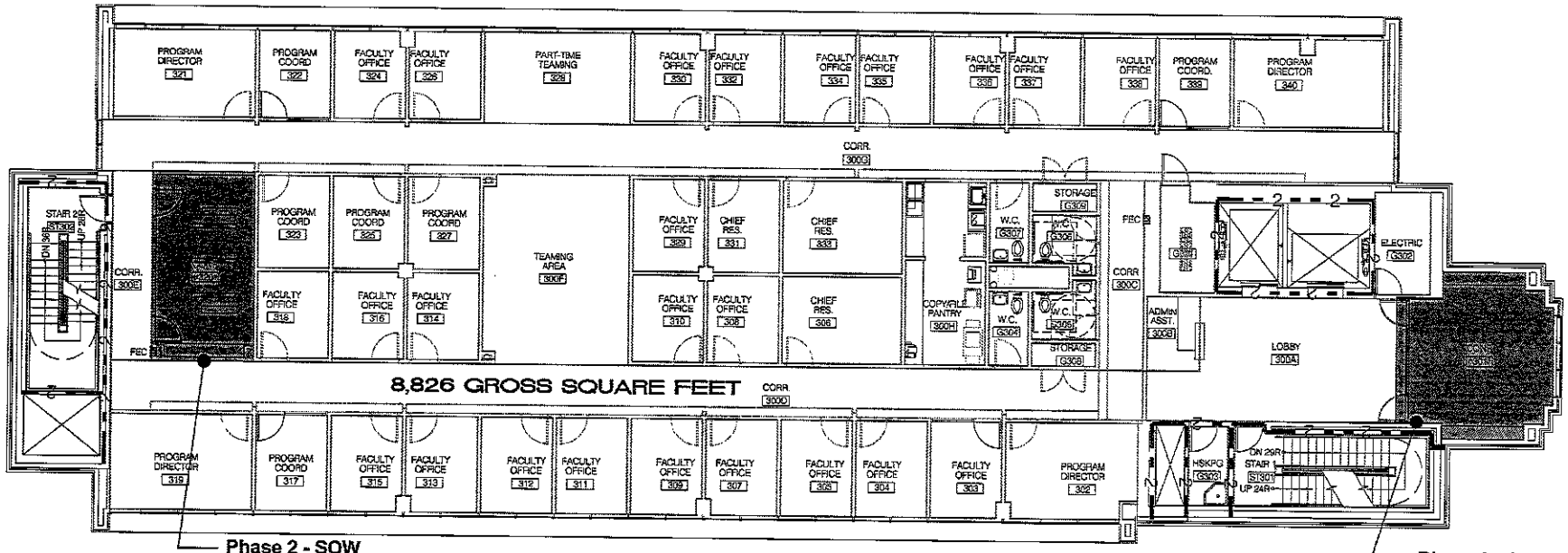
LSU HEALTH - NEW ORLEANS
MEIC AV PACKAGE UPGRADES

5249 BRITTANY DRIVE
BATON ROUGE, LOUISIANA 70808

SHEET TITLE:

BUILDING NO. 23042		
	INITLS.	DATE
DRAWN BY	MJM	4/2/26
CHECKED BY	AMF	4/2/26
UPDATED BY		
UPDATED BY		

SHEET NO.
AV-2
SHEET OF
DATE 04/02/2026
SCALE: NTS
SIZE REV.



3RD FLOOR - AREAS OF WORK
NTS

LSU Health NEW ORLEANS
Planning & Construction

LSU HEALTH - NEW ORLEANS
MEIC AV PACKAGE UPGRADES

5248 BRITTANY DRIVE BATON ROUGE, LOUISIANA 70808

SHEET TITLE:

BUILDING NO. 23042

	INITLS.	DATE
DRAWN BY	MJM	4/2/26
CHECKED BY	AMF	4/2/26
UPDATED BY		
UPDATED BY		

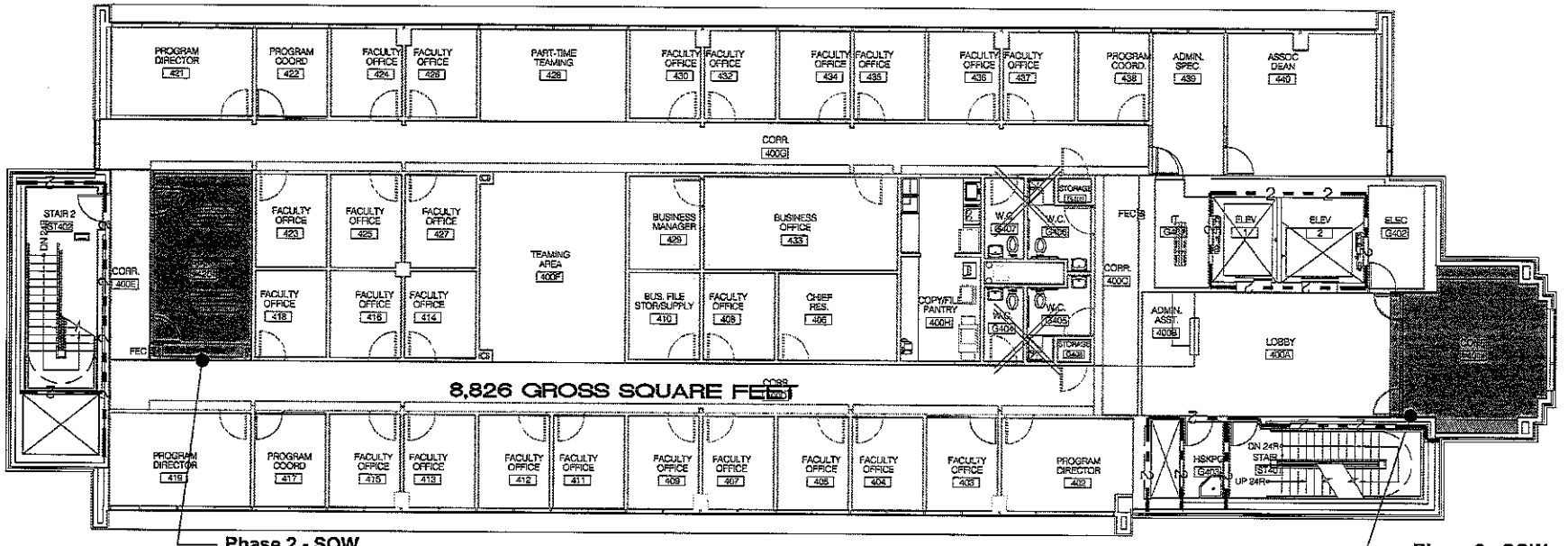
SHEET NO. AV-3

SHEET OF

DATE: 04/02/2026

SCALE: NTS

SIZE REV.



4TH FLOOR - AREAS OF WORK
NTS

LSU Health NEW ORLEANS
Planning & Construction

LSU HEALTH - NEW ORLEANS
MEIC AV PACKAGE UPGRADES

6246 BRITTANY DRIVE BATON ROUGE, LOUISIANA 70808

SHEET TITLE:

BUILDING NO. 23042

	INIT/S.	DATE
DRAWN BY	MJM	4/2/26
CHECKED BY	AMF	4/2/26
UPDATED BY		
UPDATED BY		

SHEET NO. AV-4

SHEET OF

DATE: 04/02/2026

SCALE: NTS

SIZE REV.

LSU Health New Orleans (LSUHNO) requests bids for the Medical Education and Innovation Center (MEIC) in Baton Rouge Audio/Visual Upgrade as specified in this scope of work.

The parts list attached is not meant to be an exhaustive list of all necessary parts, but includes all major components needed to achieve the desired functionality; the integrator is responsible for providing all components for the system not specified in this document and the parts list as OFE (Owner Furnished Equipment) to complete a functioning system as described in this document. The integrator is responsible for providing specifications for power, data, conduit, and floor penetration(s). The integrator is also responsible for field verification of all dimensions during the installation process. A one-line drawing of the system design must be submitted to LSUHNO for comments and revisions before installation.

This document and the Parts List associated with this project supersedes any other documents which describe general standards as dictated by LSUHNO. Any question on this or any part of the bid must be submitted as detailed in the bid documents.

All installation must be performed following the manufacturer's specifications.

The project includes 10 different types of spaces/systems, each of which will be detailed in its own section following:

1. First floor divisible classroom
2. Conference rooms
3. Reconciliation room
4. Skills Assessment rooms
5. Innovation rooms
6. Simulation Lab 1
7. Simulation Control room
8. Simulation Lab 2
9. Simulation Labs 3
10. Scheduling panels

The project will be accomplished in three phases:

1. First floor divisible classroom
2. All 5 conference rooms
3. Second floor

Each phase will be completed before the next phase begins. During all phases, lighting control must be maintained. Lighting control for the building is accomplished using the Crestron lighting panel on the first floor.

In cases where the successful bidder is responsible for removing existing equipment, they must also remove all associated wiring for that equipment back to the origin of the cabling.

Phase One:

First Floor Divisible Classroom:

This is a large space that can be divided into up to four separate rooms using movable walls. The walls are manually operated. Each of the four spaces will have one projector to be used when separated from all of the others and the two headend rooms, 101 and 104, will have an additional projector for use when joined with another room or rooms.

Room 101 will be the headend when all four rooms are joined. Room 104 will be the headend when it is joined with room 103 or rooms 103 and 102. Each room section will have its own wall mounted touch panel for use when separated from the other rooms. Rooms 101 and 104 will each have a lectern with a table top touch panel as well.

The description of the room sections will be detailed below. There is an equipment rack on the same floor that will house common equipment for the system. The integrator will install the following equipment:

- Q-Sys Core 110f
- 2 Crestron DM-NVX-D30 units
- 3 Crestron CEN-IO-RY-104 units for screen control
- 1 Crestron DIN-CENCN-2-POE for shade control
- Sennheiser MobileConnect Station
- Mediasite RL recorder (OFE)

Control

The entire system must be controlled with a Crestron VC-4 control system running on an LSUHNO server (OFE) in the LSUHNO data center. The integrator will provide the required single room license to control rooms 101, 102, 103, 104 as a configurable space and as individual spaces. The user interface with the control system will be a Crestron TS-770 on the lectern and TSW-770 touch panel on the wall near the door in rooms 101 and 104 and only the TSW-770 on the walls near the doors in 102 and 103. The user interface design must be coordinated with and approved by LSUHNO. The system shall take advantage of all functionality offered by the Crestron control system including but not limited to:

- Projector Power Control
- Volume Control
- Screen Control
- Source Switching
- Hide Picture on/off

- Mute mic on/off
- Mute Volume on/off
- Mediasite recorder start/stop
- Room joining or separating
- Lighting control
- Shade Control
- Crestron's X-Panel web-based control

♦ **Room 101**

This is the headend room when all room sections are joined or if joined with 102 or 102 and 103.

The existing equipment must be removed and returned to LSUHNO for surplus. The successful bidder must also remove all associated wiring for that equipment back to the origin of the cabling.

Lectern

The lectern used must be a Marshall Furniture custom lectern (LSU-MWSGR-32). The lectern will house the following devices:

- 1 Crestron DM-NVX-384 Encoder/Decoder
- 1 Crestron NVX D30
- 1 Crestron AM-3200-WF
- Plugable capture card
- Anker USB hub
- Crestron TS-770 with swivel mount
- Audinate ADP-USB-AU-2x2
- All-In-One Lectern PC (OFE)
- Crestron FlipTop2 with power module and cable pass through
- J5Create webcam
- Sennheiser gooseneck microphone with shock mount
- Sennheiser battery charger and spare batteries
- Furman power conditioner

The FlipTop2 will house two USB pass through extension cables connected to the Anker A7515 which will be connected to the AIO lectern PC (OFE). There will also be an HDMI pass through cable for laptops (see below) and one Ethernet cable connected to the LSUHNO LAN.

Using the Panavise 848-06 micro camera mount, the integrator will mount the j5Create JVCU435 webcam such that it faces the audience. The integrator will provide a security device to minimize the possibility of unauthorized removal.

Also, in the lectern will be a Furman M-8X2 power conditioner for the lectern equipment.

Video

The HDMI output of the AIO PC (OFE), mounted to the lectern top using the Chief mount specified, will be connected to one HDMI input of the DM-NVX-384 in the lectern. The USB connection of the AIO PC (OFE) will be connected to the USB connection of the DM-NVX-384 for the room camera video (see below in this section for more details).

The main projector for this section will be a Christie 4K10-HS which will receive its HDMI input from the DM-NVX-D30 mounted nearby. The integrator will use the existing mount (OFE) in the room and provide the lens that will allow the image to fill the existing 222" motorized screen. The relay to control the screen will be located in the network closet on the same floor. This projector will only be used when 101 is joined with another room.

The secondary projector for this room will be a Christie DWU630-GS which will receive its HDMI input from the DM-NVX-D30 mounted nearby. The integrator will use the existing mount (OFE) in the room and provide the lens that will allow the image to fill the existing motorized screen. The screen will be controlled using one of the Crestron CEN-IO-RY-104 units. This projector will only be used when 101 is used on its own.

The second HDMI input of the DM-NVX-384 in the lectern will receive input from the Crestron AM-3200. The HDMI input of the AM-3200 will be connected to an HDMI cable that will be pulled into the FlipTop2 to be used as a laptop input.

The AVer CAM550 will be wall mounted as directed and approved by LSUHSC-NO. It will use PoE and its HDMI output will be connected to the DM-NVX-E30 mounted nearby. In the rack room will be a DM-NVX-D30. Its HDMI output will feed the camera input of the Mediasite RL (OFE) in the rack. The HDMI output of the other DM-NVX-E30 in the rack will provide content to the other HDMI input of the Mediasite recorder (OFE) in the rack.

The DM-NVX-D30 in the lectern will be connected to the Plugable USB capture card, the USB output of which will be connected to the AIO Lectern PC (OFE) to provide a camera input for web conferencing.

The j5Create JVCU435 webcam described above will be connected to the AIO Lectern PC via USB.

Audio

All audio will be processed and routed by the Q-Sys Core 110f in the rack room. All NVX sources will be routed using AES67 streaming audio. The Q-Sys NL-C4 network speakers (OFE) will be ceiling mounted as directed and approved by LSUHNO. There will be 4 speakers mounted in each section. These speakers will be connected using the network jacks provided by LSUHNO.

The lectern microphone will be connected to an analog input of the Core via a line pulled from the lectern floor box to the rack room. The Sennheiser wireless microphone receiver will be mounted as directed and approved by LSUHNO. The Dante output of the receiver will be routed by the Core. The Sennheiser TeamConnect2 microphone will also have its Dante output routed by the Core.

The Core 110f will feed a complete mix of program audio and microphone audio to the Mediasite deck in the rack via an analog output. The same mix will be fed to the NL-C4 speakers (OFE). The lectern microphone, Sennheiser TC Ceiling Medium microphone and program audio will be programmed to be muted independently. A mix of the microphone audio will be sent from the Core to the Audinate ADP-USB-AU-2x2 and its USB output connected to the PC for web conferencing.

As rooms are joined with 101, their microphones and speakers will be added to the mixes described above; as the rooms are separated from 101, their microphones and speakers will be removed from the mix.

The Dante ADP-AES3-AU-2X2 will be provided by the integrator and programmed as part of the audio program. It will provide the same mix currently being sent to the speakers to feed the PB-8 press box. Neither the press box nor the audio interface will be installed but provided to LSUHNO to connect to as needed.

Recording

Mounted in the rack will be a Mediasite RL deck (OFE). As described above, the two HDMI inputs of the Mediasite deck (OFE) will be fed camera and content from the two DM-NVX-D30 units in the rack. The Core 110f will feed a complete mix of program audio and microphone audio to the Mediasite deck (OFE) in the rack via an analog output.

The integrator will program the control system for start/stop/pause functionality of the Mediasite RL (OFE) and provide feedback of the deck's recording status on the touch panel.

NVX Networking

The integrator will connect the NVX endpoints to a Cisco network switch (OFE) provided and configured by LSUHNO. The switch will be configured and managed by the LSUHNO Enterprise Network Group. Cabling for the endpoints from the network closet to this room will be provided and installed by LSUHNO.

- **Room 102**

When this room is not joined with any other room, it functions as described below. When it is joined with 101, it functions as part of 101. When it is joined with 103, it functions as the source room for the pair of rooms.

The existing equipment must be removed and returned to LSUHNO for surplus. The successful bidder must also remove all associated wiring for that equipment back to the origin of the cabling.

Control

The system will be controlled with the Crestron VC-4 control system as described above. The user interface for the control will be a Crestron TSW-770 mounted near the door. The user interface design must be coordinated with and approved by LSUHNO. When this room is joined with room 101, the touch panel will be locked out.

Floor box

The Crestron DM-NVX-E20-2G will be mounted in the floor box in the room. Users will connect a laptop (OFE) to this device to display it on the room's projector.

Video

The projector will be a Christie DWU630-GS which will receive its HDMI input from the DM-NVX-D30 mounted nearby. The integrator will use the existing mount in the room and provide the lens that will allow the image to fill the existing motorized screen. The screen will be controlled using one of the Crestron CEN-IO-RY-104 units.

Audio

Audio from the laptop (OFE) connected to the DM-NVX-E20-2G will be routed to the speakers in the room by the Core 110f. Volume control will be achieved using the TSW-770 panel installed in the room.

The Sennheiser TC Ceiling Medium microphone can only be used when this room is joined with 101 or 104.

NVX Networking

The integrator will connect the NVX endpoints to a Cisco network switch (OFE) provided and configured by LSUHNO. The switch will be configured and managed by the LSUHNO Enterprise Network Group. Cabling for the endpoints from the network closet to this room will be provided and installed by LSUHNO.

- **Room 103**

When this room is not joined with any other room, it functions as described below. When it is joined with 101, it functions as part of 101. When it is joined with 102, it functions as a part of the 102.

The existing equipment must be removed and returned to LSUHNO for surplus. The successful bidder must also remove all associated wiring for that equipment back to the origin of the cabling.

Control

The system will be controlled with the Crestron VC-4 control system as described above. The user interface for the control will be a Crestron TSW-770 mounted near the door. The user interface design must be coordinated with and approved by LSUHNO. When this room is joined with room 101 or 102, the touch panel will be locked out.

Floor box

The Crestron DM-NVX-E20-2G will be mounted in the floor box in the room. Users will connect a laptop (OFE) to this device to display it on the room's projector.

Video

The projector will be a Christie DWU630-GS which will receive its HDMI input from the DM-NVX-D30 mounted nearby. The integrator will use the existing mount in the room and provide the lens that will allow the image to fill the existing motorized screen. The screen will be controlled using one of the Crestron CEN-IO-RY-104 units.

Audio

Audio from the laptop (OFE) connected to the DM-NVX-E20-2G will be routed to the speakers in the room by the Core 110f. Volume control will be achieved using the TSW-770 panel installed in the room.

The Sennheiser TC Ceiling Medium microphone can only be used when this room is joined with 101 or 104.

NVX Networking

The integrator will connect the NVX endpoints to a Cisco network switch (OFE) provided and configured by LSUHNO. The switch will be configured and managed by the LSUHNO Enterprise Network Group. Cabling for the endpoints from the network closet to this room will be provided and installed by LSUHNO.

- **Room 104**

This is the headend room when joined with 103 or 102 and 103.

The existing equipment must be removed and returned to LSUHNO for surplus. The successful bidder must also remove all associated wiring for that equipment back to the origin of the cabling.

Lectern

The lectern used must be a Marshall Furniture custom lectern (LSU-MWSGR-32). The lectern will house the following devices:

- 1 Crestron DM-NVX-384 Encoder/Decoder
- 1 Crestron NVX D30
- 1 Crestron AM-3200-WF
- Plugable capture card
- Plugable USB hub
- Crestron TS-770 with swivel mount
- Audinate ADP-USB-AU-2x2
- All-In-One Lectern PC (OFE)
- Crestron FlipTop2 with power module and cable pass through
- J5Create webcam
- Sennheiser gooseneck microphone with shock mount
- Sennheiser battery charger and spare batteries
- Furman power conditioner

The FlipTop2 will house two USB pass through extension cables connected to the Plugable HUB7BC which will be connected to the AIO lectern PC (OFE). There will also be an HDMI pass through cable for laptops (see below) and one Ethernet cable connected to the LSUHNO LAN.

Using the Panavise 848-06 micro camera mount, the integrator will mount the j5Create JVCU435 webcam such that it faces the audience. The integrator will provide a security device to minimize the possibility of unauthorized removal.

