

#### ADDENDUM

ADDENDUM No. 3 GMCa JOB #: 202113 TDH

ISSUE DATE: 04.22.24 SBC #: 364/011-05-2021

PROJECT: Tennessee Tech University 1 William L. Jones Drive

Derryberry Hall – Building Upgrades – Phase I Cookeville, TN 38505

OWNER: Tennessee Tech University 1 Bridgestone Park, 3<sup>rd</sup> Floor

Nashville, TN 37214

ARCHITECT: Gilbert McLaughlin Casella architects 2305 Kline Ave, Suite 200

Nashville, TN 37211

The original Contract Documents dated 03.08.24, and related addenda for the above-mentioned project are hereby amended. The work reflected in this addendum is to be incorporated into the proposed Contract Sum and Time as if originally issued.

## This addendum consists of this 4 page summary outline and the following attachments (119 total pages):

- Project Manual: Section 028233 Removal & Disposal of Asbestos-Containing Materials (22 pages)
- Project Manual: Section 028333 Stabilization/Minor Demolition & Waste Disposal of Lead Containing Surfaces (14 pages)
- Project Manual: Section 028400 Work with Other Hazardous Materials (7 pages)
- Project Manual: APPENDIX Limited Hazardous Material Survey Report (62 pages)
- Drawing INDEX (30"x42" format, 1 sheet)
- Drawing A0.1b Life Safety Egress Diagrams (30"x42" format, 1 sheet)
- Drawing AD1.2 Levels 3 & 4 Enlarged Demolition Plans (30"x42" format, 1 sheet)
- Drawing E2.2 Electrical Lighting Plan Level 2 (30"x42" format, 1 sheet)
- Drawing E2.3 Electrical Lighting Plan Level 3 (30"x42" format, 1 sheet)
- Drawing E3.2 Electrical Power & Systems Plan Level 2 (30"x42" format, 1 sheet)
- Drawing E3.3 Electrical Power & Systems Plan Level 3 (30"x42" format, 1 sheet)
- Drawing ID1.0 Interior Finish Listing and Notes (30"x42" format, 1 sheet)
- Drawing ID1.1 Interior Finish Plan and Schedule-Level 1 & Level 2 (30"x42" format, 1 sheet)
- Drawing ID1.2 Interior Finish Plan and Schedule-Level 3 & Level 4 (30"x42" format, 1 sheet)

#### The Addendum is organized into the following three parts:

PART I: CLARIFICATIONS

PART II: PROJECT MANUAL REVISION SUMMARY

PART III: DRAWING REVISION SUMMARY



#### PART I – CLARIFICATIONS:

- 1) The following are responses to questions provided by bidders:
  - a) Question: Note 1 on A0.1 states "Structural Wood Post in this area supporting wood roof ridge beam above may need to be adjusted to allow for mech. Unit access or mech unit door operations. Coord. Any potential structural adjustments with the architect & structural engineer before making any structural field modifications". Since this is an unknown at this time, would the necessary structural modifications be a change order item?
  - b) Response: Yes, if modifications are required this will be handled in a change order. The existing post may interfere with the new mech. units access doors. If there is a conflict, an existing post may need to be moved or a new post may need to be added (along the beam support line). It's impossible to know the exact location of the access doors on the mech. unit until the specific unit is submitted.
  - c) Question: There are notes on the plans that require repair of acoustical plaster and other plaster surfaces on the walls and ceilings of the auditorium. Is the intent for these areas to be repaired with plaster, or will a sheetrock patch be accepted?
  - d) Response: Yes, at exposed plaster walls/ceilings you may repair the plaster with sheetrock as long as the exposed surfaces blend seamlessly with the adjacent existing plaster finish surfaces. Repairs at existing plaster ceilings concealed by ACT ceilings will still need to be patched, but the surfaces may remain rough and unfinished.
  - e) Question: Concerning section 098410, will there be an aluminum frame required for this product?
  - f) Response: There is no exposed perimeter aluminum frame trim. The fabric is just wrapped around the sides. There may however be a metal framing support system attachment at the backside of the panels for suspension per the manufacturer's standard required accessories.
  - g) Question: Concerning the mechanical equipment lead time. The submittals will take 3 weeks from the vendor, allowing the design team 2 weeks to review the submittal, there is a 34-week lead time after approved submittals, mechanical install time to be approximately 4 weeks, inspections and punch list 3 weeks. This is a total of 46 weeks or 322 days. The project has a contract time of 240 days.
  - h) Response: Base your bid on the original 240 day duration. The Owner will work with the awarded bidder later to adjust the contract time to accommodate the mechanical equipment lead time with a Change Order.

#### PART II - PROJECT MANUAL - REVISION SUMMARY:

- 1) 000000 Table of Contents
  - a) Revise "098410 Sound Absorbing Ceilings" to be "098533 Sound Absorbing Ceiling Units". The actual section in the manual is titled and numbered correctly as "Sound Absorbing Ceiling Units 098533"
  - b) Add Section "028233 Removal & Disposal of Asbestos-Containing Materials"
  - c) Add Section "028333 Stabilization/Minor Demolition & Waste Disposal of Lead Containing Surfaces'
  - d) Add Section "028400 Work with Other Hazardous Materials"
  - e) Under APPENDICES revise "Appendix Limited Asbestos Survey Report" to be "Appendix Limited Hazardous Material Survey Report"

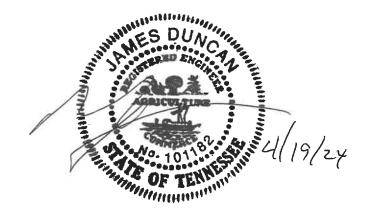
- 2) 001116 Invitation to Bid
  - a) Under "Bids Received At:" Change the **Bid Date** from April 24, 2024 to **May 1, 2024**. The time and location are the same.
  - b) This date is being changed again to provide additional time for the bidders to review the asbestos report and related project manual sections (issued in this addendum) before the bid date.
- 3) 028233 Removal & Disposal of Asbestos-Containing Materials
  - a) Insert this new section.
- 4) 028333 Stabilization/Minor Demolition & Waste Disposal of Lead Containing Surfaces
  - a) Insert this new section.
- 5) 028400 Work with Other Hazardous Materials
  - a) Insert this new section.
- 6) APPENDIX Limited Hazardous Material Survey Report
  - a) Omit the current Limited Asbestos Survey Report (survey date 02-04-2005, report date 10-29-2021)
  - b) Insert the attached Limited Hazardous Material Survey Report (dated 04-18-2024)

#### PART III - DRAWING - REVISION SUMMARY:

- 1) INDEX
  - a) Sheet Index:
    - i) Per SFM's Comments: Index was re-organized to show revisions tracking information.
    - ii) Per SFM's Comments: Sheet A1.0b-Life Safety Egress Diagram added to index (new sheet)
    - iii) Per SFM's Comments: Sheet M4.2-Mechanical Controls added to index (this sheet was originally included in the set but was just missing from the Index Sheet list)
    - iv) Under the "Owner/GC Coordination Items", a note was added clarifying the low voltage pathways for theatrical A/V/Lighting items.
    - v) A general lift equipment limit was added.
- 2) A0.1b Life Safety Egress Diagrams (sheet added)
  - a) Per SFM's Comments: Egress diagrams added
- 3) AD1.2 Levels 3 & 4 Enlarged Demolition Plans
  - a) Per SFM's Comments: 4 detail marker references corrected
- 4) E2.2 Electrical Lighting Plan Level 2
  - a) Per SFM Comments: Added General Note E to call out required duration of emergency power systems.
  - b) Updated Keyed Note 7 to call out Lutron Entry Station switch specifications.
  - c) Added Keyed Note 16, 17, & 18 for clarification regarding lighting control system.
  - d) Indicated which control location serves each circuit as follows:
    - i) A. serves Normal Branch lighting fixtures.
    - ii) B. serves Emergency Branch lighting fixtures.
    - iii) C. serves D6R-DMX fixtures.
  - e) Added General Note F regarding conduit routing and pull-wire.

- 5) E2.3 Electrical Lighting Plan Level 3
  - a) Per SFM Comments: Added General Note E to call out required duration of emergency power systems.
  - b) Updated Keyed Note 6 to call out Lutron Entry Station switch specifications.
  - c) Provided D6R-DMX fixtures with dedicated circuit with keyed note 10.
  - d) Indicated which control location serves each circuit as follows:
    - A. serves Normal Branch lighting fixtures.
    - ii) B. serves Emergency Branch lighting fixtures.
    - iii) C. serves D6R-DMX fixtures.
  - e) Added General Note F regarding conduit routing and pull-wire.
- 6) E3.2 Electrical Power & Systems Plan Level 2
  - a) Per SFM Comments: Provided Fire Alarm Pull Stations at Auditorium-242 door into Stair-283 and Vestibule-252A door into Stair-252
  - b) Per SFM Comments: Added decibel ratings to all audible notification devices and candela ratings to all visible notification devices.
  - c) Updated General Note E to call out pull-wire and conduit routing.
- 7) E3.3 Electrical Power & Systems Plan Level 3
  - a) Per SFM Comments: Added General Note E to call out required duration of emergency power systems.
  - b) Per SFM Comments: Added decibel ratings to all audible notification devices and candela ratings to all visible notification devices.
  - c) Updated General Note E to call out pull-wire and conduit routing.
- 8) ID1.0 Interior Finish Listing and Notes
  - a) Per SFM's Comments: Signed stamp added to titleblock.
- 9) ID1.1 Interior Finish Plan and Schedule-Level 1 & Level 2
  - a) Per SFM's Comments: Signed stamp added to titleblock.
- 10) ID1.2 Interior Finish Plan and Schedule-Level 3 & Level 4
  - a) Per SFM's Comments: Signed stamp added to titleblock.

-End of Addendum Summary Outline-



# SECTION 02 82 33 REMOVAL AND DISPOSAL OF ASBESTOS-CONTAINING MATERIALS

PART 1: GENERAL

## 1.1 WORK INCLUDED

- A. Furnishing of and paying for all labor, services, appliances, materials, equipment, insurance, permits, patents and decontamination facilities necessary to carry out the removal and disposal of the asbestos-containing materials (ACMs) that will be impacted by the "Derryberry Hall Building Upgrades Phase I" project on the campus of Tennessee Technological University in Cookeville, Tennessee. The ACMs scheduled for removal and estimated quantities are indicated below. Also indicated below is whether the material is to be considered friable or non-friable for disposal purposes (see subparagraph 1.4). Locations of ACMs scheduled for removal are indicated on Drawings AS-1 thru AS-4, developed by Gilbert McLaughlin Casella and modified by Terracon.
  - Category I Non-Friable Materials.
    - a. Black mastic beneath carpet, approximately 1,400 square feet;
    - b. 9" vinyl floor tile and associated black mastic, approximately 400 ft²

       (a portion of the vinyl floor tile and mastic is located beneath carpet);
  - 2. Category II Non-Friable Materials.
    - Filler material beneath paint on concrete block walls, approximately 600 square feet of wall (approximately 1,200 square feet of surface including both sides of wall)
    - b. Interior window glazing, 1 large window unit (approximately 200 square feet).
  - Friable Materials.
    - a. Textured plaster ceiling, approximately 350 square feet;
    - Fire door insulation, up to 19 doors (assumed asbestos-containing).

B. The drawings at the end of this section are to be used to aid the asbestos abatement contractor in bidding the project. The asbestos abatement contractor shall be responsible for verifying ACM locations and quantities by performing a thorough site inspection prior to bid submittal. The Owner and its representatives will not be held responsible for additional work caused by the asbestos abatement contractor not performing a thorough site inspection.

#### 1.2 COORDINATION

A. The Contractor shall ensure that the asbestos removal work, described within this section, is completed prior to the performance of any other work of this contract that will disturb or potentially disturb asbestos-containing or contaminated materials.

#### 1.3 DEFINITIONS

ACM Asbestos-Containing Material.

Adequately Wet A term as defined in CFR 40 Part 61, Subpart M and EPA 340/1-

90-019 that means to sufficiently mix or penetrate with liquid to prevent the release of particulate. If visible emissions are observed coming from ACM, then that material has not been adequately wetted. However, the absence of visible emissions is

not sufficient evidence of being adequately wetted.

Amended Water Water Treated with a Wetting Agent.

Buildings Derryberry Hall

Tennessee Technological University

Cookeville, Tennessee

Category I A term as defined in CFR 40 Part 61, Subpart M and EPA

Non-Friable ACM 340/1-90-018 that means asbestos-containing packing, gaskets,

resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in CFR 40 Part 763, Appendix A, Subpart F, Section 1, Polarized

Light Microscopy.

Category II A term as defined in CFR 40 Part 61, Subpart M and EPA

Non-Friable ACM 340/1-90-018 that means any non-friable materials other than

Category I non-friable materials.

Contractor Asbestos Abatement Contractor.

Controlled Areas that are restricted to persons directly associated with

Areas the work of this section. These areas are identified by signs and/or

opaque polyethylene barriers (if applicable).

Critical Barrier A double layer sheet of polyethylene (6-mil minimum) used to

separate the controlled area from other portions of the building and

outside of the building.

Asbestos Abatement Terracon Consultants, Inc.

Designer 1922 Old Murfreesboro Pike, Suite 905

Nashville, Tennessee 37217

(615) 333-6444

EL Excursion Limit. The OSHA, 30 min. allowable exposure of 1.0

fiber/cc of air.

Friable ACMs A term as defined in CFR 40 Part 61, Subpart M and EPA

340/1-90-018 that means any material containing more than 1 percent asbestos, that when dry, can be crumbled, pulverized, or

reduced to powder by hand pressure.

HEPA High Efficiency Particulate Air (99.97 percent minimum efficiency).

Micron One millionth of a meter (39.37 inches).

NIOSH National Institute for Occupational Safety and Health.

OSHA Occupational Safety and Health Administration.

PEL Permissible Exposure Limit. The OSHA, 8-hour time weighted

average (TWA) allowable exposure. For asbestos exposure, 0.1

fibers per cubic centimeter (f/cc) of air.

Standard For 0.01 fibers per cubic centimeter of air (f/cc) for asbestos under

Air Clearance An aggressive environment (interior samples) and under a

non-aggressive environment (exterior samples). The interior samples will be collected using stationary pumps. The exterior samples will be collected using personnel air pumps placed on

asbestos removal workers.

Time-Weighted Average (TWA)

The TWA is an 8-hour time weighted average of airborne concentration of fibers (longer than 5 micrometers) per cubic centimeter of air which represents the employee's 8-hour workday as determined by Appendix A of CFR 29 Part 1926, Section 1926.1101.

USEPA

United States Environmental Protection Agency.

#### 1.4 DISPOSAL SITES

A. Friable ACMs and associated debris must be disposed at an asbestos approved sanitary landfill. Non-friable materials must be disposed at either an asbestos approved sanitary landfill or at a landfill that has been properly notified that non-friable ACMs and associated debris are being disposed. The Contractor selected for the work must make appropriate arrangements for disposal based on the notification requirements listed in subparagraph 1.7. The Contractor must also submit to the Owner documentation stating the location of the disposed ACM in the landfill (degrees and minutes or sketch).

#### 1.5 QUALITY ASSURANCE

A. All asbestos removal and related work shall be accomplished by a Contractor (or subcontractor) specializing in, and having a record of, not less than two (2) years successful experience in asbestos removal and related work. The Contractor's superintendent shall have not less than one year of full-time experience in responsible charge of asbestos removal operations within the 24-month period proceeding the start of this project. The training of the superintendent shall be in compliance with current EPA regulations. The Contractor, supervisors, and workers shall be accredited in Tennessee, as is required under Tennessee Rule 1200-1-20, Asbestos Accreditation Requirements.

