



PURCHASING DEPARTMENT

May 13, 2026

Addendum #1

IFB 50018-260024

Grambling Hall Lecture Hall

This Addendum No. 1 shall become a part of and be attached to the Construction Documents for the referenced project dated March 10, 2026.

GENERAL:

1. Architectural Prior Approvals:

The following architectural products and manufacturers are prior approved to quote for this project per the individual specification sections to which they apply. Prior approval of manufacturers and products does not relieve the Contractor of the responsibility to provide all design requirements and function of individually applicable specification sections and where indicated on plans. All submittals are subject to review per specified submittal procedures and are subject to acceptance, re-submittal and rejection by the Architect.

- Specification: 096519 – Resilient Tile and Plank Flooring
Manufacturer: Gerflor
Product: LVT
- Specification: 102113.17 – Phenolic-Core Toilet Compartments
Manufacturer: Metpar Corporation
Product: Phenolic-Core Toilet Compartments
- Specification: 102800 – Toilet, Bath, and Laundry Accessories
Manufacturer: Saniflow Corporation; Speedflow Plus
Product: High-Speed Air Hand Dryer

DRAWINGS:

2. Sheet A1.01 Demolition/Renovation Plans:

- a. Renovation Notes: delete note 28 “New ceramic wall tile and paint, RE: Elevations” and add note 28 **“New ceramic wall tile and paint, RE: Elevations. Provide new glass-mat, water-resistant backing board at all tile walls.”**

3. Sheet A1.01 Demolition/Renovation Plans:

- a. Renovation Notes: delete note 32 “Epoxy painted floor” and add note 32 **“Epoxy painted floor, patch existing concrete where existing auditorium seats were removed. Prepare the existing concrete surface in accordance with the epoxy paint manufacturer’s instructions.”**

4. Sheet A1.02 Seating and Floor Pattern Plans:

- a. **Delete** Sheet A1.02 and add new Sheet A1.02, attached to this addendum.

5. Sheet A5.03 Interior Elevations:

a. Detail 1 – Auditorium East Elevation, delete note “Provide new pair of wood doors and hardware. Repaint existing frame” and add note “**Provide new pair of 90-Minute rated doors, temperature rise rated, and hardware. Re-paint existing frame**”

SPECIFICATIONS:

6. Add Section 096700 “Fluid Applied Flooring for Concrete”, attached to this addendum.

7. Specification 144200 “Wheelchair Lifts”:

a. Delete Article 2.2.F.

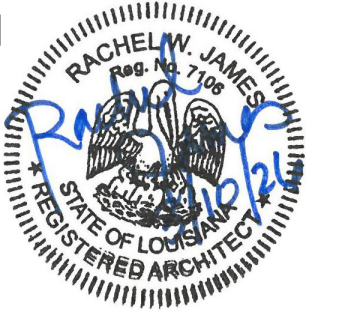
b. Add the following as Article 2.2.F:

“Power Supply: Manufacturer’s option on type of power supply that does not require a pit.
Wheelchair lift to mount on an existing concrete slab.”

8. **Delete** Section 271400 “Audio/Video (AV) Infrastructure and Equipment”.

9. Add Section 274100 “Audio/Video (AV) Infrastructure and Equipment”, attached to this addendum.

AFJMc, Inc. ADDENDUM ITEMS



**Grambling Hall Lecture Hall
Refurbishment**
Grambling State University

Project No.
2602.00

Issue

Addendum #1 - 05/11/2026

Date

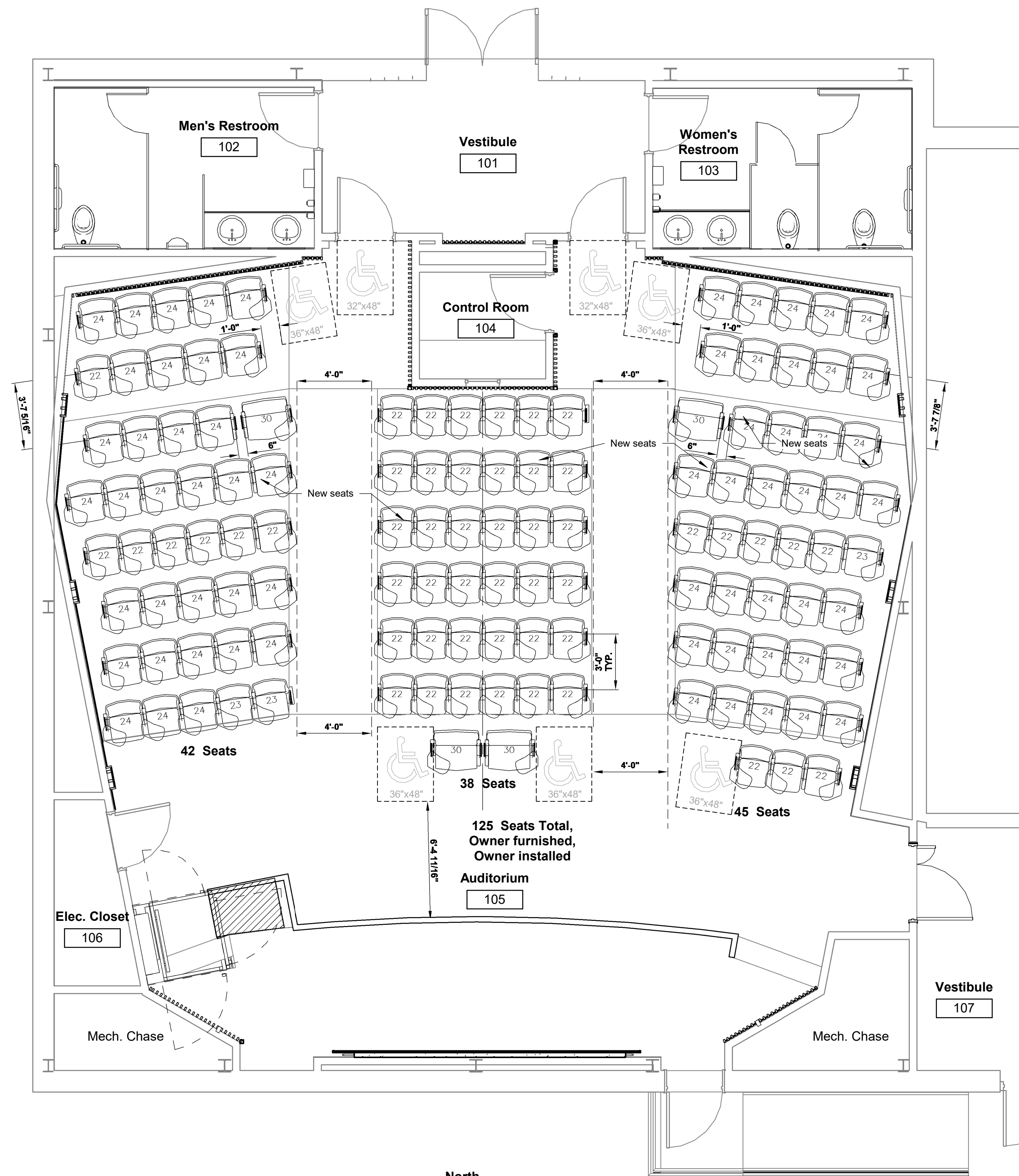
03/10/2026

Sheet Title

**Seating &
Floor Pattern
Plans**

Sheet No.