Also, in the lectern will be a Furman M-8X2 power conditioner for the lectern equipment.

Video

The HDMI output of the AIO PC (OFE), mounted to the lectern top using the Chief mount specified, will be connected to one HDMI input of the DM-NVX-384 in the lectern. The USB connection of the AIO PC (OFE) will be connected to the USB connection of the DM-NVX-384 for the room camera video (see below in this section for more details).

The main projector for this section will be a Christie 4K10-HS which will receive its HDMI input from the DM-NVX-D30 mounted nearby. The integrator will use the existing mount in the room and provide the lens that will allow the image to fill the specified Draper fixed screen. This projector will only be used when 101 is joined with another room.

The secondary projector for this room will be a Christie DWU630-GS which will receive its HDMI input from the DM-NVX-D30 mounted nearby. The integrator will use the existing mount in the room and provide the lens that will allow the image to fill the existing motorized screen. The screen will be controlled using one of the Crestron CEN-IO-RY-104 units. This projector will only be used when 101 is used on its own.

The second HDMI input of the DM-NVX-384 in the lectern will receive input from the Crestron AM-3200. The HDMI input of the AM-3200 will be connected to an HDMI cable that will be pulled into the FlipTop2 to be used as a laptop input.

The AVer CAM550 will be wall mounted as directed and approved by LSUHSC-NO. It will use PoE and its HDMI output will be connected to the DM-NVX-E30 mounted nearby. In the rack room will be a DM-NVX-D30. Its HDMI output will feed the camera input of the Mediasite RL (OFE) in the rack. The HDMI output of the other DM-NVX-E30 in the rack will provide content to the other HDMI input of the Mediasite recorder (OFE) in the rack.

The DM-NVX-E30 in the lectern will be connected to the Plugable USB capture card, the USB output of which will be connected to the AIO Lectern PC (OFE) to provide a camera input for web conferencing.

The j5Create JVCU435 webcam described above will be connected to the AIO Lectern PC via USB.

Audio

All audio will be processed and routed by the Q-Sys Core 110f in the rack room. All NVX sources will be routed using AES67 streaming audio. The Q-Sys NL-C4 network

speakers (OFE) will be ceiling mounted as directed and approved by LSUHNO. There will be 4 speakers mounted in each section. These speakers will be connected using the network jacks provided by LSUHNO.

The lectern microphone will be connected to an analog input of the Core via a line pulled from the lectern floor box to the rack room. The Sennheiser wireless microphone receiver will be mounted as directed and approved by LSUHNO. The Dante output of the receiver will be routed by the Core. The Sennheiser TeamConnect2 microphone will also have its Dante output routed by the Core.

The Core 110f will feed a complete mix of program audio and microphone audio to the Mediasite deck in the rack via an analog output. The same mix will be fed to the NL-C4 speakers (OFE). The lectern microphone, Sennheiser TC Ceiling Medium microphone and program audio will be programmed to be muted independently. A mix of the microphone audio will be sent from the Core to the Audinate ADP-USB-AU-2x2 and its USB output connected to the PC for web conferencing.

As rooms are joined with 104, their microphones and speakers will be added to the mixes described above; as the rooms are separated from 104, their microphones and speakers will be removed from the mix.

Recording

Mounted in the rack will be a Mediasite RL deck (OFE). As described above, the two HDMI inputs of the Mediasite deck will be fed camera and content from the two DM-NVX-D30 units in the rack. The Core 110f will feed a complete mix of program audio and microphone audio to the Mediasite deck in the rack via an analog output.

The integrator will program the control system for start/stop/pause functionality of the Mediasite RL (OFE) and provide feedback of the deck's recording status on the touch panel.

NVX Networking

The integrator will connect the NVX endpoints to a Cisco network switch (OFE) provided and configured by LSUHNO. The switch will be configured and managed by the LSUHNO Enterprise Network Group. Cabling for the endpoints from the network closet to this room will be provided and installed by LSUHNO.

Conclusion

Included in the bid must be a one-year warranty on equipment and installation and a one-year contract for service and support. Once the integrator reaches substantial

completion, the integrator must send a notice in writing to the LSUHNO Purchasing Department stating this and LSUHNO must accept this status. Acceptance will only come from the LSUHNO Purchasing Department in writing to the integrator. The one-year agreements must start from LSUHNO's acceptance of the project.

Upon acceptance of the project, the vendor will turn over all information related to the project including but not limited to all as-built drawings, uncompiled Crestron code, programs, equipment user IDs and passwords, manuals, remotes, cases, software, warranty information, IP addresses, and spare hardware as well as keys and any special tools included for the equipment. Also, updated code and one line drawings must be provided as changes are made throughout the one-year support period.

Once the installation is complete, a demo and installation review and any relevant training must be rendered to representatives chosen by LSUHNO.

All cables which run through ceiling spaces **must** be **plenum** rated. All cables connected to Crestron DM devices must be Crestron certified. All cables must include a minimum of a 10% service loop. No permanent wire ties must be used; only releasable wire ties, clips, etc. or hook and loop straps are allowed within the rack. LSUHNO is a Crestron A+ Partner and must receive pricing at or below the A+ Partner pricing.

Conference Rooms (201, 301,320, 401, 420)

There are five total conference rooms with identical systems. The existing equipment must be removed and returned to LSUHNO for surplus. The successful bidder must also remove all associated wiring for that equipment back to the origin of the cabling.

Control

The entire system must be controlled with a Crestron VC-4 control system running on an LSUHNO server (OFE) in the LSUHNO data center. The integrator will provide the required single room license to control each room. The user interface with the control system will be a Crestron TSW-770 touch panel on the wall near the door. The user interface design must be coordinated with and approved by LSUHNO. The system shall take advantage of all functionality offered by the Crestron control system including but not limited to:

- Display Power Control
- Volume Control
- Source Switching
- Hide Picture on/off
- Mute Volume on/off
- Lighting control
- Crestron's X-Panel web-based control
- Crestron Mobility Project must also be configured for use by LSUHNO

Display and Table

All of the equipment for the room will be mounted behind the display or under the table. The following devices will be mounted behind on with the display:

- Crestron DM-NVX-360 Encoder/Decoder
- Crestron AM-3200-WF
- AVer VB342 Pro video bar
- Dell MFF PC (OFE)

The following device will be mounted under the table:

- Crestron DM-NVX-360 Encoder/Decoder

The integrator will mount the Sharp display on the front wall of the room using the Chief mount and pull out accessory and mount the AVer video bar under the display as directed and approved by LSUHNO.

Video

The HDMI output of the MFF PC (OFE) will be connected to the HDMI input of the AM-3200-WF. Its output will be connected to the DM-NVX-360 which will be connected to the LSUHNO network using the jack provided by LSUHNO for this purpose. The USB connection of the AVer video bar will be connected to the MFF PC (OFE). Also, the USB connection of the DM-NVX-360 will be connected to the MFF PC (OFE) to provide a USB connection from the table to the MFF PC (OFE).

The other DM-NVX-360 will be installed under the table and an HDMI and USB cable will be pulled up through the table's cable management compartment for connection of a user provided laptop (OFE).

Audio

The analog audio output of the display will be connected to the analog input of the AVer video bar to provide program audio. The volume will be controlled using the TSW-770 mounted on the wall of the room near the door.

NVX Networking

The integrator will connect the NVX endpoints to a Cisco network switch (OFE) provided and configured by LSUHNO. The switch will be configured and managed by the LSUHNO Enterprise Network Group. Cabling for the DM-NVX endpoints from the network closet to this room will be provided and installed by LSUHNO.

Conclusion

Included in the bid must be a one-year warranty on equipment and installation and a one-year contract for service and support. Once the integrator reaches substantial completion, the integrator must send a notice in writing to the LSUHNO Purchasing Department stating this and LSUHNO must accept this status. Acceptance will only come from the LSUHNO Purchasing Department in writing to the integrator. The one-year agreements must start from LSUHNO's acceptance of the project.

Upon acceptance of the project, the vendor will turn over all information related to the project including but not limited to all as-built drawings, uncompiled Crestron code, programs, equipment user IDs and passwords, manuals, remotes, cases, software, warranty information, IP addresses, and spare hardware as well as keys and any special tools included for the equipment. Also, updated code and one line drawings must be provided as changes are made throughout the one-year support period.

Once the installation is complete, a demo and installation review and any relevant training must be rendered to representatives chosen by LSUHNO.

All cables which run through ceiling spaces **must** be **plenum** rated. All cables connected to Crestron DM devices must be Crestron certified. All cables must include a minimum of a 10% service loop. No permanent wire ties must be used; only releasable wire ties, clips, etc. or hook and loop straps are allowed within the rack. LSUHNO is a Crestron A+ Partner and must receive pricing at or below the A+ Partner pricing.

Reconciliation Room (211)

This room is a circular room with a large, round table in the middle.

The existing equipment must be removed and returned to LSUHNO for surplus. The successful bidder must also remove all associated wiring for that equipment back to the origin of the cabling.

Control

The entire system must be controlled with a Crestron VC-4 control system running on an LSUHNO server (OFE) in the LSUHNO data center. The integrator will provide the required single room license to control the room. The user interface with the control system will be a Crestron TSW-770 touch panel on the wall near the door. The user interface design must be coordinated with and approved by LSUHNO. The system shall take advantage of all functionality offered by the Crestron control system including but not limited to:

- Display Power Control
- Volume Control
- Source Switching
- Hide Picture on/off
- Mute Volume on/off
- Lighting control
- Crestron's X-Panel web-based control

Display and Table

The following devices will be mounted in the cabinet under the display:

- Crestron AM-3200-WF
- Dell MFF PC (OFE)

The integrator will wall mount the Sony display using the Chief mount as directed and approved by LSUHNO.

Video

The HDMI output of the MFF PC (OFE) will be connected to the HDMI input of the AM-3200-WF. Its output will be connected to the display via a long HDMI cable pulled from the cabinet. The Bose Professional video bar will be mounted underneath the Sony display and its USB connection will be connected to the MFF PC (OFE) in the cabinet below.

Audio

The Bose Professional video bar will provide program audio using a connection from the audio output of the display. The volume will be controlled using the TSW-770 mounted on the wall of the room near the door.

Conclusion

Included in the bid must be a one-year warranty on equipment and installation and a one-year contract for service and support. Once the integrator reaches substantial completion, the integrator must send a notice in writing to the LSUHNO Purchasing Department stating this and LSUHNO must accept this status. Acceptance will only come from the LSUHNO Purchasing Department in writing to the integrator. The one-year agreements must start from LSUHNO's acceptance of the project.

Upon acceptance of the project, the vendor will turn over all information related to the project including but not limited to all as-built drawings, uncompiled Crestron code, programs, equipment user IDs and passwords, manuals, remotes, cases, software, warranty information, IP addresses, and spare hardware as well as keys and any special tools included for the equipment. Also, updated code and one line drawings must be provided as changes are made throughout the one-year support period.

Once the installation is complete, a demo and installation review and any relevant training must be rendered to representatives chosen by LSUHNO.

All cables which run through ceiling spaces **must** be **plenum** rated. All cables connected to Crestron DM devices must be Crestron certified. All cables must include a minimum of a 10% service loop. No permanent wire ties must be used; only releasable wire ties, clips, etc. or hook and loop straps are allowed within the rack. LSUHNO is a Crestron A+ Partner and must receive pricing at or below the A+ Partner pricing.

Skills Assessment rooms (204, 205)

These two rooms will have identical systems.

The existing equipment in each room, except where noted, must be removed and returned to LSUHNO for surplus. The successful bidder must also remove all associated wiring for that equipment back to the origin of the cabling.

Control

The entire system must be controlled with a Crestron VC-4 control system running on an LSUHNO server (OFE) in the LSUHNO data center. The integrator will provide the required single room license to control each room. The user interface with the control system will be a Crestron TSW-770 touch panel on the wall near the door. The user interface design must be coordinated with and approved by LSUHNO. The system shall take advantage of all functionality offered by the Crestron control system including but not limited to:

- Display Power Control
- Volume Control
- Source Switching
- Mute Volume on/off
- Lighting control
- Crestron's X-Panel web-based control

Display

The following devices will be mounted behind or with the display:

- Crestron DM-NVX-D360
- AVer video bar

The integrator will mount the Sharp display using the existing articulating mount (OFE). The integrator will mount the AVer video bar under the display using the AVer mount as directed and approved by LSUHNO.

Video

The HDMI output of the AVer video bar will be connected to the DM-NVX-360. Users will connect their laptops (OFE) to the USB connection of the AVer video bar. The HDMI output of the DM-NVX-360 will be connected to the HDMI input of the display.

The AVer video bar will be connected to the LSUHNO network to allow for remote monitoring of the room.

The integrator will supply and configure a mobile DM-NVX-360 for use in the room.

Audio

The analog audio output of the display will be connected to the analog input of the AVer video video bar to provide program audio. The volume will be controlled using the TSW-770 mounted on the wall of the room near the door.

NVX Networking

The integrator will connect the NVX endpoints to a Cisco network switch (OFE) provided and configured by LSUHNO. The switch will be configured and managed by the LSUHNO Enterprise Network Group. Cabling for the DM-NVX endpoints from the network closet to this room will be provided and installed by LSUHNO.

Conclusion

Included in the bid must be a one-year warranty on equipment and installation and a one-year contract for service and support. Once the integrator reaches substantial completion, the integrator must send a notice in writing to the LSUHNO Purchasing Department stating this and LSUHNO must accept this status. Acceptance will only come from the LSUHNO Purchasing Department in writing to the integrator. The one-year agreements must start from LSUHNO's acceptance of the project.

Upon acceptance of the project, the vendor will turn over all information related to the project including but not limited to all as-built drawings, uncompiled Crestron code, programs, equipment user IDs and passwords, manuals, remotes, cases, software, warranty information, IP addresses, and spare hardware as well as keys and any special tools included for the equipment. Also, updated code and one line drawings must be provided as changes are made throughout the one-year support period.

Once the installation is complete, a demo and installation review and any relevant training must be rendered to representatives chosen by LSUHNO.

All cables which run through ceiling spaces **must** be **plenum** rated. All cables connected to Crestron DM devices must be Crestron certified. All cables must include a minimum of a 10% service loop. No permanent wire ties must be used; only releasable wire ties, clips, etc. or hook and loop straps are allowed within the rack. LSUHNO is a Crestron A+ Partner and must receive pricing at or below the A+ Partner pricing.

Innovation rooms (206, 207)

Each of these rooms has its own system which is described in this section.

The existing equipment in each room, except where noted, must be removed and returned to LSUHNO for surplus. The successful bidder must also remove all associated wiring for that equipment back to the origin of the cabling.

- **Room 206**

Control

The entire system must be controlled with a Crestron VC-4 control system running on an LSUHNO server (OFE) in the LSUHNO data center. The integrator will provide the required single room license to control each room. The user interface with the control system will be a Crestron TSW-770 touch panel on the wall near the door. The user interface design must be coordinated with and approved by LSUHNO. The system shall take advantage of all functionality offered by the Crestron control system including but not limited to:

- Display Power Control
- Volume Control
- Source Switching
- Hide Picture on/off
- Mute Volume on/off
- Lighting control
- Crestron's X-Panel web-based control

Display

The following devices will be mounted behind or with the display:

- Crestron DM-NVX-D360
- AVer video bar
- Dell MFF PC (OFE)
- Crestron AM-3200-WF

The integrator will mount the Sharp display using the existing articulating mount (OFE). The integrator will mount the AVer video bar under the display using the AVer mount as directed and approved by LSUHNO.

Video

The HDMI output of the MFF PC (OFE) will be connected to the HDMI input of the AM-3200-WF and its HDMI output will be connected to the DM-NVX-360. The USB connection of the AVer video bar will be connected to the MFF PC (OFE) for web conferencing. The HDMI output of the DM-NVX-360 will be connected to the HDMI input of the display. The DM-NVX-360 will be connected to the LSUHNO network.

The AVer video bar will be connected to the LSUHNO network to allow for remote monitoring of the room.

The other DM-NVX-360 designated for this system will be turned over to LSUHNO as a portable unit to be used as required.

Audio

The analog audio output of the display will be connected to the analog input of the AVer video bar to provide program audio. The volume will be controlled using the TSW-770 mounted on the wall of the room near the door.

NVX Networking

The integrator will connect the NVX endpoints to a Cisco network switch (OFE) provided and configured by LSUHNO. The switch will be configured and managed by the LSUHNO Enterprise Network Group. Cabling for the DM-NVX endpoints from the network closet to this room will be provided and installed by LSUHNO.

- **Room 207**

Control

The entire system must be controlled with a Crestron VC-4 control system running on an LSUHNO server (OFE) in the LSUHNO data center. The integrator will provide the required single room license to control each room. The user interface with the control system will be a Crestron TSW-770 touch panel on the wall near the door. The user interface design must be coordinated with and approved by LSUHNO. The system shall take advantage of all functionality offered by the Crestron control system including but not limited to:

- Display Power Control
- Volume Control
- Source Switching
- Hide Picture on/off
- Mute Volume on/off
- Lighting control
- Crestron's X-Panel web-based control

Display

The following devices will be mounted behind or with the display:

- Crestron DM-NVX-D360
- AVer video bar

The integrator will mount the Sharp display using the existing articulating mount (OFE). The integrator will mount the AVer video bar under the display using the AVer mount as directed and approved by LSUHNO.

Video

The HDMI output of the AVer video bar will be connected to the DM-NVX-360. Users will connect their laptops (OFE) to the USB connection of the AVer video bar. The HDMI output of the DM-NVX-360 will be connected to the HDMI input of the display.

The AVer video bar will be connected to the LSUHNO network to allow for remote monitoring of the room.

The integrator will mount a DM-NVX-E30 on the wall behind the existing AIO PC (OFE). The HDMI output of the AIO PC (OFE) will be connected to the HDMI input of the DM-NVX-E30 which will be connected to the LSUHNO network.

The other DM-NVX-360 designated for this system will be turned over to LSUHNO as a portable unit to be used as required.

Audio

The analog audio output of the display will be connected to the analog input of the AVer video bar to provide program audio. The volume will be controlled using the TSW-770 mounted on the wall of the room near the door.

NVX Networking

The integrator will connect the NVX endpoints to a Cisco network switch (OFE) provided and configured by LSUHNO. The switch will be configured and managed by the LSUHNO Enterprise Network Group. Cabling for the DM-NVX endpoints from the network closet to this room will be provided and installed by LSUHNO.

Conclusion

Included in the bid must be a one-year warranty on equipment and installation and a one-year contract for service and support. Once the integrator reaches substantial completion, the integrator must send a notice in writing to the LSUHNO Purchasing Department stating this and LSUHNO must accept this status. Acceptance will only come from the LSUHNO Purchasing Department in writing to the integrator. The one-year agreements must start from LSUHNO's acceptance of the project.

Upon acceptance of the project, the vendor will turn over all information related to the project including but not limited to all as-built drawings, uncompiled Crestron code, programs, equipment user IDs and passwords, manuals, remotes, cases, software, warranty information, IP addresses, and spare hardware as well as keys and any special tools included for the equipment. Also, updated code and one line drawings must be provided as changes are made throughout the one-year support period.

Once the installation is complete, a demo and installation review and any relevant training must be rendered to representatives chosen by LSUHNO.

All cables which run through ceiling spaces **must** be **plenum** rated. All cables connected to Crestron DM devices must be Crestron certified. All cables must include a minimum of a 10% service loop. No permanent wire ties must be used; only releasable wire ties, clips, etc. or hook and loop straps are allowed within the rack. LSUHNO is a Crestron A+ Partner and must receive pricing at or below the A+ Partner pricing.

Simulation Room 1 (213)

The existing equipment in each room, except where noted, must be removed and returned to LSUHNO for surplus. The successful bidder must also remove all associated wiring for that equipment back to the origin of the cabling.

Control

The entire system must be controlled with a Crestron VC-4 control system running on an LSUHNO server (OFE) in the LSUHNO data center. The integrator will provide the required single room license to control rooms 213, 214, 215, and 216. The user interface with the control system for this room will be a Crestron TSW-770 touch panel on the wall near the door. The user interface design must be coordinated with and approved by LSUHNO. The system shall take advantage of all functionality offered by the Crestron control system including but not limited to:

- Display Power Control
- Volume Control
- Source Switching
- Video Routing
- Hide Picture on/off
- Mute Volume on/off
- Lighting control
- Crestron's X-Panel web-based control

This room contains two simulators (OFE), each with its own AIO PC (OFE) as described below. The control system will allow for video and audio from each of the two simulators to be routed to either or both displays and speakers as required.