# 1.6 REGULATORY REQUIREMENTS

- A. All work shall be in strict compliance with the current issues of federal, state and local regulations, codes and standards as listed below:
  - U.S. Environmental Protection Agency (EPA) Standards for Asbestos (Code of Federal Regulations Title 40, Part 61, Sub-Part M);
  - 2. U.S. Environmental Protection Agency (EPA) National Emissions Standards for Hazardous Air Pollutants (NESHAPS);

- 3. U.S. Department of Labor Occupational Safety and Health Administration (OSHA) Asbestos Standards (Code of Federal Regulations Title 29, Part 1926, Section 1926.1101);
- 4. Title 29, Code of Federal Regulations, Section 1910.1001. Occupational Safety and Health Administration (OSHA), U.S. Department of Labor;
- 5. Title 29, Code of Federal Regulations, Section 1910.134. Occupational Safety and Health Administration Respiratory Protection Standards;
- 6. Section 6, Toxic Substance Control Act (TSCA);
- 7. Title 29, Code of Federal Regulations, Part 1926, Occupational Safety and Health Administration Construction Standards;
- 8. Hazard Communication Standard Title 29, Code of Federal Regulations, Part 1910, Section 1200;
- 9. Specifications for Accident Prevention, Signs and Tags Title 29, the Code of Federal Regulations, Part 1910, Section 145;
- U.S. Department of Transportation (DOT), included, but not limited to: Hazardous Substance - Title 49, Codes of Federal Regulations, Part 171 and 172;
- 11. All attachments, memorandums and information sheets submitted by Federal, State and Local agencies;
- 12. All State, County, and City codes and ordinances as applicable. Provide one copy of EPA, OSHA, State, and City Regulations governing the work available for review at the site.

# 1.7 SUBMITTALS

#### A. Pre-Job Submittals

1. Submit notice of impending commencement of demolition, electronically or in writing to the following agency:

State of Tennessee Department of Environment and Conservation Division of Air Pollution Control

Nashville Environmental Field Office

711 R.S. Gass Boulevard

Nashville, Tennessee 37216

Asbestos.NESHAP.Program@tn.gov

Comply with the applicable notice procedures set forth in EPA 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants; Asbestos NESHAP Revision; Final Rule dated November 20, 1990. Include one copy of the notifications in the submittal package along with a Certified Mail Receipt (or equivalent) indicating the delivery of Notification to aforementioned agencies. If the time from signing of the Contract to the scheduled start of work is less than the applicable notice period, seek a

- waiver of the notice period. Without written approval from all of said agencies, do not shorten the applicable notice period.
- 2. All required permits, site location, and arrangements for transport and disposal of asbestos-containing or contaminated materials. Submit certification that the landfill site to be used meets all Environmental Protection Agency regulatory standards.
- 3. Written description, sketch or combination thereof, of the plans for construction of a worker decontamination enclosure system and for isolation of the Controlled Areas in compliance with the Contract Documents.
- 4. Information regarding the Contractor's Workforce for this project:
  - a. Superintendent:
    - 1) Supervisor(s) name;
    - Proof of experience in like projects to meet criteria of subparagraph 1.5;
    - 3) EPA & State of Tennessee Certifications to perform work under this section:
    - Medical documentation certifying that the individual is able to wear respiratory protection as indicated in subparagraph 1.12; and
    - 5) Respirator fit test (within previous year) for each type of respiratory protection intended for this project.

## b. Workers:

- 1) Workers' Name;
- 2) EPA & State of Tennessee Certifications to perform work under this section;
- Medical documentation certifying that the individual is able to wear respiratory protection as indicated in subparagraph 1.12; and
- 4) Respirator fit test (within previous year) for each type of respiratory protection intended for this project.

**Note:** After the project has begun, if previously unregistered employees perform work at the site, submit the above information for those employees prior to entry at the project.

- 5. Product data and Material Safety Data sheets for any materials to be used.
- 6. Name, address and telephone number of the air monitoring firm contracted to perform the Contractor's personal and area air monitoring as referenced in subparagraph 3.5.

#### B. Post-Job Submittals

1. Asbestos waste log showing date, type of container removed from Controlled Area, signature of recorder and time of day.

- A copy of the asbestos removal Sign In/Out Log showing the following: date, name, last four digits of social security number, entering and leaving time, company or agency represented and reason for entry for all persons entering the Controlled Areas.
- 3. A copy of ACM removal area and employee air monitoring results relative to subparagraph 3.5 of this section and to Occupational Health and Safety Administration respiratory protection level compliance.

#### 1.8 DELIVERY AND STORAGE

- A. Deliver materials in the original packages, containers, or bundles bearing the name of the manufacturer and the brand name.
- B. Store material subject to damage off the ground, away from wet or damp surfaces, and under cover sufficient to prevent damage or contamination.
- C. Remove from the premises all damaged or deteriorating materials. Dispose of materials that become contaminated with asbestos in accordance with applicable regulatory standards.

#### 1.9 GENERAL PROTECTION OF PERSONS

- A. Prior to commencement of work all workers shall be instructed and shall be knowledgeable in appropriate procedures of personnel protection during asbestos removal.
- B. Contractor shall be solely responsible for enforcing worker protection requirements.
- C. Contractor shall provide workers with personally issued and marked respiratory equipment approved by NIOSH and meeting specifications of OSHA. This respiratory equipment shall be suitable for the asbestos exposure level in the controlled area according to OSHA Standard 29 CFR 1926.1101 as identified by the Designer and/or as more stringently specified otherwise in these specifications. Provide disposable HEPA filters as required, with sufficient filters for replacement.
- D. Contractor shall provide workers, Designer and authorized visitors with sets of protective disposable clothing, head covers, gloves, eye protection and foot covers of sizes to properly fit individual workers and visitors whenever they are required to enter the controlled area. Provide a minimum of four sets per day for visitors and sufficient sets as required for workers and Designer.

- E. Reporting Unusual Events: When an event of unusual and significant nature occurs at the site, prepare and submit a special report listing chain of events, persons participating, response and similar pertinent information. When such events are known or predictable in advance, advise Designer in advance, at earliest possible date.
- F. Reporting Accidents: Prepare and submit reports of significant accidents, at site and anywhere else work is in progress. For this purpose, a significant accident is defined to include events where personal injury is sustained, or property loss of substance is sustained.
- G. Post telephone numbers and locations of emergency services including, but not limited to, fire, ambulance and police at the entrance to the decontamination unit.

# 1.10 SIGN IN/OUT LOG

- A. Contractor shall maintain a sign in/out log in the immediate vicinity of the change room of any decontamination area. Log shall be maintained from the time the first activity is performed involving the disturbance of ACMs until acceptance of the final air test results. All persons entering the controlled area, including the Contractor's workers, Designers, Owner and Government Officials shall be required to sign in and out each time upon entering and leaving the controlled area. All persons shall indicate name, time, company or agency represented and reason for entering the containment area.
- B. Except for Governmental Inspectors having jurisdiction, no visitors shall be allowed in any controlled area, except as authorized by the Owner or his representative.

# 1.11 SAFETY AND PROTECTION, OSHA COMPLIANCE

A. The Contractor warrants that he is familiar with the codes and requirements applicable to asbestos removal and/or disturbance work and shall give all notices and comply with all laws, ordinances, rules and regulations applicable to the work. If the Contractor observes that the specifications or plans are at variance therewith, he shall give written notice to the Designer describing such variance. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, and without written notice to the Designer, he shall bear all costs arising therefrom. The Contractor's particular attention is directed to the "Safety and Health Regulations for Construction" and subsequent amendments promulgated by the Department of Labor identified as Chapter XVII of Title 29, Code of Federal Regulations (CFR), Part 1926 and the necessity of complying with the regulations in the progress of his work. Failure or omission on the part of the

Owner, Designer or any of their representatives either to discover or to bring to the attention of the Contractor shall not be used as defense for failure on his part to fulfill such requirements.

#### 1.12 SPECIFIC PROTECTION OF WORKERS

A. Respirators shall be selected and used in accordance with manufacturers recommendations, and shall be approved by National Institute for Occupational Safety and Health (NIOSH) for use in environments containing airborne asbestos fibers. Personnel who handle ACM, enter asbestos regulated controlled area that require the wearing of a respirator, or who are otherwise carrying out abatement activities that require the wearing of a respirator, shall be provided with approved respirators that are fully protective of the worker at the measured or anticipated airborne asbestos concentration level to be encountered. Respiratory protection shall comply with the CFR 29 Part 1926, and CFR 29 Part 1910.

# B. In **All** Removal Areas

- Workers shall always wear a respirator properly fitted on the face while in the removal areas. Workers wearing tight-fitting face pieces shall be cleanshaven to the extent that the hair does not interfere with the sealing surface of the respirator. This must be documented by a standard respirator fit test.
- 2. The Contractor shall instruct and train workers in proper respirator use.
- 3. Workers shall wear disposable, full-body cover-alls and disposable head covers and footwear suitable for asbestos work in the removal areas.
- 4. Workers shall not eat, drink, smoke, chew gum, tobacco, or apply cosmetics in the removal areas.
- The Contractor shall provide a fit tested respirator and disposable cover-alls, head cover, and footwear to any official representative of the Owner or Designer who inspects the project.
- 6. All persons entering the removal areas shall wear an approved respirator and disposable cover-alls, head cover and footwear.
- 7. The Contractor shall instruct and train workers in the nature of asbestos and the hazards related to asbestos exposure during removal and/or disturbance work.
- 8. The Contractor shall set up a decontamination unit consisting of a change room, shower and equipment room, enclosed and separated by triple-flap polyethylene air locks, connected to the controlled areas. All workers, without exception, shall:

- a. Remove and properly store street clothes in the change room and put on new disposable cover-alls, head covers, footwear and cleaned respirators before entering the controlled area.
- b. Upon leaving the controlled area, remove the disposable cover-alls, head covers and footwear in the equipment room and dispose of them in an appropriate waste container. Still wearing their respirators, workers shall proceed to the shower and remove their respirators while showering with soap and tempered water. Wetted HEPA respirator cartridges shall be disposed in appropriate containers.
- c. This procedure shall be followed each time a worker enters or leaves the controlled area.

# PART 2: PRODUCTS

#### 2.1 MATERIAL

- A. 6-mil fire-retardant polyethylene sheets in sizes to minimize the frequency of joints.
- B. Tape: Glass fiber or other type capable of sealing joints of adjacent plastic sheets and for attachment of plastic sheet to finished or unfinished surfaces of dissimilar materials under both dry and wet conditions.
- C. Surfactant (Wetting Agent) and Sealants: Shall consist of materials which are non-toxic and non-irritating to skin and eyes, and non-carcinogenic.
- D. Impermeable Containers: Air and water-tight, suitable to receive and retain any asbestos-containing or contaminated materials until disposal at an approved site, and labeled in accordance with OSHA Regulation 29 CFR 1910.1001 and 29 CFR 1926.1101, as well as EPA regulation 40 CFR Part 61, 29 CFR 1910.145, and 49 CFR 172, 173, 178 and 179. Three types of impermeable containers shall be used:
  - 1. Six mil plastic bags sized to fit within the drum;
  - 2. Metal or fiber drums with tightly fitting lids; and
  - 3. 6-mil polyethylene sheets.
- E. Warning Labels and Signs: In conformance with OSHA regulation 29 CFR 1926.1101 (asbestos), DOT regulation Title 49, Part 171 and 172 of the Codes of Federal Regulations, and EPA regulation Title 40, Part 61, Sub-Part M.

- F. High Efficiency Purifying Air (HEPA) Vacuums: For cleaning residual dust at the area of removal.
- G. Scaffolding: Provide all scaffolding, ladders and/or staging, etc., as necessary to accomplish the work of this contract. Scaffolding may be suspension type; or standing type such as metal tube and coupler, tubular welded frame, pole or outrigger type or cantilever type. The type, erection and use of all scaffolding shall comply with all applicable OSHA provisions.
- H. Other Materials: Provide all other materials, such as lumber, nails, and hardware, which may be required to construct and dismantle the decontamination area and the barriers that isolate the controlled area. Mastic removal solvents shall be low odor and compatible with adhesives for new flooring systems, if applicable.

# PART 3: EXECUTION

# 3.1 CONTROLLED AREA CATEGORIES

- A. The following three (3) categories of Controlled Areas may exist during the execution of this contract. The categories and the asbestos-containing materials that may be removed under each category are as follows.
  - 1. Mini-Enclosure and/or Full Containment:
    - a. Textured plaster ceiling; and
    - b. Filler material beneath paint on concrete block walls.
  - Partial Containment
    - a. 9" vinyl floor tile and associated mastic; and
    - b. Black mastic beneath carpet.
  - 3. Limited Containment
    - a. Interior window glazing (component removal); and
    - b. Fire door insulation (component removal).

# 3.2 CONTROLLED AREA PREPARATION (MINIMUM REQUIREMENTS)

- A. In the All Interior Controlled Areas, the Contractor shall:
  - Ensure that all ventilating systems or any other system bringing air into or out of the controlled areas is disabled. Disable systems by disconnecting wires, removing circuit breakers, lockable switches or other positive means that will prevent accidental restarting of the equipment.
  - 2. Lockout power to circuits running through the controlled areas by switching off all breakers or removing fuses serving these circuits. Label breakers

with tape over breaker with notation, "DANGER circuits being worked on." Lock panel and have all keys under control of Contractor's superintendent. If circuits cannot be shut down for any reason, label at intervals 4-feet 0-inches on center with tags reading, "DANGER live electric circuit. Electrocution Hazard." Label circuits that are in hidden locations but which may be affected by the work in a similar manner.

3. Isolate the controlled areas to prevent entry by unauthorized personnel into the area by placing opaque polyethylene barriers at each entrance to the area and by providing warning signs at each locked door leading into the controlled area. The signs shall be 1'-2" X 1'-8" in dimension, and shall read as follows:

# DANGER ASBESTOS

# CANCER AND LUNG DISEASE HAZARD RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

The graphic symbol for "No Admittance," which depicts a circled open hand, shall be attached near the "Danger" command on this sign.

- 4. Construct any and all necessary, temporary walls to completely isolate the area of asbestos disturbance.
- 5. Seal all openings (doors, windows, etc.) with a 6-mil (minimum) polyethylene containment barrier to prevent leakage of air into the outside environment or other portions of the building.
- 6. Pre-clean all surfaces and immovable objects, such as mechanical and electrical equipment, within any proposed controlled areas, using HEPA vacuum equipment and/or wet cleaning methods as appropriate.
- 7. The Contractor shall establish emergency exits and procedures for the controlled areas, satisfactory to fire officials.
- 8. Do not cover stairs or ramps with unsecured sheet plastic. Where stairs or ramps are covered with plastic, provide 3/4-inch exterior grade plywood treads securely held in place, over plastic. Do not cover rungs or rails with any type of protective materials.
- 9. Provide sufficient HEPA air filtration units to maintain airflow of at least four complete air changes per hour in the removal area.
- 10. Ensure that barriers and plastic enclosures remain effectively sealed and taped. Inadvertent tears in plastic shall be repaired with fiber tape and the tear covered by plastic applied with spray adhesive, overlapping the tear by six inches on all sides.
- 11. The Contractor shall set up a decontamination facility connected to the controlled area as indicated in subparagraph 1.12.B.8. Water from the shower shall be filtered with an acceptable asbestos filtering system prior to discharge to the sewer.

B. In the Full Containment and Mini-Enclosure Controlled Areas, the Contractor shall (Minimum Requirements):

# 1. Filler Material Beneath Paint on Concrete Block Wall and Textured Plaster Ceiling Material:

- a. Cover all walls (that will not be impacted) in the controlled areas, including "Critical Barrier" sheet plastic barriers, with a minimum of one (1) layer of polyethylene sheeting, at least 6-mil in thickness, mechanically supported and sealed with duct tape. Tape all joints including the joints joining with the floor covering with duct or fiber tape. Note: In wall demolition locations, areas on both sides of the wall shall be contained.
- b. Cover the floor of the controlled areas with a minimum of two (2) individual layers of clear polyethylene sheeting, each at least 6-mil in thickness, turned up walls at least 12 inches. Form a sharp right-angle bend at junction of floor and wall so that there is no radius which could be stepped on causing the wall attachment to be pulled loose. Both spray-glue and duct tape all seams in floor covering. Locate seams in top layer six (6) feet from, or at right angles to, seams in bottom layer. Install sheeting so that top layer can be removed independently of bottom layer.
- c. In locations where ACM wall and ceiling removal under full containment is conducted and vinyl floor tile and associated mastic are to be abated, the Contractor shall abate the materials requiring full containment first, clean up the debris, and request a visual clearance from the Designer. If the location is visually cleared, the Contractor may remove the floor polyethylene barrier and begin vinyl floor tile and mastic abatement activities.

**Note:** It will be acceptable to utilize a mini-enclosure system for the abatement of the ACM filler material beneath paint on concrete block walls and textured plaster ceiling material. The mini-enclosure shall comply with the requirements of the full containment. Temporary walls shall be constructed as necessary to enclose the controlled area and shall be constructed with wood studs or Polyvinyl Chloride (PVC) pipes with polyethylene sheeting. Mini-enclosures must be large enough for 2 workers.