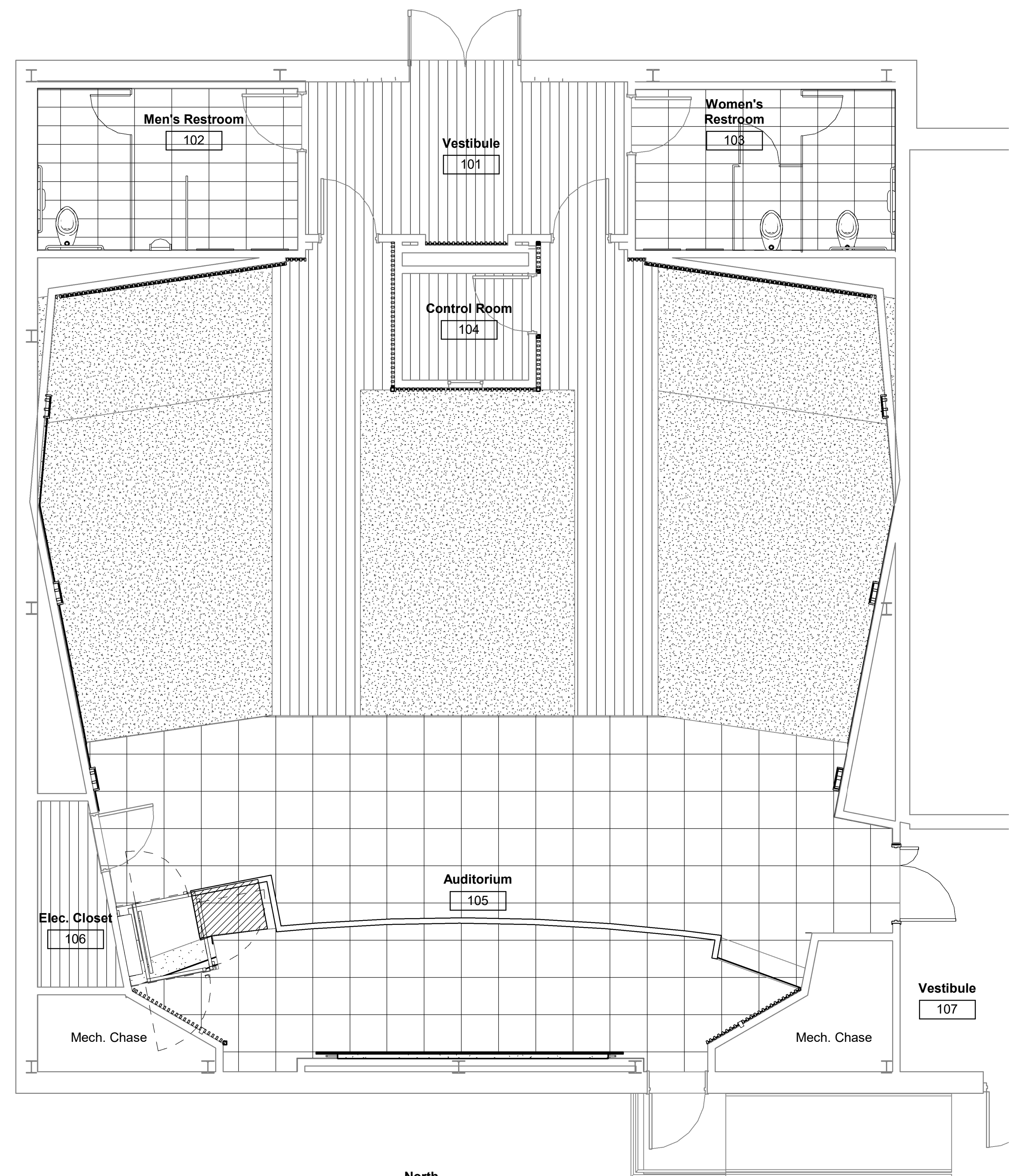
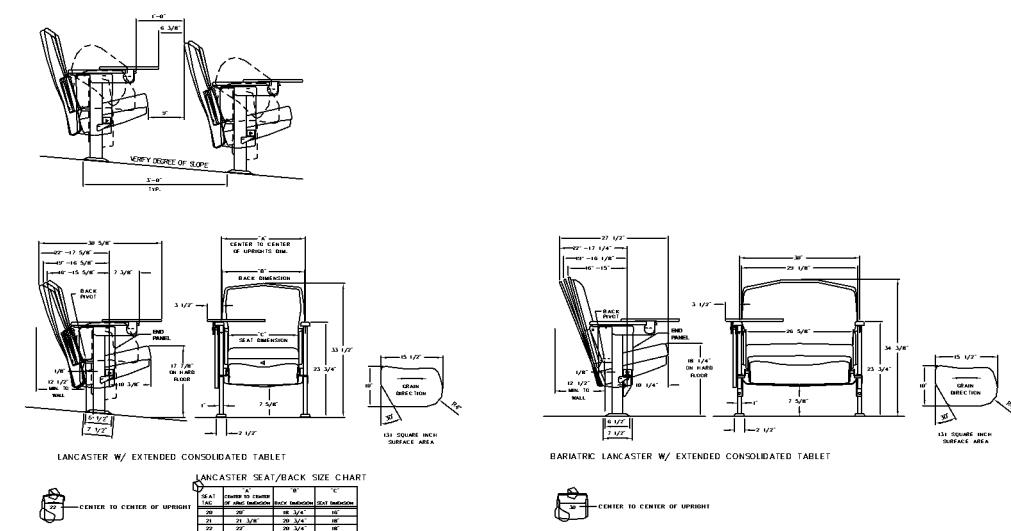
A1.02



1 Seating Plan
1/4" = 1'-0"

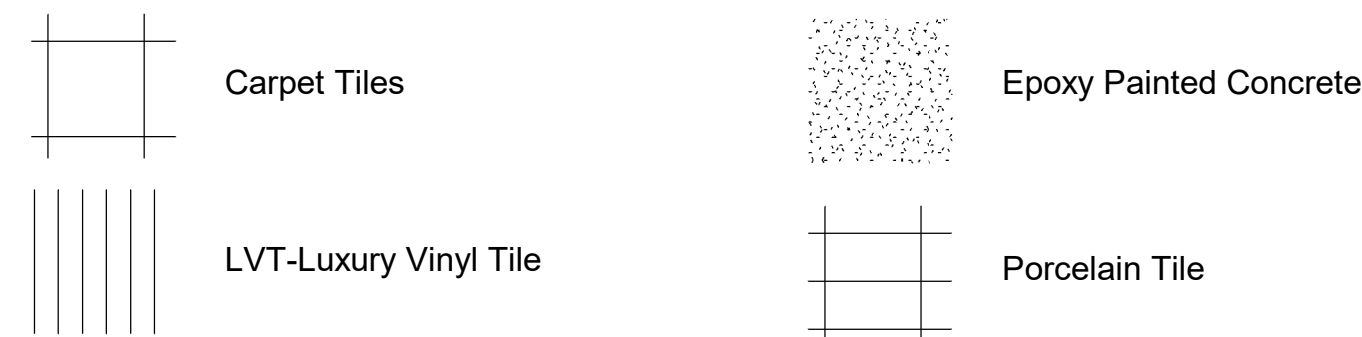
QTY	TOTAL SEATING	125 TOTAL SEATS
121	LANCASTER	
4	BARIAITRIC LANCASTER	
22	LEFT HAND TABLETS	
103	RIGHT HAND TABLETS	
54	END PANELS	
51	22" SEAT	
3	23" SEAT	
67	24" SEAT	
4	30" BARIAITRIC SEAT	
2	DESIGNATED AISLE SEATS	
5	WHEELCHAIR SPACES	

* VERIFY HANDICAP REQUIREMENTS AND ACCESSIBILITY *



2 Floor Finish Plan
1/4" = 1'-0"

Floor Pattern Legend:



Finish Schedule							
Room Number	Room Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Ceiling Height	Comments
101	Vestibule	LVT	Rubber Base	Paint	Paint		
102	Men's Restroom	Porcelain tile	Porcelain Tile	Porcelain Tile/Paint	Paint		
103	Women's Restroom	Porcelain tile	Porcelain Tile	Porcelain Tile/Paint	Paint		
104	Control Room	LVT	Rubber Base	Paint	Paint		
105	Auditorium	Epoxy Painted Concrete/LVT	Rubber Base	Paint	Paint		
106	Elec. Closet	LVT	Rubber Base	Paint	Paint		
107	Vestibule	LVT	Rubber Base	Paint	Paint		

SECTION 096700 - FLUID APPLIED FLOORING FOR CONCRETE

Part 1 GENERAL

1.1 SECTION INCLUDES

- A Fluid-applied flooring for Concrete

1.3 REFERENCES

- A SSPC-SP 1 - Solvent Cleaning
- B SSPC-SP 2 - Hand Tool Cleaning
- C SSPC-SP 3 - Power Tool Cleaning
- D SSPC-SP 13 / NACE No. 6 Surface Preparation for Concrete
- E ASTM F1869 - Moisture Test by use of Calcium Chloride
- F ASTM D4258 - Standard Practice for Cleaning Concrete
- G ASTM D4259 - Standard Practice for Abrading Concrete
- H ASTM D4260 - Standard Practice for Etching Concrete
- I ASTM D4263 - Plastic Sheet Method for Checking Moisture in Concrete
- J ICRI # 310.2 - Surface Preparation of Concrete

1.4 SUBMITTALS

- A Submit under provisions of Section 013300, Submittal Procedures.
- B Product Data: Manufacturer's data sheets on each paint and coating product should include:
 - 1 Product characteristics
 - 2 Surface preparation instructions and recommendations
 - 3 Primer requirements and finish specification
 - 4 Storage and handling requirements and recommendations
 - 5 Application methods
 - 6 Clean-up information
- C Selection Samples: Submit a complete set of color chips that represent the full range of manufacturer's color samples available.
- D Coating Maintenance Manual: upon conclusion of the project, the Contractor or paint manufacture/supplier shall furnish a coating maintenance manual, such as Sherwin-Williams "Custodian Paint Maintenance Manual" report or equal. Manual shall include an Area Summary with finish schedule, Area Detail designating where each product/color/finish was used, product data pages, Safety Data Sheets, care and cleaning instructions, touch-up procedures, and color samples of each color and finish used.

1.6 DELIVERY, STORAGE, AND HANDLING

- A Delivery: Deliver manufacturer's unopened containers to the work site. Packaging shall bear the manufacturer's name, label, and the following list of information:
 - 1 Product name, and type (description)
 - 2 Application & use instructions
 - 3 Surface preparation
 - 4 VOC content

- 5 Environmental handling and an SDS
- 6 Batch date
- 7 Color number

- B Storage: Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction. Store materials in an area that is within the acceptable temperature range, per manufacturer's instructions. Protect from freezing.
- C Handling: Maintain a clean, dry storage area, to prevent contamination or damage to the coatings.

1.7 PROJECT CONDITIONS

Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not apply coatings under environmental conditions outside manufacturer's absolute limits.

Part 2 PRODUCTS

2.1 MANUFACTURERS

- A.Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Sherwin-Williams Company
 - b. Stonhard

2.2 APPLICATION/SCOPE

- A Use this article to define the scope of painting if not fully defined in a Finish Schedule or on the drawings. This article must be carefully edited to reflect the surfaces actually found on the project. In some cases, it may be enough to use the first paragraph that says, in effect, "paint everything" along with a list of items not to paint, without exhaustively defining all the different surfaces and items that must be painted.
- B If the project involves repainting some but not all existing painted surfaces, be sure to indicate the extent of the repainting.
- C The descriptions of each system can also be used to further refine the definition of what is to be coated.