Video

Mounted behind each of the displays will be a Crestron DM-NVX-D30 Decoder. The integrator will mount the Sharp displays using the existing articulating mount (OFE). The HDMI output of the DM-NVX-D30 will be connected to the HDMI input of the display.

There will be two AIO PCs (OFE) that are used as simulated patient monitors that are mounted on existing mounts (OFE). The integrator will mount one DM-NVX-E30 behind each of these PCs (OFE) and connect the HDMI output of the AIO PC (OFE) to the input of the DM-NVX-E30 and connect the DM-NVX-E30 to the LSUHNO network. The DM-NVX-360 designated for this system will be turned over to LSUHNO as a portable unit to be used as required.

The integrator will also provide, connect, and install an Axis M5525-E IP camera (OFE) as directed and approved by LSUHNO. LSUHNO will configure the camera for use with the simulation capture system.

Audio

The integrator will install and connect to the LSUHNO network two Shure MXA902 microphone/loudspeaker units as directed and approved by LSUHNO. The audio processor for this room will be located in the AV Closet (218).

NVX Networking

The integrator will connect the NVX endpoints to a Cisco network switch (OFE) provided and configured by LSUHNO. The switch will be configured and managed by the LSUHNO Enterprise Network Group. Cabling for the DM-NVX endpoints from the network closet to this room will be provided and installed by LSUHNO.

Conclusion

Included in the bid must be a one-year warranty on equipment and installation and a one-year contract for service and support. Once the integrator reaches substantial completion, the integrator must send a notice in writing to the LSUHNO Purchasing Department stating this and LSUHNO must accept this status. Acceptance will only come from the LSUHNO Purchasing Department in writing to the integrator. The one-year agreements must start from LSUHNO's acceptance of the project.

Upon acceptance of the project, the vendor will turn over all information related to the project including but not limited to all as-built drawings, uncompiled Crestron code, programs, equipment user IDs and passwords, manuals, remotes, cases, software, warranty information, IP addresses, and spare hardware as well as keys and any special tools included for the equipment. Also, updated code and one line drawings must be provided as changes are made throughout the one-year support period.

Once the installation is complete, a demo and installation review and any relevant training must be rendered to representatives chosen by LSUHNO.

All cables which run through ceiling spaces **must** be **plenum** rated. All cables connected to Crestron DM devices must be Crestron certified. All cables must include a minimum of a 10% service loop. No permanent wire ties must be used; only releasable wire ties, clips, etc. or hook and loop straps are allowed within the rack. LSUHNO is a Crestron A+ Partner and must receive pricing at or below the A+ Partner pricing.

Simulation Control Room (214)

The existing equipment in each room, except where noted, must be removed and returned to LSUHNO for surplus. The successful bidder must also remove all associated wiring for that equipment back to the origin of the cabling.

Control

The entire system must be controlled with a Crestron VC-4 control system running on an LSUHNO server (OFE) in the LSUHNO data center. The integrator will provide the required single room license to control rooms 213, 214, 215, and 216. The user interface with the control system will be a Crestron TS-1070 touch panel on a table top as directed and approved by LSUHNO. This room will control all four rooms, although each room will have some limited control from its own touch panel. The user interface design must be coordinated with and approved by LSUHNO. The system shall take advantage of all functionality offered by the Crestron control system including but not limited to:

- Display Power Control
- Volume Control
- Source Switching
- Video Routing
- Hide Picture on/off
- Mute Volume on/off
- Lighting control
- Joining or separating the sections of room 213
- Crestron's X-Panel web-based control

Video

Using the Chief mounts, the integrator will mount the three Sharp displays as directed an approved by LSUHNO. Behind each display will be a DM-NVX-D30 with its HDMI output connected to its display and the DM-NVX-D30 will be connected to the LSUHNO network. There will be three simulation control PCs (OFE), each will be connected to one DM-NVX-E30 mounted as directed and approved by LSUHNO. A DM-NVX-360 will be mounted in the room as directed and approved by LSUHNO for a user provided laptop (OFE) or other device (OFE).

Audio

All audio for rooms 213, 214, 215, and 216 will be routed by the Q-Sys Core8 Flex which will be located in the AV closet, 218. Audio will be both Dante and AES67. The integrator will install on tables as directed and approved by LSUHNO three Attero Tech unDNEMO network audio monitors which will be configured to communicate with rooms

213, 215, and 216 as required. The integrator will also provide three sets of Shure SRH240A headphones that can be connected to the audio interfaces as required.

In the hallway outside of Sim Rooms 1 and 2, there are JBL Control 126W speakers (OFE) mounted near the observation windows, each with a Lowell 25LVC volume control units (OFE). Two analog outputs of the Core8 Flex will feed two Crestron AMP-X50MP amplifiers located in room 218. These will each feed one of the hallway speaker systems (OFE) at 70V.

NVX Networking

The integrator will connect the NVX endpoints to a Cisco network switch (OFE) provided and configured by LSUHNO. The switch will be configured and managed by the LSUHNO Enterprise Network Group. Cabling for the DM-NVX endpoints from the network closet to this room will be provided and installed by LSUHNO.

Conclusion

Included in the bid must be a one-year warranty on equipment and installation and a one-year contract for service and support. Once the integrator reaches substantial completion, the integrator must send a notice in writing to the LSUHNO Purchasing Department stating this and LSUHNO must accept this status. Acceptance will only come from the LSUHNO Purchasing Department in writing to the integrator. The one-year agreements must start from LSUHNO's acceptance of the project.

Upon acceptance of the project, the vendor will turn over all information related to the project including but not limited to all as-built drawings, uncompiled Crestron code, programs, equipment user IDs and passwords, manuals, remotes, cases, software, warranty information, IP addresses, and spare hardware as well as keys and any special tools included for the equipment. Also, updated code and one line drawings must be provided as changes are made throughout the one-year support period.

Once the installation is complete, a demo and installation review and any relevant training must be rendered to representatives chosen by LSUHNO.

All cables which run through ceiling spaces **must** be **plenum** rated. All cables connected to Crestron DM devices must be Crestron certified. All cables must include a minimum of a 10% service loop. No permanent wire ties must be used; only releasable wire ties, clips, etc. or hook and loop straps are allowed within the rack. LSUHNO is a Crestron A+ Partner and must receive pricing at or below the A+ Partner pricing.

Simulation Room 2 (215)

The existing equipment in each room, except where noted, must be removed and returned to LSUHNO for surplus. The successful bidder must also remove all associated wiring for that equipment back to the origin of the cabling.

Control

The entire system must be controlled with a Crestron VC-4 control system running on an LSUHNO server (OFE) in the LSUHNO data center. The integrator will provide the required single room license to control rooms 213, 214, 215, and 216. The user interface with the control system for this room will be a Crestron TSW-770 touch panel on the wall near the door. The user interface design must be coordinated with and approved by LSUHNO. The system shall take advantage of all functionality offered by the Crestron control system including but not limited to:

- Display Power Control
- Volume Control
- Source Switching
- Hide Picture on/off
- Mute Volume on/off
- Lighting control
- Crestron's X-Panel web-based control

Video

Mounted behind each of the displays will be a Crestron DM-NVX-D30 Decoder. The integrator will mount the Sharp displays using the existing articulating mount (OFE). The HDMI output of the DM-NVX-D30 will be connected to the HDMI input of the display.

There will be an AIO PC (OFE) that is used as a simulated patient monitor and is mounted on an existing mount (OFE). The integrator will mount the DM-NVX-E30 behind the PC (OFE) and connect the HDMI output of the AIO PC (OFE) to the input of the DM-NVX-E30 and connect the DM-NVX-E30 to the LSUHNO network. The DM-NVX-360 designated for this system will be turned over to LSUHNO as a portable unit to be used as required.

Audio

The integrator will install and connect to the LSUHNO network a Shure MXA902 microphone/loudspeaker unit as directed and approved by LSUHNO. The audio processor for this room will be located in the Sim Control room (214) as described in that section.

NVX Networking

The integrator will connect the NVX endpoints to a Cisco network switch (OFE) provided and configured by LSUHNO. The switch will be configured and managed by the LSUHNO Enterprise Network Group. Cabling for the DM-NVX endpoints from the network closet to this room will be provided and installed by LSUHNO.

Conclusion

Included in the bid must be a one-year warranty on equipment and installation and a one-year contract for service and support. Once the integrator reaches substantial completion, the integrator must send a notice in writing to the LSUHNO Purchasing Department stating this and LSUHNO must accept this status. Acceptance will only come from the LSUHNO Purchasing Department in writing to the integrator. The one-year agreements must start from LSUHNO's acceptance of the project.

Upon acceptance of the project, the vendor will turn over all information related to the project including but not limited to all as-built drawings, uncompiled Crestron code, programs, equipment user IDs and passwords, manuals, remotes, cases, software, warranty information, IP addresses, and spare hardware as well as keys and any special tools included for the equipment. Also, updated code and one line drawings must be provided as changes are made throughout the one-year support period.

Once the installation is complete, a demo and installation review and any relevant training must be rendered to representatives chosen by LSUHNO.

All cables which run through ceiling spaces **must** be **plenum** rated. All cables connected to Crestron DM devices must be Crestron certified. All cables must include a minimum of a 10% service loop. No permanent wire ties must be used; only releasable wire ties, clips, etc. or hook and loop straps are allowed within the rack. LSUHNO is a Crestron A+ Partner and must receive pricing at or below the A+ Partner pricing.

Simulation Room 3 (216)

The existing equipment in each room, except where noted, must be removed and returned to LSUHNO for surplus. The successful bidder must also remove all associated wiring for that equipment back to the origin of the cabling.

Control

The entire system must be controlled with a Crestron VC-4 control system running on an LSUHNO server (OFE) in the LSUHNO data center. The integrator will provide the required single room license to control rooms 213, 214, 215, and 216. The user

interface with the control system for this room will be a Crestron TSW-770 touch panel on the wall near the door. The user interface design must be coordinated with and approved by LSUHNO. The system shall take advantage of all functionality offered by the Crestron control system including but not limited to:

- Display Power Control
- Volume Control
- Source Switching
- Hide Picture on/off
- Mute Volume on/off
- Lighting control
- Crestron's X-Panel web-based control

Video

Mounted behind each of the displays will be a Crestron DM-NVX-D30 Decoder. The integrator will mount the Sharp displays using the existing articulating mount (OFE). The HDMI output of the DM-NVX-D30 will be connected to the HDMI input of the display.

There will be a AIO PC (OFE) that is used as a simulated patient monitor and is mounted on an existing mount (OFE). The integrator will mount the DM-NVX-E30 behind the PC (OFE) and connect the HDMI output of the AIO PC (OFE) to the input of the DM-NVX-E30 and connect the DM-NVX-E30 to the LSUHNO network. The DM-NVX-360 designated for this system will be turned over to LSUHNO as a portable unit to be used as required.

Audio

The integrator will install and connect to the LSUHNO network a Shure MXA902 microphone/loudspeaker unit as directed and approved by LSUHNO. The audio processor for this room will be located in the Sim Control room (214) as described in that section.

NVX Networking

The integrator will connect the NVX endpoints to a Cisco network switch (OFE) provided and configured by LSUHNO. The switch will be configured and managed by the LSUHNO Enterprise Network Group. Cabling for the DM-NVX endpoints from the network closet to this room will be provided and installed by LSUHNO.

Conclusion

Included in the bid must be a one-year warranty on equipment and installation and a one-year contract for service and support. Once the integrator reaches substantial completion, the integrator must send a notice in writing to the LSUHNO Purchasing Department stating this and LSUHNO must accept this status. Acceptance will only come from the LSUHNO Purchasing Department in writing to the integrator. The one-year agreements must start from LSUHNO's acceptance of the project.

Upon acceptance of the project, the vendor will turn over all information related to the project including but not limited to all as-built drawings, uncompiled Crestron code, programs, equipment user IDs and passwords, manuals, remotes, cases, software, warranty information, IP addresses, and spare hardware as well as keys and any special tools included for the equipment. Also, updated code and one line drawings must be provided as changes are made throughout the one-year support period.

Once the installation is complete, a demo and installation review and any relevant training must be rendered to representatives chosen by LSUHNO.

All cables which run through ceiling spaces **must** be **plenum** rated. All cables connected to Crestron DM devices must be Crestron certified. All cables must include a minimum of a 10% service loop. No permanent wire ties must be used; only releasable wire ties, clips, etc. or hook and loop straps are allowed within the rack. LSUHNO is a Crestron A+ Partner and must receive pricing at or below the A+ Partner pricing.

Scheduling Panels:

Each room described in this document with the exception of the sim control room (214) will have a TSS-1070 mounted outside of its door. LSUHNO uses CollegeNet 25Live to drive these panels and owns the licensing required (OFE). LSUHNO will provide the network infrastructure to support these panels.

Parts for MEIC First Floor Upgrade			
Rack Room			
Part Number	**Manufacturer**	**Description**	**Quantity**
DM-NVX-D30	Crestron	Network AV decoder	2
VC-4-ROOM	Crestron	Virtual control server license	1
CEN-IO-RY-104	Crestron	Network relay module	3
DIN-CENCN-2-POE	Crestron	Ethernet to Cresnet brige with PoE	1
Core 110f	Q-Sys	Network audio processor	1
SLDAN-32-P	Q-Sys	Dante license for 32x32	1
MobileConnect Station	Sennheiser	Assitive listening and talkback station	1
Mediasite RL	Sonic Foundry	Mediaiste capture deck (OFE)	1
M-8X2	Furman	Power conditioner	1
UTR1	Middle Atlantic	Rack shelf	3
101			
Part Number	**Manufacturer**	**Description**	**Quantity**
4K13-HS	Christie	14,800 Lumen, 4K projector	1
TBD	Christie	Lens for 4K13-HS	1
DWU630-GS	Christie	6,750 Lumen WUXGA projector	1
TBD	Christie	Lens for DWU-630-GS	1
DM-NVX-384	Crestron	Network AV encoder/decoder	1
DM-NVX-E30	Crestron	Network AV encoder	1
DM-NVX-D30	Crestron	Network AV decoder	3
AM-3200-WF	Crestron	Wireless presentation gateway	1
TSW-770-X-S	Crestron	7" Wall mount touch screen (color TBD)	1
TS-770-X-S	Crestron	7" Tabletop touch screen (color TBD)	1
TS-770/1070-SMK	Crestron	Swivel mount kit for touch panel	1
TSS-1070-X-S	Crestron	10" Room scheduling touch screen (color TBD)	1
CEN-ODT-C-POE	Crestron	Dual-Technology occupancy sensor	1
FT2-202-MECH-PTL-X	Crestron	FlipTop with cable pass through (color TBD)	1
FT2A-PWR-US-1	Crestron	Power module for FlipTop	1
NL-C4	Q-Sys	Network speaker [OFE]	4
ADP-AES3-AU-2X2	Audinate	Network audio input/output	1
PB-8	RapcoHorizon	8 Channel press box	1

TeamConnect Ceiling Medium CT-W 2FT	Sennheiser	Ceiling array microphone in white, 2ft ceiling kit	1
SL MCR 4 DW-4	Sennheiser	Four channel receiver for SpeechLine microphones	1
SL Bodypack - ME 2 Kit DW-4	Sennheiser	Bodypack kit with omni microphone	1
SL Handheld 865 DW-4-US	Sennheiser	Handheld transmitter with 865 capsule	1
MEG 14-40 B	Sennheiser	Gooseneck microphone	1
MZS 31	Sennheiser	Shock mount for microphone	1
CHG 4N US	Sennheiser	4 bay battery charger	1
BA 30	Sennheiser	Spare battery for bodypack	1
BA 10	Sennheiser	Spare battery for handheld	1
ADP-USB-AU-2X2	Audinate	Dante to USB-A adapter	1
USBC-CAP60	Plugable	USB capture card	1
SPOTLIGHT	Logitech	Presentation remote	1
A7515	Anker	10 port USB 3.0 hub	1
JVCU360	j5Create	360° All Around Webcam	1
848-06	Panvise	Desktop camera mount	1
CAM550	AVer	12x PTZ tracking camera	1
IP2SL-P	Global Cache	IP to serial interface with PoE	1
custom	Da-Lite	222" Diagaonal motorizied screen (OFE)	1
SW-XIOC-EM	Crestron	XiO Cloud endpoint management license, annual	1
LSU-MWSGR-32	Marshall	Custom lectern	1
M-8X2	Furman	Power conditioner	1
UTR1	Middle Atlantic	Rack shelf	2
102			
Part Number	**Manufacturer**	**Description**	**Quantity**
DWU630-GS	Christie	6,750 Lumen WUXGA projector	1
TBD	Christie	Lens for DWU-630-GS	1
DM-NVX-E20-2G-X-T	Crestron	Network AV encoder wall plate (color TBD)	1
DM-NVX-D30	Crestron	Network AV decoder	1
TSW-770-X-S	Crestron	7" Wall mount touch screen (color TBD)	1
TSS-1070-X-S	Crestron	10" Room scheduling touch screen (color TBD)	1
CEN-ODT-C-POE	Crestron	Dual-Technology occupancy sensor	1
NL-C4	Q-Sys	Network speaker [OFE]	4
TeamConnect Ceiling Medium CT-W 2FT	Sennheiser	Ceiling array microphone in white, 2ft ceiling kit	1

IP2SL-P	Global Cache	IP to serial interface with PoE	1
SW-XIOC-EM	Crestron	XiO Cloud endpoint management license, annual	1
103			
Part Number	**Manufacturer**	**Description**	**Quantity**
DWU630-GS	Christie	6,750 Lumen WUXGA projector	1
TBD	Christie	Lens for DWU-630-GS	1
DM-NVX-E20-2G-X-T	Crestron	Network AV encoder wall plate (color TBD)	1
DM-NVX-D30	Crestron	Network AV decoder	1
TSW-770-X-S	Crestron	7" Wall mount touch screen (color TBD)	1
TSS-1070-X-S	Crestron	10" Room scheduling touch screen (color TBD)	1
CEN-ODT-C-POE	Crestron	Dual-Technology occupancy sensor	1
NL-C4	Q-Sys	Network speaker [OFE]	4
TeamConnect Ceiling Medium CT-W 2FT	Sennheiser	Ceiling array microphone in white, 2ft ceiling kit	1
IP2SL-P	Global Cache	IP to serial interface with PoE	1
SW-XIOC-EM	Crestron	XiO Cloud endpoint management license, annual	1
104			
Part Number	**Manufacturer**	**Description**	**Quantity**
4K13-HS	Christie	14,800 Lumen, 4K projector	1
TBD	Christie	Lens for 4K13-HS	1
DWU630-GS	Christie	6,750 Lumen WUXGA projector	1
TBD	Christie	Lens for DWU-630-GS	1
DM-NVX-384	Crestron	Network AV encoder/decoder	1
DM-NVX-E30	Crestron	Network AV encoder	1
DM-NVX-D30	Crestron	Network AV decoder	3
AM-3200-WF	Crestron	Wireless presentation gateway	1
TSW-770-X-S	Crestron	7" Wall mount touch screen (color TBD)	1
TS-770-X-S	Crestron	7" Tabletop touch screen (color TBD)	1
TS-770/1070-SMK	Crestron	Swivel mount kit for touch panel	1
TSS-1070-X-S	Crestron	10" Room scheduling touch screen (color TBD)	1
CEN-ODT-C-POE	Crestron	Dual-Technology occupancy sensor	1
FT2-202-MECH-PTL-X	Crestron	FlipTop with cable pass through (color TBD)	1
FT2A-PWR-US-1	Crestron	Power module for FlipTop	1