C. In the Partial Containment Controlled Areas, the Contractor shall (Minimum Requirements):

- 9" Vinyl Floor Tile and Associated Mastic and Black Mastic Beneath Carpet (where ACM removal under full containment is not performed): Cover the walls in the Controlled Area, including "Critical Barrier" sheet plastic barriers, with a minimum of one (1) layer of polyethylene sheeting, at least 6-mil in thickness, mechanically supported and sealed with duct tape. The wall polyethylene shall extend from floor level, up the wall a minimum of four (4) feet. Tape all joints and seams with duct or fiber tape.
- D. In the Limited Containment Controlled Areas, the Contractor shall (Minimum Requirements):
  - 1. **Interior Window Glazing and Fire Door Insulation:** Place a minimum of one (1) layer of 6-mil polyethylene sheeting (drop cloth) beneath material to be abated. The sheeting shall extend a minimum of five (5) feet in all directions, where possible.

#### 3.3 ACM REMOVAL

A. In Full Containment Controlled Areas, the Contractor shall (Minimum Requirements):

# 1. Filler Material Beneath Paint on Concrete Block Walls:

- a. Because the wall is to be demolished, the contractor has 2 abatement options:
  - Spray the wall surface with a sealant encapsulant. Demolish the wall with the filler in place. After demolition, place the wall debris into a 6-mil bag with asbestos "Danger" labels on the outside surface, and seal the bag opening with tape. Wet clean the remaining surfaces of the room to remove any residual dust and debris.
  - Spray the wall surface with an amended water, continually wetting through the abetment process. Carefully remove the filler from the block using hand tools (knives, scrappers, chisels, grinders, etc.). Provide HEPA vacuum in the immediate area of the removal for immediate clean-up of any residual debris. Upon removal, immediately place the abated materials into a 6-mil bag with asbestos "Danger" labels on the outside surface and seal the bag opening with duct tape. After removal of the filler material, the surface

shall be wet cleaned to remove residual accumulated material. After wet cleaning, surface shall appear free of visible filler material.

**Note:** The abatement contractor shall coordinate with the General Contractor to install fixtures, penetrations and other miscellaneous items to concrete block walls with asbestos-containing filler material. The abatement contractor will either install the items for the General Contractor or prepare the surfaces for safe installation by the General Contractor.

# 2. Textured Plaster Ceiling Material:

- a. Thoroughly wet asbestos-containing materials prior to removal to reduce fiber dispersal into the air. Accomplish wetting by using a fine spray (mist) of amended water or removal encapsulant. Mist the area sufficiently to wet the material without causing excessive dripping or breaking. Allow time for water or removal encapsulant to penetrate material thoroughly.
- If amended water is used, spray material repeatedly during the work process to maintain a continuously wet condition. If a removal encapsulant is used, apply in strict accordance with manufacturer's written instructions.
- c. Mist the entire controlled area during removal procedures with amended water to reduce airborne fiber levels.
- d. Remove wetted asbestos-containing materials in small sections. As it is removed, simultaneously pack material into disposal bags. Twist the neck of bags, bend over (goose neck) and seal with minimum three wraps of duct tape.
- e. Evacuate air from disposal bags with HEPA filtered vacuum cleaner before sealing.
- f. After removal of the ACMs, surface shall be wet cleaned to remove residual accumulated material. After wet-cleaning, surface shall appear free to visible material.
- B. In Partial Containment Controlled Areas, the Contractor shall (Minimum Requirements):
  - 1. Utilize water delivered in a fine mist from a hose or garden sprayer during removal of the materials. The mist should cover the immediate removal

- areas and should not be excessive to a point where standing or ponding water is present. In areas with carpet over ACM floor tile and/or mastic remove the carpet to expose the underlying floor tile and/or mastic. The carpet should be cut into manageable sections and bagged as asbestoscontaminated debris.
- 2. In areas with ACM floor tile, remove the floor tile down to the floor substrate in a manner which will minimize breakage. Materials should not be sanded or sawed unless the tools are equipped with HEPA exhaust filtration.
- 3. Upon removal, immediately place the ACMs into a 6-mil bag with asbestos "Danger" labels on the outside surface, and seal the bag opening with tape.
- 4. Remove ACM mastic adhesive by mechanical devices or use of a non-toxic mastic remover.
- After removal of the ACMs surface shall be wet-cleaned to remove residual accumulated material. After wet-cleaning, surface shall appear free to visible material.
- C. In Limited Containment Controlled Areas, the Contractor shall (Minimum Requirements):

# 1. Interior Window Glazing (component removal):

- a. HEPA vacuum to collect loose debris then completely cover the ACM glazing material with duct tape.
- b. Carefully remove the window sashes or units using hand tools and HEPA vacuum for immediate clean-up of residual debris.
- c. Carefully place the removed window sash or unit onto two (2) individual layers of polyethylene sheeting. Do not allow material to dry out. Seal the edges and/or seams with duct or fiber tape and place appropriate warning labels on the wrapped materials.

# 2. Fire Door Insulation (component removal):

- a. Carefully detach the door from the frame.
- b. Lower the door to the ground and wrap with two (2) independent layers of 6-mil polyethylene and fold and tape polyethylene over exposed ends. Place appropriate warning labels on the wrapped materials.

# 3.4 CLEAN-UP FOR CONTROLLED AREAS

A. The asbestos-containing materials shall be sealed in plastic bags or shall be wrapped in a minimum of two (2) polyethylene sheets (6-mil minimum). Initial bagging of waste shall be supplemented by a secondary containment, either by use of a second bag (6-mil minimum) or by use of a fiber or metal drum. If it appears likely that the waste material will tear the plastic, the bag must be placed into a

drum for disposal. Bags and drums shall be marked with the OSHA label prescribed by the OSHA Regulations referenced in this section. The outside of all containers shall be cleaned before leaving the controlled area.

- B. After ACM removal procedures have been completed, the Contractor shall notify the Designer. The Designer shall visually observe the areas. Upon completion of the observation, and subsequent approval, the Contractor shall encapsulate the abated surfaces and contact their testing firm (subparagraph 3.5.A) to perform final clearance air sampling. Upon successful completion of the final clearance air sampling, the Contractor shall remove the decontamination enclosure systems. The remaining barriers between contaminated and clean areas and all seals on openings into the Controlled Area shall be removed and disposed as contaminated waste.
- C. All plastic sheeting tape, cleaning material, clothing, and all other disposable material used in the asbestos removal operation or items used in the controlled area shall be packed into sealable plastic bags (6-mil minimum). These bags must be marked with the OSHA label prescribed by the OSHA Regulations.

# 3.5 FIELD QUALITY CONTROL

- A. The Contractor will employ a testing firm to perform during- and post abatement air sampling as well as the necessary tests required by regulations or codes and standards for the protection of his workers, or other purpose. **The testing firm must be onsite during all asbestos removal procedures.** The testing firm must be approved by the Designer prior to any work.
- B. Test results shall be reported in terms of f/cc for asbestos and collected in accordance with EPA, OSHA, and NIOSH-recommended sampling volumes for appropriate detection limits. All results must be posted at the job site no later than 24 hours from sample collection.
- C. Testing Laboratory shall perform all air testing according to the method prescribed by Section 1910.1001 and 1926.1101 of OSHA CFR Title 29 and analyzed in accordance with procedures outlined in NIOSH 7400 Method (PCM).
- D. At no time during interior ACM removal and/or disturbance shall air sampling results inside containment exceed 0.1 f/cc and at no time during ACM removal and/or disturbance shall air sampling results outside containment exceed 0.01 f/cc. Continual results near 0.1 and 0.01 f/cc may be cause for the Contractor (or subcontractor) to be dismissed from the project. The standard for clearance air sampling is 0.01 f/cc.

# E. Air Sampling Schedule (minimum requirements)

- 1. <u>During Work Activities, Per Shift</u>
  - 2 per Controlled Area
  - 2 Outside Controlled Area
- 2. Final Interior Clearance (PCM)

2 per Controlled Area

Blanks - 10% of total, with a minimum of two

NOTE: All locations of air tests are subject to review and change by the Designer.

**END OF SECTION** 

ВЕ

G

ISSUED: 03.08.24 SBC PROJECT #: 364/011-05-2021 GMCA PROJECT #: 202113 TDH

REVISED:

OVERALL SCOPE OF WORK PLAN DIAGRAMS

GENERAL NOTES D. ALL PRIVIDE AND THIS FOR SHARE AND SHARE AN

ASBESTOS REMOVAL LEGEND

SPOT ABATEMENT OF ACM TEXTURED PLASTER CEILING AS NECESSARY FOR INSTALLATION OF FLOOR LIGHTING IN AUDITORIUM. COORDINATE WITH CONSTRUCTION MANAGER TO DETERMINE LOCATION AND EXTENT OF ABATEMENT.

PLAN - LEVEL 1

TENNESSEE TECH UNIVERSITY
DERRYBERRY HALL
BUILDING UPGRADES - PHASE I
COCAMILE IN 3868

KEYNOTES D STRUCTURM, WOOD POST IN THE AREA SUPPORTING WOOD POOF BODE BEAM ABOVE MAY NEED TO BE ADMISTED TO ALLOW FOR MECH, WHIT ADDESS OR MIGHLY HARD FOR ON GERMANDES, COORD, MAY FORDINGH, STRUCTURM, ADMISTRATING AND STRUCTURM, FEED WOODS FOR ADMISTRATION FIELD WOODS FOR FIELD WOODS AN STRUCTURE, PELD REPORTATIONS.

(2) OFFIX TO STEEL ROOF STRUCTURE FABOR AND STRUCT FLOOR BELDE AND LABORSDE OF DOPOSID PROSTRUCTURE FABOR CELLIS FABOR BELDE AND UNDERSOE OF DOPOSID PROSED ROOF STRUCTURE ABOUT CELLIS FABORS BELDE AND UNDERSOE OF DOPOSID ROOF STRUCTURE ABOUT FABORS FABORS

DISTING COVINGED/SEARCH OPENING IN MALL THAT WILL NEED TO BE TEMPORARY REMOVED FOR MICHANICAL UNIT REPLACEMENT DELARGY ACCESS.

DISTRIBUTIONS OF STRUCTURAL MEMBERS SUPPORTING THE ROOF OR CLPOLA ABOVE.

GENOLA MONE

(S) EXISTING DUTCHORK (AT CONCRETE ATTIC FLOOR PENETRATION) TO BE REPLACED, BEE MEDICA

(T) NEW DUCTWORK (AT CONCRETE ATTIC FLOOR PENETRATION). CENTER BETWEEN EXISTING STREEL JOST HOROTH BLOOK SEE MEDIC.

(S) DISTING NOT HOUSE NOW MULTIS HOPT

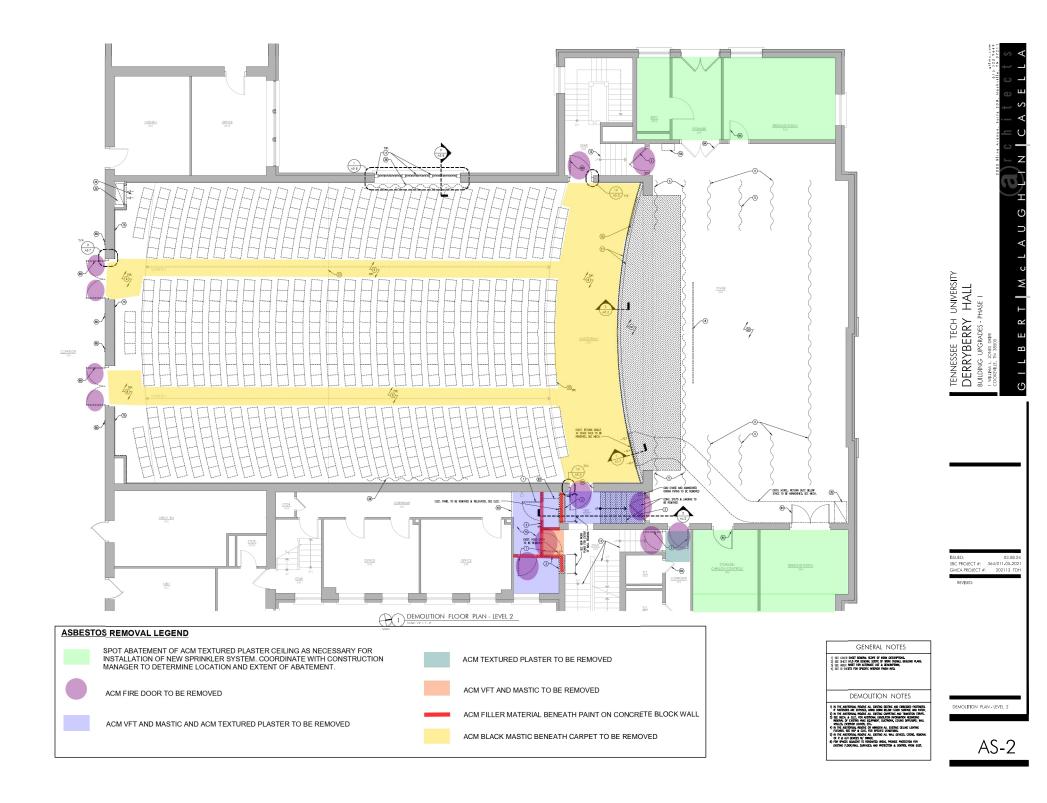
(D) DISTING THE MERIES (DATES AND AUTOMAN AND)

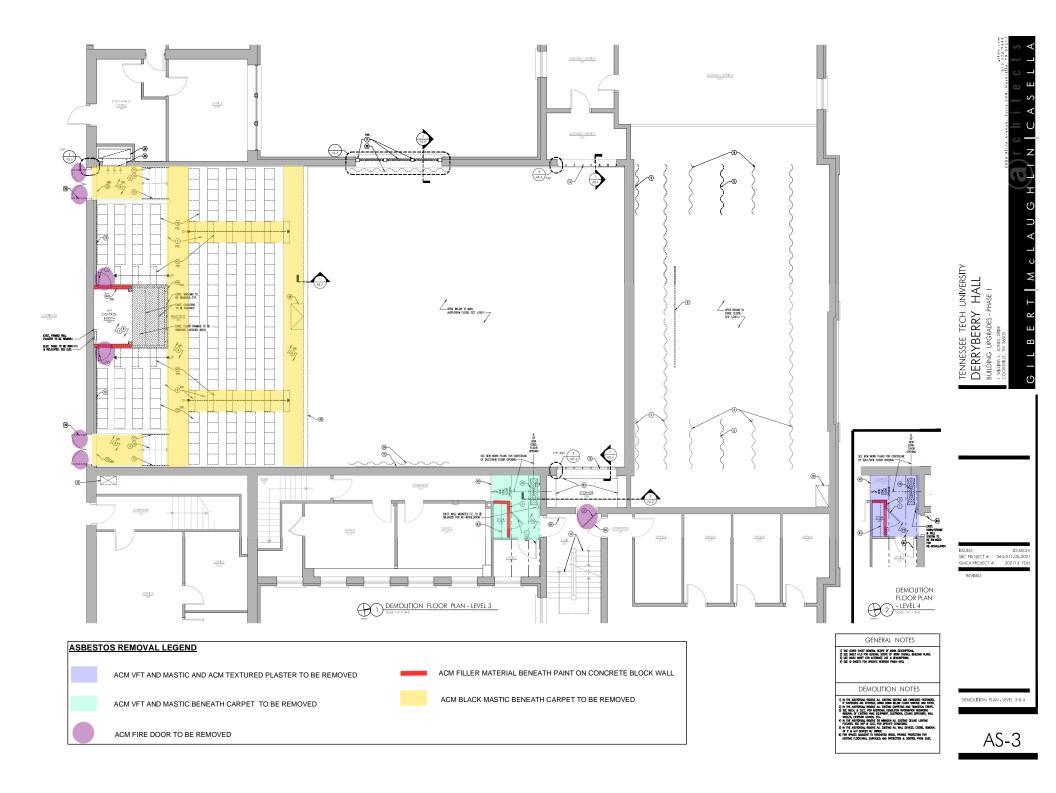
(S) MADINA, A R.-SIGNALINDO OF CELOR STREES BELOW THE ADTOMAN AND AUTOMAN AUTOMAN AND AUTOMAN AND AUTOMAN AND AUTOMAN AND AUTOMAN AND AUTOMAN AUTOMAN AND AUTOMAN AUTOMAN AUTOMAN AND AUTOMAN AUTOMAN AND AUTOMAN AUTOMAN AUTOMAN AUTOMAN AND AUTOMAN AUTOMAN AUTOMAN AND AUTOMAN A