2.3 SCHEDULE

A Light Duty Industrial: (Foot Traffic)

- 1 Water Based Epoxy Primer / Water Based Epoxy Systems
 - Prime Coat: As recommended by manufacturer.
 - 1st Coat: Basis of Design Product: ArmorSeal® 8100 Water Based Epoxy, B70-8100 Series
 - 2nd Coat: Basis of Design Product: ArmorSeal® 8100 Water Based Epoxy, B70-8100 Series
 - 3rd Coat: Basis of Design Product: ArmorSeal® 8100 Water Based Epoxy, B70-8100 Series (2.0 - 5.0 mils dry per coat)

2.4 MATERIALS - GENERAL REQUIREMENTS

- A Paints and Coatings - General:
 - 1 Unless otherwise indicated, provide factory-mixed coatings. When required, mix coatings to correct consistency in accordance with manufacturer's instructions before application. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions. VOCs need to be confirmed by using the products EDS sheets.
- B Primers:
 - 1 Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.

2.5 ACCESSORIES:

- A Coating Application Accessories:
 - 1 Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required, per manufacturer's specifications.

Part 3 EXECUTION

3.1 EXAMINATION

- A Do not begin application of coatings until substrates have been properly examined and prepared. Notify Architect or Specifier of unsatisfactory conditions before proceeding.
- B If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C Proceed with work only after conditions have been corrected, and approved by all parties, otherwise application of coatings will be considered as an acceptance of surface conditions.
- D Previously Painted Surfaces: Verify that existing painted surfaces do not contain lead based paints, notify Architect immediately if lead based paints are encountered.

3.2 SURFACE PREPARATION

- A Proper product selection, surface preparation, and application affect coating performance. Coating integrity and service life will be reduced because of improperly prepared surfaces. Selection and implementation of proper surface preparation ensures coating adhesion to the substrate and prolongs the service life of the coating system.
- B Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion. Recognize that any surface preparation short of total removal of the old coating may compromise the service length of the system.
- C Prior to attempting to remove mildew, it is always recommended to test any cleaner on a small, inconspicuous area prior to use. Bleach and bleaching type cleaners may damage or discolor existing paint films. Bleach alternative cleaning solutions may be advised. Mildew may be removed before painting by washing with a solution of 1-part liquid household bleach and 3-parts of warm water. Apply the solution and scrub the mildewed area. Allow the solution to remain on the surface for 10 minutes. Rinse thoroughly with clean water and allow the surface to dry at least 48 hours before painting. Wear protective glasses or goggles, waterproof gloves, and protective clothing. Quickly wash off any of the mixture that comes in contact with your skin. Do not add detergents or ammonia to the bleach/water solution.
- D Previously Painted Concrete Surfaces
If in sound condition, clean the surface of all foreign material. Smooth, hard, or glossy coatings and surfaces should be dulled by abrading the surface. Apply a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, or if this product attacks the previous finish, removal of the previous coating may be necessary. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above.
- E Fill all cracks, voids, bug holes and joints with appropriate filler or ArmorSeal Crack Filler, ArmorSeal Flexible Joint Sealant, or ArmorSeal Expresspatch.
- F Always follow the ASTM methods listed below:
 - 1 ASTM F1869 Moisture Test by use of Calcium Chloride
 - 2 ASTM D4258 Standard Practice for Cleaning Concrete
 - 3 ASTM D4259 Standard Practice for Abrading Concrete
 - 4 ASTM D4260 Standard Practice for Etching Concrete
 - 5 ASTM D4263 Plastic Sheet Method for Checking Moisture in Concrete
 - 6 SSPC-SP 13/Nace 6 Surface Preparation of Concrete
 - 7 ICRI # 310.2 Surface Preparation of Concrete

3.3 INSTALLATION

- A Testing: Due to the wide variety of substrates, preparation methods, application methods and environments, one should test the product in an inconspicuous spot for adhesion and compatibility prior to full-scale application.
- B Apply all coatings and materials with the manufacturer's specifications in mind. Mix and thin coatings according to manufacturer's recommendation.
- C Do not apply to wet or damp surfaces.
 - 1 Wait at least 30 days before applying to new concrete or masonry, or follow manufacturer's procedures to apply appropriate coatings prior to 30 days.
 - 2 Test new concrete for moisture content.
- D Apply coatings using methods recommended by manufacturer.
- E Uniformly apply coatings without runs, or sags, without brush marks, and with consistent sheen.

- F Apply coatings at spreading rate required to achieve the manufacturer's recommended dry film thickness.
- G Regardless of number of coats specified, apply as many coats as necessary for complete hide and uniform appearance following manufacturer's guidelines.
- H Inspection: The coated surface must be inspected and approved by the Architect or Engineer just prior to the application of each coat.

3.4 PROTECTION

- A Protect finished coatings from damage until completion of project.
- B Touch-up damaged coatings after substantial completion, following manufacturer's recommendation for touch up or repair of damaged coatings. Repair any defects that will hinder the performance of the coatings.

END OF SECTION

SECTION 271400 – AUDIO/VIDEO (AV) INFRASTRUCTURE AND EQUIPMENT

PART 1. GENERAL

1.1. GENERAL NOTES

- A. The Audiovisual System Designer herein shall be referred to as the Architect.
- B. Grambling State University herein shall be referred to as the User Agency.
- C. The State of Louisiana herein shall be referred to as the Owner.
- C. The Audiovisual Contractor herein shall be referred to as the AV Contractor.

1.2 SUMMARY

- A. This Section covers the general requirements for integration of audiovisual systems to be used for presentation, collaboration and media distribution at Grambling State University's Grambling Hall Auditorium. All audiovisual hardware and equipment furnished by the Contractor shall conform to the general requirements in this specification as well as the performance specifications for the intended particular application.

1.3 DEFINITIONS

- A. ADA: Americans with Disabilities Act, which became civil law in 1990, which prohibits discrimination against individuals with disabilities in all areas of public life, including jobs, schools, transportation, and all public and private places that are open to the general public.
- B. ANSI: American National Standards Institute
- C. AV: Audiovisual (typically referring to related equipment or specific application)
- D. AVIXA: Audiovisual and Integrated Experience Association™, formerly known as INFOCOMM, is an international trade association representing the audio-visual industry that is committed to development of world standards for best practices and formalized AV training.
- E. Backbone: A facility (e.g., pathway, cable, or conductors) between equipment rooms or floor distribution terminals, the entrance facilities, and the equipment rooms within or between buildings.
- F. BICSI: Building Industry Consulting Service International
- G. DSP: Digital Signal Processor
- H. EIA: Electronic Industries Alliance
- I. EMI: Electromagnetic Interference
- J. LAN: Local Area Network
- K. LED: Light-Emitting Diode
- L. NECA: National Electrical Contractors Association
- M. NRTL: Nationally Recognized Testing Laboratory, an independent agency with the experience and capability to conduct the testing as defined by OSHA in 29 CFR 1910.7
- N. OSHA: Occupational Safety & Health Administration
- O. TIA: Telecommunications Industry Association

1.4 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including instructions to Bidders, General and Supplementary Conditions and Division 1 Specification Sections, apply to the work performed within this Section.
- B. The publications listed below form a part of this specification to the extent referenced and are referred to in the text by the basic designation only.
- C. Where applicable, work performed shall comply with guidelines as established in the latest edition/revision, as of the date of the Contract Documents, for the following publications:
 - 1. 2010 ADA "Standards for Accessible Design"
 - 2. ANSI/TIA/EIA-568-B.1 "Commercial Building Telecommunications Cabling Standards, Part 1: General Requirements"

3. ANSI/TIA/EIA-568-B.2 "Commercial Building Telecommunications Cabling Standard Part 2: Balanced Twisted-Pair Cabling Components"
4. ANSI/TIA/EIA-568-B.3 "Optical Fiber Cabling Components Standard"
5. ANSI/TIA/EIA-569-A "Commercial Building Standard for Telecommunications Pathways and Spaces"
6. ANSI/TIA/EIA-606-A "Administration Standard for Commercial Telecommunications Infrastructure"
7. ANSI/TIA/EIA-526 "Standard Test Procedures for Fiber Optic Systems"
8. ANSI/NECA/BICSI-568-2006, "Standards for Installing Commercial Building Telecommunications Cabling"
9. ANSI/INFOCOMM-10:2013, "Audiovisual Systems Performance Verification"
10. AVIXA-F501.01.201X, "Energy Management for Audiovisual Systems" (Replaces ANSI/INFOCOMM-2:2012)
11. AVIXA-S601.01.2015, "Cable Labeling for Audiovisual Systems"
12. AVIXA-D401.01:201X, "Standard Guide for Audiovisual Systems Design and Coordination Processes" (Replaces 2M:2010) Association

1.5 RELATED WORK SPECIFIED ELSEWHERE

- A. Requirements and materials as applicable to the work of others related to audiovisual systems are listed here to define and establish quality-acceptance criteria necessary to support the installation or operation of audiovisual systems.
- B. High-voltage electrical line power, and all required conduits for both power supply and low-voltage, shall be furnished by the Electrical Contractor. Unless otherwise specified, all back-boxes are to be furnished and installed by the Electrical Contractor as indicated in the electrical drawings located elsewhere in this document. (See Section 260533)
- C. Coordination with the Electrical Contractor is required in order to assure correct conduit placement and routing, AV back-box locations and line power circuit locations as specified in Division 26 – Electrical.
- D. The AV Contractor shall not be responsible for providing the load-bearing mounting back-board upon which the LED wall display will be installed at the front of the auditorium. The AV Contractor shall provide any specifications from the given manufacturer, but the responsibility for providing and installing the mounting back-board work shall be performed by other contractor(s).