NL-C4	Q-Sys	Network speaker [OFE]	4
unDX2IO+	Q-Sys	Network audio wallplate for output	1
PB-8	RapcoHorizon	8 Channel press box	1
TeamConnect Ceiling Medium CT-W 2FT	Sennheiser	Ceiling array microphone in white, 2ft ceiling kit	1
SL MCR 4 DW-4	Sennheiser	Four channel receiver for SpeechLine microphones	1
SL Bodypack - ME 2 Kit DW-4	Sennheiser	Bodypack kit with omni microphone	1
SL Handheld 865 DW-4-US	Sennheiser	Handheld transmitter with 865 capsule	1
MEG 14-40 B	Sennheiser	Gooseneck microphone	1
MZS 31	Sennheiser	Shock mount for microphone	1
CHG 4N US	Sennheiser	4 bay battery charger	1
BA 30	Sennheiser	Spare battery for bodypack	1
BA 10	Sennheiser	Spare battery for handheld	1
ADP-USB-AU-2X2	Audinate	Dante to USB-A adapter	1
USBC-CAP60	Plugable	USB capture card	1
SPOTLIGHT	Logitech	Presentation remote	1
A7515	Anker	10 port USB 3.0 hub	1
JVCU360	j5Create	360° All Around Webcam	1
848-06	Panvise	Desktop camera mount	1
CAM550	AVer	12x PTZ tracking camera	1
IP2SL-P	Global Cache	IP to serial interface with PoE	1
custom	Da-Lite	222" Diagaonal motorizied screen (OFE)	1
SW-XIOC-EM	Crestron	XiO Cloud endpoint management license, annual	1
LSU-MWSGR-32	Marshall	Custom lectern	1
M-8X2	Furman	Power conditioner	1
UTR1	Middle Atlantic	Rack shelf	2
Parts for MEIC Second Floor Upgrade			
MEIC 201			
Part Number	**Manufacturer**	**Description**	**Quantity**
4P-B65EJ2U	Sharp	65" professional 4K monitor	1
LTM1U	Chief	Large Fusion wall mount	1
FCAV1U	Chief	Pull out accessory for Fusion mount	1
COMVBTMNT	AVer	Universal sounbar mounting kit	1

DM-NVX-360	Crestron	Network A/V endcoder/decoder	2
VB342 Pro	AVer	Video bar	1
AM-3200-WF	Crestron	Wireless presentation gateway	1
TSW-770-B-S	Crestron	7" Wall mount touch screen	1
TSS-1070-W-S	Crestron	10" Room scheduling touch screen	1
CEN-ODT-C-POE	Crestron	Dual-Technology occupancy sensor	1
SW-XIOC-EM	Crestron	XiO Cloud endpoint management license, annual	1
VC-4-ROOM	Crestron	Virtual control server license	1
MEIC 204			
Part Number	**Manufacturer**	**Description**	**Quantity**
4P-B65EJ2U	Sharp	65" professional 4K monitor	1
custom		Existing articulating wall mount (OFE)	1
COMVBTMNT	AVer	Universal sounbar mounting kit	1
DM-NVX-360	Crestron	Network AV encoder/decoder	2
TSW-770-B-S	Crestron	7" Wall mount touch screen	1
TSS-1070-W-S	Crestron	10" Room scheduling touch screen	1
VB342 Pro	AVer	Video bar	1
AC-215A	Furman	Compact power conditioner	1
VC-4-ROOM	Crestron	Virtual control server license	1
CEN-ODT-C-POE	Crestron	Dual-Technology occupancy sensor	1
SW-XIOC-EM	Crestron	XiO Cloud endpoint management license, annual	1
MEIC 205			
Part Number	**Manufacturer**	**Description**	**Quantity**
4P-B65EJ2U	Sharp	65" professional 4K monitor	1
custom		Existing articulating wall mount (OFE)	1
COMVBTMNT	AVer	Universal sounbar mounting kit	1
DM-NVX-360	Crestron	Network AV encoder/decoder	2
TSW-770-B-S	Crestron	7" Wall mount touch screen	1
TSS-1070-W-S	Crestron	10" Room scheduling touch screen	1
VB342 Pro	AVer	Video bar	1
AC-215A	Furman	Compact power conditioner	1
VC-4-ROOM	Crestron	Virtual control server license	1

CEN-ODT-C-POE	Crestron	Dual-Technology occupancy sensor	1
SW-XIOC-EM	Crestron	XiO Cloud endpoint management license, annual	1
MEIC 206			
Part Number	**Manufacturer**	**Description**	**Quantity**
4P-B65EJ2U	Sharp	65" professional 4K monitor	1
custom		Existing articulating wall mount (OFE)	1
COMVBTMNT	AVer	Universal sounbar mounting kit	1
DM-NVX-360	Crestron	Network AV encoder/decoder	1
DM-NVX-360	Crestron	Network AV encoder/decoder, portable	1
AM-3200-WF	Crestron	AirMedia wireless presentation gateway	1
AC-215A	Furman	Compact power conditioner	1
TSW-770-B-S	Crestron	7" Wall mount touch screen	1
TSS-1070-W-S	Crestron	10" Room scheduling touch screen	1
VB342 Pro	AVer	Video bar	1
AC-215A	Furman	Compact power conditioner	1
VC-4-ROOM	Crestron	Virtual control server license	1
CEN-ODT-C-POE	Crestron	Dual-Technology occupancy sensor	1
SW-XIOC-EM	Crestron	XiO Cloud endpoint management license, annual	1
MEIC 207			
Part Number	**Manufacturer**	**Description**	**Quantity**
4P-B65EJ2U	Sharp	65" professional 4K monitor	1
custom		Existing articulating wall mount (OFE)	1
COMVBTMNT	AVer	Universal sounbar mounting kit	1
DM-NVX-E30	Crestron	Network AV encoder	1
DM-NVX-360	Crestron	Network AV encoder/decoder	1
TSW-770-B-S	Crestron	7" Wall mount touch screen	1
TSS-1070-W-S	Crestron	10" Room scheduling touch screen	1
VB342 Pro	AVer	Video bar	1
AC-215A	Furman	Compact power conditioner	1
VC-4-ROOM	Crestron	Virtual control server license	1
CEN-ODT-C-POE	Crestron	Dual-Technology occupancy sensor	1
SW-XIOC-EM	Crestron	XiO Cloud endpoint management license, annual	1

MEIC 211, Reconcilliation Room			
Part Number	**Manufacturer**	**Description**	**Quantity**
FW-55BZ40L	Sony	55" professional 4K monitor	1
PIWRFUB	Chief	Large low profile in-wall mount with interface	1
PAC501B	Chief	In wall mount box	1
AM-3200-WF	Crestron	Wireless presentation gateway	1
TSW-770-B-S	Crestron	7" Wall mount touch screen	1
TSS-1070-W-S	Crestron	10" Room scheduling touch screen	1
VB-S	Bose Professional	Video bar	1
869196-0010	Bose Professional	Videobar display mounting kit	1
MEIC 213, Sim Room 1			
Part Number	**Manufacturer**	**Description**	**Quantity**
4P-B55EJ2U	Sharp	55" professional 4K monitor	2
custom		Existing articulating wall mount (OFE)	2
DM-NVX-360	Crestron	Network AV encoder/decoder, portable	2
DM-NVX-E30	Crestron	Network AV encoder	1
DM-NVX-D30	Crestron	Network AV decoder	2
TSW-770-B-S	Crestron	7" Wall mount touch screen	1
TSS-1070-W-S	Crestron	10" Room scheduling touch screen	1
MXA902	Shure	Network microphone and loudspeaker	2
M5525-E	Axis	IP camera for sim capture (OFE)	1
CEN-ODT-C-POE	Crestron	Dual-Technology occupancy sensor	1
SW-XIOC-EM	Crestron	XiO Cloud endpoint management license, annual	1
MEIC 214, Sim Control			
Part Number	**Manufacturer**	**Description**	**Quantity**
4P-B43EJ2U	Sharp	43" professional 4K monitor	3
TS325TU	Chief	Thinstall 25" extension arm wall mount	3
DM-NVX-E30	Crestron	Network AV encoder	3
DM-NVX-D30	Crestron	Network AV decoder	3

DM-NVX-360	Crestron	Network AV encoder/decoder	1
unDNEMO	Attero Tech	Network audio monitor	3
SRH240A	Shure	Professional headphones	3
TS-1070-X-S	Crestron	Table top touch panel	1
VC-4-ROOM	Crestron	Virtual control server license	1
MEIC 215, Sim Room 2			
Part Number	**Manufacturer**	**Description**	**Quantity**
4P-B55EJ2U	Sharp	55" professional 4K monitor	2
custom		Existing articulating wall mount (OFE)	2
DM-NVX-360	Crestron	Network AV encoder/decoder, portable	1
DM-NVX-D30	Crestron	Network AV decoder	2
TSW-770-B-S	Crestron	7" Wall mount touch screen	1
TSS-1070-W-S	Crestron	10" Room scheduling touch screen	1
MXA902	Shure	Network microphone and loudspeaker	1
CEN-ODT-C-POE	Crestron	Dual-Technology occupancy sensor	1
SW-XIOC-EM	Crestron	XiO Cloud endpoint management license, annual	1
MEIC 216, Sim Room 3			
Part Number	**Manufacturer**	**Description**	**Quantity**
4P-B55EJ2U	Sharp	55" professional 4K monitor	2
custom		Existing articulating wall mount (OFE)	2
DM-NVX-E30	Crestron	Network AV encoder	3
DM-NVX-360	Crestron	Network AV encoder/decoder, portable	1
DM-NVX-D30	Crestron	Network AV decoder	2
TSW-770-B-S	Crestron	7" Wall mount touch screen	1
TSS-1070-W-S	Crestron	10" Room scheduling touch screen	1
MXA902	Shure	Network microphone and loudspeaker	1
CEN-ODT-C-POE	Crestron	Dual-Technology occupancy sensor	1
SW-XIOC-EM	Crestron	XiO Cloud endpoint management license, annual	1
MEIC 218			
Core 8Flex	Q-Sys	Network audio processor	1
SLDAN-32-P	Q-Sys	Dante license for 32x32	1

AMP-X50MP	Crestron	MP Amplifier, 50 W	2
MEIC 301			
Part Number	**Manufacturer**	**Description**	**Quantity**
4P-B65EJ2U	Sharp	65" professional 4K monitor	1
LTM1U	Chief	Large Fusion wall mount	1
FCAV1U	Chief	Pull out accessory for Fusion mount	1
COMVBTMNT	AVer	Universal sounbar mounting kit	1
DM-NVX-360	Crestron	Network A/V endcoder/decoder	2
VB342 Pro	AVer	Video bar	1
AM-3200-WF	Crestron	Wireless presentation gateway	1
TSW-770-B-S	Crestron	7" Wall mount touch screen	1
TSS-1070-W-S	Crestron	10" Room scheduling touch screen	1
CEN-ODT-C-POE	Crestron	Dual-Technology occupancy sensor	1
SW-XIOC-EM	Crestron	XiO Cloud endpoint management license, annual	1
VC-4-ROOM	Crestron	Virtual control server license	1
MEIC 320			
Part Number	**Manufacturer**	**Description**	**Quantity**
4P-B65EJ2U	Sharp	65" professional 4K monitor	1
LTM1U	Chief	Large Fusion wall mount	1
FCAV1U	Chief	Pull out accessory for Fusion mount	1
COMVBTMNT	AVer	Universal sounbar mounting kit	1
DM-NVX-360	Crestron	Network A/V endcoder/decoder	2
VB342 Pro	AVer	Video bar	1
AM-3200-WF	Crestron	Wireless presentation gateway	1
TSW-770-B-S	Crestron	7" Wall mount touch screen	1
TSS-1070-W-S	Crestron	10" Room scheduling touch screen	1
CEN-ODT-C-POE	Crestron	Dual-Technology occupancy sensor	1
SW-XIOC-EM	Crestron	XiO Cloud endpoint management license, annual	1
VC-4-ROOM	Crestron	Virtual control server license	1

MEIC 401			
Part Number	**Manufacturer**	**Description**	**Quantity**
4P-B65EJ2U	Sharp	65" professional 4K monitor	1
LTM1U	Chief	Large Fusion wall mount	1
FCAV1U	Chief	Pull out accessory for Fusion mount	1
COMVBTMNT	AVer	Universal sounbar mounting kit	1
DM-NVX-360	Crestron	Network A/V endcoder/decoder	2
VB342 Pro	AVer	Video bar	1
AM-3200-WF	Crestron	Wireless presentation gateway	1
TSW-770-B-S	Crestron	7" Wall mount touch screen	1
TSS-1070-W-S	Crestron	10" Room scheduling touch screen	1
CEN-ODT-C-POE	Crestron	Dual-Technology occupancy sensor	1
SW-XIOC-EM	Crestron	XiO Cloud endpoint management license, annual	1
VC-4-ROOM	Crestron	Virtual control server license	1
MEIC 420			
Part Number	**Manufacturer**	**Description**	**Quantity**
4P-B65EJ2U	Sharp	65" professional 4K monitor	1
LTM1U	Chief	Large Fusion wall mount	1
FCAV1U	Chief	Pull out accessory for Fusion mount	1
COMVBTMNT	AVer	Universal sounbar mounting kit	1
DM-NVX-360	Crestron	Network A/V endcoder/decoder	2
VB342 Pro	AVer	Video bar	1
AM-3200-WF	Crestron	Wireless presentation gateway	1
TSW-770-B-S	Crestron	7" Wall mount touch screen	1
TSS-1070-W-S	Crestron	10" Room scheduling touch screen	1
CEN-ODT-C-POE	Crestron	Dual-Technology occupancy sensor	1
SW-XIOC-EM	Crestron	XiO Cloud endpoint management license, annual	1
VC-4-ROOM	Crestron	Virtual control server license	1

LSU Health
NEW ORLEANS
Department of Information Technology
433 Bolivar Street · New Orleans, LA 70112 · Phone 504-568-6130

Structured Cabling System: Design & Installation Standards

Last Revised: Friday, February 27th, 2026

Table of Contents

Article I. Revision History

Date	Area of Change	Scope of Change
1/21/2011	Document	Modified document verbiage to specify strict compliance with all LSUHSC requirements.
1/21/2011	Document	Reorganized document to cover all facets of wiring build-outs.
1/21/2011	Article III, Section 3.04	Added "Contractor/Installer Requirements" section to document.
1/21/2011	Article III, Section 3.05	Added "Coordination of Work" section to document.
1/21/2011	Article IV	Revised list of applicable industry standards
1/21/2011	Article V	Added "Preferred Part Number" section to document.
1/21/2011	Article VI	Added "Before you Dig" section to document.
1/21/2011	Article VII	Added "Building Entrance Facilities" section to document.
1/21/2011	Article VIII, Section 8.06	Added "Access Controls" section to document.
1/21/2011	Article VIII, Section 8.07	Added stipulation for no 1st Floor HCs in multi-story buildings due to flooding concerns.
1/21/2011	Article VIII, Section 8.17	Added "Electrical Emergency Disconnect" section to document.
1/21/2011	Article VIII, Section 8.19	Added labeling requirements for conduits and innerduct.
1/21/2011	Article VIII, Section 8.19	Added caveats to prevent electrolysis.
1/21/2011	Article IX, Section 9.02	Removed 6" wide vertical cable management at end of racks.
		Increased vertical cable management between racks to 10" wide.
		Specified that all racks must be grounded.
1/21/2011	Article X, Section 10.04	Added "Special Use Patch Panels" section to document.
1/21/2011	Article X, Section 10.05	Modified layout of data patch panels in racks to better utilize vertical management.
1/21/2011	Article X, Section 10.06	Modified layout of voice patch panels in racks to better utilize vertical management.
1/21/2011	Article X, Section 10.07	Modified layout of telephony patch panels in racks to better utilize vertical management.
1/21/2011	Article XI, Section 11.01	Added installation caveat regarding building infrastructure shall not be used to support horizontal cabling.
1/21/2011	Article XI, Section 11.02	Specified that cable trays must be grounded.
1/21/2011	Article XII, Section 12.02	Added "Splice Points" section to document.
1/21/2011	Article XII, Section 12.03	Added "Service Loops" section to document.
1/21/2011	Article XII, Section 12.05	Specified that intra-building fiber must use 50 micron laser optimized fiber (OM4)
1/21/2011	Article XII, Section 12.07	Added labeling requirements for fiber optics.
1/21/2011	Article XII, Section 12.08	Specified that fiber optic terminations must use fusion splices.
1/21/2011	Article XIII, Section 13.02	Updated data/voice cable colors. Data is blue, Voice is Ivory.
1/21/2011	Article XIII, Section 13.02	Added special purpose cable colors. Purple is networking. Orange is building systems.
1/21/2011	Article XIII, Section 13.05	Added labeling requirements for special purpose cabling.
1/21/2011	Article XIII, Section 13.08	Added "Special Purpose Drops" section to document.
1/25/2011	Article I	Added "Revision History" section to document.
1/26/2011	Article XII, Section 12.01	Added caveat about pulling tension and bend radius.
1/26/2011	Article XIII, Section 13.01	Added caveat about pulling tension and bend radius.
1/31/2011	Article X, Section 10.02	Added caveat regarding patch panel placement in racks.
2/23/2011	Article III, Section 3.06	Added "Removal of Abandoned Cables" section to document
2/23/2011	Article XIII, Section 13.02	Added requirement for spacing between electrical and data outlets.
4/6/2011	Document	Rewrite to comply with R.S 38:2290

7/16/2012	Article XIII, Section 12.06	Added requirement for contractor to provide "special purpose" patch cables in cross-connect.
7/1/2016	Article III, Section 3.06	Added verbiage that contractor shall check with Network/Facilities prior to removal of abandoned cables.
8/9/2016	Article XII, Section 12.10	Added verbiage about marginal passing test results.
5/30/2017	Document	Revised document due to change in definition of a "Standard Drop"
8/7/2019	Article XII, Section 12.06	Added "Green" for Passive Poe Systems
12/11/20	Article XII, Section 12.02	Added caveat regarding cable splicing.
08/24/22	Document	Revised document including • General document clean-up and format changes • Industry Standards to reference latest standards • Intra-building fiber from laser optimized OM-4 to single-mode fiber. • Rack positioning with minimum clearance. • UTP cabling service loops
3/6/23	Article XIII	Added Preferred Parts List
3/6/23	Article XII, Section 12.15	Added wireless access point enclosure
9/27/23	Article XII, Sections 12.01, 12.07, & 12.15	Updated cabling standard, revised Patch Cables for Yellow to include "AV", and updated keystone module for access point drops
9/27/23	Article XIII	Removed Cat6+ cabling from wiring specs
9/27/23	Article IX, Section 9.06	Revised MC and HC Rack Layout diagrams
9/30/23	Article VIII	Updated MC and HC sample drawings
9/30/23	Article XIII	Added Keystone module for AP drops to preferred parts list
10/9/23	Document	Minor technical changes in various subsections.
12/12/24	Article XI, Section 11.07	Updated Intra-building fiber language to include both single mode and OM4 multimode fiber.
2/27/26	Article XII, Section 7.16	Added network closet electrical outlet placement
2/27/26	Article IX, Section 9.05	Updated analog telephone/telecom patch panel location in the rack
2/27/26	Article XII, Section 12.08	Updated angled faceplate orientation based on jack height
2/27/26	Article XIII	Minor part number changes to UTP cabling and REV jacks

Article II. Definitions, Acronyms and Units of Measure

Section 2.01 Definitions

Abandoned Cable: As defined in paragraph 800.2 of the National Electric Code, any communication cable that is not terminated on both ends at a connector or other equipment and not identified for "For Future Use" with a tag.

Backbone: A facility (e.g., pathway, cable, or conductors) between telecommunications rooms, or floor distribution terminals, the entrance facilities and the equipment rooms within or between buildings.

Cable Run: A length of installed media which may include other components along its path.

Drop: An outlet that can support data, voice, or video applications.

Faceplate: The covering for a cable outlet usually flush mounted into a wall or a termination box mounted to the surface of a wall or floor. Faceplates typically have openings or insert positions for modular jacks.

Horizontal Cabling: The cabling between and including the telecommunications outlet/connector and the horizontal cross-connect.

Horizontal Cross-connect (HC): A cross-connect of horizontal cabling to other cabling, e.g., horizontal, backbone, equipment.

Main Cross-Connect (MC): A cross-connect for first level backbone cables, entrance cables and equipment cables.

Modular Jack: An 8 position 8 conductor (8P8C) connector commonly used to terminate twisted pair cabling. An 8P8C modular connector has two paired components: the male plug and the female jack.

Pathway: A facility for the placement of telecommunications cable.

Standard Drop: A drop in a work area consisting of two color-coded ports and two color-coded wires. Generally, one drop is used to support VoIP phone and workstation and one drop is available for spare.

Structured Cabling System: A complete system of cabling and associated hardware, which provides a comprehensive telecommunications infrastructure. Installations typically include entrance facilities, equipment rooms, backbone cabling, telecommunication rooms, horizontal cabling, and work areas.

Work Area: A building space where the occupants typically interact with computer equipment.