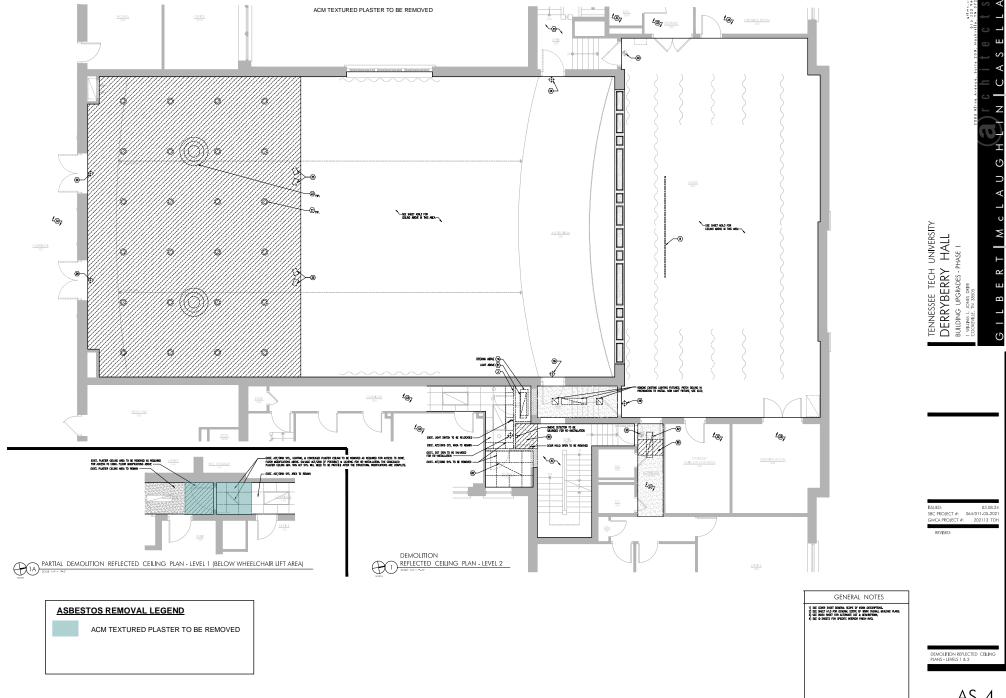
EDISTING LACGER TO ATTIC HATCH ACCESS
 EDIST, ABANDONED DUCTWORK TO BE REMOVED (SEE MECH.) AND HOLE IN FLOOR SLAB TO BE SEALED WITH CONC. MATERIAL.

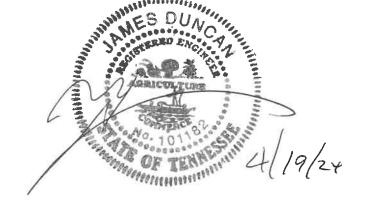
(4) EXISTING ROOF BELOW
(8) EXISTING EXTERIOR WALL HODGEN BELOW ROOF CUT-THROUGH EXISTING ROOF RAFTERS

AS-1









# SECTION 02 83 33 STABILIZATION/MINOR DEMOLITION & WASTE DISPOSAL OF LEAD-CONTAINING SURFACES

PART 1: GENERAL

# 1.1 WORK INCLUDED

- A. Furnishing of all labor, services, appliances, materials, equipment, insurance, and permits, necessary to meet regulatory compliance requirements and control airborne concentrations of the confirmed lead-containing paint (LCP) from surfaces to be impacted by the "Derryberry Hall Building Upgrades Phase I" project on the campus of Tennessee Technological University in Cookeville, Tennessee. The lead-containing painted surfaces are indicated in the Hazardous Materials Report, developed by Terracon.
- B. The scope of work for this project includes:
  - Stabilize damaged painted surfaces, to the extent that flaking, chipping, and peeling paint is removed prior to refinishing or minor demolition of painted surfaces. Upon completion of the stabilization process, the surface shall be smooth and free of residual particles.
  - Should isolated surfaces be demolished during the renovation process, where the surfaces are free of flaking, chipping, and peeling paint, the LCP may remain on the various substrates during demolition and the demolition material may be disposed of as construction and demolition debris in a Class IV landfill (C & D landfill).

**Note:** Recycling of lead-containing painted surfaces or equipment will not be allowed unless the paint is determined to be within acceptable concentration limits established by the recycler.

- C. Minor demolition of painted surfaces will not be conducted on building materials that have been identified as asbestos-containing until the asbestos has been abated or, if the lead remediation firm is also licensed as an asbestos abatement firm, they can be removed in conjunction with the asbestos abatement activities as per the specification for Removal and Disposal of Asbestos-Containing Materials (Section 02 82 33).
- D. For informational purposes, the following is a list of the samples collected from various painted surfaces within the renovation area. The paint color, substrate, sample location and amount of lead content are listed. Not all painted surfaces were sampled. The Contractor shall use the table as a reference for comparison purposes to determine if other painted surfaces are lead-containing. Should the painted surfaces appear different than those identified in the table, it should be assumed that the painted surfaces are lead-containing until additional sampling can either confirm or refute lead content.

PAINT COLOR	PAINT SUBSTRATE	SAMPLE	RESULT % by
		LOCATION	Weight
Brown	Wood Window Frame	Room 242	0.034
White	CMU Wall	Room 252	0.23
White	Wood Window Frame	Exterior	0.42
White	Plaster wall and ceiling	Not Applicable	Assumed Lead- containing

- E. The Environmental Protection Agency (EPA) defines lead-based paint (LBP) as containing 5,000 milligrams of lead per kilogram (mg/kg) by Inductively Coupled Plasma (ICP) or 0.5% of lead by weight by Atomic Absorption Spectroscopy (AAS). Although the lead content of the paint does not meet the EPA criterion for LBP, measures must be taken to minimize the potential for generating airborne concentrations of lead-containing paint (LCP) that might present an exposure issue from an Occupational Safety and Health Administration (OSHA) standpoint. The potential for overexposures to personnel can occur at concentrations less than the EPA criterion.
- F. The Contractor acknowledges that all details and specifics regarding the LCP work are not necessarily shown or specified. Each contractor shall visit the site and familiarize themselves with the existing quantities, layers, condition of surfaces to be demolished and stabilized, and local conditions prior to submitting his bid. Lack of knowledge relative to these conditions on the part of the contractor will in no way relieve him of the obligation and responsibilities assumed under the contract. The contractor will be expected to provide all of the items, necessary and/or incidental, to complete the work consistent with this specification. Should additional paints be discovered, the paints should be considered lead-containing until sampling and subsequent analysis can either confirm or refute their lead content.

# 1.2 LEAD-CONTAINING PAINT WORK PLAN

- A. The Contractor shall specify the renovation/demolition procedures and methods to be used and shall prepare a detailed LCP Work Plan to be submitted to the owner's representative prior to the start of work. To be accepted, the work plan shall meet the requirements of OSHA as specified in their Lead, Construction Standard, 29 CFR 1926.62(e) and this specification.
- B. Key Elements of Work Plan (Required):
  - 1. Methods to cordon-off areas of LCP disturbance;
  - Procedures used when preparing surfaces for re-painting, to include procedures for minimizing worker exposure to lead and other project-related health and safety hazards;
  - Procedures used during minor demolition activities; to include procedures for minimizing worker exposure to lead and other project-related health and safety hazards;
  - 4. Description of the exposure air monitoring program, to include personal and area sampling;
  - 5. Placement of employee decontamination unit;
  - 6. Capture and disposal of lead-contaminated water used during renovation/demolition activities;
  - Name of Competent Person;
  - 8. Protocols for sampling the waste debris;
  - Name of personal air monitoring firm and name and accreditation certificate
    of ICP or AAS laboratory; and Name and accreditation certificate of Toxicity
    Characteristic Leaching Procedure (TCLP) laboratory.
- C. The LCP Work Plan must be accepted by the owner's representative prior to the start of any work included in this project. (see subparagraph 1.8)

# 1.3 COORDINATION

A. The Contractor shall ensure that the LCP surfaces are properly handled to control airborne concentrations of lead during the renovation process.

# 1.4 DEFINITIONS

AL Action Level. An exposure level established by OSHA, of 30 micrograms per cubic meter (μg/m³) of lead in air. The Action Level is the level at which initial monitoring, record-keeping, medical surveillance and training is initiated. The Action Level shall also be used as the "during renovation" clearance level for area air monitoring.

Building Derryberry Hall

Tennessee Technological University

Cookeville, Tennessee

Contractor General Contractor

Controlled Areas that are restricted to persons directly associated with the work.

Areas These areas are identified by signs and restrictive tape. Controlled areas will

be areas where LCP renovation is being performed.

Control of LCP must be controlled to the extent that the

Lead-Containing Contractor is in compliance with federal, state and local regulations

Paint regarding worker exposure and environmental impact.

Critical Barrier A double layer of polyethylene (6-mil minimum) sheet used to separate the

controlled area and HVAC systems from other portions of the building and

outside of the building

LCP Lead-Containing Paint

OSHA Occupational Safety and Health Administration

PEL Permissible Exposure Limit. An 8-hour time weighted average (TWA)

exposure limit established by OSHA. The PEL-TWA for lead is 50

micrograms per cubic meter ( $\mu g/m^3$ ).

USEPA United States Environmental Protection Agency

#### 1.5 DISPOSAL SITES

- A. Stabilization Prior to Refinishing and/or Minor Demolition:
  - The waste generated while stabilizing surfaces or equipment shall be tested to determine whether the material must be disposed of as hazardous waste or construction waste. The contractor shall collect composite debris samples for testing by TCLP analysis to determine proper disposal requirements. Protocols for sampling the debris shall be outlined in the LCP Work Plan. Results shall be submitted and approved by the owner's representative prior to the disposal of the waste debris.

- The LCP waste must be kept secured and labeled in accordance with 29 CFR §1910.145 Signs and Tags until analyzed by the TCLP test. If it is characterized as hazardous, the waste must be labeled in accordance with 49 CFR §172, 173, 178 and 179 Regulations for Labeling, Mailing and Transporting Hazardous Waste.
- 3. After the waste is characterized, it will be disposed of in accordance with all applicable local, federal, state and/or county regulations.
- 4. All entities and/or individuals involved in the work must possess valid permits and/or licenses required under the Resource Conservation and Recovery Act (RCRA) as well as any other federal, state or local permits or licenses required for removal, packaging, transportation and disposal of hazardous waste.
- 5. The hazardous waste removed must be disposed by the Contractor at an Environmental Protection Agency (EPA) permitted Treatment, Storage and Disposal Facility (TSD).

#### B. Minor Demolition:

 Should it be necessary to demolish surfaces and equipment that do not need to be stabilized, the debris generated from the demolition process shall be disposed of as construction and demolition debris in a Class IV (Construction & Demolition Debris) landfill.

#### 1.6 QUALITY ASSURANCE

- A. Contractor The Contractor shall certify that they or their subcontractor providing the services of this section has prior experience on LCP building material renovation projects, similar in nature and extent to perform the work in a satisfactory manner.
- B. Competent Person The Contractor shall certify that they or their subcontractor that is providing the services of this section employ a full-time, onsite Competent Person that meets the requirements of 29 CFR §1926.62 and is experienced in the administration and supervision of LCP building material renovation.
- C. Testing Laboratory The contractor shall provide the name, address, and telephone number of the independent testing laboratory that will be used to perform analysis of air and waste samples. Documentation that the laboratory performing the analysis is an EPA National Lead Laboratory Accreditation Program (NLLAP) accredited laboratory and that it is rated proficient in the NIOSH/EPA Environmental Lead Proficiency Analytical Testing Program (ELPAT) will also be provided.

- D. Training Contractor personnel working on the site shall meet applicable federal, state and local training requirements for lead renovation projects.
- E. Licenses and Permits Copies of licenses and permits required by applicable federal, state, and local regulations shall be obtained at least 20 days before the start of the renovation process.

#### 1.7 REGULATORY REQUIREMENTS

- A. All work shall be performed in strict compliance with the current issues of federal, state and local regulations, codes and standards as listed below:
  - 1. Occupational Safety and Health Administration:
    - 29 CFR §1910 General Industry Standard
    - 29 CFR §1910.1025 Lead Hazard Standard
    - 29 CFR §1910.134 Respiratory Protection
    - 29 CFR §1910.1200 Hazard Communication
    - 29 CFR §1910.145 Signs and Tags
    - 29 CFR §1926 Construction Industry Standard
    - 29 CFR §1926.62 Lead Standard for the Construction Industry
  - 2. Environmental Protection Agency:
    - 40 CFR §260, 261, 262, 263, 264 and 265 Hazardous Waste Regulations
  - 3. Department of Transportation:
    - 49 CFR §172, 173, 178 and 179 Regulations for Labeling, Mailing and Transporting Hazardous Waste
  - 4. State, county and city codes and ordinances as applicable.

#### 1.8 SUBMITTALS

#### A. Pre-Job Submittals

- 1. All required permits, site location, and arrangements for transport and disposal of lead contaminated debris. Submit certification that the proposed landfill site meets all Environmental Protection Agency regulatory standards.
- 2. Information regarding the Contractor's Workforce for this project:
  - a. Superintendent (Competent Person):
    - 1) Supervisor(s) name;
    - 2) Proof of experience in like projects to meet criteria of subparagraph 1.6;
    - 3) EPA Certifications to perform work under this section;
    - Medical documentation certifying that the individual is able to wear respiratory protection as indicated in subparagraph 1.12;

5) Respirator fit test (within previous year) for each type of respiratory protection intended for this project; and

#### b. Workers:

- 1) Workers' Name:
- 2) EPA Certifications to perform work under this section;
- Medical documentation certifying that the individual is able to wear respiratory protection as indicated in subparagraph 1.12;
- 4) Respirator fit test (within previous year) for each type of respiratory protection intended for this project; and
- After the project has begun, if previously unregistered employees perform work at the site, submit the above information for those employees prior to entry at the project.
- 4. Product data and Material Safety Data sheets for any materials to be used.
- LCP Work Plan.
- 6. Name, address and telephone number of the air monitoring firm contracted to perform the Contractor's ambient air monitoring and surface clearance sampling as referenced in subparagraphs 3.4 and 3.6.B.

#### B. Post-Job Submittals

- Lead waste disposal manifest showing date, type of container removed from the controlled area, signature of recorder, time of day, and general location of the waste material in landfill.
- 2. A copy of the controlled area Sign In/Out Logs showing the following: date, name, last four digits of social security number, entry and exit times, company or agency represented and reason for entry into the controlled area(s).
- 3. Copies of laboratory analysis results.

# 1.9 GENERAL PROTECTION OF PERSONS

- A. Prior to commencing work, all workers shall be instructed and knowledgeable in appropriate procedures of personnel protection for LCP renovation work.
- B. Contractor shall be solely responsible for enforcing worker protection requirements and job safety.
- C. Contractor shall provide workers with personally issued respiratory protective equipment approved by NIOSH. The respiratory equipment shall be suitable for protecting against lead exposures in the Controlled Areas according to OSHA Standard 29 CFR §1926.62 and OSHA 29 CFR §1910.134, Respiratory Protection. Filter cartridges that meet the criteria established in NIOSH 42 CFR 84 shall be selected, provided and replaced as required.

- D. Contractor shall provide workers, Owner or Owner's representative and authorized visitors with protective disposable clothing, head covers, gloves, eye protection and foot covers of various sizes to enter Controlled Areas. Provide a minimum of four sets per day for visitors and sufficient sets as required for workers and the Owner or Owner's representative.
- E. Reporting Unusual Events: When an event of unusual and significant nature occurs at the site, a report listing the chain of events, persons participating, response and similar pertinent information shall be prepared and submitted to the Owner's representative. When such events are known or predictable in advance, the Owner's representative will be notified in advance, at the earliest possible date.
- F. Reporting Accidents: Prepare and submit reports of significant accidents at the site. A significant accident includes events where personal injury is sustained, or property loss of substance is sustained.
- G. Post telephone numbers and locations of emergency services including, but not limited to, fire, ambulance, hospital and police at the entrance to the decontamination unit. Post directions to the nearest emergency medical facility.