1.6 WORK SPECIFICATIONS FOR THIS SECTION

- A. This section addresses the initial phase of audiovisual systems integration as described for Grambling State University's Grambling Hall Auditorium. The objective is for the AV Contractor to provide the owners of this facility with the turnkey professional AV systems that fit their specific application needs. The awarded AV Contractor is expected to provide all AV equipment as specified, to include professional turn-key installation, QA performance-acceptance testing, end-user training, and ongoing systems support as established under the terms of an extended service/maintenance agreement.
- B. The written work specifications and AV drawings outlined in this package shall be collectively referred to herein as Contract Documents. It is possible some of the system features or requirements listed in one part may not be present in others. In the case of conflict between written specifications and drawings, the AV Contractor must seek written clarification from the Architect. In the event the AV Contractor fails to obtain such written clarification, the interpretation of the Architect shall prevail. Where conflict exists with other specifications concerning such work or materials this specification takes precedence, unless otherwise approved in writing by the Owner.
- C. This section includes all labor, materials, equipment, and services necessary to furnish and install aforementioned audiovisual systems in the Grambling Hall Auditorium at Grambling State University in Grambling, Louisiana. The overall system shall include but not be limited to the following:
 1. LED Array Video Wall - Large-Format, High Definition Display System
 2. High-Bandwidth Video Digital Switcher/Scaler
 3. Integrated Control System Processor and Touch Panel User Interface(s)
 4. Sound Reinforcement & Media Presentation Audio Subsystem

1.7 PROJECT CONDITIONS

- A. All dimensions and equipment locations shall be verified in the field prior to component fabrication or equipment installation by the AV Contractor, who shall make at least one (1) visit to the job site prior to preparation of shop drawings.
- B. All affected conduit placement, routing, and separation shall be coordinated with the Electrical Contractor to ensure compliance with established specifications and proper installation.

C. No claims for additional compensation shall be allowed due to the AV Contractor's negligence, misunderstanding of the work scope, or lack of preparation by not performing a thorough investigation of the job site.

1.8 CONTRACTOR RESPONSIBILITY

A. It shall be the sole responsibility of the AV Contractor to furnish and install equipment as a complete system in all respects and to furnish and install any additional equipment required to fulfill the intent of the Contract Documents, regardless of whether or not such items are herein specified or indicated without claim for additional payment or costs.

B. The work specified herein shall be accomplished by a single AV Contractor who assumes complete responsibility for the audiovisual systems described. The AV Contractor shall be required to have a minimum of ten (10) years professional experience with installation, configuration and programming of audiovisual systems having similar size, complexity and scope. Written proof of such experience shall be submitted to the Architect prior to selection, as one of the qualifying factors for bidding candidates.

C. The Audiovisual Contractor shall be responsible for coordinating with other trades as needed to ensure complete and suitable installation of any electrical isolation equipment needed to meet the intent of this specification.

D. No electrical equipment (except that which is approved by the Owner) shall be installed or located within Acoustically Sensitive Spaces or installed on walls common to Acoustically Sensitive Spaces. The AV Contractor shall report any and all discrepancies between this requirement and the Contract Documents to the Architect and Electrical Engineer prior to installation of such equipment.

1.9 DESIGN INTENT

A. The Audiovisual Contractor shall furnish and install Infrastructure and Major Equipment for system, including but not limited to wire, cable, equipment racks, wiring devices, and listed Major Equipment.

B. If requested, the AV Contractor shall furnish line item pricing for Infrastructure and Major Equipment List written in this specification.

1.10 FUNCTIONAL REQUIREMENTS

A. LED ARRAY VIDEO WALL – Device must meet or exceed following specifications:

1. 5.3' Tall x 9.45' Wide Screen Size, 864 x 1536 Pixels Total Resolution, 1.8mm Pitch
2. Video Wall frame depth is not to exceed 2.5 inches.
3. Video Wall to include framing and integrated mounting/hang points.
4. Video Wall manufacturer must provide a five (5) -year factory warranty for all components to include the Display Interface Unit (DIU) and shall extend to cover each individual pixel from the first date of shipment.
5. Video Wall shall have a minimum 100,000-hour life span to half-brightness as an inherent performance characteristic guaranteed by the manufacturer.
6. Video Wall Display System from the manufacturer shall not require total of more than 20,000 Watts maximum power to during use and operating at full-brightness.
7. Spare Parts Kit Included – includes a minimum of 5% running spares for LED Modules, Power Supplies, Receive Cards, and internal cabling for the entire warranty period. Spare parts shall be included at no additional charge as part of the warranty program. As spare parts are accessed, the faulty part(s) will be sent back to the manufacturer for repair or replacement.
8. Video Wall shall be front-serviceable for quick and easy maintenance.
9. Video Wall must be finished with non-reflective black surfaces, which produce better content enhancement.
10. Video Wall must have Off-Axis Viewing angles of at least 160 degrees, producing displays that have virtually no visual distortions in the image, regardless of how far off-axis a viewer gets to the video wall display. Virtually no distortion from above or below view as well.
11. Video wall must utilize LED tiles that magnetically attach to the manufacturer's bespoke sheet metal substrate (frame), without static registration in the X and Y axis to allow for take-up of inconsistencies in host wall and for ease of re-calibration post install, as may be required as a result of long-term settling or mechanical disruption.
12. Video Wall surface must be comprised of LED tiles with a footprint no greater than 0.5ft², in order to minimize the impact of disruption of the entire system in the event of an LED tile failure.
13. Video Wall must be wired internally in a manner that prevents isolated LED tile, power supply, or data card failure from affecting the overall usability of the video wall.

14. Video Wall must be wired to accept AC power local to the video wall, via recessed junction box, to allow for flush mount to host wall, and not powered over DC umbilical from an off-board power supply/array.
15. Video Wall Display Interface (DIU) must accept a 4K60 signal over a single video input (HDMI or DisplayPort).
16. Video Wall Display processor must support control of at least 2.6 million pixels at 10bits and HDR support.
17. Video Wall Display processor must support up to 6 video layers per screen, with multi-window support and irregular window size support.
18. Video Wall Display processor must include at a minimum of one (1) HDMI 2.0 and two (2) HDMI 1.3 inputs.
19. Video Wall Display processor must support TCP/IP and RS232 support from the Integrated Control System.
 - a. Basis of Design Vendor: KWav ATX
 - b. Approved Alternate Vendor: Absen NX
 - c. Basis of Design Vendor: Novastar

B. VIDEO DIGITAL SWITCHER/SCALER – Device must meet or exceed the following specifications:

1. Switcher/Scaler shall have four (4) HDCP-compatible HDMI (1.4 & 2.0) inputs, supporting signal inputs of DVI 1.0, HDMI 1.4 and 2.0, HDCP 1.4 and 2.3
2. Switcher/Scaler shall be capable of displaying up to 8 user-definable windows concurrently for graphics and/or video signals.
3. Switcher/Scaler shall support video resolutions up to 4K/60 with 4:4:4 color sampling
4. Switcher/Scaler to be capable of fully real-time processing with no dropped frames, which shall allow smooth video scaling and seamless switching
5. Switcher/Scaler shall provide broadcast-quality video imaging.
6. Switcher/Scaler shall have an embedded operating system and be rated for 24/7 operation.
 - a. Basis of Design Vendor: Extron
 - b. Approved Alternate Vendor: Crestron
7. There shall be one (1) Wall-mounted HDMI input shall be mounted at receptacle height on the platform, near the front of the room.
8. There shall be one (1) Wireless HDMI extension system provided and integrated into the video control system.
 - a. Basis of design Vendor: Barco CX-50 Gen2
 - b. Approved Alternate Vendor: BenQ WDC15

C. INTEGRATED CONTROL SYSTEM – All equipment must meet or exceed the following specifications:

A commercial-grade control system will be installed to allow single-point control of all video and audio distribution, volume controls for audio media and microphones from one (1) custom-programmed touch panel with a graphical user interface. The touch panel shall be located in the Control Booth.

A high-definition scaling auto-switcher and media/control extender shall be provided to auto-switch HDMI and VGA inputs at the transmitter and one additional HDMI input at the receiver to ensure a reliable, high-quality video image.

Control functions shall include Audio System Power, Video Signal Switching, and Microphone and Presentation Volume Controls.

1. One (1) 24-Port PoE 1 Gigabit managed AV Ethernet switch shall be installed to allow communications with Ethernet-based control interfaces in the AV System.
2. Industrial-grade control system processor with one (1) bidirectional RS-232 serial port with software handshaking, one (1) bidirectional RS-232/RS-422/RS-485 serial port with hardware and software handshaking, one (1) IR/Serial port for one-way control of external devices, four (4) digital I/O ports, two (2) control relays, one (1) Ethernet port, supports secure industry standard communications protocols including HTTP (insecure), HTTPS, SSH, SFTP, SMTP, NTP, Discovery Service, DHCP, DNS, ICMP, 802.1X, and IPv4, shall be provided and custom-programmed by the AV Contractor.

3. One (1) 7 inch touch-sensitive control panel with 1024x600 resolution and 24-bit color depth shall be provided in the Control Booth area and programmed by the AV Contractor with a custom GIU to allow single-point control of the system functions described herein.