Section 2.02 Acronyms

ACR-F	Attenuation Crosstalk Ratio Far End
ACR-N	Attenuation Crosstalk Ratio Near End
ANSI	American National Standards Institute
AWG	American Wire Gauge
BICSI	Building Industry Consulting Service International
EMI	Electromagnetic interference
EMT	Electrical Metal Tubing
HC	Horizontal Cross-Connect
HVAC	Heating, Ventilation and Air Conditioning
IP	Internet Protocol
ISO/IEC	International Organization for Standards/ International Electrotechnical Commission
ITU	International Telecommunications Union
LSUHSC	LSU Health Sciences Center New Orleans
MC	Main Cross-Connect
NEXT	Near-end Crosstalk
NFPA	National Fire Protection Association
OS1	Optical Single-mode 1
OSI	Open Systems Interconnection
OTDR	Optical Time Domain Reflectometer
PVC	Polyvinyl Chloride
RCDD	Registered Communications Distribution Designers
RU	Rack Units
SC	Subscriber Connector
TGB	Telecommunications Grounding Busbar
TIA/EIA	Telecommunications Industry Association / Electronic Industries Association
UTP	Unshielded Twisted Pair
VoIP	Voice over IP

Section 2.03 Units of Measure

µm	Micrometer or micron
A	Ampere
dB	Decibel
ft or '	Foot
in or "	Inch
kPa	KiloPascal
lx	Lux
V	Volt

Article III. Design and Installation Standards Overview

Section 3.01 Purpose

This document is intended to provide a basic framework for the design specifications and requirements for all structured cabling system installations.

All campus renovations projects to existing work areas and new building construction shall include drawings for each structured cabling system sub-system (if applicable).

This document details the minimum performance criteria for all components which comprise a structured cabling system, including product specifications, design considerations and installation guidelines.

Section 3.02 Caveats

An authorized representative of the LSUHSC Department of Information Technology must approve all deviations from these standards in writing prior to implementation of the deviation.

All structured cabling system installations must be coordinated through the LSUHSC Department of Information Technology.

All construction projects must be approved by and coordinated through the LSUHSC Department of Property and Facilities Management.

The contractor is responsible for ensuring that all products selected are mated to interoperate such that the overall performance capability and usefulness of the structured cabling system is not degraded.

Section 3.03 Scope

This document applies to all LSUHSC facilities including all new construction and renovations to existing facilities or work areas.

These standards shall apply to all work performed by LSUHSC staff, contractors, sub-contractors and technicians.

Section 3.04 Contractor/Installer Requirements

This document is subject to revisions and modifications as necessary to maintain support and compatibility with changing construction techniques and technological developments.

The contractor/installer shall:

- Verify compliance with the most recent revision of this document and all applicable standards.
- Adhere to all applicable building, fire, and/or life safety codes, State laws and industry standards.
- Furnish all labor, supervision, tooling, miscellaneous mounting hardware and consumables for each cabling system installed.
- Remove all trash and debris daily.
- Submit all documentation that is necessary for a manufacturer provided warranty and/or a contractor/installer provided warranty. The warranty terms and conditions and coverage period shall be clearly stated.

Section 3.05 Coordination of Work

Serving as both an Academic Medical Center and a Healthcare Provider, it is often necessary that installations must be scheduled around daily business activities, such as classes and/or clinics.

Therefore, the contractor shall coordinate with the LSUHSC Department of Information Technology so that all necessary work will be accomplished in an orderly and timely manner with a minimal amount of disruption.

Article IV. Applicable Standards

Section 4.01 Caveats

In general, the following standards are to be used as minimum standards.

Compliance with the latest revision and all addenda for each of the applicable standards listed below is required.

In the event of ambiguities regarding requirements, the more stringent standard shall be adhered to. The LSUHSC Department of Information Technology will determine the more stringent standard that shall be adhered to.

Section 4.02 State of Louisiana Standards

State of Louisiana, Division of Administration: Facility, Planning & Control, Guideline Requirements, Specifications and Wiring Diagrams for Communications Cable/Wire and Related Building Facilities

Section 4.03 BICSI Standards

Telecommunications Distribution Methods Manual

Section 4.04 ISO Standards

ISO 9001: Quality Management Systems - Requirements

Section 4.05 ITU Standards

ITU-T G.652.D: Characteristics of a single-mode optical fibre cable

ITU-T G.651: Characteristics of a 50/125 mm multimode graded index optical fibre cable

Section 4.06 NFPA Standards

NFPA 70: National Electric Code

NFPA 75: Standard for the Protection of Information Technology Equipment

NFPA 101: Life Safety Code

Section 4.07 TIA/EIA Standards

TIA/EIA-526: Standard Test Procedures for Fiber Optic Systems

TIA/EIA-568: Commercial Building Telecommunications Wiring Standard

TIA/EIA-569: Telecommunications Pathways and Spaces

TIA/EIA-598: Optical Fiber Cable Color Coding

TIA/EIA-606: Administration Standard for the Telecommunications

TIA/EIA-607: Generic Telecommunications Bonding and Grounding for Customer Premises

TIA/EIA-758: Customer-Owned Outside Plant Telecommunications Infrastructure Standard

TIA/EIA-942: Telecommunication Infrastructure Standard for Data Centers

TIA/EIA-1179: Healthcare Facility Telecommunications Infrastructure Standard

Article V. Underground Excavation

All underground excavations shall adhere to Louisiana Revised Statute (RS) 40:1749.11 to 1749.27.

The contractor shall be responsible for contacting the regional notification centers prior to excavations so that utility providers in the area are properly notified and have adequate time to identify services.

All damages caused by the contractor shall be repaired at contractor's expense.

Article VI. Building Entrance Facilities

Every building should be constructed to allow for diverse entrance paths for telecommunication providers and/or inter-building fiber optic connectivity.

Telecommunication provider paths shall consist of a minimum of two 4″ rigid metallic conduit pathways, fully populated with innerducts and pull-strings, from a hand-hole located on the property line into the building telecommunications room.

Hand-holes shall be a minimum of 24″ wide x 36″ length x 24″ deep.

All non-rated copper or optical cables (i.e. outdoor cable plant) must transition to indoor rated cables within 50′ of building entrance unless they are encapsulated in EMT or rigid conduit.

Pull strings shall be ¼″ 500 lb strength pull rope.

No section of conduit shall be longer than 100′ or contain more than two 90° bends between pull points or pull boxes.

The telecommunications room must have 4′ x 8′ x ¾″ fire-rated plywood installed on the wall near the 4″ conduit penetrations.

A TGB with #6 AWG ground wire to the main power ground for the building must be installed.

The actual point of entrance for all cable paths into LSUHSC facilities must be approved by the LSUHSC Department of Property and Facilities Management.

Article VII. Cross-Connect Design

Section 7.01 General

The Cross-Connect is the room where the horizontal and/or backbone cabling is terminated, and network electronics are installed. Depending on function, a cross-connect may serve as a MC, as an HC, or as both.

TIA/EIA-569 provides a standard for the design and construction of the cross-connect.

Section 7.02 Caveats

All applicable local, state, and federal codes shall be observed for the design of the cross-connect.

The cross-connect shall be dedicated to the telecommunications function and related support facilities.

The cross-connect shall not be shared with electrical installations other than those for telecommunications. Equipment not related to the support of the cross-connect (e.g., piping, ductwork, pneumatic tubing, plumbing, etc.) shall not be installed in, pass through, or enter the cross-connect.

Section 7.03 Asbestos Safety

A review of the current location, extent and condition of asbestos will be required. The construction of the cross-connect shall be such that the safety of the occupants of the building is not jeopardized before, during, or after construction.

If asbestos is determined to exist within the open areas of the cross-connect, sufficient notification shall be prominently displayed so that all people entering the room are informed of the risks of doing so.

Section 7.04 Fire Protection

Fire protection of the cross-connect shall be provided as per applicable code. All sprinkler heads shall be provided with wire cages to prevent accidental operation.

Section 7.05 Entry Door

The entry door shall be a minimum of 36″ wide and 80″ high, without a doorsill and fitted with a lock.

Code permitting, doors shall swing outward. Otherwise, inward door swing will be determined by the door placement such that the swing of the door opens into the nearest wall.

Section 7.06 Access Controls

Access to each cross-connect shall be tightly controlled and each room shall at a minimum be secured with a high security lock.

If additional security is deemed necessary by the LSUHSC Department of Information Technology, then the installation of proximity readers, electronic door strikes, and request-to-exit motion sensors or similar components shall be required.

Section 7.07 Location

The cross-connect shall be in an accessible area on each floor and shall be located as close as possible to the center of the building or the area being serviced. In multi-story buildings, if possible, there should not be a cross-connect located on the 1st floor to limit exposure from flooding.

All cross-connects within multi-story buildings shall be vertically stacked.

The cross-connect shall not be located adjacent to any electrical, mechanical, or other areas that are likely to emit EMI.

Section 7.08 Sizing

TIA/EIA-568 provides a standard for the sizing of cross-connects in commercial buildings. TIA/EIA-1179 provides a standard for the sizing of cross-connects in Healthcare Facilities.

Cross-connect sizing is generally based on the square footage of the area being serviced. Additional requirements such as density of drops in the service area or additional equipment that must be in the cross-connect may however require additional space.

Refer to table 1 below for the TIA/EIA minimum cross-connect size requirements.

Serving Area (Ft^2)	Minimum Cross-Connect Size
10000	10′ x 11′
8000	10′ x 9′
5000	10′ x 7′
For support of additional services such as AV or Building MC services	10′ x 16′ or larger
Healthcare	10′ x 13′ or larger

Table 1: TIA/EIA Minimum Cross-Connect Sizing

If the floor size to be serviced exceeds 10,000 ft^2 or if distances between the cross-connect and work area exceeds 295′, additional cross-connects will be required.

Section 7.09 Ceiling

For maximum flexibility, a false ceiling shall not be installed. The structural ceiling shall be painted white.

Section 7.10 Walls

A minimum of three walls shall be covered with rigidly fixed ¾″ A-C plywood, preferably void free, 8′ high, capable of supporting attached equipment.

Plywood shall be either fire-rated and/or covered with two coats of fire-retardant paint and shall be installed in a horizontal orientation beginning 4′ from the floor.

All walls shall be painted white to enhance room lighting.

Section 7.11 Flooring

Flooring shall consist of vinyl composition tile, off-white in color.

Section 7.12 Lighting

Fluorescent lighting shall be a minimum of 500 lx (50-foot candles) mounted a minimum of 9′ above finished floor.

Lighting fixtures should not be powered from the same electrical distribution panel as the network electronics installed in the cross-connect.

Dimmer switches shall not be used.

To prevent EMI, lighting fixtures shall be kept a minimum of 18″ away from cable pathways.

Emergency lighting and signs shall be properly placed such that an absence of light will not hamper emergency exit.

Section 7.13 Floor Loading

The cross-connect shall be located on floor areas designed with a minimum floor loading of 2.4 kPa (50 lb f/ft^2).

Contractor shall verify that concentrations of proposed equipment do not exceed the floor loading limit.

If unusually heavy equipment is anticipated, these specifications may have to be increased.

Section 7.14 Penetrations

Penetrations through fire or smoke rated barriers shall be sealed with a fire stopping compound complying with NFPA and State Fire Marshal requirements.

There shall be a minimum of four 4″ slab penetrations per cross-connect in order to reach cross-connects on lower floors. In buildings without a cross-connect on the 1st floor, additional penetrations may be required in the 2nd floor cross-connect to accommodate drops from the 1st floor.

Penetrations shall be placed such that:

- Where a slot is used, it shall have a minimum 1″ curb around the top of the slot.
- Where a sleeve is used, it shall extend 1″ – 3″ above the floor.

Penetrations must be free of sharp edges so that cables will not be damaged.

Penetrations shall be sufficient to allow access to the main horizontal distribution pathway.

Section 7.15 HVAC

Planning for continuous HVAC (24 hours per day and 365 days per year) shall be included in the initial design.

HVAC shall be designed to maintain the cross-connects temperature the same as the adjacent office area. Ambient room temperature should be between 68° – 72° F.

A positive pressure shall be maintained with a minimum of one air change per hour, or as required by applicable code. When active devices (heat producing equipment) are present, enough air changes should be provided to dissipate the heat. The LSUHSC Department of Information Technology will provide the necessary heat dissipation information for all electronics that will be installed in the cross-connect to determine cooling requirements.

If a standby power source is available in the building, the HVAC system serving the cross-connect should be connected to the standby supply.

Section 7.16 Electrical

As electrical requirements vary by installation, the LSUHSC Department of Information Technology will provide the electrical circuit requirements including receptacle types and locations within each cross-connect prior to construction.

If standby power will be available, automatic transfer switchover of power should be provided.

Outlet faceplates to designate emergency power shall be red in color.

Outlet faceplates to designate building power shall be gray in color.

Each network rack should have one rear top of rack 120v 20amp dedicated circuit, with a 2-gang box containing (2) 5-20R. The outlets should be rear wall facing and parallel to the rear wall.

Each network rack should also have one rear top of rack 208v 30amp dedicated circuit, with a 2-gang box containing (1) L6-30R. The outlet should be rear wall facing and parallel to the rear wall.

Each network closet should have two 120v 20amp circuits, with at least one 1-gang box containing (1) 5-20R on each wall.

Any changes to this should be discussed with the Department of Information Technology prior to any installation.

Section 7.17 Electrical Emergency Disconnect

Each cross-connect shall have a properly sized non-fusible safety switch disconnect installed, configured such that all outlets within the room are isolated when switched off.

The electrical emergency disconnect shall be mounted on the wall immediately inside of the door such that it is reachable without entering the cross-connect.

Section 7.18 Grounding

Refer to Article XIII for preferred parts list.

As per TIA/EIA-607, each cross-connect shall contain a TGB.

TGBs shall be located inside the cross-connect and be insulated from its support; a 2" separation is recommended.

TGBs shall be located to provide the greatest flexibility and accessibility for telecommunications system grounding. Multiple TGBs may be installed within the same closet to aid in minimizing bonding conductor lengths and terminating space.

Article VIII. Cross-Connect Build-out

Section 8.01 General

The specifications detailed in the following section are the "general" design requirements for each cross-connect.

Refer to figures 1 through 5 for an overhead, front, and side view showing an example of a typical MC or HC build-out.

Section 8.02 Caveats

Typical designs may need to be modified due to the room orientation, room dimensions, cable entrances facilities, drop density and/or voice and video requirements.

Section 8.03 Racks

Racks shall be at least 7′ in height. Racks greater than 7′ may be needed in areas where higher port density requirements exist.

Racks shall support 19″ rack-mount widths.

RU should be clearly marked on the racks.

A minimum of three racks shall be installed in each HC.

A minimum of four racks shall be installed in the MC.

Racks shall be installed and secured as per the manufacturer's installation instructions.

Racks shall be positioned within the cross-connect to allow access to both the front and rear of all racks. A minimum of 48″ of clearance shall exist between the front of the rack and the wall and the rear of the rack and the wall.

Racks shall be positioned within the cross-connect to allow the entry door to be fully opened.

Racks shall be properly grounded.

Section 8.04 Vertical Cable Management

Refer to Article XIII for preferred parts list.

Vertical cable management shall be a minimum of 10″ wide.

Vertical cable management shall be double-sided to allow routing of cables from both front and rear.

Vertical cable management shall include hinged doors to hide cables.

Vertical cable management shall be installed between each rack in the cross-connect.

Vertical cable management shall be installed and secured as per the manufacturer's installation instructions.

Section 8.05 Cable Runway Installation

Refer to Article XIII for preferred parts list.

Cable runways shall be a minimum of 18″ wide and black in color.

Cable runways shall be installed and secured as per the manufacturer's installation instructions.

Cable runways crossing above racks shall be secured to and supported above each rack using a cable runway standoff support.

Cable runways shall be properly grounded.

Section 8.06 Cable Runway Drops

Refer to Article XIII for preferred parts list.

Cable runway drops shall be installed to accommodate the cable bend radius to transition cable routing from horizontal cable runways and into each of the vertical cable managements.

Cable runway drops shall be mated for 18″ cable runway.

Cable runway drops shall be installed and secured as per the manufacturer's installation instructions.