# 1.10 SIGN IN/OUT LOG

- A. Contractor shall maintain a Sign In/Out Log at the entrance to the Controlled Area(s). The log shall be maintained from the time the first LCP activity is performed until the project is complete. All persons entering the Controlled Area, including the Contractor's workers, Owner's representative and Government Officials shall be required to sign in and out upon entering and exiting the Controlled Area. All persons shall record their name, time, company or agency represented and reason for entering the control area.
- B. Except for Governmental Inspectors having jurisdiction, no visitors shall be allowed in any Controlled Area, except as authorized by the Owner's representative.

# 1.11 SAFETY AND PROTECTION, OSHA COMPLIANCE

A. The Competent Person shall be the onsite person responsible for coordination, safety, security and execution of the work. The Competent Person shall be able to identify existing and predictable lead hazards and shall have the authority to take corrective measures to eliminate them.

# 1.12 PERSONAL PROTECTION, SPECIFIC

A. The Contractor shall document that lead renovation airborne exposure levels are below the OSHA established Action Level. This may be accomplished by establishing

an airborne concentration baseline (minimum of 3 days of air sampling on-site) or by providing documentation (pre-job submittal) that renovation activities will not cause the airborne levels to exceed regulated limits. The baseline shall be established using a minimum of 25% of the employees for each type of work task performed where LCP is being impacted.

- B. The following personal protective equipment (PPE) shall be used for work with LCP until the above requirements are met:
  - 1. Tyvec Outer Coveralls
  - 2. Cotton Inner Gloves
  - 3. Impermeable, Abrasion Resistant Outer Gloves
  - 4. Impermeable Safety Footwear (Rubber)
  - 5. Filters Lead P or R-Series filter cartridges with an efficiency rating of 100%

**Note:** Should lead-in-air concentrations exceed the protection factor of the above-referenced respirator, respirators with the appropriate protection factor must be used.

- C. Personal Protection & Decontamination The following shall be performed by while the airborne concentration baseline is being established and if an acceptable airborne concentration baseline is not obtained:
  - Workers shall always wear a respirator properly fitted on the face while in the renovation areas. Workers wearing tight-fitting face pieces shall be clean-shaven to the extent that the hair does not interfere with the sealing surface of the respirator. This must be documented by a standard respirator fit test.
  - 2. The Contractor shall instruct and train workers in proper respirator use.
  - 3. Workers shall wear disposable, full-body cover-alls and disposable head covers and footwear suitable for LCP-related work.
  - 4. Workers shall not eat, drink, smoke, chew gum, tobacco, or apply cosmetics in the removal areas.
  - The Contractor shall provide a fit tested respirator and disposable cover-alls, head cover, and footwear to any official representative of the Owner or Owner's designee who inspects the project.
  - 6. All persons entering the removal areas shall wear an approved respirator and disposable cover-alls, head cover and footwear.
  - 7. The Contractor shall instruct and train workers in the nature of LCP and the hazards related to lead dust exposure during renovation activities.
  - 8. The Contractor shall set up a decontamination unit as follows:
    - a. Set-up a unit consisting of a change room, shower and equipment room, enclosed and separated by triple-flap polyethylene air locks, connected to the controlled areas. All workers, without exception, shall:

- Remove and properly store street clothes in the change room and put on new disposable cover-alls, head covers, footwear and cleaned respirators before entering the controlled area.
- Upon leaving the controlled area, remove the disposable coveralls, head covers and footwear in the equipment room and dispose of them in an appropriate waste container. Still wearing their respirators, workers shall proceed to the shower and remove their respirators while showering with soap and tempered water. Wetted respirator cartridges shall be disposed of in appropriate containers.
- 3) This procedure shall be followed each time a worker enters or leaves the controlled area.

#### PART 2: PRODUCTS

# 2.1 MATERIAL

- A. Containers: Air and water-tight, suitable to receive and retain any lead containing or contaminated materials until disposal at an approved site, and labeled in accordance with OSHA Regulation 29 CFR §1926.62, 29 CFR §1910.145, and/or 49 CFR §172, 173, 178 and 179. Three (3) types of containers may be used:
  - 1. Six mil plastic bags/sheet sized to fit within a drum or waste dumpster;
  - 2. Metal or fiber drums with tightly fitting lids; and
  - 3. Waste dumpsters with lids.
- B. Warning Labels and Signs: Will conform to OSHA regulation 29 CFR §1926.62 (Lead), DOT regulation 49 CFR §172, 173, 178 and 179 Regulations for Labeling, Mailing and Transporting Hazardous Waste, and/or EPA regulation 40 CFR §260, 261, 262, 263, 264 and 265 Hazardous Waste Regulations.

#### PART 3: EXECUTION

## 3.1 CONTROLLED AREA PREPARATION

- A. In Controlled Areas where LCP will be disturbed, the Contractor shall:
  - Ensure that all ventilating systems or any other system bringing air into or out
    of the controlled area are disabled. Disable systems by disconnecting wires,
    removing circuit breakers, lockable switches or other positive means that will
    prevent accidental restarting of the equipment.

- 2. Lockout power to circuits running through the controlled area whenever possible by switching off all breakers or removing fuses serving these circuits. Label breakers with tape over breaker with notation, "DANGER circuits being worked on." Lock panel and have all keys under control of Contractor's superintendent. If circuits cannot be shut down for any reason, label at intervals 4-feet 0-inches on center with tags reading, "DANGER live electric circuit. Electrocution Hazard." Label circuits that are in hidden locations but which may be affected by the work in a similar manner.
- 3. Construct any and all necessary temporary walls to completely isolate the area of LCP disturbance.
- 4. Critical Barriers: Seal all openings (doors, windows, etc.) with a 6-mil (minimum) flame resistant polyethylene containment barrier to prevent leakage of air into the outside environment or other portions of the building not being renovated.
- 5. Cover the floor of the renovation areas with a minimum of one (1) layer of clear polyethylene sheeting, at least 6-mil in thickness.
- 6. The Contractor shall set up a decontamination facility connected to the controlled area as indicated in subparagraph 1.12. This shall be done in accordance with OSHA Regulations 29 CFR 1926.1101.
- 7. Any water discharged shall be filtered utilizing a filter with a maximum porosity of 5 microns prior to discharging the water into a drainage system. The drainage system shall be the closest available drainage system to the controlled area. The Contractor is responsible for making all necessary temporary utility connections to support his work and returning the building systems to its original condition at the conclusion of the project. Measures shall be taken by the Contractor to prevent leaks.
- All connections to Owner's water system shall include backflow prevention.
   The hoses used shall have a minimum pressure rating of 100 PSI. The pressure exiting any hose within the controlled area shall not exceed 30 PSI.
- 9. Provide sufficient HEPA air filtration units to maintain airflow of at least four complete air changes per hour in the removal area
- 10. Ensure that barriers and plastic enclosures remain effectively sealed and taped. Inadvertent tears in plastic shall be repaired with fiber tape and the tear covered by plastic applied with spray adhesive, overlapping the tear by six inches on all sides.
- 11. The Contractor shall establish emergency exits and procedures for the renovation area, satisfactory to fire officials.

#### 3.2 LEAD-CONTAINING PAINT WORK

A. Stabilizing Surfaces by Scraping and/or Other Mechanical Means (Minimum Requirements):

- Utilize water delivered in a fine mist from a hose or garden sprayer during scraping or agitating of the painted surfaces. The mist should cover the immediate stabilization areas and should not be excessive to a point where standing or ponding water is present.
- 2. Remove the paint in a manner that will minimize airborne emissions of lead dust. The use of hand scrappers, needle guns, and like equipment will be acceptable. Materials should not be sanded.
- 3. Upon completion of the stabilization process, immediately place the paint waste into a 6-mil bag and seal the bag opening with duct or fiber tape.
- 4. After stabilization of the LCP, surfaces shall be wet-cleaned to remove residual accumulated material. After wet-cleaning, surfaces shall appear free of that flaking, chipping, and peeling paint and shall be ready for re-application of paint.
- B. Solvent Abatement for Stabilization (Minimum Requirements):
  - Solvent abatement methods shall be performed in strict compliance with manufacturer instructions. The solvent materials shall be compatible with new finish applications.
- C. Minor Demolition of LCP In-place (Minimum Requirements):
  - Spray a fine mist of water using a sprinkler-type sprayer during the renovation process. The mist should cover the immediate renovation area and should not be excessive to the point where there is surface run-off from the area of renovation.
  - 2. Upon demolition, immediately place the Lead-containing painted building materials into an appropriate disposal container (dump truck, dumpster, etc.). Cover and remove the debris from the site.

#### 3.3 SAFETY AND HEALTH PROCEDURES

- A. The Competent Person shall be present on the work site throughout the renovation process to supervise, monitor, and document the project's health and safety provisions. A daily log shall be maintained that provides the results of any testing performed.
  - 1. Safety and Health Responsibilities
    - a. The Competent Person shall:
      - 1) Verify that training meets applicable requirements.
      - 2) Ensure compliance with the LCP Work Plan.
      - 3) Enforce work practices to minimize airborne concentrations of lead.

4) Ensure that workers are not exposed to airborne lead concentrations in excess of the PEL established by 29 CFR §1926.62.

#### 3.4 MONITORING

- A. Personal Air Monitoring Airborne concentrations of lead shall be monitored and analyzed in accordance with 29 CFR §1926.62. The Competent Person shall use personal air monitoring results to determine the effectiveness of engineering controls and work practices and the adequacy of PPE. The Owner's representative shall be notified if any personal air monitoring result equals or exceeds 30 micrograms per cubic meter (μg/m³) of air and the Contractor shall take immediate steps to reduce the airborne concentration.
- Area Air Monitoring Area air monitoring shall be performed in accordance with the contractor's LCP Work Plan. Air monitoring shall be performed while the airborne concentration baseline is being established, throughout the duration of the project if an acceptable airborne concentration baseline is not obtained. Samples will be collected and analyzed in accordance with 29 CFR §1926.62. The Contractor shall provide the Owner's representative with the results of area air monitoring within 48 hours after completion of the sampling.
- C. Clearance Dust Sampling: Clearance dust sampling shall be performed for interior work areas in accordance with EPA guidelines. Samples shall be collected in accordance with Appendix 13.1 and Chapter 15 of the HUD Guidelines and ASTM E 1728. Clearance wipe (dust) samples must be analyzed for lead by a laboratory recognized by the EPA under the National Lead Laboratory Accreditation Program (NLLAP) for analysis of lead in dust.

#### 3.5 CLEAN-UP FOR CONTROLLED AREAS

- A. After the stabilization or minor demolition of lead-containing painted surfaces has been completed, the Contractor shall notify the Designer. The Designer shall visually observe the areas. Upon completion of the observation, and subsequent approval, the requirements of subparagraph 3.4.C shall be accomplished. surface clearance guidelines shall be used for the clearance criteria:
  - Floors: 10 micrograms per square foot (μg/ft²)
  - Interior windowsills: 100 µg/ft<sup>2</sup> (as applicable)
  - Window troughs: 400 μg/ft² (as applicable)

Upon successful completion of the final clearance requirements, the Contractor shall remove the decontamination unit. The remaining barriers between controlled and

clean areas and all seals on openings into the controlled area shall be removed, packed into sealable plastic bags (6-mil minimum) and disposed of appropriately.

B. All plastic sheeting tape, cleaning material, clothing, and all other disposable material used in the LCP stabilization and minor demolition process shall be packed into sealable plastic bags (6-mil minimum) and disposed of appropriately.

#### 3.6 FIELD QUALITY CONTROL

- A. The Contractor is responsible for performing area and personal (OSHA compliance) air monitoring until the requirements of subparagraph 1.12. are successfully accomplished. The Contractor must also perform any other necessary tests required by regulations or codes and standards for the protection of his workers.
- B. The Contractor shall be responsible for area air monitoring (during stabilization/minor demolition) until the requirements of subparagraph 1.12 are successfully accomplished. The minimum frequency of area air sampling shall be as follows:

<u>During Work Activities Per Shift</u> 2 per Controlled Area

Note: The Owner reserves the right to perform air sampling at any time during the project without notifying the Contractor.

**END OF SECTION** 



#### SECTION 02 84 00 WORK WITH OTHER HAZARDOUS MATERIALS

PART 1: GENERAL

#### 1.1 WORK INCLUDED

- A. Furnishing of and paying for all labor, services, appliances, materials, equipment, insurance, permits, patents and decontamination facilities necessary to carry out the safe handling and/or removal of "other hazardous materials" from the areas of renovation for the "Derryberry Hall Building Upgrades Phase I" project on the campus of Tennessee Technological University in Cookeville, Tennessee. For this project, "other hazardous materials" are as follows:
  - Chlorofluorocarbons (CFC) & Hydrochlorofluorocarbons (HCFC) Refrigeration and air conditioning units commonly contain CFC & HCFC.
  - Mercury-containing equipment Fluorescent light tubes, electrical/mechanical thermostats, switches and monometers commonly contain small amounts of Mercury.
  - 3. PCB-containing equipment fluorescent light ballasts and other electrical devices commonly contain Polychlorinated Biphenyls (PCBs).
    - a. Check all equipment (including fluorescent light ballasts) for a "No PCB" label and/or a date stamp to determine if it is non-PCB containing or PCB-Free equipment. The EPA prohibited the use PCB-containing oils in equipment in 1979. Therefore, ballasts manufactured after 1979 may be considered PCB free. Unmarked equipment without a "No PCB" or "PCB-Free" label should be considered PCB-containing.
- B. It is the responsibility of the Contractor to identify and document the location and removal of PCB, CFC & HCFC, Mercury equipment and fixtures prior to building renovation. The Contractor shall be responsible for verifying quantities by performing a thorough site inspection prior to bid submittal. The Owner and its representatives will not be held responsible for additional work caused by the Contractor not performing a thorough site inspection.

#### 1.2 COORDINATION

The Contractor shall confirm that the hazardous materials identified in subparagraph
 1.1 are properly removed prior to any renovation of the building that will disturb these materials.

#### 1.3 STANDARD OPERATING PROCEDURES

A. Prepare a written Standard Operating Procedure (SOP) that includes a description explaining how workers, visitors and employees will be protected from exposure should leaking PCB, CFC & HCFC, Mercury containing items be encountered; a layout showing the location of items and materials placement after removal; personal protective equipment, decontamination sequence and clean-up procedures to be used should leaking PCB, CFCs, HCFCs, and Mercury be encountered; removal methods to be used; and an emergency action plan in the event of a spill or contact with eyes or skin. This SOP should be available at the work site for referral and reviewed by workers, visitors and employees prior to entry into the Controlled Area.

#### 1.4 SUBMITTALS DURING THE WORK

- A. Maintain Sign In/Out logs showing names of persons entering the work space, date and time of entry and exit, record of any accidents, emergency evacuation and other safety and/or health incidents.
- B. Provide data to Owner's representative on a daily basis or other agreed upon interval.

#### 1.5 QUALIFICATIONS OF PERSONNEL

- A. All personnel of the entity involved with the work of this section must be trained in the hazards of PCBs, CFCs, HCFCs, and Mercury and the precautions to take to prevent exposure.
- B. In the event that the entity involved with renovation work will respond to a spill or leak of PCBs, CFCs, HCFCs, and Mercury, the personnel who clean up the spill will possess a certificate of participation and successful completion of training in accordance with OSHA 29 CFR §1910.120, Hazardous Waste Operations and Emergency Response.

#### 1.6 APPLICABLE PUBLICATIONS

A. General Publications:

- 1. OSHA 29 CFR §1926.59, Hazard Communication
- 2. Department of Transportation, 49 CFR §172, 173, 178 and 179 Regulations for Labeling, Mailing and Transporting Hazardous Waste
- 3. OSHA 29 CFR §1910.134 Respiratory Protection
- 4. 29 CFR §1920.20, Subpart C, General Safety and Health Provisions
- 5. 29 CFR §1910.120, Hazardous Waste Operations and Emergency Response.
- 6. 29 CFR §1910.145, Accident Prevention Tags.