6. The AV Contractor shall provide the uncompiled source code to the Owner at the time of system commissioning.

a. Basis of Design Vendor: Extron IPCP Pro 250 xi and TLP Pro 725M.

b. Approved Alternate Vendor: Crestron

D. SOUND REINFORCEMENT AND MEDIA AUDIO SYSTEM – All related equipment must meet or exceed following listed specifications:

1. The AV Contractor shall provide two (2) Black 8" compact 2-way passive speakers, each rated at power capacity of 200 Watts, and two (2) Black compact 4" 2-way passive speakers, and install them mounted from the ceiling at the front of the stage of Grambling Hall's auditorium stage left and right. These front-of-house speakers at the front of the stage shall be focused towards the audience. The speaker system shall be capable of a Maximum continuous SPL of 124db at 1 meter, with a frequency range from 60Hz to 20KHz (-10dB).

a. Approved Vendor: RCF

b. Approved Alternate Vendor: JBL

2. The AV Contractor shall provide one (1) Professional Class H Audio Power Amplifier rated at 2 x 1250 Watts @ 4 ohms to power the passive loudspeakers. This amplifier shall have a Total Harmonic Distortion rating of <0.01% at @ 1 kHz nominal power.

a. Approved Vendor: RCF

b. Approved Alternate Vendor: Crown

3. The AV Contractor shall provide two (2) wireless combo systems, which include two (2) wireless bodypack transmitters with two (2) cardioid lavalier condenser microphones for hand-free presentations and two (2) wireless handheld microphones paired to two (2) wireless receivers.

a. Approved Vendor: Shure

b. Approved Alternate Vendor: Sennheiser

4. The AV Contractor shall provide a (1) commercial-grade Audio Digital Signal Processor (DSP) with 12 mic/line-level inputs and 8 mic/line-level outputs. The audio processor shall be capable of performing 24-bit audio signal shaping, incorporate a 48KHz digital sampling rate, and perform audio signal routing during general presentations and meetings. The digital audio processors shall include RS-232 and Ethernet ports for connectivity with external control systems.

a. Approved Vendor: Extron

b. Approved Alternate Vendor: Crestron

5. The AV Contractor shall provide one (1) rack-mountable, high-performance wireless microphone antenna combiner system with a slim-profile diversity architectural antenna, capable of supporting up to five (5) microphone systems.

a. Approved Vendor: RF Venue

b. Approved Alternate Vendor: Shure

1.11 SCOPE OF WORK

A. Furnish shop drawings and receive approvals from the Architect, prior to fabrication and installation.

B. Furnish all materials, labor, and any engineering services required to provide a complete and professionally installed system in working order as described herein. Labor furnished shall be performed by personnel specialized and experienced in audiovisual systems installation.

C. Furnish and install all wiring and cable called out in Contract Documents.

D. Coordinate all back-box locations with the Electrical Contractor and other appropriate general trades.

E. Furnish any additional items, not specifically mentioned herein, to meet system requirements as specified, without claim for additional payment. Such items may include, but are not limited to, hardware, transformers, line/distribution amplifiers, and other devices needed to achieve proper installation, systems interface, electrical isolation, or audio gain structure.

F. Perform initial adjustments and performance verification tests as needed. Submit verification test report to the Architect five (5) days prior to commissioning.

- G. Perform formal Quality Assurance inspections and performance-acceptance testing of all system functions, and generate documented results of final adjustments performed, utilizing AV Contractor-furnished test equipment and project engineers.
- H. Furnish and participate in User training.
- I. Furnish system documentation, including copies of all relevant drawings and equipment manuals in compliance with the Contract Documents.
- J. Furnish maintenance services for the specified period from the date of acceptance.
- K. Guarantee all new equipment, software, hardware, components, and workmanship for the specified periods herein from the date of acceptance.
- L. Provide ongoing systems support, according to the terms of a five (5) year Maintenance Agreement, for all installed AV systems installed which are included in these Contract Documents.

1.12 QUALITY REQUIREMENTS

- A. Wire Labeling: All system wiring and cabling provided by the AV Contractor shall comply with labeling requirements as defined in AVIXA Standard F501.01.2015, "*Cable Labeling for Audiovisual Systems*" and be acceptable to authorities having local jurisdiction. As applicable, these components shall be marked for intended use and follow consistent nomenclature.
- B. Packaging: All purchased project materials shall be suitably packaged by their respective manufacturers to prevent damage during shipment and/or handling. Any received materials that are damaged shall not be considered acceptable for use.
- C. Building Code: Compliance must be maintained with the local authority having jurisdiction over the standards of Building Code, which shall take precedence over all other restrictions or codes, unless the requirements of other codes are more stringent than the local building code. In such cases, the more stringent requirements shall govern and supersede.
- D. Installer Qualifications: The awarded AV Contractor shall have on-staff appropriate AVIXA-trained and manufacturer-certified technicians and engineers as designated herein that will be assigned to this project. If the AV Contractor's personnel are not formally AVIXA-trained, or not manufacturer-certified where specified, the AV Contractor shall submit with their bid all professional credentials and certificates of professional training for those personnel who will be assigned to the project for evaluation and determination by the Architect that the said credentials and certificates are comparable to AVIXA accreditation.
- E. Staffing: During project execution, the project shall be staffed at all times by professional Technicians and Engineers who, in the role of lead crafts persons, shall be capable of providing leadership and technical direction to those AV personnel who remain on the project site. The AV Contractor must:
 - 1. Be fully capable and experienced in the installation of the audiovisual systems specified, and have a minimum of ten (10) years 'experience with systems of similar size, complexity, and value.
 - 2. Possesses AVIXA APEx program certification credentials.
 - 3. Have on staff no less than one (1) certified Extron Control Professional with no less than ten (10) years combined professional experience at the specified levels.
 - 4. Have on staff no less than one (1) audio DSP programmer who possesses current Extron ProDSP Specialist certification credentials for programming the Extron DSP or other approved audio DSP device.
 - 5. Be factory-certified by the equipment manufacturing company(ies) in all aspects of programming, installation, and testing of their AV equipment, where recommended by those manufacturers. Specifically, this applies to those manufacturer(s) whose equipment may constitute a component of the audiovisual system(s) installed as part of the information transport systems. Said certification is to be such that the Contractor can offer documented proof from the manufacturer(s) and fully comply with all the requirements for providing the Owner with a System Warranty and Application Assurance.
 - 6. Ensure compliance with the intended and established performance-acceptance criteria through use of formal in-house Quality Assurance and Field Operations Testing Program(s) and Procedures(s) in place, and formally execute all associated procedures for testing, corrective actions and archival documentation in accordance with classical Quality Assurance requirements. The document(s) that will be used by the AV Contractor for reporting test results shall be submitted with the bid package for approval by Architect.
- F. System Designer & Project Manager Requirements:

1. The AV Contractor shall have on-staff a Project Manager to act as a single point of contact for all activities performed under this section. The Project Manager shall have a minimum of 3 years' experience in commercial AV design and related project installation work.
2. The AV Contractor's Project Manager, or designee thereof, shall be required to attend periodic project meetings as required until project closeout/signoff.
3. Should the Project Manager assigned to this project change during the installation, the new Project Manager assigned must meet all qualifications stated in this section, and must also submit a resume for review by the Architect.
4. If, in the opinion of the Owner, the Project Manager does not possess adequate skills or qualifications to properly support the project, the Owner reserves right to require the Contractor to assign a different designer who, in the Owner's opinion, possesses the necessary skills and experience required for successful completion of this project.

G. Installer References

1. The AV Contractor shall supply references for three (3) projects of similar size, complexity and scope that were completed successfully over the previous three (3) years.

1.13 COORDINATION

- A. Coordinate layout and installation of audiovisual components and cabling with other trades.
 1. Meet jointly with mechanical, electrical, telecom, table manufacturer and millwork contractor to exchange information and agree on details of equipment arrangements and installation interfaces.
 2. Record agreements reached in meetings and distribute to other participants.
- B. Where work covered by this Section connects to equipment furnished under other Sections, verify audiovisual work involved in the field and make proper connection to such equipment.
- C. Coordination of wall plates, floor boxes, connection points, rack locations, power, data, and conduit must be approved by the Architect or Owner prior to installation of any equipment.
- D. The AV Contractor shall not be responsible for performing any high voltage work on this project
- E. The AV Contractor must coordinate all high-voltage electrical work through the client-contracted electrical contractor (EC).
- F. The AV Contractor shall not be responsible for providing the load-bearing mounting board upon which the LED wall display will be installed at the front of the auditorium. This work shall be executed by others.

PART 2. PROJECT EXECUTION REQUIREMENTS

2.1 INSTALLATION STANDARDS

- A. All work performed on this project will be installed in accordance with the current edition of the following:
 1. Documents listed in Article 1.4 "References".

2.2 DELIVERY AND STORAGE

- A. Receive, handle, and store audiovisual system items and materials at the project site. Materials and items shall be so placed that they are protected from damage, deterioration and theft.

2.3 INSTALLATION

- A. The drawings for work under Division 26 Sections related to audiovisual systems are diagrammatic and are intended to convey the scope of work and indicate the general arrangement of conduit, boxes, equipment, termination hardware, fixtures and other work included in the Contract.
- B. Location of items required by the drawings or specifications not definitely fixed by dimensions are approximate only and exact locations necessary to secure the best conditions and results shall be determined at the site and shall be subject to the approval of the Architect/Consultant/Client.
- C. Follow drawings in laying out work, check drawings of other trades to verify spaces in which work will be installed, and maintain maximum headroom and/or space conditions at all points.
 1. Where headroom or space conditions appear inadequate, the Architect shall be notified before proceeding with installation.
 2. Minor conduit and cable rerouting and changes shall be made at no additional cost to the Owner.

3. Coordinate the mounting heights of audiovisual equipment to clear the opening heights of doors and the heights of equipment which needs to be removed and replaced.

4. As necessary, adjust elevations of rack-mounted hardware and horizontal wire management panels so as to compensate for rack unit sizes of actual hardware used, as compared to hardware rack unit sizes depicted in Contract Drawings.