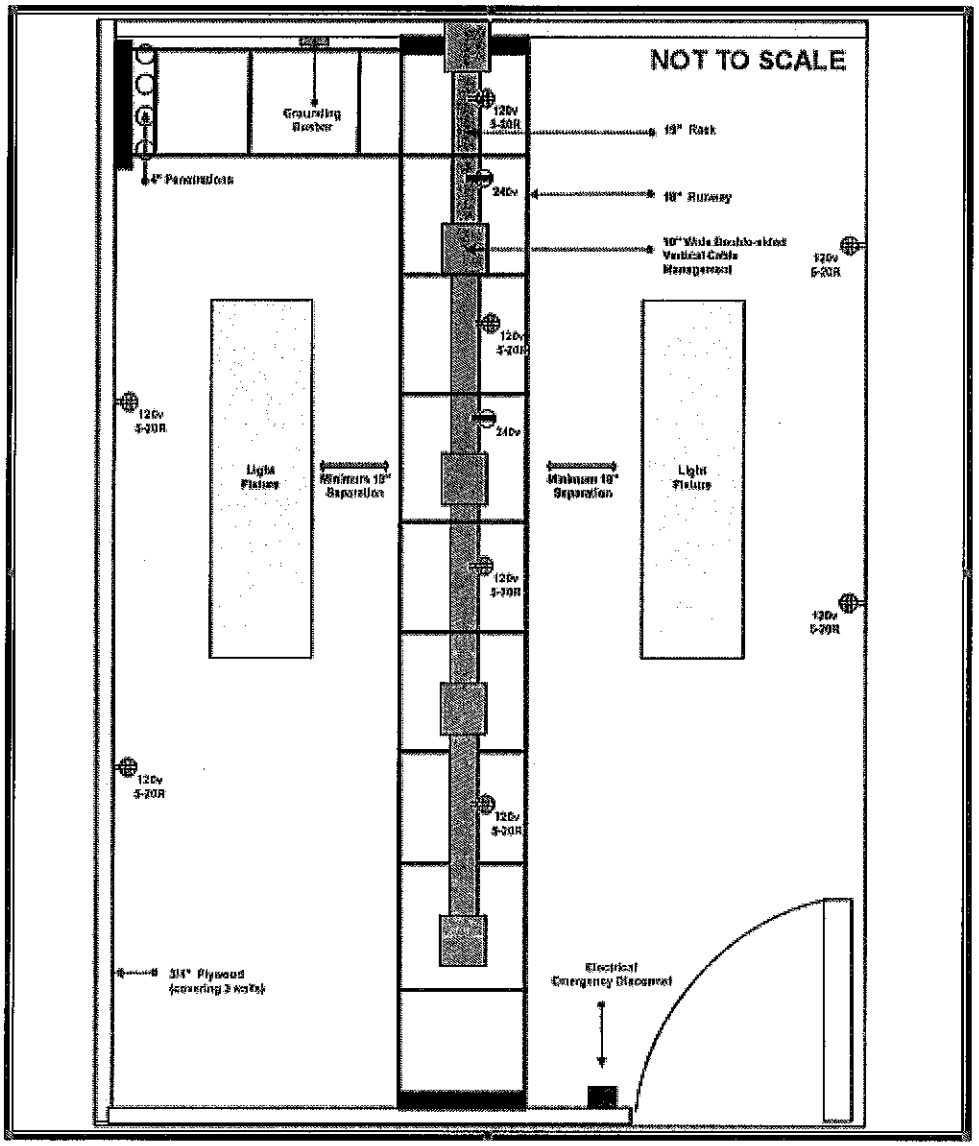


Figure 1: Main Cross-Connect Overhead View

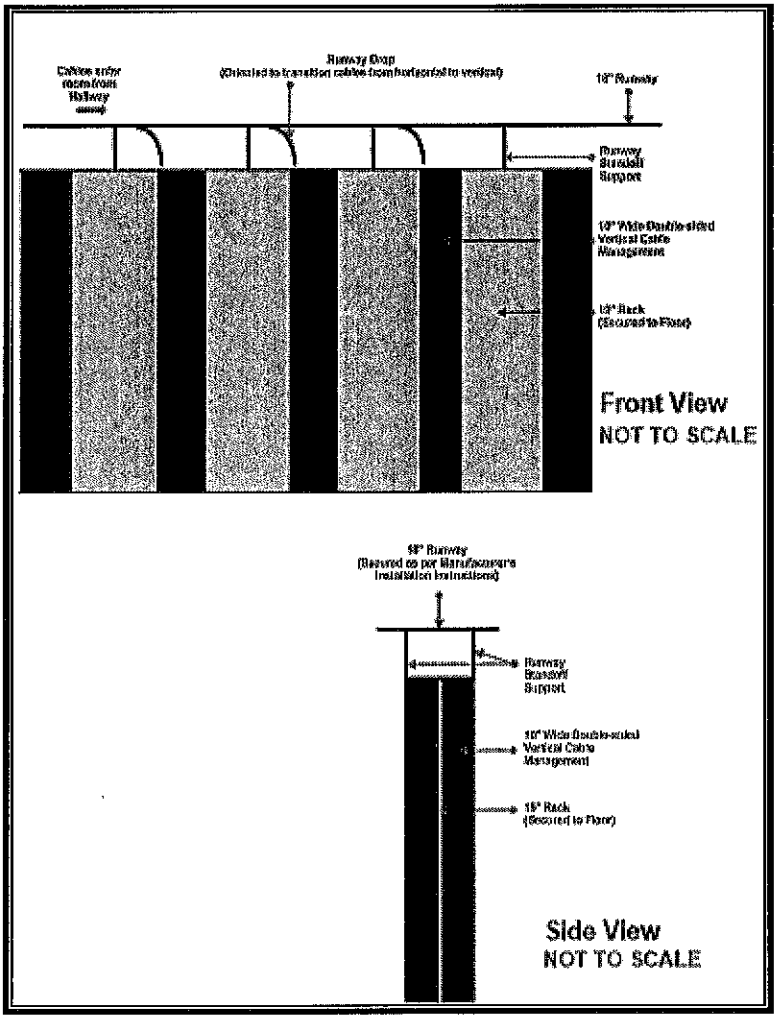


Figure 2: Main Cross-Connect Front and Side View

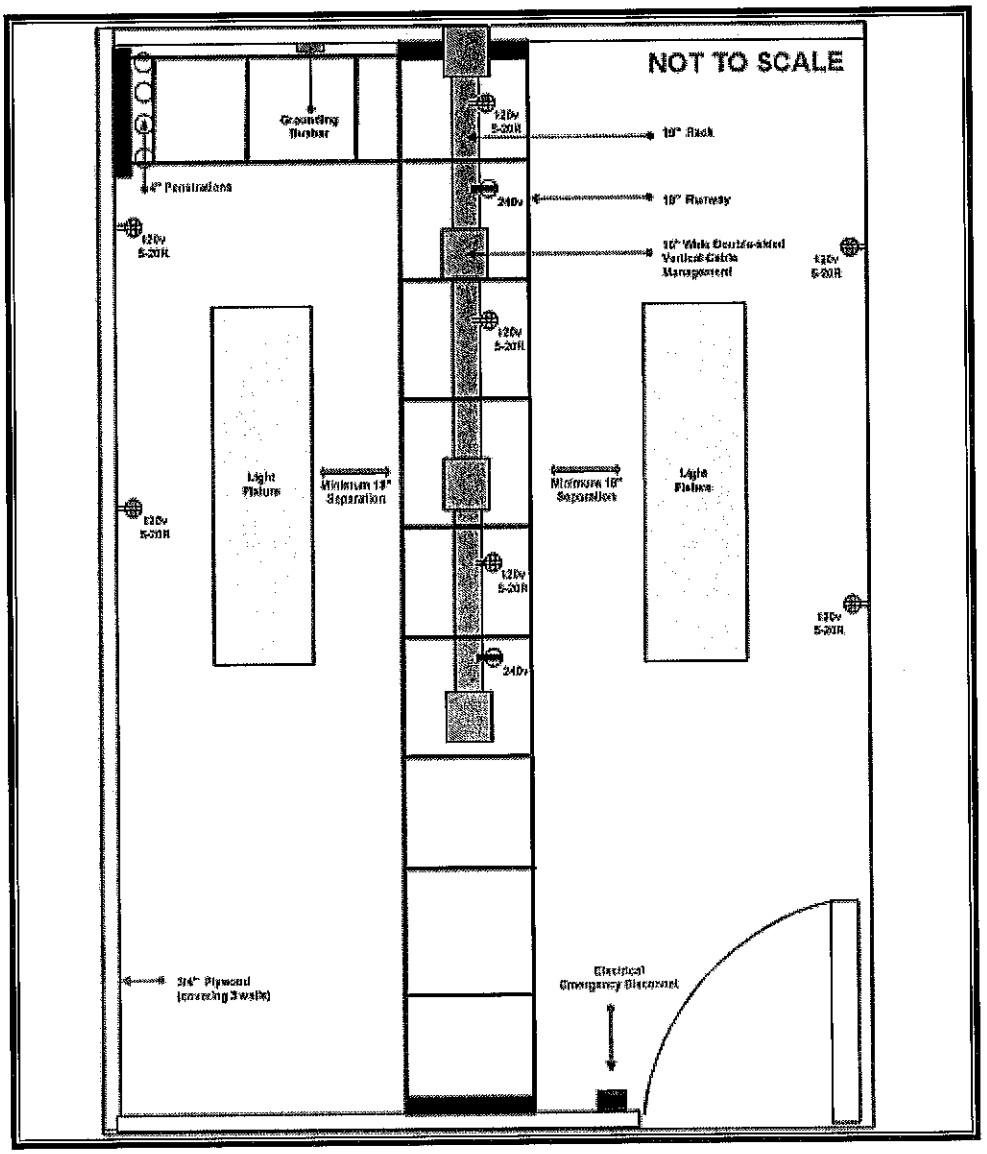


Figure 3: Horizontal Cross-Connect Overhead View

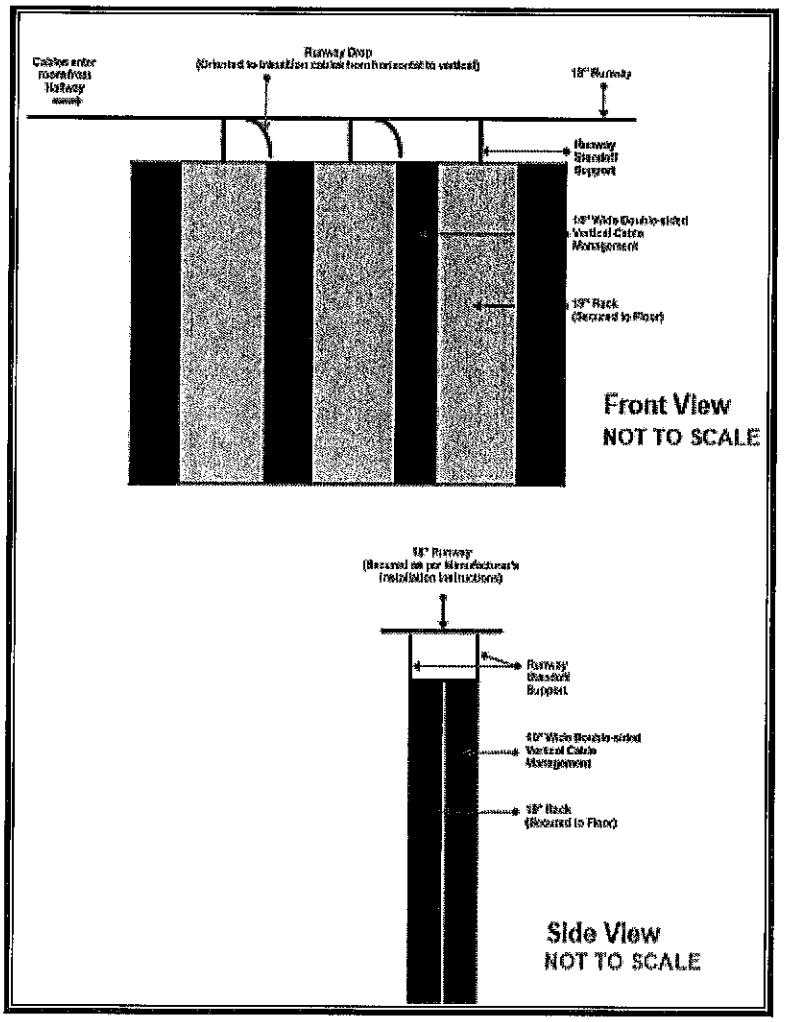


Figure 4: Horizontal Cross-Connect Front and Side View Rack Layout

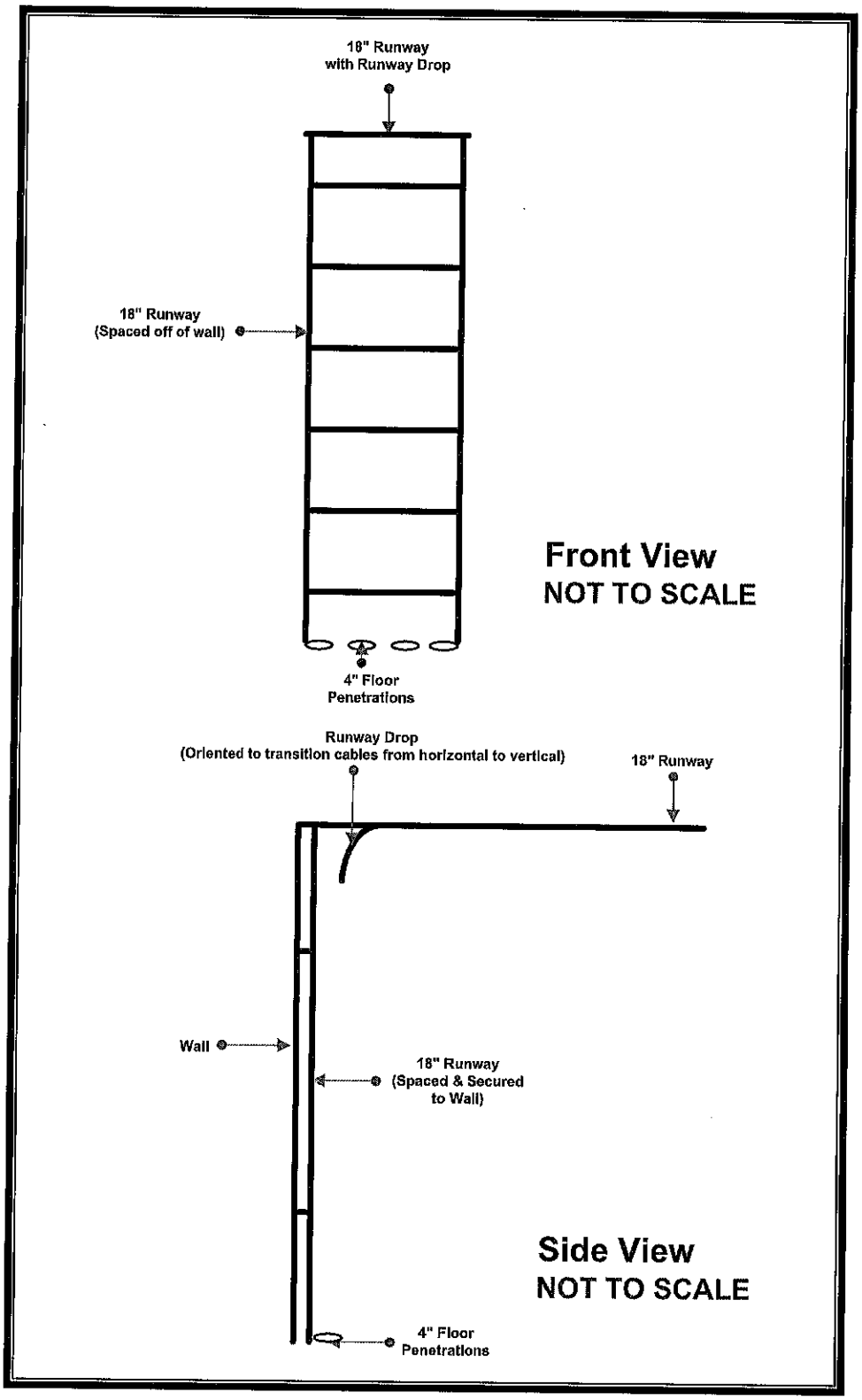


Figure 5: Vertical Cable Management

Article IX. Rack Layout

Section 9.01 General

Each HC build-out consists of a three-rack system.

When facing the front of the racks,

- The left most rack is designated as Data Rack 1.
- The middle rack is designated as Data Rack 2.
- The right most rack is designated as Data Rack 3.

In addition to the HC racks, the MC shall have an additional rack positioned left of the HC racks that will be designated as the Core Network Rack.

Refer to figure 6 for a typical MC rack layout and to figure 7 for a typical HC rack layout.

Section 9.02 Caveats

Typical rack layouts may need to be modified due to the drop types and density. The LSUHSC Department of Information Technology will provide the necessary guidance to installers for the rack layout.

Section 9.03 Fiber Optic Enclosures

Refer to Article XIII for preferred parts list.

Fiber optic enclosures shall be 19″ rack mountable and shall accommodate fiber optic termination capacity for a minimum of 24 strands of fiber optics.

Fiber optic enclosures shall be black in color.

In the HC, install a fiber optic enclosure for the intra-building fiber optics at the top of Data Rack 2.

In the MC, install fiber optic enclosures for inter-building and intra-building fiber optics beginning at the top of the Core Network Rack. Inter-building fiber optics shall be housed in a separate enclosure from Intra-building fiber optics.

If multiple fiber optic enclosures are utilized in the MC for intra-building fiber, fiber optic enclosures should be arranged such that room numbers appear in a descending order from top to bottom.

Fiber optic enclosures shall be labeled with a machine etched hard plastic label.

Fiber optic enclosures labels supporting intra-building fiber shall specify at a minimum the remote room number where the fiber optics terminates.

Fiber optic enclosures labels supporting inter-building fiber shall specify at a minimum the remote building name and room number where the fiber optics terminate.

Section 9.04 Patch Panels

Refer to Article XIII for preferred parts list.

Patch panels shall be 19″ rack mountable.

Patch panels shall have a 24 or 48-port capacity and support modular jacks. Jacks shall be populated in a left to right fashion. Angled patch panels should be utilized unless under the direction of LSUHSC Department of Information Technology.

When possible, cables should be installed in the patch panels in sequence number order to simplify locating specific ports.

Patch panels shall have machine printed labels with plastic label covers. Labeling shall be identical to the respective faceplate in the work area.

Section 9.05 Patch Panel Usage

The LSUHSC Department of Information Technology will specify the organization of the modular jacks across the various patch panels listed below:

(a) Data Patch Panels

Data patch panels shall be positioned beginning in the upper portion of data rack 1 and only installed in data rack 3 if more than (8) 48 port angled patch panels are used in the closet. If more than (16) 48 port patch panels are planned to be installed in a closet, please coordinate with the LSUHSC Department of Information Technology regarding their location. Angled patch panels should be utilized unless otherwise directed by the LSUHSC Department of Information Technology.

(b) Telephony Cross-Connect Patch Panels

A minimum of one 48-port patch panel to support the Analog telephone infrastructure will be installed in the data rack 2 below the last angled patch panel in HC closets.

Details for cross-connect instructions to connect to the telephone infrastructure is outside the scope of this document. Consult the LSUHSC Department of Information Technology Telephony Standards for details on the installation and labeling requirements.

Section 9.06 Horizontal Cable Managements

Refer to Article XIII for preferred parts list.

Horizontal cable managements shall be 19″ rack mountable.

Horizontal cable managements for the purpose of managing patch cable shall have hinged covers.

Horizontal cable managements for horizontal cable shall utilize D rings.

Horizontal cable managements shall be properly sized for the number of cables to be managed.

Horizontal cable managements are not required if utilizing angled patch panels.

Horizontal cable managements shall be installed between all flat patch panels.

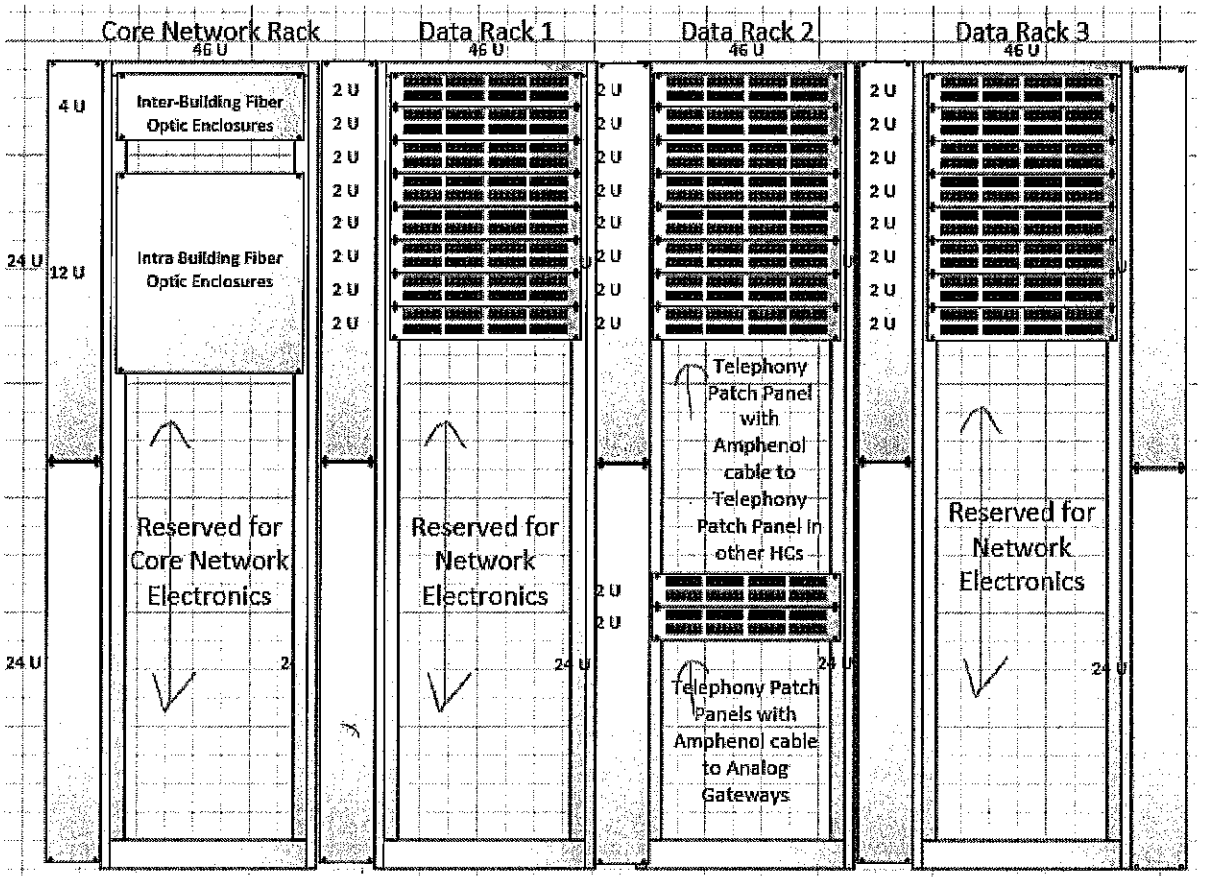


Figure 6: Sample MC Rack Layout

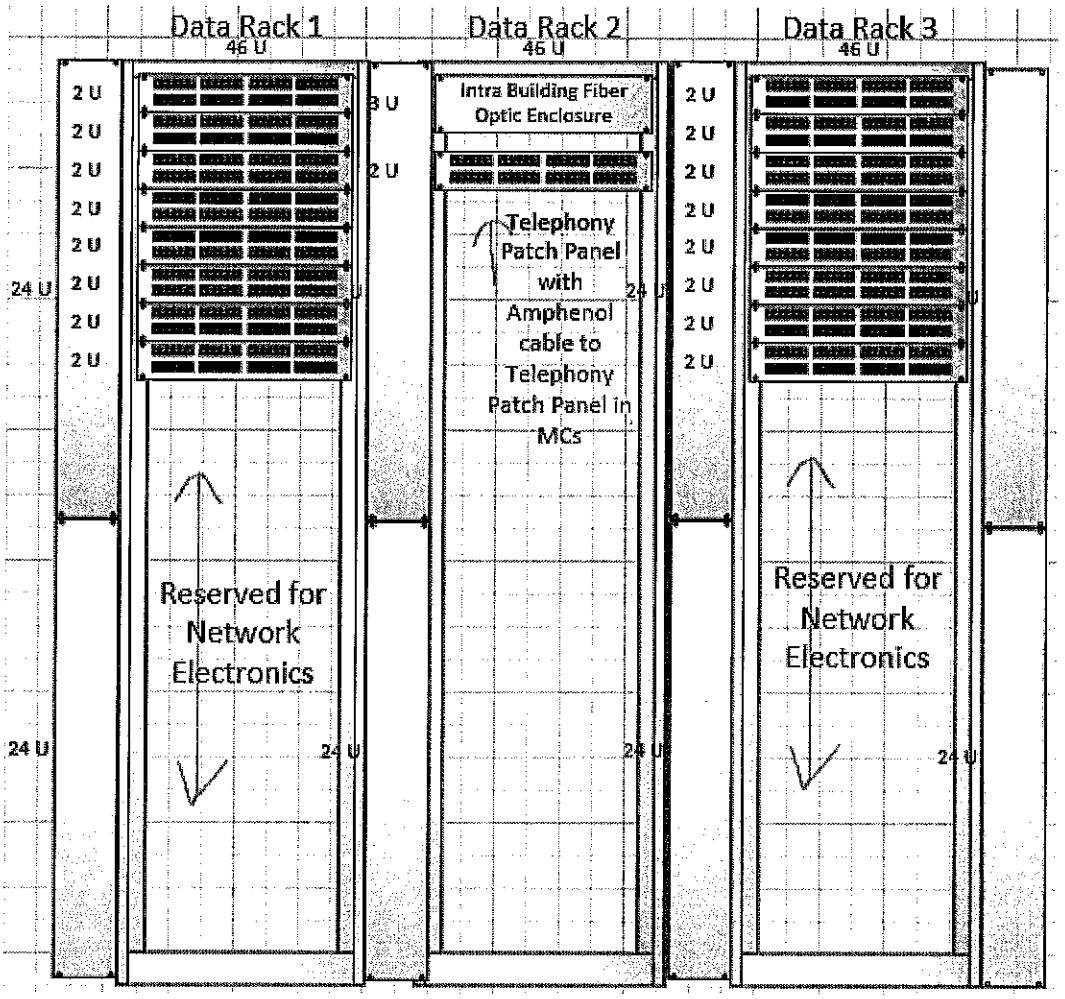


Figure 7: Sample HC Rack Layout

Article X. Cable Pathways

Section 10.01 General

Cable pathways and spaces must comply with TIA/EIA-568 and TIA/EIA-569.