#### B. PCB Publications:

- 1. 40 CFR §761, Polychlorinated Biphenyl Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions.
- 2. EPA 40 CFR §261.24, 264 and 273

#### C. CFC & HCFC Publications:

1. Refrigeration Recycling Regulation for Venting Prohibition under EPA regulation 40 CFR Part 82.

#### D. Mercury Publications:

1. EPA 40 CFR §261.24, 264 and 273

#### 1.7 STANDARD OPERATING PROCEDURE (SOP)

#### A. The SOP shall include:

- 1. Security procedures to prevent unauthorized entry into work spaces.
- 2. Appropriate protective clothing.
- 3. Methods for disconnecting and removing PCBs, CFCs, HCFCs, and Mercury containing equipment in ways that prevent release of the hazardous material.
- 4. Packaging of contaminated material in a way that minimizes exposure and contamination.
- 5. Emergency evacuation for medical or safety reasons (fire and smoke) such that exposure will be minimized.
- 6. Methods for preventing electrical shock hazards.
- 7. Methods for isolating and identifying suspect PCBs, CFCs, HCFCs, and Mercury containing equipment.
- 8. Effective supervision during the work.

#### 1.8 PROTECTIVE EQUIPMENT

- A. Provide all workers, foremen, supervisors, authorized visitors and inspectors with protective, disposable clothing consisting of full body coveralls, head covers, gloves and 18-inch high type foot covers or reusable footwear. Clothing shall be adequate to remain intact under work conditions. Protective clothing shall not leave the Controlled Area during the performance or completion of work or if emergency spill situations exist.
- B. Provide eye protection as required by job conditions and safety regulations.
- C. Should leaks be detected during the removal of the equipment, the Contractor shall contain the spill and consult with a safety/health professional to determine the need to upgrade personal protective equipment (PPE) before stopping the leak and cleaning up the spill.

#### PART 2: PRODUCTS

#### 2.1 MATERIAL

- A. Impermeable Containers: Air and water-tight, suitable to receive and retain any hazardous material containing or contaminated equipment until disposal at an approved site, and labeled in accordance with OSHA Regulation 29 CFR §§1910.1001 and 29 CFR §§1926.1101, as well as EPA regulation 40 CFR Part 61, 29 CFR §§1910.145, and 49 CFR §172, 173, 178 and 179. Two types of impermeable containers shall be used:
  - 1. Six (6) mil plastic bags sized to fit UN specification drums.
  - 2. UN specification metal or fiber drums with tight fitting lids.
- B. Warning Labels and Signs: In conformance with DOT regulation 49 CFR §172, 173, 178 and 179 Regulations for Labeling, Mailing and Transporting Hazardous Waste, and EPA regulation 40 CFR §260, 261, 262, 263, 264 and 265 Hazardous Waste Regulations.

#### PART 3: EXECUTION

#### 3.1 WORK PROCEDURES

Hazardous Materials work shall be performed in accordance with the Contractor's accepted SOP. Procedures and equipment required to limit occupational and environmental exposures to PCBs, CFCs, HCFCs, and Mercury during related work shall be in accordance with federal, state and local regulations. Associated waste shall be disposed in compliance with federal, state, and local regulations.

#### A. PCBs:

1. Ballasts - Carefully remove the cover to the fluorescent light ballasts from the fixture. Identify the potential PCB content using the criteria listed in subparagraph 1.1.A.3.a.

#### a. Removal:

- Should the ballasts meet the criteria specified for PCB-containing ballasts, the Contractor shall ascertain that all power to circuits running through the area are disabled whenever possible by switching off all breakers or removing fuses serving these circuits. Label breakers with tape over breaker with notation, "DANGER circuits being worked on." Lock panel and have all keys under control of Contractor's superintendent. If circuits cannot be shut down for any reason, label at intervals 4-feet 0-inches on center with tags reading, "DANGER Live Electric Circuit. Electrocution Hazard." Label circuits that are in hidden locations but which may be affected by the work in a similar manner.
- Remove the ballast by carefully cutting the wiring as close to the ballast as possible and carefully lowering the ballast to the ground and place it into a steel drum or UN specification shipping container.
- 3) Label manifest and package the container for transport in accordance with 40 CFR Part 761.
- 4). Should PCB leaks be detected during the ballast removal process:
  - a) While wearing PPE:
    - Place the leaking ballast in a double layer of 6 mil polyethylene sheeting or bags and seal with duct or fiber tape.
    - 2. Place the wrapped ballast into a UN specification shipping container.

- Upon completion of the clean-up, dispose of the ballasts in accordance with EPA 40 CFR Part 761 and Tennessee Department of Environment & Conservation (TDEC) Division of Solid Waste Management regulations.
- Should PCB inadvertently contact the worker's skin or eyes, the worker should immediately refer to the Contractor's SOP for decontamination procedures.

#### B. CFCs & HFCs:

- 1. Perform Work in accordance with EPA 40 CFR Part 82, Refrigeration Recycling Regulation for Venting Prohibition.
- 2. This Work shall be performed by individuals trained and certified in accordance with EPA 40 CFR Part 82.

#### C. Mercury

- 1. Carefully remove fluorescent, high intensity discharge, Mercury vapor, and sodium lamps and Mercury-containing electrical/mechanical equipment and place them in a secure area free of vehicle traffic, falling object hazards, etc.
- 2. Should Mercury leaks be detected during the lamp or equipment removal process:
  - a. While wearing PPE, isolate the Mercury by applying Amalgam powder to the contaminated surface and remove the Mercury from the subject surface using a HEPA-filtered Mercury vacuum.
  - Upon completion of the clean-up, dispose of the contaminated debris and vacuum filter in accordance with EPA 40 CFR 261 and TDEC's Division Solid Waste Management regulations.
- 3. Should Mercury inadvertently contact the worker's skin or eyes, the worker should immediately refer to the Contractor's SOP for decontamination procedures (see subparagraph 1.3).

#### 3.2 WASTE DISPOSAL

Note: It is the intent of the Owner for the Contractor to recycle as much hazardous material waste as possible.

#### A. PCBs:

#### Ballasts:

a. The Tennessee Department Environment and Conservation, Division of Solid Waste Management regulates the disposal of PCB containing equipment. There are established limits for disposal of 50 parts per million (ppm) of bulk PCB per month. Fluorescent light ballasts frequently contain less than 1 ppm PCB per unit.

#### B. CFCs & HCFCs:

1. The Contractor will be responsible for compliance with the Refrigeration Recycling Regulation for Venting Prohibition under EPA regulation 40CFR Part 82.

#### C. Mercury:

1. TDEC's Division Solid Waste Management regulates the disposal of mercury containing equipment. The State of Tennessee has established disposal limits of 50 lamp units per month.

#### 3.3 DOCUMENTATION

A. Document the description, quantity and approximate weight and/or quantity of all PCBs, CFCs, HCFCs, and Mercury containing equipment that is removed and forward this inventory to the Owner.

**END OF SECTION** 

Limited Hazardous Materials Survey Report
Derryberry Hall Auditorium Renovations
Tennessee Technological University
Cookeville, Tennessee

April 18, 2024 | Report Number: 18247187

#### Prepared for:

Tennessee Technological University 220 W. Tenth Street Cookeville, Tennessee 38505





1922 Old Murfreesboro Pike, Suite 905 Nashville, Tennessee 37217 P (615) 333-6444 Terracon.com

April 18, 2024

Tennessee Technological University 220 W. Tenth Street Cookeville, Tennessee 38505

**Attn:** Ms. Christine Daniels Email: <a href="mailto:cdaniels@tntech.edu">cdaniels@tntech.edu</a>

Re: Limited Hazardous Materials Survey Report

Derryberry Hall Auditorium Renovations Tennessee Technological University Project SBC No. 364/011-05-2021 Terracon Project No. 18247187

Dear Ms. Daniels:

The purpose of this report is to present the results of a limited hazardous materials survey performed on April 11, 2024 at Derryberry Hall (subject building) located on the campus of Tennessee Technological University (TTU) in Cookeville, Tennessee. We understand that this survey was requested due to the planned renovation of auditorium and associated stairwells and corridors. This survey was conducted in general accordance with Terracon's contract with the TTU and Terracon's Proposal dated April 12, 2024. The survey was limited to the renovation area as specified on demolition plans developed by Gilbert McLaughlin Casella (GMC) and provided to Terracon by TTU.

This report contains the results of the bulk material samples collected and analyzed and indicates the locations of the samples collected during the April 11, 2024 site visit. Pertinent asbestos sample results from a previous asbestos survey of the subject building have also been incorporated into this report. Based upon this survey, **asbestos-containing materials and lead-containing painted surfaces were identified** within the renovation area. **Other hazardous materials potentially exist as well**. Please see the enclosed report for details.

We appreciate the opportunity to be of service to TTU on this project. If there are any questions regarding this report or if we may be of further assistance, please do not hesitate to contact us.

Sincerely,

Terracon Consultants, Inc.

Joel Russell

Joel Russell Project Manager Matt Johnston

Med pluster

Authorized Project Reviewer



#### Table of Contents

Intr	oduction	1
1.1	Project Objective	1
1.2		
1.3		
Buil	ding Description Inculding Roof Core Detail	3
Fiel	d Activities	4
4.2	Physical Assessment	4
4.3	Sample Collection	5
4.4	Sample Analysis	5
Reg	ulatory Overview	6
5.1		
5.2	Lead-Containing Paint Regulations	8
5.3	Other Hazardous Materials Regulations	8
Find	lings and Recommendations	9
Gen	eral Comments	12
	1.1 1.2 1.3 Buil Prio Field 4.1 4.2 4.3 4.4 Reg 5.1 5.2 5.3 Find	1.2 General Conditions and Limitations.  1.3 Reliance

#### **Appendices**

APPENDIX A	Asbestos Sample Summary Table
APPENDIX B	Identified Asbestos-Containing Materials
APPENDIX C	Asbestos Analytical Laboratory Reports
APPENDIX D	Lead-Containing Paint Sample Summary Table
APPENDIX E	Lead-Containing Paint Analytical Laboratory Report
APPENDIX F	Renovation Area Drawings
APPENDIX G	Photographs
APPENDIX H	Certifications



#### 1.0 Introduction

Terracon Consultants, Inc. (Terracon) conducted a limited hazardous materials survey of Derryberry Hall located on the campus of Tennessee Technological University in Cookeville, Tennessee. This survey was conducted on April 11, 2024, by State of Tennessee accredited asbestos inspectors in general accordance with Terracon's contract with the TTU and Terracon's Proposal dated April 12, 2024. We understand that this survey was requested due to the planned renovation of auditorium and associated stairwells and corridors. The survey was limited to building components and surfaces anticipated to be impacted by the project as specified on demolition plans developed by Gilbert McLaughlin Casella (GMC) and provided to Terracon by TTU.

Accessible building components and surfaces within the renovation area were inspected for homogeneous areas of suspect asbestos-containing materials (ACM) and leadcontaining paint (LCP). A homogeneous area consists of building materials and surfaces which appear similar throughout in terms of color, texture and date of application. Suspect ACM samples were collected in general accordance with the sampling protocols outlined in the Environmental Protection Agency (EPA) regulation 40 CFR 763 (Asbestos Hazard Emergency Response Act, AHERA). Other hazardous materials were also assessed and documented. For the purpose of this report, other hazardous materials consist of: Mercury, typically contained in fluorescent, sodium, high intensity, and mercury vapor lamps, as well as in thermostats and electrical switches; chlorofluorocarbons (CFCs) and hydro-chlorofluorocarbons (HCFCs), that are typically contained within refrigeration systems (refrigerators, air conditioning units, water fountains, etc.); and polychlorinated biphenyls (PCBs), that are typically contained in fluorescent light fixture ballasts, elevator motors and electrical transformers.

Although reasonable effort was made to survey all accessible suspect materials and surfaces, additional suspect, but un-sampled materials and surfaces could be located in walls, in voids or in other concealed areas.

#### 1.1 Project Objective

Terracon understands that the subject building is scheduled for renovations. The objective of this survey is to determine the presence or absence of hazardous materials that may be impacted by the impending renovation project. The survey was limited to building components and surfaces anticipated to be impacted by the project as specified on demolition plans developed by Gilbert McLaughlin Casella (GMC) and provided to Terracon by TTU.



#### **Asbestos**

EPA regulation 40 CFR 61, Subpart M, National Emission Standards for Hazardous Air Pollutants (NESHAP), prohibits the release of asbestos fibers to the atmosphere during renovation or demolition activities. The asbestos NESHAP requires that potentially regulated ACM be identified, classified, and quantified prior to planned disturbances or demolition activities. The Occupational Health and Safety Administration (OSHA) has promulgated worker protection standard for the disturbance of materials containing asbestos during demolition and renovation projects.

Suspect ACM samples were collected in general accordance with the sampling protocols outlined in EPA regulation 40 CFR 763 (Asbestos Hazard Emergency Response Act, AHERA). Samples were delivered to an accredited laboratory for analysis by polarized light microscopy.

#### **Lead-Containing Paint**

OSHA regulation 29 CFR 1926.62 established airborne lead concentration limits for the Construction Industry. OSHA has not established limits for lead content in bulk materials. Their interpretation on this issue is that any amount of lead may cause airborne concentrations above the established limits. Therefore, during renovation or demolition activities, which may disturb lead, employees must be protected from lead exposures.

Suspect LCP samples were collected to meet informational needs to comply with OSHA requirements for lead-in-air content during disturbance of the leaded materials. The survey was not designed to meet the requirements of the U.S. Department of Housing and Urban Development (HUD).

#### Other Hazardous Materials

Other hazardous materials were visually assessed in the subject building. Fluorescent, sodium, high intensity, and mercury vapor lamps, as well as in thermostats and electrical switches, if present, were observed for mercury content. Fluorescent light fixtures and transformers were observed for PCB-containing ballasts. Air conditioning systems and water fountains were observed for CFC or HCFC content. OSHA, EPA and the Department of Transportation (DOT) govern the handling, removal, transporting and disposal of the mercury, PCBs, CFCs and HCFCs during renovation or demolition projects.

#### 1.2 General Conditions and Limitations

The limited hazardous materials survey encompassed accessible areas of the specified renovation areas of the subject building, primarily the auditorium and associated stairwells and corridors. The survey was limited to building components and surfaces anticipated to be impacted by the project. It should be noted that the auditorium ceiling is 2 to 3-stories high



and that assessment to materials located over the stage area was restricted to sampling and visual assessment from the stage floor.

Although reasonable effort was made to survey accessible suspect materials and surfaces within the renovation area, additional suspect but un-sampled materials and surfaces could be located in walls, in voids, in other concealed areas. Should suspect materials other than those which were identified during this survey be uncovered prior to or during renovation activities, those materials should be assumed asbestos-containing until sampling and analysis can confirm or deny their asbestos content. The level of effort and associated tasks performed for this service was limited to the scope of services outlined in Terracon's proposal. Terracon did not attempt to identify every potential exposure or hazard present in the building.

#### Reliance 1.3

This report is prepared for the exclusive use and reliance of TTU (Terracon's Client). Use or reliance by any other party is prohibited without the written authorization of the Client and Terracon.

Reliance on the report by the client and all authorized parties will be subject to the terms, conditions and limitations stated in Terracon's contract with the TTU.

#### 2.0 Building Description

Derryberry Hall is an approximate 55,300 square foot four-story CMU block structure situated over a basement with a concrete slab-on-grade foundation. The exterior façade consists of brick walls with metal and wood framed windows and doors. The building is primarily comprised of administrative offices and an auditorium. The renovation area consists of the auditorium and associated corridors and stairwells on the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> levels. The auditorium interior finishes include concrete, carpet or wood stage flooring; wood and plaster walls with gypsum board and concrete block in the auditorium control room; and plaster ceilings. The interior finishes in the associated stairwells and corridors include carpet, vinyl stair tread and vinyl floor tile flooring; concrete block and gypsum board walls; and textured plaster ceilings.

#### 3.0 Prior Report Review

Terracon reviewed asbestos results from a previous asbestos survey of the building performed by Terracon for the State of Tennessee TNFITTS asbestos program. Pertinent results from the previous asbestos survey are incorporated into this report. The previous asbestos analytical report in included in Appendix C.



#### 4.0 Field Activities

Joel Russell and Aljus Alcineus, State of Tennessee-accredited asbestos building inspectors, conducted the hazardous materials survey. The asbestos portion of the survey was conducted in general accordance with the protocols established by EPA regulation 40 CFR 763 (AHERA). A copy of the asbestos inspector certificate is attached as Appendix H. The lead-containing paint survey was conducted to meet informational needs to comply with OSHA requirements for lead-in-air content during disturbance of the leaded materials. The survey was not designed to meet the requirements of the U.S. Department of Housing and Urban Development (HUD). The survey of other hazardous materials was conducted to meet informational needs to comply with OSHA, EPA, State and Local requirements. A summary of the field activities is described below.