D. Perform all work with skilled professionals of the particular trade involved in a neat and organized manner.

E. Perform all work in cooperation and coordination with other trades and schedule.

F. Furnish other trades advance information on locations and sizes of frames, boxes, sleeves and openings needed for the work, routes for conduit and cable pathways, and also furnish information and shop drawings necessary to permit trades affected to install their work properly and without delay.

G. Where there is evidence that work of one trade will interfere with the work of other trades, all trades shall assist in working out space allocations to make satisfactory adjustments and shall be prepared to submit and revise coordinated shop drawings.

H. With the approval of the Architect and without additional cost to the Owner, make minor modifications in the work as required by structural interferences, by interferences with work of other trades or for proper execution of the work.

I. Work installed before coordinating with other trades so as to cause interference with the work of such other trades shall be changed to correct such condition without additional cost to the Owner and as directed by the Architect.

K. AV Contractor shall cooperate with other trades and coordinate work so that conflicts with other work are eliminated.

L. Equipment shall be installed with adequate space allowed for removal, repair or changes to equipment. Ready accessibility to removable parts of equipment and to wiring shall be provided without having to move other equipment already in place or awaiting to be installed. The AV Contractor shall verify all measurements critical to equipment installation. Discrepancies shall be brought to the Architect's attention for direction.

M. Determine temporary openings in the buildings that will be required for the admission of apparatus furnished under this Division, and notify the Architect accordingly. In the event of failure to give sufficient time in notice to arrange for these openings during construction, the Contractor shall assume all costs of providing such openings thereafter.

N. Drawing locations of audiovisual outlets and raceway pathways are considered approximate. Exact locations shall be determined on site by the awarded AV Contractor.

O. The AV Contractor shall refer to the original contract documents for construction details, reflected ceiling plans, and large-scale drawings.

2.4 PATHWAY EXAMINATION

A. Examine pathway routes intended for cables.

1. Verify proposed routes of pathways. Check pathways and other elements for compliance with space allocations, clearances, installation tolerances, hazards to cable installation, and other conditions affecting installation. Verify that cabling can be installed complying with EMI clearance requirements.
2. Prepare wall penetrations and verify that penetrations of rated fire walls are made using products labeled for type of wall penetrated.
3. Identify plan to support cables and raceways in suspended ceilings. Verify weight of individual types and sizes of cables. Verify that load capacity of cable support structures is adequate for each pathway.
4. Proceed with the installation only after unsatisfactory conditions have been corrected.

B. Separation from EMI Sources: Comply with InfoComm-AVDRM, AVIXA-D401.01:201X, and TIA/EIA-569-A, which provide recommendations for separating unshielded copper communication cable from potential EMI sources, including electrical power lines and equipment. Comply with the following minimum separation distances from possible sources of EMI:

1. Separation between unshielded power lines or electrical equipment in proximity to open cables or cables in nonmetallic raceways is as follows:

- a. Electrical Equipment Rating Less Than 2 kVA: 5 inches.
- b. Electrical Equipment Rating between 2 and 5 kVA: 12 inches.
- c. Electrical Equipment Rating More Than 5 kVA: 24 inches.

2. Separation between unshielded power lines or electrical equipment in proximity to cables in grounded metallic raceways is as follows:

- a. Electrical Equipment Rating Less Than 2 kVA: 2-1/2 inches.
- b. Electrical Equipment Rating between 2 and 5 kVA: 6 inches.

- c. Electrical Equipment Rating More Than 5 kVA: 12 inches.
- 3. Separation between power lines and electrical equipment located in grounded metallic conduits or enclosures in proximity to cables in grounded metallic raceways is as follows:
 - a. Electrical Equipment Rating Less Than 2 kVA: No requirement.
 - b. Electrical Equipment Rating between 2 and 5 kVA: 3 inches.
 - c. Electrical Equipment Rating More Than 5 kVA: 6 inches.
- 4. Electrical Motors and Transformers, 5 kVA or HP and Larger: 48 inches.
- 5. Fluorescent Fixtures: 5 inches.

2.5 CONDUIT REQUIREMENTS

- A. One and one-half inch (1.5") conduit shall be used for all audiovisual cable pathways unless otherwise specified.
- B. No more than two (2) 90-degree bends in the conduit shall be allowed without a pull box.
- C. No more than one hundred feet (100') shall exist between pull boxes.
- D. A physical barrier between power and audio video cabling shall exist in all floor boxes.
- E. The power and audiovisual conduit pathways to all floor boxes shall not adjoin one another.
- F. The conduit utilized for all AV wiring shall be EMT or compliant with standards for shielding of electromagnetic interference from inductive fields from electric current.

2.6 FIRESTOPPING

- A. Utilize an approved firestop assembly to seal all cable and raceway penetrations of fire-rated Floor and wall assemblies. Assembly must achieve the same smoke/fire-resistance rating as the floor or wall being penetrated.

2.7 CUTTING AND PATCHING

- A. Cut, channel, chase and drill any floors, walls, partitions, ceilings and/or other surfaces required to permit audiovisual systems installation, including all pathway elements and supports necessary for same. Cutting operations shall be performed by skilled professionals of the trades involved. Any cutting operations required shall be performed in such a manner that the structural stability and/or functional integrity of the building construction and related support systems are not impaired in any way.
- B. Conduits passing through roofs or other surfaces exposed to weather shall be properly flashed as specified in roofing and waterproofing sections.
- C. The AV Contractor shall repair and re-finish any finishes and/or other surfaces damaged by the AV Contractor's personnel to match the adjacent undamaged surfaces. Install new fire-stopping where existing fire-stopping has been disturbed during the course of install. Repair and re-finish work shall be performed by skilled professionals of the trades involved.

2.8 CLEANING AND PROTECTION

- A. On completion of installation, all affected furniture and equipment, including outlets, fittings, and devices, inspect exposed finishes shall be cleaned in preparation for turnover.
- B. The AV Contractor shall remove any dirt, paint spots, and construction debris created by AV personnel during the project installation work.
- C. All finishes shall be clean upon Substantial Completion. Unless otherwise indicated, clean shall mean free of dust, dirt, mud, debris, oil, grease, residues, and contamination.
- D. Protect equipment and installations and maintain conditions to ensure that coatings, finishes, and cabinets are without damage or deterioration at time of Substantial Completion. Protect conduit and wire-way openings against the entrance of foreign matter by means of plugs or caps. Cover fixtures, materials, equipment and devices furnished or installed under this Section or otherwise protect against damage, both before and after installation. Hardware, materials, equipment, or devices damaged prior to final acceptance of the work shall be restored to their original condition or replaced.
- E. During the course of audiovisual installation work, provide for on-going proper disposal of all debris, including but not limited to: equipment packaging and shipping materials, shipping pallets, empty cable reels/boxes, cable cuttings, etc.

PART 3. ADMINISTRATIVE PROCEDURES AND DOCUMENTATION REQUIREMENTS

3.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

3.2 DESCRIPTION

A. Apparatus, appliance, material or work not shown on drawings, but mentioned in the specifications, or vice versa, or any incidental accessories necessary to make the work complete and ready for operation, even though not specified or shown on the drawings, shall be furnished and installed as necessary without additional expense to the Owner.

B. Should there be any discrepancies or question of intent, refer the matter to the Architect for a decision prior to ordering any equipment or materials and before starting any related work.

C. Furnish, erect, install, connect, clean, adjust, test and condition all manufactured articles, materials and equipment, and place in service in accordance with the manufacturer's directions and recommendations except as otherwise noted.

3.3 SUBMITTALS

A. Operating Manuals: The AV Contractor must submit three (3) copies of operating manuals for all installed equipment as hard-bound document binders containing approved shop drawings, operating instructions, wiring diagrams, and parts lists.

B. Shop Drawings: A complete set of as-built Shop Drawings shall be provided by the AV Contractor to the Owner at the time of project completion.

C. Source Quality Control Test Reports: The AV Contractor shall perform appropriate quality inspections and testing procedures throughout the duration of the Project, document all available test information, and submit those data in formal QA reports to the Owner within five (5) days of completion of the project.

3.4 SHOP DRAWINGS

A. The AV Contractor shall perform no portion of the work requiring submittal and review of shop drawings, product data or samples until the Architect has approved the respective submittal(s). Any materials, fixtures, apparatus or equipment installed without stamped or written approval must be removed by the AV Contractor and replaced with properly specified equipment under the direction of the Architect and without recourse from the AV Contractor for additional compensation.

B. Where applicable, shop drawings shall incorporate a 1/8" equal 1'-0" scale on architectural floor plans, except for layouts of all congested areas such as conference rooms which shall be provided at 1/4" equal 1'-0" scale or larger. All drawings shall be of the same size and with the same border lines and title blocks as the Architect's Drawings, with the AV Contractor's name added.

C. All drawing sets shall be prepared in AutoCAD, DWG format (Release 2010 or higher) or Microsoft Visio, with associated data in a systematic layered format. Shop drawings of any fixtures, apparatus or equipment that are not in accordance with the established specification requirements will be rejected for use in this installation and construction process.

D. Cabling Administration Drawings: Using label/identification scheme outlined in Contract Drawings, develop Cabling Administration Drawings for system identification, testing, and management. Cabling Administration Drawings shall feature a unique, alphanumeric designation for each cable outlet, faceplate and backbone cable pathway. Coordinate with requirements of Section 271500 "Communication Horizontal Cabling." At completion, Cabling Administration Drawings shall reflect the as-built conditions of all related AV systems.

E. Where applicable, dimensioned plans and elevation views of affected facility rooms shall be submitted, labeling each individual component with unique identifier(s).