Cable paths shall consist of a primary path above the main hallways of the building with individual drops exiting the main pathways at right angles and suspended by J-hooks towards the top of the wall above the intended drop/faceplate location.

In areas with suspended ceiling tiles, all cabling and support structures should be installed above the ceiling tiles in such a way that will not interfere with the moving or removal of ceiling tiles.

Specific attention should be paid to issues such as:

- Distance requirements for separation from EMI emitting devices and electrical equipment such as fluorescent lighting and power supplies.
- Proper supporting of cables within cable paths to prevent the weight of cables from damaging cable or other equipment.
- Proper conditioning of floor and wall penetrations to prevent damage to cable jackets while installing the cable and throughout the cable life.
- Segregation and separation of cabling in cable trays by media type and then by color of jackets for like media.

Section 10.02 Caveats

All penetrations through fire or smoke rated barriers shall be sealed with a fire stopping compound complying with all NFPA and State Fire Marshal requirements.

In no cases shall any cabling be permitted to utilize building infrastructure for support or to aid in the cable's suspension. Only systems installed specifically for the purpose of routing and managing cabling shall be utilized.

Section 10.03 Abandoned Cables

Abandoned cables increase fire loading unnecessarily and if installed in plenums, can affect airflow. Therefore, the accessible portion of all abandoned communication cables shall be removed.

Prior to removal of any cables, the contractor shall obtain approval from the LSUHSC Department of Information Technology and from the LSUHSC Department of Property and Facilities Management.

Section 10.04 Cable Trays

Refer to Article XIII for preferred parts list.

Cable tray shall be installed in all primary pathways (i.e., hallways).

Cable trays shall be of a wire mesh construction and be a minimum of 4" deep and 12" wide. Fill rates should not exceed 60%.

Cable trays shall be properly grounded.

Cable trays shall be installed and secured as per the manufacturer's installation instructions.

No component of the cable tray system or support structure should be mounted to the suspended ceiling support wires.

Section 10.05 Cable Supports

J-hooks shall be installed in areas where the installation of cable trays is not possible or to support cables between cable trays and user work areas.

The minimum J-hook size shall be 2". Larger sizes, if necessary, shall be determined based on manufacturer's recommendations for the number of cables to be supported.

All J-hooks shall have cable retaining clips installed.

In main hallways, where possible, J-hooks shall be mounted to the wall and spaced every 4′. The distance between J-hooks in overhead areas shall not exceed 5′.

All J-hooks shall be installed and secured as per the manufacturer's installation instructions.

Section 10.06 Conduits and Innerduct

For conduit and innerduct installations, the following best practices should be adhered to:

- Innerduct should be cut and securely fastened at all conduit junction boxes
- All conduits shall use sweeping bends for directional changes
- All conduits, tubings and innerducts shall be securely terminated on both ends with appropriate termination hardware and junction boxes
- Transitions between different types of tubing, conduit and innerduct shall be made with a junction box unless a special adapter designed for such purpose is available
- All empty innerducts and unfilled conduits shall contain pull strings to assist with future cable installations
- Conduit shall have a maximum fill capacity of 50%
- Innerduct may be filled to any capacity that can be achieved with a single pull without damaging the integrity of the cables being installed
- Conduit and tubing shall terminate in junction boxes appropriately sized for the type and quantity of cable being installed
- When using conduit greater than 2″ inner diameter, innerduct shall be used within the entire length of the conduit unless a shielded cable is used
- When 4" conduit is installed, it should be completely filled with innerduct

Conduits and innerducts shall be clearly labeled on the exterior surface, at least every 50′.

Conduits and innerduct labels shall include a unique identification that identifies the origination and destination, such as RCB719-LEC230-1 signifying the 1st conduit originating in the Resource Center Building, room 719, and terminating in room 230 in the Lions Eye Center.

Labeling shall consist of black letters, at least 1.5″ – 2″ high, on a white or yellow background.

Labels should be self-adhesive labels suitable for indoor and outdoor installations.

Conduit sizing shall be based on cable capacity as per the manufacturer's recommendations.

Conduit installations in areas where the presence of an electrolyte, such as water or moisture containing small amounts of acid are likely to be present, appropriate measures shall be taken to ensure that dissimilar metals do not come in contact with one another in order to prevent corrosion of metals.

Refer to the table 2 below regarding metals that corrode when in the presence of an electrolytic and in contact with another metal.

The Galvanic Series			
1	Aluminum	7	Tin
2	Zinc	8	Lead
3	Steel	9	Brass
4	Iron	10	Copper
5	Nickel	11	Bronze
6	Stainless Steel 400 Series	12	Stainless Steel 300 Series

Table 2: The Galvanic Series

Article XI. Fiber Optic Cabling

Section 11.01 General

All fiber optic backbone cabling shall be installed in a star (hub-and-spoke) topology in compliance with TIA/EIA-568.

Section 11.02 Caveats

All fiber optic cables must be installed, handled, routed and terminated as per the manufacturer's installation instructions. Special attention shall be paid to the pulling tension and bend radius limitations for each cable.

Section 11.03 Splice Points

The LSUHSC Department of Information Technology has established two splice points on the downtown campus, each having available single-mode fiber optics, to the Resource Center Building which acts as the hub in the downtown campus star topology.

Splice points are established in the following locations:

- Walk-to-Wellness (East end of walkway in ceiling area of Entergy Garage)
- Walk-to-Wellness (West end in Seton Building Elevator / Mechanical closet)

All new building construction on the downtown campus shall attempt to utilize these existing resources.

Section 11.04 Installation Techniques

Fiber optic cabling must be completely encapsulated for the entire length of the cable run. Acceptable encapsulation types are aluminum armor cladding, innerduct, rigid metallic conduit, electrical metallic tubing, flexible metallic tubing, or other suitable enclosure that meets the requirements of the installation.

Different types of encapsulation materials may be required in different areas to accommodate intra-building, inter-building, or plenum space requirements.

Grounding requirements shall be adhered to for each applicable encapsulation type.

Section 11.05 Fiber Optic Service Loops

Fiber optic cables shall be provided with a 25′ long service loop per end for a total of 50′ per fiber optic cable.

Fiber optic service loops shall be securely mounted to the wall in the cross-connects.

Section 11.06 Inter-building

Inter-building backbone cabling shall consist of a minimum of 24-strands of single-mode fiber optic cabling.

Inter-building fiber shall be indoor/outdoor rated fiber.

Depending upon the geographic location of the building being served, as well as its logical relationship to the campus environment, the number and type of strands may be increased.

Section 11.07 Intra-building

Intra-building riser cabling shall consist of a minimum of 24-strands of fiber optic cabling broken down as 12-strands of single mode (SMF) and 12-strands of multimode (OM4 MMF) fiber, preferably in a hybrid armor.Depending upon equipment in the closets and geographic location of the switches, more strands of fiber may be required to be installed. The LSUHSC Department of Information Technology shall be consulted prior to any fiber installation and purchase.

Section 11.08 Termination

All single-mode and multimode terminations shall have SC connectors.

Section 11.09 Testing

Each fiber strand shall be tested with an OTDR to verify installed cable length and all points of dB loss.

OTDR must have been calibrated within past year by accredited lab or by the original equipment manufacturer. Certification of last calibration date shall be made available upon request.

Fusion splice loss shall not exceed 0.2 dB and connector loss shall not exceed 0.5 dB.

Testing shall be performed in both directions on each strand.

Section 11.10 Labeling

All fiber optic cables shall have a self-laminating plastic tag affixed with tie wraps (plenum or non-plenum as necessary) every 50' unless it the cable is encapsulated in a conduit or innerduct.

All fiber optic cables shall have a cable tag affixed before the cable enters any conduit or innerduct and within any pull box, junction box, or hand-hole where the fiber is exposed.

Fiber optic cable tags shall include a unique identifier neatly printed in a permanent marker.

This unique identifier shall be constructed in such a way as to easily identify the type of fiber optic cable, strand count and origination cross-connect and destination cross-connect. Refer to Figure 8 for a sample fiber optic identifier.

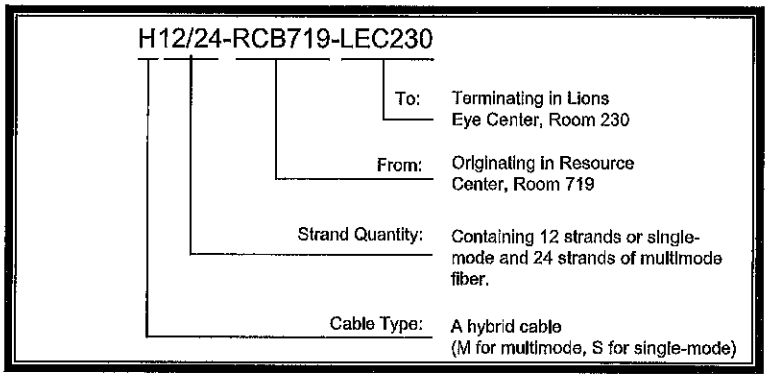


Figure 8: Fiber Optic Identifier

Article XII. UTP Cabling

Section 12.01 General

Refer to Article XIII for preferred parts list.

At a minimum, all UTP cabling components, including cables, connectors, and patch cables, must exceed the ANSI/TIA-568.2-D Category 6A standard. The LSUHSC Department of Information Technology shall be consulted to verify the UTP cabling component requirements for each installation.

TIA/EIA 1179 recommends that healthcare facilities install Category 6A.

Standard colors for UTP cabling have been adopted to easily identify cable usage.

Section 12.02 Caveats

UTP cables must be installed, handled, routed, and terminated as per the manufacturer's installation instructions. Special attention shall be paid to the pulling tension and bend radius limitations for each cable.

UTP cables shall not be painted (oil or water based) or be installed in the presence of water.

UTP cables shall not be spliced.

Section 12.03 Penetrations

All penetrations through fire or smoke rated barriers shall be sealed with a fire stopping compound complying with NPFA and State Fire Marshal requirements.

If conduit is not provided to the outlet box location, all penetrations through office wall top plates should have a collar or similar device installed to prevent damage to the UTP cable jacket.

Section 12.04 Horizontal UTP Cables

The maximum length of a horizontal UTP cable, between the faceplate in the work area and patch panel in the HC, shall not exceed 295′.

UTP cables shall terminate at a patch panel in the cross-connect and at a faceplate on the same floor as the work area being served. UTP cables that terminate in floor boxes and which route through the slab may be terminated on the floor below to avoid distance limitations.

UTP cables shall be colored to easily identify usage as specified in Table 3.

Section 12.05 Horizontal UTP Cable Service Loops

No service loops shall be installed.

Section 12.06 Modular Connectors

Refer to Article XIII for preferred parts list.

Modular connectors shall (as close as possible) match the color of the UTP cable as specified in Table 3.

Section 12.07 Patch Cables

Refer to Article XIII for preferred parts list.

The maximum length of a patch cable in the work area shall not exceed 16′.

The Contractor shall provide appropriately sized patch cable for all cross-connect drops. Patch cables shall be sized to minimize excess cable length in the vertical managements.

The patch cables shall (as close as possible) match the color of the modular connector as specified in Table 3.

UTP Cable / Modular Connector / Patch Cable	Usage
Blue / Blue / Blue	Primary Data
Blue / Blue / Blue	Spare Data
Violet / Violet / Violet	Special Purpose – Networking
Orange / Orange / Orange	Special Purpose – Building Systems
Green / Green / Green	Special Purpose – Passive PoE
Yellow / Yellow / Yellow	Special Purpose – AV

Table 3: UTP Cable / Modular Connector and Patch Cable Color Code

Section 12.08 Faceplates

Refer to Article XIII for preferred parts list.

The color of the faceplates shall match wall colors and shall support a minimum of four modular jacks.

Installations shall be such that the bottom of the faceplate is parallel to the floor surface and the sides of the faceplate are perpendicular to the floor surface.

All unused faceplate ports shall have blank inserts installed.

Faceplates mounted on horizontal surfaces that are in line with standard electrical outlets, which is normally around 18" on center above the floor, shall have the faceplate and modular jacks pointing towards the ceiling. Faceplates that are mounted on horizontal surfaces above 18" (e.g. table height) shall have the faceplate and modular jacks pointing towards the floor. Consult the LSUHSC Department of Information Technology for any non-standard height faceplate and modular jack locations.

Faceplates shall be separated from Electrical outlets by a minimum of 6".

Faceplates shall have machine printed labels and plastic label covers. Labels shall be in compliance with TIA/EIA-606.

Faceplates in work areas shall be labeled with the room number, jack number, and the jack position. Refer to Figure 9 for jack positions. If multiple faceplates exist within the same room, faceplates jack numbers shall be sequentially numbered in a clockwise manner. This should begin with the first faceplate to the left of the main doorway as you enter the room. The main doorway is the one that provides access to a common area, such as a hallway or lobby.

Faceplate labels in office work areas shall be white with black lettering. Faceplate labels in public areas (i.e. auditoriums, conference rooms, etc) shall be green with black lettering. LSUHSC Department of Information Technology shall determine areas that are to be considered public areas for the purpose of labeling.

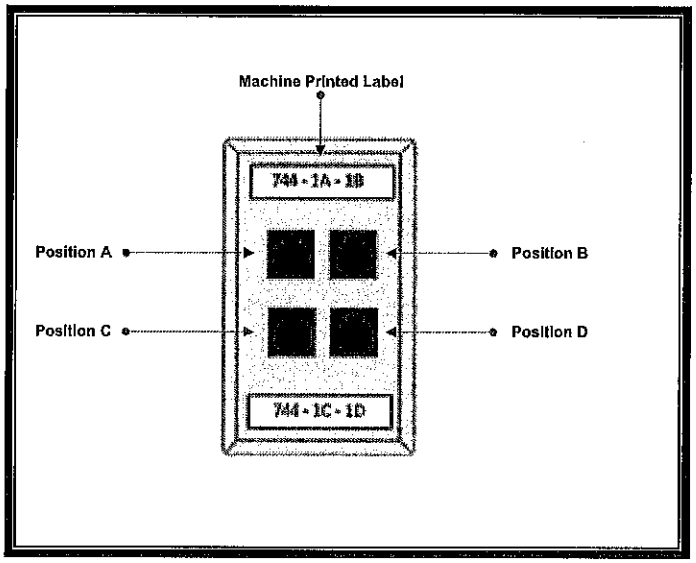


Figure 9: Faceplate Jack Positions

Faceplates for Special Systems shall be labeled with the room number, system code and jack number. Refer to Table 4 for defined system codes

Name of System	Abbreviation
Access Points	AP
Digital Signs	DS
Environmental Monitoring Systems	ENV
Access Controls	AC
Security Systems (Cameras, NVRs, etc.)	SEC

Table 4: System Codes

Section 12.09 Cable Bindings

Cable bindings (straps, tie wraps, etc) should be irregularly spaced and should be loosely fitted (easily moveable).

Section 12.10 Terminations

UTP cable runs should be terminated using modular connectors on both ends.

Eight position jack pin/pair assignments will comply with T568B termination standards.

Section 12.11 Testing

All testing shall be in compliance with TIA/EIA-568.

UTP cables shall be tested at the appropriate frequency for the cable type and tests shall provide at a minimum, wire mapping, cable length, insertion loss, return loss, propagation delay, NEXT, power sum NEXT, ACR-F, power sum ARC-F, ARC-N, and power sum ARC-N.

UTP cable test result shall "PASS". Any "MARGINAL PASS" test result shall not be acceptable and shall require re-termination.

Certification of last date and time of calibration to manufacturer's requirements for all test instruments shall be made available upon request.

Any test instrument utilized must be compliant and shall not allow marginal results to be hidden.

Test results shall be saved and submitted electronically to the building owner and LSUHSC Department of Information Technology upon completion of the installation. Format for electronic submission of test results shall be in a file format mutually agreed to by the contractor and LSUHSC Department of Information Technology.

Section 12.12 Documentation

Documentation shall be submitted in mutually compatible electronic format and must include:

- As-built drawings depicting the path of all backbone and vertical cabling as well as the primary path cable trays for horizontal cabling.
- As-built documentation of all floor plans for HCs including physical location of racks, trays, and penetrations.
- A logical representation of each patch panel including the corresponding labeling.
- Test results for every fiber optic and UTP cable installed. The test results shall be submitted in a mutually agreeable electronic format.

Section 12.13 Standard Drop

A standard drop shall consist of two blue cables. Corresponding faceplate shall have two blue modular jacks oriented as follows:

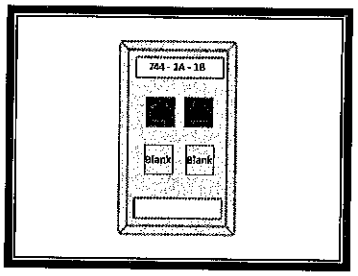


Figure 10: Standard Drop

Section 12.14 Non-Standard Drop

A non-standard drop in a typical office area may consist of one or as many as four blue cables. Corresponding faceplates shall have the corresponding number of blue modular jacks oriented as follows:

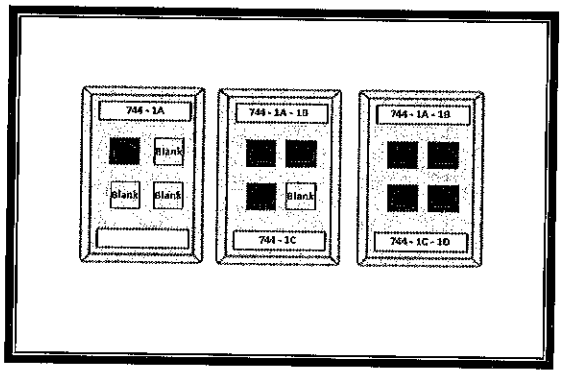


Figure 11: Non-Standard Drop Options

Section 12.15 Special Purpose Drops

The following special purpose drops have been identified:

(a) AP Drop

An AP drop shall consist of one purple cable. Corresponding keystone modules will have one purple modular jack color oriented as follows with the updated label directly applied to the module:

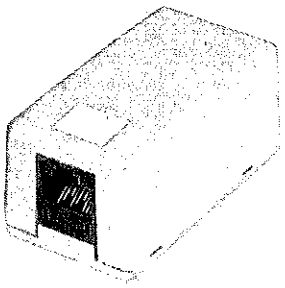
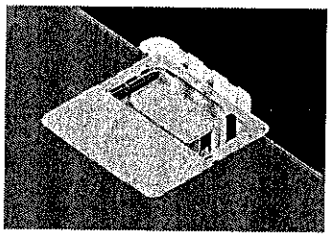


Figure 12: AP Drop

On grid/drop ceilings, AP Drop should be located above the ceiling with ceiling tile or grid marked with location of AP Drop. On non-grid/drop ceilings, AP Drop should be located inside a wireless access point enclosure which is installed and sitting recessed in the ceiling. Refer to Article XIII for preferred parts list.