#### 4.1 Visual Assessment

Our survey activities began with visual observation of the renovation area to identify homogeneous areas of suspect ACM and LCP that may be impacted by renovation activities. Building materials that were not identified as concrete, glass, wood, masonry brick or concrete, metal or rubber were considered suspect ACM. All painted surfaces were suspected of containing lead. A visual assessment of each painted surface was conducted to assess its condition. The painted surfaces were assessed as good, fair or poor condition depending on degrees of cracking, peeling or chipping. Fluorescent lamps and thermostats were observed for mercury content and fluorescent light fixtures were observed for PCB-containing ballasts. Any existing air conditioning units and water fountains were observed for CFCs or HCFCs.

#### 4.2 Physical Assessment

#### **Asbestos**

A physical assessment of each homogeneous area of suspect ACM was conducted to assess the condition of the material. The suspect ACMs were assessed as either friable or non-friable. The EPA defines a friable ACM as one which, when dry, can be crumbled, pulverized or reduced to powder by hand pressure. Friability was assessed by physically touching suspect materials. In addition, materials were assessed for condition, as either damaged or undamaged.

#### **Lead-Containing Paint**

No physical assessment of the painted surfaces was performed.

#### **Other Hazardous Materials**

No physical assessment of other hazardous materials was performed.



#### 4.3 Sample Collection

#### **Asbestos**

Based on results of the visual observation, bulk samples of suspect ACM were collected in general accordance with AHERA sampling protocols. Random samples of suspect materials were collected in each homogeneous area. Bulk samples were collected using wet methods as applicable to reduce the potential for fiber release. Samples were placed in sealable containers and labeled with unique sample numbers using an indelible marker.

Forty-five (45) bulk samples were collected from fourteen (14) homogeneous areas of suspect ACM during the April 11, 2024 site visit. A summary of suspect ACM samples collected during the survey is included as Appendix A.

#### **Lead-Containing Paint**

The lead-containing paint sampling was performed in accordance with standard sampling protocol established for the lead industry. Sample collection was performed with the intent of collecting all layers of a painted surface. This was accomplished by sampling down to the substrate. Not all painted surfaces were sampled. Terracon collected representative samples from the various substrate types (concrete, concrete block, wood, wallboard, etc.) anticipated to be affected by renovation activities. Upon collection, the samples were placed in sealable containers and labeled with unique sample numbers using an indelible marker. A total of three (3) paint chip samples were collected from suspect lead-containing painted surfaces within the renovation area. The suspect painted surfaces are listed in Appendix D.

#### **Other Hazardous Materials**

A visual assessment was performed to identify potential materials and equipment that may contain mercury, PCBs and CFCs or HCFCs. No samples were collected.

#### 4.4 Sample Analysis

#### **Asbestos**

Bulk samples were submitted under chain of custody to Moody Labs in Farmers Branch, Texas for analysis by PLM with dispersion staining techniques per EPA methodology (EPA Method 600/R-93/116). The percentage of asbestos, where applicable, was determined by microscopic visual estimation by Moody Labs, LLC under the National Voluntary Laboratory Accreditation Program (NVLAP) accreditation number 102056-0. Terracon instructed the laboratory to analyze all samples.



#### **Lead-Containing Paint**

The suspect lead-containing paint chip samples were submitted under chain of custody to EMSL Analytical, Inc. (EMSL) of Cinnaminson, New Jersey for analysis by Flame Atomic Absorption (FAA) method. EMSL is an AIHA Environmental Lead Laboratory Accreditation Program (ELLAP) accredited laboratory (Accreditation Number 100194). The laboratory was instructed to analyze all the submitted samples.

#### Other Hazardous Materials:

A visual assessment was performed to identify potential materials and equipment that may contain mercury, PCBs and CFCs or HCFCs. No samples were collected.

#### 5.0 Regulatory Overview

#### **5.1 ASBESTOS REGULATIONS**

The following sections provide a general overview to the applicable asbestos regulations. Please refer to the complete current regulation in order to verify compliance before any actions are initiated on an ACM.

#### **NESHAP**

The asbestos NESHAP (40 CFR Part 61, Subpart M) regulates asbestos fiber emissions and asbestos waste disposal practices. It also requires the identification and classification of existing building materials prior to demolition or renovation activities. Under NESHAP, asbestos-containing building materials are classified as either friable, Category I non-friable or Category II non-friable ACM. Friable materials are those that, when dry, may be crumbled, pulverized or reduced to powder by hand pressure. Category I non-friable ACM includes packings, gaskets, resilient floor coverings and asphalt roofing products containing more than 1% asbestos. Category II non-friable ACM are any materials other than Category I materials that contain more than 1% asbestos.

Friable ACM, Category I, and Category II non-friable ACM which is in poor condition and has become friable or which will be subjected to drilling, sanding, grinding, cutting, or abrading and which could be crushed or pulverized during anticipated renovation or demolition activities are considered regulated ACM (RACM).



#### **Tennessee State Regulations**

In Putnam County, Tennessee, asbestos NESHAP regulations are administered by the Tennessee Department of Environment and Conservation (TDEC) Division of Air Pollution Control (DAPC). Tennessee Rule Chapter 1200-01-20 Asbestos Accreditation Requirements requires that any asbestos-related activity conducted in a public building within the State of Tennessee be performed by personnel accredited by the TDEC.

Friable ACM and Category I and Category II non-friable ACM which is in poor condition and has become friable or which will be subjected to drilling, sanding, grinding, cutting, or abrading and which could be crushed or pulverized during anticipated renovation or demolition activities are considered regulated ACM (RACM). RACM must be removed prior to renovation or demolition activities. If the amount of RACM exceeds 260 linear feet of pipe insulation or more than 160 square feet in other building components, the owner or operator must provide the Tennessee Department of Environment and Conservation - Division of Air Pollution Control (TDEC-APC) with written notification of planned removal activities at least 10 working days prior to the commencement of asbestos abatement activities. Removal of RACM should be conducted by an accredited and appropriately licensed asbestos abatement contractor.

#### **OSHA** Regulations

OSHA's general industry asbestos standard (29 CFR 1910.1001) requires employers to exercise due diligence in complying with the requirements to inform their employees and affected contractors working in the facility about the presence and location of both ACM and materials assumed to contain asbestos.

The OSHA Asbestos standard for the construction industry (29 CFR 1910.1101) regulates workplace exposure to asbestos. The OSHA standard requires that employee exposure to airborne asbestos fibers be maintained below 1 f/cc for a 30-minute excursion limit and 0.1 f/cc for an 8-hour permissible exposure limit. The OSHA standard classifies construction and maintenance activities, which could disturb ACM, and specifies work practices and precautions which employers must follow when engaging in each class of regulated work.

According to USEPA and the Occupational Safety and Health Administration (OSHA) regulations, an asbestos-containing material (ACM) is considered any material or product containing more than one percent (>1%) asbestos. Per the USEPA, a material with asbestos content ranging from <1% to 10% by PLM, must be analyzed by point count method or must be presumed asbestos-containing. Materials confirmed to be <%1 asbestos by point count analysis are considered by OSHA to be materials of concern. OSHA's concern is that a material, when disturbed, may emit fiber concentrations greater than 1 f/cc for a 30-minute excursion limit and 0.1 f/cc for an 8-hour permissible exposure limit. Therefore, the renovation/demolition contractor is required to comply with OSHA worker protection regulations during any disturbance or removal of these materials.



A full copy of the OSHA asbestos standard for general and construction industry may be found at OSHA's website (<a href="www.osha.gov">www.osha.gov</a>) and should be referenced for specific information.

#### 5.2 Lead-Containing Paint Regulations:

The following provide a general overview to the applicable lead regulations. Please refer to the complete current regulation in order to verify compliance before any actions are initiated on a LCP.

The OSHA *Lead Standard for Construction* (29 CFR 1926.62) applies to all construction work where an employee may be occupationally exposed to lead. All work related to construction, alteration, or repair (including painting and decorating) is included. The lead-in-construction standard applies to any detectable concentration of lead in paint, as even small concentrations of lead can result in unacceptable employee exposures depending upon on the method of removal and other workplace conditions.

Under the OSHA standard, construction includes, but is not limited to, the following:

- Demolition or salvage of structures where lead or materials containing lead are present
- Removal or encapsulation of materials containing lead
- New construction, alteration, repair, or renovation of structures, substrates, or portions containing lead, or materials containing lead
- Installation of products containing lead
- Lead contamination/emergency clean-up
- Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed
- Maintenance operations associated with construction activities described above

OSHA regulation 29 CFR 1926.62 established an "Action Level" for lead concentrations "in air" of 30 micrograms per cubic meter of air ( $\mu g/m^3$ ) and a "Permissible Exposure Limit" for lead concentrations "in air" of 50  $\mu g/m^3$ . At this time, OSHA has not established limits for lead content in bulk paint (non-airborne). Their interpretation on this issue is that any amount of lead may cause airborne concentrations above the established limits.

#### **5.3 Other Hazardous Materials Regulations:**

All hazardous materials are regulated under OSHA regulations 29 CFR 1926.59, Hazard Communication, 29 CFR 1910.134 Respiratory Protection, 29 CFR 1920.20, Subpart C, General Safety and Health Provisions, 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response and 29 CFR 1910.145, Accident Prevention Tags, as well as DOT 49 CFR 172, 173,178 and 179 Regulations for Labeling, Mailing and Transporting Hazardous Waste.



Specifically, mercury is regulated under EPA 40 CFR 261.24, Toxicity Characteristic and 273, Standard of Universal Waste Management. CFCs or HCFCs are regulated under 40 CFR Part 82, Refrigeration Recycling Regulation for Venting Prohibition. PCBs are regulated under 40 CFR 761, Polychlorinated Biphenyl Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions.

#### 6.0 Findings and Recommendations

#### **Asbestos Findings:**

Please refer to Appendix B for a summary of identified asbestos-containing materials. Asbestos laboratory analytical reports are provided in Appendix C.

Based on the results of laboratory analysis, the following materials were determined to be greater than 1% asbestos and thus ACM per EPA regulations:

- HA 02 Filler material beneath paint on concrete block wall;
- HA 02 Black mastic beneath carpet;
- HA 03 Interior window glazing;
- HA 06 Textured plaster ceiling;
- \*9" vinyl floor tiles and associated black mastic.

\*Note: materials were sampled and analyzed during a previous asbestos survey of the building.

The following material could not be sampled during the survey and therefore is assumed to contain greater than 1% asbestos and thus ACM per EPA regulations:

HA 11 - Fire door insulation.

The vinyl floor tile and mastics are considered Category I non-friable ACMs per EPA regulations. The filler material and glazing are considered Category II non-friable ACM per EPA regulations. These materials were observed to be in good condition. Typically, the Category I and Category II Non-friable materials are not considered RACM; however, if the materials become disturbed during renovation, they may become friable and thus, be considered a RACM. Therefore, the Category I and Category II Non-friable materials must be removed from the renovation area prior to any potential disturbance.

The textured plaster ceiling is considered a Friable ACM per EPA regulations. The material was observed in good condition. The textured plaster ceiling is considered a RACM and should be removed from the renovation area prior to any potential disturbance.



#### **Asbestos Recommendations**

It should be noted that suspect materials, other than those identified during this survey may exist within the renovation areas. While every attempt was made to identify the suspect materials, concealed materials may still be present. Should suspect materials other than those which were identified during this survey be uncovered during the renovation process, those materials should be assumed asbestos-containing until sampling and analysis can confirm or refute their asbestos content.

The following steps should be taken for the removal of the RACMs and potential RACMs:

1. Notify TDEC-DAPC officials of the impending abatement project electronically at Asbestos.NESHAP.Program@tn.gov or (written) at the following address:

> State of Tennessee Department of Environment and Conservation Division of Air Pollution Control Nashville Environmental Field Office 711 R.S. Gass Boulevard Nashville, Tennessee 37216

2. Remove the materials from the building before any activity begins that would break up, dislodge, or similarly disturb the material.

A Tennessee-accredited asbestos abatement firm should be contracted to perform the asbestos-containing material removal prior to any renovation process. The work should be performed in compliance with federal, state and local guidelines. It is recommended the work be performed in accordance with an asbestos removal specification developed by a Tennessee-accredited design firm.

The ACM waste must be manifested and disposed at an appropriately classified landfill and a landfill that is certified to accept RACM and non-RACM wastes.

#### **Lead-Containing Paint Findings:**

Based on the results of laboratory analyses, the following painted surfaces **were determined to be lead-containing:** 

- Brown colored paint on interior wood window frame;
- White colored paint on interior white concrete block wall; and
- White colored paint on exterior wood window frame.

Please refer to Appendix D for a summary of lead-containing paint samples. The lead-containing paint laboratory analytical report is provided in Appendix E.



#### **Lead-Containing Paint Recommendations:**

Should minor demolition occur, "undamaged" lead-containing paint may remain on the various substrates and the demolition material may be disposed as construction and demolition debris in a Class III and/or IV landfill. Should painted surfaces be "damaged" to extent that the surfaces are peeling, blistered or cracked, the surfaces must be stabilized prior to demolition or re-finishing. This may be accomplished using hand tools or a removal solvent.

Care must be taken by the contractor to not exceed the OSHA established Action Level of 30  $\mu g/m^3$  during the stabilization, demolition, or re-finishing process. Detection of these levels can be accomplished by personal air monitoring during the renovation activities that impact the lead-containing painted surfaces. The confirmed lead-containing painted surfaces and observed surface conditions are included in Appendix D.

Should stabilization work be necessary, the work should be performed by a Tennessee-licensed lead abatement firm, using Tennessee-licensed lead abatement workers under the guidelines developed by a professional designer.

#### **Other Hazardous Materials Findings Findings:**

The following observations were made during the survey regarding the absence and/or presence of other hazardous materials within the renovation areas:

- Mercury-containing thermostats were not observed;
- Fluorescent lamps (mercury) were observed;
- Light fixture ballasts (potential PCBs) were observed; and
- Potential CFC or HCFC-containing HVAC equipment was observed.

**Note:** Not all of the fluorescent light fixture ballasts were visually assessed. Because the building was constructed prior to 1979, there is potential for the presence of unlabeled fluorescent light fixture ballasts which could contain PCBs. Typically, manufacturers stopped producing PCB-containing oils in 1979. The ballasts should be visually confirmed as non-PCB containing before removal. Any unlabeled or PCB-containing ballasts and the hydraulic oil associated with the elevator motor should be handled, transported and disposed according to regulatory protocol.

#### Other Hazardous Materials Findings Recommendations:

Based on the above observations, the renovation contractor will need to comply with Tennessee regulation 1200-1-11-.12, Standard for Universal Waste Management. A written specification section should be developed to address the handling, transport and disposal of these materials during the renovation process. This specification should be followed by the renovation contractor during renovation activities.



#### 7.0 General Comments

The hazardous materials survey was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. The results, findings, conclusions, and recommendations expressed in this report are based on conditions observed during our survey of the renovation area of the building. The information contained in this report is relevant to the date on which this survey was performed and should not be relied upon to represent conditions at a later date. This report has been prepared on behalf of and exclusively for use by the Client. for specific application to their project as discussed. This report is not a bidding document. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary. Terracon does not warrant the work of regulatory agencies, laboratories or other third parties supplying information which may have been used in the preparation of this report. No warranty, express or implied is made.