F. System Labeling Schedules: Electronic copy of labeling schedules, in software and format selected by AV Contractor.

G. Layout Responsibility: Preparation of Shop Drawings is to be overseen by the AV Contractor's In-House Design Engineer and CTS Project Manager.

H. The AV Contractor shall be responsible for the coordination of audiovisual work with the work of all other trades and shall, in preparing the drawings, check the work of other trades in order to avoid possible installation conflicts arising from it. It shall be understood that the work shown on the construction drawings has been so coordinated. In the event of conflicts or interference that cannot be resolved in the field, the AV Contractor shall request a written clarification from the Architect.

I. The submitted "As-Built" drawings shall indicate the systems installations exactly as they were constructed onsite.

J. All drawings shall be developed in accordance with an approved schedule, to be prepared by the Contractor, and arranged to coincide with actual construction in such a manner as to allow the latter to proceed without delay.

K. If, in the opinion of the Architect, the drawings are considered acceptable in accuracy and detail after each has been finally revised and reviewed, the AV Contractor may submit same drawings as the "as-built" archival drawings.

3.5 QUALITY ASSURANCE

A. Carefully examine the contract documents, visit the site, and thoroughly become familiar with the local conditions relating to the work. Failure to do so will not relieve the contractor of the obligations of the Contract.

B. After all equipment, devices and raceways are installed and wires and cables are in place and connected to devices and equipment, test the system for defects. If a defective condition is present, make all necessary corrections and retest for compliance. Test systems for proper operation and demonstrate successful operation of the system to the Consultant.

C. Adherence to Construction Codes and Standards:

1. Materials and installation provided by the AV Contractor shall comply with codes, laws, and ordinances of all Federal, State, and local governing bodies having jurisdiction.
2. In case of differences between building codes, State and Federal laws, local ordinances, utility company regulations, and the original contract documents, the most stringent rules shall govern.
3. Should work be performed which does not comply with the requirements of the applicable building codes, State and Federal laws, local ordinances, industry standards, and utility company regulations, all related changes or modifications required to achieve compliance shall be performed by the AV Contractor at no additional cost to the Owner.
4. Secure and pay for all permits, governmental fees, taxes, and licenses necessary for the proper execution and completion of communications systems work.
5. Submit to governmental agencies and utility companies shop drawings, as required by these agencies, for their approval.
6. Notify the Architect of any materials or apparatus believed to be inadequate, unsuitable, in violation of laws, ordinances, rules, or regulations of authorities having jurisdiction.
7. Evaluate and test video subsystems using industry-standard test procedures and equipment for compliance with established performance-acceptance criteria:
 - a. All video cabling shall be shielded where noted in the above requirements. All video cabling shall be tested for continuity and short-circuits.
 - b. All playback devices shall be tested to ensure that all supported media display correctly over the displays.
 - c. All recording devices shall be tested to ensure that recording functions are correct.
 - d. All recorded video playback must be clean, with colors balanced, commensurate to the fidelity of the recording medium.
8. Evaluate and test all audio subsystems for compliance with established performance-acceptance criteria.
9. The AV Contractor shall ensure that switching audio sources does not cause popping, static, hum, or feedback.
10. The AV Contractor shall ensure that the sound is balanced between the speakers.
11. Sound volume shall be left at a neutral level at the time of systems turnover to the Owner. The Owner will be responsible for increasing/decreasing volume as needed.
12. The AV Contractor shall ensure that powering up devices shall not cause power bumps on the overhead speakers.

3.6 SYSTEM WARRANTY AND APPLICATION ASSURANCE

A. General Warranty: The warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be concurrent with other warranties provided by the Contractor under other requirements of the Contract Documents.

B. The AV Contractor shall guarantee at the time of the bid that all audiovisual equipment, that all cabling and components meet or exceed established specifications or performance-acceptance criteria.

3.7 MATERIALS AND EQUIPMENT

A. Materials and equipment shall be new, UL or CSA-labeled and shall bear the manufacturer's name, model number and other identification markings.

B. Materials and equipment shall be the standard product of a manufacturer regularly engaged in the production of the required type of material or equipment for at least five years (unless specifically exempted by the Architect) and shall be the manufacturer's latest design with published properties.

C. Source Limitations: Equipment and materials of the same general type shall be of the same manufacture throughout the project to provide uniform appearance, compatibility, operation and maintenance.

D. Equipment and materials provided by AV Contractor shall be without blemish or defect.

E. Where two or more makes or kinds of materials or equipment are specified, indicate which of these choices will be used. This information shall be included with the list of manufacturers for equipment and materials to be submitted to the Architect/Consultant as specified under "Submittals".

3.8 EQUIPMENT FURNISHED BY OTHERS

A. Where equipment is to be owner-furnished or provided by others, and that equipment requires audiovisual equipment and/or connections, the AV Contractor shall determine and coordinate any ancillary equipment and/or materials necessary to install the provided equipment.

B. The contractor furnishing the equipment shall erect, align, level and prepare the equipment for audiovisual work. Work performed under Division 26 provides for any raceway rough-ins to include conduit systems, connections and electrical accessories not furnished, but considered necessary to provide a fully operational and complete audiovisual system(s).

3.9 INSTRUCTION AND DEMONSTRATIONS

A. AV Contractor shall be responsible for training the Owner's personnel in audiovisual management operations, including resetting components, reloading control system source code, projector maintenance and manual operation and managing changes to documentation.

B. AV Contractor shall train Owner's users and trainers in daily operations of the audiovisual control panel and other systems

C. AV Contractor shall provide training materials for users as necessary to reference within the room

D. The primary adjustments of the system(s) shall be accomplished by the AV Contractor to the complete satisfaction of the Owner and Architect at the time of completion for the installation.

PART 4. WORK REQUIREMENTS AND SPECIFICATIONS

4.1 PHASE I - SCOPE OF WORK

Grambling State University in Grambling, Louisiana has requested a state-of-the-art audio/visual system to be installed within the campus 'Nursing Auditorium for support of general presentations, panel discussions, host lectures, and production-oriented events. have an intuitive interface for seamless operability. NOTE: Any and all required electrical service, millwork, etc. required at the installation site shall be the responsibility of others. The AV Contractor shall be responsible for providing, installing, and configuring new equipment to meet the requirements of the specified audio-visual system laid out in this document. The AV Contractor is responsible for providing and installing a completely functional system for the Owner.

NOTE: No equipment shall be substituted without the consent of the Architect, with concurrence from the Owner.

A. Video Wall Display System

The AV Contractor shall provide and install a one (1) 9.54ft wide x 5.3ft tall, 1.8mm direct-view LED video wall, with a 3.1:1 aspect ratio, or equivalent substitute, to be placed on the center of the front auditorium wall on the stage at the appropriate height to ensure visibility for the entire audience.

B. Video Wall Processor and Video Equipment

The AV Contractor shall provide and install one (1) Video Wall Processor/Splicer for full control of all the pixels, with support for multi-window, multi-layer video. The Video Wall Processor shall be able to take in up to four (4) presentation video sources and arrange them together into one large video space to be shown on the LED video wall display.

The AV Contractor shall provide and install a four (4) input 4K/60 Seamless Scaling Switcher, which will manage inputs from a wall-mounted HDMI source, a wireless HDMI extension system, and any Owner-Furnished PC to be located in the equipment rack area.

C. Control System Equipment

The AV Contractor shall provide and install the following Control System Equipment, or equivalent substitute, to provide control of all video and audio functionality from one (1) custom touch panel interface. The touch panel shall be located in the Control Booth.

Control functions programmed shall include Audio System Power, Video Source Selection, Video Windowing Layout, and Microphone and Presentation Volume Controls.

- One (1) Control Processor to be installed in the head end rack
- One (1) 7" Touch Screen with Wall Mount
- One (1) 24-Port Gigabit PoE+ Compliant AV Managed Network Switch

The AV Contractor shall provide custom programming for the following control functionality listed below:

- User Log in page with password protection
- Video Wall Standby Mode
- Video Content Routing to Video Wall
- Audio Content Routing to Speaker System
- Volume Control to Speaker System

The AV Contractor shall provide custom configuration of the touch screen controller layout and functionality to be approved by the client.

D. Audio System Equipment

The AV Contractor shall provide two (2) approved Two-Way Compact 8" Passive Speakers at the front of the stage, stage right and stage left, focused towards the audience, and two (2) approved Two-Way Compact 4" Passive Speakers at the front of the stage, focused towards the audience to cover the extreme edges of the listening area for smooth, even coverage.

The AV Contractor shall provide one (1) 2 x 1250Watt Professional Power Amplifier to power the Compact speakers.

The AV Contractor shall provide two (2) Bodypack Transmitters and two (2) Shure cardioid lavalier microphone elements, or equivalent substitutes, for hands-free presentations.

The AV Contractor shall provide two (2) Handheld Transmitters with Shure SM58 dynamic microphone elements, or equivalent substitutes, for general presentations.

The AV Contractor shall provide two (2) Wireless microphone receivers for the wireless transmitters.

The AV Contractor shall provide a (1) commercial-grade Audio Digital Signal Processor (DSP) with 12 mic/line-level inputs and 8 mic/line-level outputs. The audio processor shall be capable of performing 24-bit audio signal shaping, incorporate a 48KHz digital sampling rate, and perform audio signal routing during general presentations and meetings. The digital audio processors shall include RS-232 and Ethernet ports for connectivity with external control systems.

E. Equipment Rack

The AV Contractor shall provide one (1) 12-Space Wall-Mounted Equipment Rack to be installed in the Control Booth.

The AV Contractor shall provide one (1) Power Conditioner, 11 outlets, 15A, which will distribute and control power to various system equipment.