(b) Digital Sign Drop

A Digital Sign drop shall consist of one blue and two yellow cables. Corresponding faceplates will have one blue and two yellow modular jacks oriented as follows:

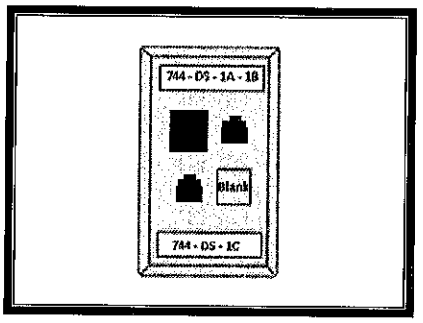


Figure 13: Digital Sign Drop

(c) AV/NVX Project Drops

Any drops labeled as AV or NVX in plans shall be run with yellow ethernet cable. Any changes to this should be discussed with the Department of Information Technology prior to any cable being installed.

(d) HVAC, Access Control, and Security Appliance Drops

All HVAC environment monitoring, access control, and security drops shall consist of a minimum of one orange cable. Corresponding faceplates will have one orange modular jack oriented as follows:

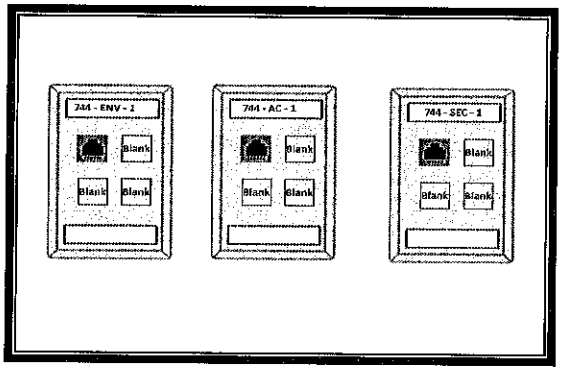


Figure 16: HVAC, Access Control and Security Appliance Drops

Keystone modules or FlexPlugs may be used in place of faceplates where appropriate and where approved by the Department of Information Technology.

Article XIII. Preferred Parts List

Brand Name Disclaimer: The cable plant constitutes the lowest layer of the OSI network model - the physical layer. As such, it is the foundation of the network, used to transport all data, voice, video, access control and environmental monitoring systems to their destinations.

As more and more systems traverse this physical layer, reliability becomes key. And to ensure this reliability, we need to ensure compatibility between products which comprise this system so that we can avoid any interoperability issues.

Within this document, many components are specified by Manufacturer, Part Number and/or Brand Name. These are the parts that have been adopted by LSUHSC not only due to interoperability but also because they exceed all ANSI TIA/EIA specifications. The LSUHSC "in-house" wiring group has been trained to install and support these products.

To deviate from using these parts would require significant investment for additional training, tools and a separate spares inventory to support the new products. It is highly recommended that all installations utilize these specific brands to maintain compatibility and interoperability with the existing installed systems.

To help maintain reliability at the physical layer, all deviations from the LSUHSC preferred brands should conform to the minimum product specifications outlined within this document.

Section 13.01 Cable Management

Part Number	Manufacturer	Item Description
30163-703	Chatsworth	CCS, Double-Sided for 3"D Racks, 7 x 10 x 12.24 (2.1 x 250 x 310)
30530-719	Chatsworth	UHCM, Double-Sided, 2U x 19 x 11.73 (297)

Section 13.02 Cable Runway

Part Number	Manufacturer	Item Description
10250-718	Chatsworth	18" Universal Cable Runway
10487-701	Chatsworth	Butt-Swivel Splice Kit
10488-701	Chatsworth	Junction Swivel Splice Kit
10489-701	Chatsworth	Vertical Swivel Splice Kit
10506-706	Chatsworth	Elevation Kit
10595-718	Chatsworth	Rack-to-Runway Mounting Kit
10642-001	Chatsworth	Protective End Caps For Runway
11301-701	Chatsworth	Butt-Splice Kit
11302-701	Chatsworth	Junction-Splice Kit
11303-000	Chatsworth	J-Bolt Kit
11310-001	Chatsworth	Threaded Ceiling Kit
11421-718	Chatsworth	Wall Angle Support Kit
11746-718	Chatsworth	Triangular Support Bracket, Steel
11959-715	Chatsworth	Cable Runway Corner Bracket
12100-718	Chatsworth	Cable Runway Radius Drop

Section 13.03 Cable Wraps

Part Number	Manufacturer	Item Description
AX100783	Belden	Velcro Cable Ties, 25 per Roll, 8"
AX100784	Belden	Velcro Cable Ties, 25 per Roll, 12"

Section 13.04 Cable Tray and Support

Part Number	Manufacturer	Item Description
Caddy CAT32	Erico	J-Hook
CF 105/300EZ	Cablofil	Cable Tray
PRECLICK	Cablofil	Preclick Splice
SWK	Cablofil	Splice Washer Kit
FASPCH 450	Cablofil	Support - Hanging

Section 13.05 Faceplates

Part Number	Manufacturer	Item Description
AX106629	Belden	Faceplates – 2 port, Angled, Single-gang Gray
AX106630	Belden	Faceplates – 2 port, Angled, Single-gang Almond
AX104483	Belden	Faceplates – 2-port, Angled inserts, Gray
AX102412	Belden	Faceplates – 2-port, Angled inserts, Almond
AX107026	Belden	Faceplate Blank Module, Gray
AX102261	Belden	Faceplate Blank Module, Almond
AX104133	Belden	KeyConnect Side Entry Box with Shutter Door 2-Port
RVAFFPUBK18O-S1	Belden	REVConnect FlexPlug 10GX, 18in, UTP, Black
4108W-0SP	Leviton	QuickPort Telephone Wall Jack, stainless steel

Section 13.06 Fiber Optics

Part Number	Manufacturer	Item Description
024E81-33131-A1	Corning	Indoor Fiber Optics (Riser) – Single-mode
024E88-33131-A3	Corning	Indoor Fiber Optics (Plenum) – Single-mode
024E8F-31131-A1	Corning	Indoor/Outdoor Fiber (Riser) - Single-mode
024E8P-31131-A3	Corning	Indoor/Outdoor Fiber (Plenum) - Single-mode
024T81-33190-A1	Corning	Indoor Fiber Optics (Riser) – Multimode
024T88-33190-A3	Corning	Indoor Fiber Optics (Plenum) – Multimode
95-051-41-SP-X	Corning	Anaerobic Connector, SC, Multimode
95-201-41-SP	Corning	Anaerobic Connector, SC, Single-mode
CCH-01U	Corning	Closet Connector Housings - 1U
CCH-02U	Corning	Closet Connector Housings - 2U

CCH-03U	Corning	Closet Connector Housings - 3U
CCH-04U	Corning	Closet Connector Housings - 4U
CCH-CP12-59	Corning	Connector Panel, SC Single-mode
CCH-CP12-59-P03RH	Corning	Pigtailed Panel, SC Single-mode
CCH-CP12-E7	Corning	Connector Panel, SC Multimode
CCH-CP12-E7-P03SH	Corning	Pigtailed Panel, SC Multimode
CCH-UCC-KIT	Corning	Cable Clamp for Housing (Strain Relief for 3U & 4U)
CPP-UCC-KIT	Corning	Cable Clamp for Housing (Strain Relief for 1U & 2U)
HDWR-GRND-KIT	Corning	Hardware Grounding Kit for Armored Cables

Section 13.07 Grounding Busbar

Part Number	Manufacturer	Item Description
13622-012	Chatsworth	12" TGB Pattern
40153-012	Chatsworth	12" TMGB Pattern
40162-901	Chatsworth	#6 AWG Two-Hole Compression Lug
40162-957	Chatsworth	#2 AWG Two-Hole Compression Lug

Section 13.08 Labels

Part Number	Manufacturer	Item Description
PST-FO	Panduit	Self-Laminating Fiber Optic Cable Marker Tag
PST-FOBLNK	Panduit	Self-Laminating Fiber Optic Cable Marker Tag

Section 13.09 Modular Jacks

Part Number	Manufacturer	Item Description
RVAMJKUBL-S1	Belden	Category 6A Jack (Blue)
RVAMJKUIV-S1	Belden	Category 6A Jack (Ivory)
RVAMJKUPR-S1	Belden	Category 6A Jack (Violet)
RVAMJKUOR-S1	Belden	Category 6A Jack (Orange)
RVAMJKUYL-S1	Belden	Category 6A Jack (Yellow)

Section 13.10 Patch Cables

Part Number	Manufacturer	Item Description
CA21106007	Belden	Category 6A Modular Patch Cords 7" Blue
CA21109007	Belden	Category 6A Modular Patch Cords 7" White
CA21103007	Belden	Category 6A Modular Patch Cords 7" Orange
CA21107007	Belden	Category 6A Modular Patch Cords 7" Purple

CA21104007	Belden	Category 6A Modular Patch Cords 7" Yellow

Section 13.11 Patch Panels

Part Number	Manufacturer	Item Description
808004389	Ortronics	Telephony Patch Panel - 24 ports
AX104601	Belden	KeyConnect Angled Patch Panel, 48-port, 2U
AX103114	Belden	KeyConnect Modular Patch Panel, 24-port, 1U
AX103115	Belden	KeyConnect Modular Patch Panel, 48-port, 2U

Section 13.12 Standard Rack

Part Number	Manufacturer	Item Description
55053-703	Chatsworth	3" Deep Standard Rack, 7 (2.1) x 19", 45U

Section 13.13 Surface Mount Raceway

Part Number	Manufacturer	Item Description
LD10EI8-A	Panduit	8' Low Voltage 1-piece Single Channel Raceway, .38 in^2, (Electric Ivory)
LD10IG8-A	Panduit	8' Low Voltage 1-piece Single Channel Raceway, .38 in^2, (International Gray)
LD5EI8-A	Panduit	8' Low Voltage 1-piece Single Channel Raceway, 1.00 in^2, (Electric Ivory)
LD5IG8-A	Panduit	8' Low Voltage 1-piece Single Channel Raceway, 1.00 in^2, (International Gray)
DCF10EI-X	Panduit	Drop ceiling fitting for use with LD10 raceway (Electric Ivory)
DCF10IG-X	Panduit	Drop ceiling fitting for use with LD10 raceway (International Gray)
DCF5EI-X	Panduit	Drop ceiling fitting for use with LD5 raceway (Electric Ivory)
DCF5IG-X	Panduit	Drop ceiling fitting for use with LD5 raceway (International Gray)
JBX3510EI-A	Panduit	Low Voltage Surface Mount Outlet Boxes (Electric Ivory)

Section 13.14 UTP Cabling

Part Number	Manufacturer	Item Description
10GXW13 D151000	Belden	CAT6A 10GX, 4pr, UTP, LS-PVC Jkt, CMP (Blue)
10GXW13 0031000	Belden	CAT6A 10GX, 4pr, UTP, LS-PVC Jkt, CMP (Orange)
10GXW13 0071000	Belden	CAT6A 10GX, 4pr, UTP, LS-PVC Jkt, CMP (Purple)
10GXW13 0041000	Belden	CAT6A 10GX, 4pr, UTP, LS-PVC Jkt, CMP (Yellow)
10GXW13 0071001	Belden	CAT6A 10GX, 4pr, UTP, LS-PVC Jkt, CMP (White)

Section 13.15 Wireless Access Point Enclosures

Part Number	Manufacturer	Item Description
1019-RM	Oberon	Wireless Access Point Enclosure (White)

Section 13.16 Wireless Access Point Wall Mounting Bracket

Part Number	Manufacturer	Item Description
ENBRKT	Tripp Lite	Universal Wall Bracket for Wireless access point mounting, right angle, steel, white

LSU Health Sciences Center New Orleans (LSUHSC-NO) A/V Standards

This standard promulgates the A/V equipment brands that will be used on the LSU Health Sciences Center New Orleans campus when specifying and implementing Audio/Visual systems. Equipment brands rather than models are being specified in order to allow the flexibility to customize an A/V solution that best fits each project. For example, both the size and shape of a room will affect the model of projector, the screen size, audio requirements, and other attributes of the planned system.

1) **Brand Standards**:
   a) Established using statewide contracts that were bid by the Office of State purchasing
   b) Driven by major A/V installations and multiple smaller installations in every major building on campus
   c) Assure that LSUHSC-NO maximizes the consistency and interchangeability between installations
   d) Aid in providing the highest level of in-house expertise with a limited set of resources

2) **"High-End" Installation**:
   a) A system within a room, hall or auditorium that incorporates an image processor allowing for more flexibility in displaying content.
   b) An auditorium or space that is used by multiple departments and seats a large number of people.
   c) Only certain brands are allowed in "high-end" installations
      i) These brands may also be used in other applications, but must be used in "high-end" projects in favor of any other brands listed.

3) **Projectors**:
   a) Installed Projectors:
      i) Christie Digital projectors are specified for most installations; in specific cases, NEC projectors may be used with approval from LSUHSC-NO.
   b) Portable Equipment:
      i) Christie and NEC are specified.

4) **Screens**:
   a) Mounted Projection Screens:
      i) Fixed screens are preferred in any room where they are possible
      ii) If a fixed screen cannot be used (i.e. due to room size or configuration) motorized or manual pull-down screens may be used
      iii) The fabric will be high-contrast grey or white

iv) Motorized screens must use a low-voltage motor controller
v) Manufacturers:
(1) Draper and Da-lite for standard size screens
(2) Stewart Filmscreens for large, seamless custom sizes

b) Portable Projection Screens:
i) Da-Lite and Draper are preferred if the size and aspect ratio needed are available

5) **Microphones:**
a) Shure, Sennheiser, and Behringer
b) USB microphones:
i) Blue, Shure, Vaddio, HuddleCamHD, Anker
c) Analog Audio to USB Interfaces:
i) Shure, Behinger, Vaddio
d) "High-end" installations:
i) Wireless – Shure or Sennheiser
ii) Wired – Shure or Sennheiser
iii) Ceiling - Shure or Sennheiser

6) **Speakers:**
a) JBL, Behringer, Crestron, or Extron
b) Networked speakers: Shure or Q-Sys
c) "High-end" installations:
i) JBL for standard, Shure or Q-Sys for networked speakers

7) **Audio Processors/Mixers:**
a) QSC, Crestron, Behringer, Shure, and Extron
b) "High-end" installations:
i) QSC, Crestron, Shure

8) **Audio Amplifiers:**
a) Crown, QSC, Lea, Behringer, Crestron, JBL, or Extron
b) "High-end" installations:
i) Crown, QSC, Lea

9) **Document Cameras:**
a) Hovercam (for USB), WolfVision, or AverMedia
b) "High-end" installations:
i) Hovercam (for USB), WolfVision, AverMedia

10) **Flat Panel Monitors and Televisions, Touch and Non-Touch:**
a) Sharp, Samsung, Christie, Dell, and LG
b) All monitors and televisions must be professional or commercial grade:

i) This specification also applies to all touch screen, large format monitors, and televisions
ii) Professional or commercial grade monitors and televisions are required due to their robust construction and design which allows them to operate in a less-forgiving environment
iii) As a general rule, consumer monitors and televisions are not designed to be used in a public or commercial environment and their warranties are considered void if used in such a manner

c) Monitors must have to ability to accept control from third party controllers via RS-232 or IP

11) Direct LED Walls:

a) NanoLumens, Christie, or Samsung

12) Image Processor:

a) Crestron

13) Interactive Displays:

a) PC monitor based or flat panel based
   i) Sharp, AVer, Dell, or Samsung
b) Projection Interactive Whiteboard Systems:
   i) SMART, Promethean, or Hitachi

14) Control Systems:

a) Crestron

15) Touch Panel Interfaces:

a) Crestron

16) A/V over IP:

a) Crestron DM-NVX, NAX, and NUX series

17) Classroom Capture:

a) SonicFoundry Mediasite

18) A/V Furniture:

a) Lecterns, credenzas, etc.
   i) Marshall Furniture, Middle Atlantic, or Spectrum Industries
b) "High-End" installations:
   i) Marshall custom lecterns or Middle Atlantic

19) Racks, Mounts and Carts:

a) Middle Atlantic or Chief:
   i) This does not apply to lecterns and credenzas (see A/V Furniture above).
b) Ceiling mounts for projectors:
   i) Use the Chief Universal Mount for projectors unless it is impossible in the room configuration.
c) All wall mounted monitors will be mounted on Chief pull out mounts or Chief Fusion mounts with a pull out accessory.
d) A/V carts, including their mounts:
   i) Chief, Middle Atlantic, or Spectrum Industries

20) PTZ Video Cameras:
a) Vaddio, AVer, Marshall, and Panasonic
b) "High-End" installations:
   i) Vaddio and AVer

21) DVD, DVD/VHS Combo Units, Blu-ray decks:
a) Sony or LG

22) Videoconferencing Endpoints:
   i) LSUHSC no longer uses hardware endpoints; only Webconferencing is used
   ii) LSUHSC's current standards for Webconferencing are Zoom and Microsoft Teams, but all Webconferencing equipment must be Webconferencing platform agnostic

23) Power Conditioners/UPS Units:
a) Furman, APC, SurgeX, or Tripp-Lite

24) Cables:
a) Any cables connected to any Crestron device must be certified by Crestron if such a cable exists; if Crestron does not certify a cable that must be connected to a Crestron device, the cable must be approved by LSUHSC-NO.
b) Cables for other purposes can be purchased from any manufacturer, although Crestron, Monoprice, Comprehensive, Extron, and Kramer are generally preferred.

25) Digital Signs:
a) LSUHSC-NO uses FourWinds Interactive (FWi) for digital signs
b) The hardware for these signs must be a professional display
   i) Touch capability may be required and may be integrated into the monitor or effected by the use of an overlay
   ii) The monitor must adhere to the guidelines for monitors listed in this document

26) Accessories and Components:

a) If something is required that is not in the standards listed above, or if the manufacturer in the above standard does not produce a product with the specifications required for the project, the first vendors that should be used, in no particular order, are:
   i) Crestron, Extron, Vaddio, JBL, Shure, Behringer, QSC, Dell, and Kramer.
   ii) If these manufacturers do not produce the needed component, the selected component must be approved by LSUHSC-NO

LSU Health New Orleans (LSUHSC-NO) A/V Installation Best Practices

To provide consistent installation standards as well as ease of support, the following best practices will be used:

- All finishes/colors must be coordinated with and approved by LSUHSC-NO.
- All installation must be performed following the manufacturer's specifications.
- To whatever degree possible or practical, signal conversion (e.g.: HDMI to VGA, analog to digital) is to be avoided since it introduces noise into the signal. Maintaining a signal's original format is to be done whenever possible. If signal conversion is required to achieve the system goals, it will be limited to as few conversions as required.
- All infrastructure must be as flexible as possible, allowing for future upgrades without the requirement of installing new infrastructure.
- LSUHSC-NO prefers customizable touch panel interfaces over button panels in most cases due to the flexibility that they offer.
- Included in any bid must be a one-year warranty on equipment and installation and a one-year contract for service and support. Once the integrator reaches substantial completion, the integrator must send a notice in writing to the LSUHSC-NO Purchasing Department stating this and LSUHSC-NO must accept this status. Acceptance will only come from the LSUHSC-NO Purchasing Department in writing to the integrator. The one-year agreements must start from LSUHSC-NO's acceptance of the project.
- Upon acceptance of the project, the vendor will turn over all information related to the project including but not limited to all as-built drawings, uncompiled Crestron code, programs, equipment user IDs and passwords, manuals, remotes, cases, software, warranty information, IP addresses, and spare hardware as well as keys and any special tools included for the equipment. Also, updated code and one line drawings must be provided as changes are made throughout the one-year support period. At the end of the warranty period, the integrator must ensure that current system programming and as-built drawings are delivered to LSUHSC-NO.
- All cables which run through ceiling spaces **must** be **plenum** rated.
- All cables connected to Crestron devices must be Crestron certified (see above).
- All cables must include a minimum of a 10% service loop.

- No permanent wire ties must be used; only releasable wire ties, clips, etc. or hook and loop straps are allowed within the lectern, credenza, or rack.