NOTE: The AV Contractor shall provide and install the necessary rack hardware for a clean and professional rack layout, including blank plates to fill unused spaces and lace bars for proper wire management. An unprofessional layout shall not be accepted by the Architect or the Owner.

The AV Contractor shall provide any machinery or hardware needed to mount Audio-Visual equipment at heights over 35 feet.

The AV Contractor shall provide and install all low-voltage cabling needed to facilitate the Audio-Visual System.

I. Approved AV Equipment

A list of AV equipment for use with this integration project has been provided below. For components listed by performance all products shall be submitted for prior approval and if approved, will be listed in an addendum as acceptable for inclusion in the bid. Any items not prior approved, will not be accepted. Substitute products may be accepted if their specifications are equal to or greater than those listed with the products listed herein. Any equipment substitutions must be approved by the Architect prior to acceptance of bids for this project. The list of recommended, or preferred equipment, for integration with this AV system shall include, but not be limited to, the following items:

Manufacturer or Component	Model/Part#	Description	Qty	Notes
KWav	ATX	9.45' x 5.31' P1.8mm Pitch LED Wall	1	
Shure	SLXD124+/85M	Digital Wireless Combo System with SM58® Handheld and WL185m Lavalier Microphones	2	
Novastar	VX400 Pro	Video Wall Processor	1	
RCF	Compact M 08	Passive 8" 2-way Compact Speaker (Blk)	2	
RCF	Compact M04	Passive 4" 2-way Compact Speaker (Blk)	2	
RCF	IPS 2.5K	Class H Power Amplifier 2 X 1,250 W @ 4 Ohm	1	

J. Standard Service & Maintenance Agreement

The AV Contractor shall provide a standard service agreement that guarantees a minimum of 90 days of installation warranty coverage after systems commissioning for all AV systems installed. This coverage applies only to the installation portion of the project; the manufacturer's warranties will apply to all products installed by the AV contractor, with the terms outlined within each manufacturer's warranty terms.

K. Extended Service & Maintenance Agreement

The AV Contractor will provide, as an option, an extended warranty as outlined below:

The AV Contractor shall provide ongoing systems support for a period of five (5) years after systems commissioning, for all installed AV systems installed which are included in these Contract Documents according to the terms below:

- The AV Contractor shall provide four-hour telephone response for system-related problems upon receipt of notification.
- The AV Contractor shall guarantee priority status over other customers for the resolution of system-related problems during the period of coverage.

- The AV Contractor shall provide unlimited on-site labor support for diagnostics or repair of system-related problems.
 - The AV Contractor shall provide next-day on-site labor services during normal business hours.
 - The AV Contractor shall provide an on-call field service engineer as needed to diagnose system-related problems during normal business hours.
 - The AV Contractor's technical staff shall perform software and firmware version upgrades, as they become necessary and are available from the manufacturer.
 - For the Video Wall Display and Video Windows Processor components, all labor parts, repair and replacement items shall be completely covered by the AV Contractor for the duration of the extended service agreement.
 - With the exception of the Video Wall Display and Video Windows Processor components, any equipment or parts not covered by the manufacturers 'warranties that fail during this period shall be charged at-cost plus 15% by the AV Contractor.
-
- The AV Contractor shall provide on-site preventive maintenance inspections annually. The preventive maintenance items that will be performed for systems that were installed by the AV Contractor as required in these Contract Documents shall be:
 - a. Coverage of the equipment listed in the service agreement
 - b. Diagnostics and performance acceptance checks on all equipment
 - c. Testing of all input sources, video and data, alignment, resolution, and convergence checks of display systems
 - d. Evaluation and diagnostics checks of inter-systems communications
 - e. On-site communication with designated representative for problem resolution.

The AV Contractor shall schedule maintenance by notifying a designated contact and arranging for room availability through that individual.

L. Items Specifically Not Covered

The AV Contractor shall not be responsible for any problems or malfunctions that have an origin determined not to be the result of a manufacturing defect or failure. Operator error, operator abuse, general misuse or neglect of equipment is not covered under the terms of the Extended Service & Maintenance Agreement.

Consumables, such as CRT's, lamps and batteries, etc. are defined as consumables and shall only be covered under the terms of the manufacturer's warranty. These items are only covered in case of manufacturer defect. All service calls and repairs performed to the equipment under the above circumstances shall be billed at current labor rates and may include a rush or emergency service charge.

END OF SECTION 271400



CONSULTING ENGINEERS

GSU Grambling Hall Renovation Addendum 1

5.11.26

Electrical:

1. Contractor to protect existing floor boxes on stage during construction. Contractor shall provide new in-use covers for existing floor boxes that have power and data sized for the box, and blank face plates for un-used floor boxes. Covers shall be sized so they cover the entire cut out of the stage floor.
2. All "F1" fixtures listed in the lighting schedule are voided. Fixture "F1" shall be a color changing fixture with DMX control equal to the following:
 - a. Lumenwerx model# VIA1.5RVDHLOFHQUADRO80CRI40K5WF4FT120VDMX1CBFDTLW
 - b. Starfire model# WC1L9G5X1DFC35048X
 All "F1" fixtures shall be connected to the same circuit as the "L1" cove fixture.
3. The following fixtures are approved as equals:

Mark:	Manufacturer:	Model #:
A1	Daybrite	2FPZ30L8404A12UNVDIMFMA24
A1	Tracelite	LPX24CP4LP24FMK
A1	LiteTronics	PT4S2540K PADMT4
A2	Daybrite	1FPZ30L8404A12UNVDIMFMA14FP
A2	Tracelite	LPX14CP4LP14FMK
A2	LiteTronics	PT1S2540K PADMT1
L1	Color Kinetics	123-000181-01/108-000028-01/ 108-000029-04/106-000004-00 (DMX control)
L1	Moda Light	MMCISSDMXRDM512RGB4*
L1	Acclaim	XTC221*LR
R1	Lightolier	M6RDL10(1000L)9CS(40K)WCLZ10U
R1	Halo	HCDJBS510(1000L)CS(40K)D HCD61TRH
R1	Speclight	SGRTE6FX15L40KDX/AR6223FXSGWFSO

R2	Lightolier	M6RDL25(1500L)9CS(40K)WCLZ10U
R2	Halo	HCDJBLS1525(1500L)CS(40K)D HCD61TRH
R2	Speclight	SGRTE6FX20L40KDX/AR6223FXSGWFSO
R3	Lightolier	M6RDL25(2000L)9CS(40K)WCLZ10U
R3	Halo	HCDJBLS1525(2000L)CS(40K)D HCD61TRH
R3	Speclight	SGRTE6FX30L40KDX/AR6223FXSGWFSO
R4	Lightolier	M6RDL40(3000L)9CS(40K)WCLZ10U
R4	Halo	HCDJBLS3040(3000L)CS(40K)D HCD61TRH
R4	Speclight	SGRTE6FX40L40KDX/AR6223FXSGWFSO
R5	Lightolier	M8RDL40(3000L)9CS(40K)WCLZ10U
R5	Halo	HCDJBLS3040(3000L)CS(40K)D HCD81TRH
R5	Speclight	SGRTE8FX40L40KDX/AR6223FXSGWFSO
R6	Lightolier	M8RDL25(1500L)9CS(40K)WCLZ10U
R6	Halo	HCDJBLS1525(1500L)CS(40K)D HCD81TRH
R6	Speclight	SGRTE8FX20L40KDX/AR6223FXSGWFSO
X	Chloride	CLXNRW
X	LightAlarms	QLXN500RNID

4. Wattstopper is approved as a manufacturer for lighting relay panel and occupancy sensors.
5. Contractor to field verify existing openings for can lights in lecture hall prior to ordering new light fixtures. If necessary, a different housing size may be selected to accommodate the existing opening and prevent additional ceiling work.
6. The use of MC cable is approved for the new lights in the existing ceiling.

GSU MANDATORY PRE-BID SIGN IN SHEET

Project: Grambling Hall Lecture Hall

PLEASE PROVIDE INFORMATION REQUESTED IN EACH SECTION

DATE AND TIME:		Thursday, April 30, 2026 at 11:00am	AM/PM	PLEASE PRINT LEGIBLY	Gen Cont	Sub Cont	LA CONTRACTOR LICENSE NO.	PHONE NUMBER & FAX NUMBER	EMAIL
PRINT NAME	Sign In Time	Sign Out Time	COMPANY NAME/ADDRESS	Gen Cont	Sub Cont	LA CONTRACTOR LICENSE NO.	PHONE NUMBER & FAX NUMBER	EMAIL	
Tyler Ragan	10:36	11:40	Triad	✓			318-372- 5725	tyler.e@triadustan.com	
Danny Jones	10:36	11:40	Triad	✓			318-255- 2341	danny@triadustan.com	
Joseph Gillettine	10:40	11:40	Thrash Construction	✓			318-453- 1030	estimating@thrashes.com	
Michael Barron	10:40	11:40	112 Apache drive Barron Services	✓			312-600- 7586	Barron Services DIO @ outlook.com	
Chris Ware	10:40	11:40	Trubine AV 6840 W 70th street Shreveport, LA				318-553- 5133	chris@trubineav.com	
Joe Prator	10:40	11:40	Trubine AV				318-553- 5133	Joe@trubineav.com	
Codell Kays II	10:45	11:40	Copeland		✓		318-297- 0651	codellk@copelandelectric.com	
Rena Garcia	10:47	11:40	Barron Services	✓			682-704- 8865	rena@1282garcia7@gmail.com	
Alan Blakeney	11:19		65A JV				318-547- 7390	blakeney@gram.edu	