## Appendix A Asbestos Sample Summary Table



#### **ASBESTOS SAMPLE SUMMARY TABLE**

#### DERRYBERRY AUDITORIUM RENOVATIONS TENNESSEE TECHNOLOGICAL RENOVATIONS COOKEVILLE, TENNESSEE

HOMOGENEOUS AREA (HA)	SAMPLE NO.	SAMPLE DESCRIPTION	SAMPLE LOCATION
01	001	Filler material beneath paint on concrete block walls	Room 354
01	002	Filler material beneath paint on concrete block walls	Room 252
01	003	Filler material beneath paint on concrete block walls	Room 252
02	004	Carpet mastic – yellow and black	Room 242
02	005	Carpet mastic – yellow and black	Room 242
02	006	Carpet mastic – yellow and black	Room 242
03	007	Interior window glazing	Room 242
03	008	Interior window glazing	Room 242
04	009	Plaster ceiling - smooth	Room 242
04	010	Plaster ceiling - smooth	Room 242
04	011	Plaster ceiling - smooth	Room 242
04	012	Plaster ceiling - smooth	Room 354
04	013	Plaster ceiling - smooth	Balcony
05	014	Stair tread mastic	Room 252
05	015	Stair tread mastic	Room 252
05	016	Stair tread mastic	Room 252
06	017	Textured plaster ceiling	Room 141
06	018	Textured plaster ceiling	Room 283
06	019	Textured plaster ceiling	Room 283
06	020	Textured plaster ceiling	Room 252
06	021	Textured plaster ceiling	Room 482
07	022	Cove base mastic	Room 264
07	023	Cove base mastic	Room 264
07	024	Cove base mastic	Room 283
08	025	Door caulk	Room 264
08	026	Door caulk	Room 264
08	027	Door caulk	Room 264
09	028	Exterior window glazing	Exterior of auditorium
09	029	Exterior window glazing	Exterior of auditorium
12	030	Filler material / paint coating on concrete block wall	Room 264

### Limited Hazardous Materials Survey Report Derryberry Auditorium Renovations | Tennessee Technological University April 18, 2024 | Terracon Project No. 18247187



HOMOGENEOUS AREA (HA)	SAMPLE NO.	SAMPLE DESCRIPTION	SAMPLE LOCATION
12	031	Filler material / paint coating on concrete block wall	Room 264
12	032	Filler material / paint coating on concrete block wall	Room 264
13	033	Gypsum wallboard and joint compound	Room 244
13	034	Gypsum wallboard and joint compound	Room 354
13	035	Gypsum wallboard and joint compound	Room 244
14	036	Plaster Wall	Balcony
14	037	Plaster Wall	Balcony
14	038	Plaster Wall	Balcony
14	039	Plaster Wall	Balcony
14	040	Plaster Wall	Room 354
15	041	Plaster ceiling patch textured material	Room 242
15	042	Plaster ceiling patch textured material	Room 242
15	043	Plaster ceiling patch textured material	Room 242
16	044	Window caulk - tan	Exterior or auditorium
16	045	Window caulk - tan	Exterior or auditorium



## Appendix B Identified Asbestos-Containing Materials

Limited Hazardous Materials Survey Report Derryberry Auditorium Renovations | Tennessee Technological University April 18, 2024 | Terracon Project No. 18247187



# IDENTIFIED ASBESTOS-CONTAINING MATERIALS

## DERRYBERRY AUDITORIUM RENOVATIONS TENNESSEE TECHNOLOGICAL RENOVATIONS COOKEVILLE, TENNESSEE

HA NO.	DESCRIPTION	MATERIAL	PERCENT/TYPE ASBESTOS	NESHAP CLASSIFICATION	CONDITIO	*ESTIMATED QUANTITY
01	Filler material beneath paint on concrete block wall	Rooms 244, 250, 251, 252, 330, 334, 354, 410 and 437.	2%C – Filler Material	Category II Non- Friable	Good	600 ft² of concrete block, (1,200 ft² of block surface)
02	Black mastic beneath carpet	Rooms 242 and Balcony	ND – Yellow Mastic 3%C – Black Mastic	Category I Non-Friable	Good	1,400 ft²
03	Interior window glazing	Rooms 242	3%C – Window Glazing	Category II Non- Friable	Good	1 large window unit (approximate 200 ft²)
90	Textured plaster ceiling	Rooms 133, 168C, 244, 250, 251, 255, 262, 2624, 263, 410 and 437.	5%C - Acoustic Texture	Friable	Good	350 ft²
11	Fire Door Insulation	Rooms 242, 244, 252, 264, 336 and Balcony	Assumed Asbestos- Containing	Friable	Good	19 Doors
Not assigned	9" vinyl floor tile and associated black mastic	Rooms 244, 250, 251, 252, 410, 437, and 438. Beneath carpet in Rooms 330, 334 and 335	3%C – floor tile 5%C – black mastic	Category I Non-Friable	Good	400 ft²

HA NO. = Homogeneous Area Number

C = Chrysotile Asbestos

ND = No Asbestos Detected

ft<sup>2</sup> = square feet

of the material present within the building. These quantities should not be used for bidding purposes. Any contractor reviewing this report must \*Estimated Quantities - estimation is based on quantity of material anticipated to be impacted by the project and is not indicative of the quantity draw their own conclusions regarding remediation deemed necessary.



## Appendix C Asbestos Laboratory Analytical Reports



#### **PLM Summary Report**

NVLAP Lab Code 102056-0
2051 Valley View Lane
TDSHS License No. 300084

Farmers Branch, TX 75234 Phone: (972) 241-8460

Client: Terracon - Nashville Lab Job No. : 24B-04141

Project: TTU, Derryberry Hall Report Date : 04/12/2024

Project #: 18247187 Sample Date : 04/11/2024

Identification: Asbestos, Bulk Sample Analysis

Test Method: Polarized Light Microscopy / Dispersion Staining (PLM/DS)

EPA Method 600 / R-93 / 116 Page 1 of 3

On 4/12/2024, forty five (45) bulk material samples were submitted by a representative of Terracon - Nashville for asbestos analysis by PLM/DS. The PLM Detail Report is attached; additional information may be found therein. The results are summarized below:

Sample Number	Client Sample Description / Location	Asbestos Content
001	HA 01, CMU Filler / Coating, Room 354	None Detected - Filler Material
002	HA 01, CMU Filler / Coating, Room 252	2% Chrysotile - Filler Material
003	HA 01, CMU Filler / Coating, Room 252	2% Chrysotile - Filler Material
004	HA 02, Carpet Mastic, Room 242	None Detected - Yellow Mastic 3% Chrysotile - Black Mastic
005	HA 02, Carpet Mastic, Room 242	None Detected - Yellow Mastic 3% Chrysotile - Black Mastic
006	HA 02, Carpet Mastic, Room 242	None Detected - Yellow Mastic 3% Chrysotile - Black Mastic
007	HA 03, Window Glaze Interior, Room 242	3% Chrysotile - Window Glazing
008	HA 03, Window Glaze Interior, Room 242	3% Chrysotile - Window Glazing
009	HA 04, Plaster Ceiling, Room 242	None Detected - Plaster
010	HA 04, Plaster Ceiling, Room 242	None Detected - Plaster
011	HA 04, Plaster Ceiling, Room 242	None Detected - Base Plaster None Detected - Top Plaster
012	HA 04, Plaster Ceiling, Room 354	None Detected - Plaster
013	HA 04, Plaster Ceiling, Balcony	None Detected - Plaster
014	HA 05, Stair Tread Mastic, Room 252	None Detected - Yellow Mastic
015	HA 05, Stair Tread Mastic, Room 252	None Detected - Yellow Mastic
016	HA 05, Stair Tread Mastic, Room 252	None Detected - Yellow Mastic
017	HA 06, Textured Ceiling (Popcorn), Room 141	5% Chrysotile - Acoustic Texture
018	HA 06, Textured Ceiling (Popcorn), Room 283	5% Chrysotile - Acoustic Texture
019	HA 06, Textured Ceiling (Popcorn), Room 283	5% Chrysotile - Acoustic Texture



#### **PLM Summary Report**

NVLAP Lab Code 102056-0
2051 Valley View Lane
TDSHS License No. 300084

Farmers Branch, TX 75234 Phone: (972) 241-8460

Client: Terracon - Nashville Lab Job No. : 24B-04141

Project: TTU, Derryberry Hall Report Date : 04/12/2024

Project #: 18247187 Sample Date : 04/11/2024

Identification: Asbestos, Bulk Sample Analysis

Test Method: Polarized Light Microscopy / Dispersion Staining (PLM/DS)

EPA Method 600 / R-93 / 116 Page 2 of 3

On 4/12/2024, forty five (45) bulk material samples were submitted by a representative of Terracon - Nashville for asbestos analysis by PLM/DS. The PLM Detail Report is attached; additional information may be found therein. The results are summarized below:

Sample Number	Client Sample Description / Location	Asbestos Content
020	HA 06, Textured Ceiling (Popcorn), Room 252	5% Chrysotile - Acoustic Texture
021	HA 06, Textured Ceiling (Popcorn), Room 482	5% Chrysotile - Acoustic Texture
022	HA 07, Cove Base (Black) Mastic, Room 264	None Detected - Cove Base None Detected - Yellow Mastic
023	HA 07, Cove Base (Black) Mastic, Room 264	None Detected - Cove Base None Detected - Yellow Mastic
024	HA 07, Cove Base (Black) Mastic, Room 283	None Detected - Cove Base None Detected - Yellow Mastic
025	HA 08, Door Caulking, Room 264	None Detected - Caulking
026	HA 08, Door Caulking, Room 264	None Detected - Caulking
027	HA 08, Door Caulking, Room 264	None Detected - Caulking
028	HA 09, Window Glazing Exterior	None Detected - Window Glazing
029	HA 09, Window Glazing Exterior	None Detected - Window Glazing
030	HA 12, CMU Filler / Coating, Room 264	None Detected - CMU None Detected - Mortar None Detected - Paint / Filler
031	HA 12, CMU Filler / Coating, Room 264	None Detected - CMU None Detected - Mortar None Detected - Paint / Filler
032	HA 12, CMU Filler / Coating, Room 264	None Detected - CMU None Detected - Mortar None Detected - Paint / Filler
033	HA 13, Gypsum Wallboard and Mastic, Room 244	None Detected - Drywall Material None Detected - Texture None Detected - Tan Mastic
034	HA 13, Gypsum Wallboard and Mastic, Room 354	None Detected - Drywall Material None Detected - Texture No Mastic



#### **PLM Summary Report**

NVLAP Lab Code 102056-0 2051 Valley View Lane TDSHS License No. 300084

Farmers Branch, TX 75234 Phone: (972) 241-8460

Client: Terracon - Nashville Lab Job No.: 24B-04141 Project: TTU, Derryberry Hall Report Date: 04/12/2024 Project #: 18247187 Sample Date :04/11/2024

Identification: Asbestos, Bulk Sample Analysis

Test Method: Polarized Light Microscopy / Dispersion Staining (PLM/DS)

> EPA Method 600 / R-93 / 116 Page 3 of 3

On 4/12/2024, forty five (45) bulk material samples were submitted by a representative of Terracon - Nashville for asbestos analysis by PLM/DS. The PLM Detail Report is attached; additional information may be found therein. The results are summarized below:

Sample Number	Client Sample Description / Location	Asbestos Content
035	HA 13, Gypsum Wallboard and Mastic, Room 244	No Drywall Material None Detected - Texture
036	HA 14, Plaster Wall, Balcony	None Detected - Base Plaster None Detected - Top Plaster
037	HA 14, Plaster Wall, Balcony	None Detected - Base Plaster None Detected - Top Plaster
038	HA 14, Plaster Wall, Balcony	None Detected - Base Plaster None Detected - Top Plaster
039	HA 14, Plaster Wall, Balcony	None Detected - Plaster
040	HA 14, Plaster Wall, Room 354	None Detected - Plaster
041	HA 15, Ceiling Plaster Patch Texture, Room 242	None Detected - Texture
042	HA 15, Ceiling Plaster Patch Texture, Room 242	None Detected - Texture
043	HA 15, Ceiling Plaster Patch Texture, Room 242	None Detected - Texture
044	HA 16, Window Caulking, Exterior	None Detected - Caulking
045	HA 16, Window Caulking, Exterior	None Detected - Caulking

These samples were analyzed by layers. Quantification, unless otherwise noted, is performed by calibrated visual estimate. The test report shall not be reproduced except in full without written approval of the laboratory. The results relate only to the items tested. These test results do not imply endorsement by NVLAP or any agency of the U.S. Government. Accredited by the National Voluntary Laboratory Accreditation Program for Bulk Asbestos Fiber Analysis under Lab Code 102056-0.

Analyst(s): Amy Le, Jacob Sutherland, Shaun Wilkerson

Lab Manager: Heather Lopez

Lab Director: Bruce Crabb

Thank you for choosing Moody Labs

Approved Signatory: Bene &

#### This Page Left Intentionally Blank

#### **PLM Detail Report**

Supplement to PLM Summary Report

NVLAP Lab Code 102056-0 TDSHS License No. 300084

Lab Job No.: 24B-04141

Report Date: 04/12/2024

Farmers Branch, TX 75234 Phone: (972) 241-8460

Client : Terracon - Nashville Project : TTU, Derryberry Hall

Project #: 18247187

2051 Valley View Lane

Page 1 of 5

Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
001	Filler Material (Blue/ White)	100%	Calcite	25%	04/12	SW
			Pigment / Binders	75%		
002	Filler Material (Tan)	100%	Chrysotile	2%	04/12	SW
			Calcite	23%		
			Pigment / Binders	75%		
003	Filler Material (Tan)	100%	Chrysotile	2%	04/12	SW
			Calcite	23%		
		0	Pigment / Binders	75%		
004	Yellow Mastic (Yellow)	98%	Glue Binders	100%	04/12	SW
	Black Mastic (Black)	2%	Chrysotile	3%		
			Tar Binders	97%		
005	Yellow Mastic (Yellow)	50%	Glue Binders	100%	04/12	SW
	Black Mastic (Black)	50%	Chrysotile	3%		
			Tar Binders	97%		
006	Yellow Mastic (Yellow)	90%	Glue Binders	100%	04/12	SW
	Black Mastic (Black)	10%	Chrysotile	3%		
			Tar Binders	97%		
007	Window Glazing (Grey)	100%	Chrysotile	3%	04/12	sw
			Calcite	57%		
			Binders / Fillers	40%		
008	Window Glazing (Grey)	100%	Chrysotile	3%	04/12	sw
			Calcite	57%		
			Binders / Fillers	40%		
009	Plaster (White)	100%	Calcite / Binders	100%	04/12	SW
010	Plaster (White)	100%	Calcite / Binders	100%	04/12	sw
011	Base Plaster (Tan)	5%	Aggregate	65%	04/12	SW
			Calcite / Binders	35%		
	Top Plaster (White)	95%	Calcite / Binders	100%		

#### **PLM Detail Report**

Supplement to PLM Summary Report

NVLAP Lab Code 102056-0 TDSHS License No. 300084

Lab Job No.: 24B-04141

Report Date: 04/12/2024

Farmers Branch, TX 75234 Phone: (972) 241-8460

Client : Terracon - Nashville
Project : TTU, Derryberry Hall

Project #: 18247187

2051 Valley View Lane

Page 2 of 5

Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
012	Plaster (Tan)	100%	Aggregate	65%	04/12	SW
			Calcite / Binders	35%		
013	Plaster (White)	100%	Calcite / Binders	100%	04/12	SW
014	Yellow Mastic (Yellow)	100%	Glue Binders	100%	04/12	SW
015	Yellow Mastic (Yellow)	100%	Glue Binders	100%	04/12	SW
016	Yellow Mastic (Yellow)	100%	Glue Binders	100%	04/12	SW
017	Acoustic Texture (Off-White)	100%	Chrysotile	5%	04/12	sw
			Perlite	70%		
			Calcite / Talc / Binders	25%		
018	Acoustic Texture (Off-White)	100%	Chrysotile	5%	04/12	SW
			Perlite	70%		
			Calcite / Talc / Binders	25%		
019	Acoustic Texture (Off-White)	100%	Chrysotile	5%	04/12	SW
			Perlite	70%		
			Calcite / Talc / Binders	25%		
020	Acoustic Texture (Off-White)	100%	Chrysotile	5%	04/12	SW
			Perlite	70%		
			Calcite / Talc / Binders	25%		
021	Acoustic Texture (Off-White)	100%	Chrysotile	5%	04/12	SW
			Perlite	70%		
			Calcite / Talc / Binders	25%		
022	Cove Base (Black)	5%	Calcite / Vinyl Binders	100%	04/12	AL
	Yellow Mastic (Yellow)	95%	Glue Binders	100%		
023	Cove Base (Black)	10%	Calcite / Vinyl Binders	100%	04/12	AL
	Yellow Mastic (Yellow)	90%	Glue Binders	100%		
024	Cove Base (Black)	95%	Calcite / Vinyl Binders	100%	04/12	AL
	Yellow Mastic (Yellow)	5%	Glue Binders	100%		

#### **PLM Detail Report**

Supplement to PLM Summary Report

NVLAP Lab Code 102056-0 TDSHS License No. 300084

Farmers Branch, TX 75234 Phone: (972) 241-8460

Client: Terracon - Nashville Project: TTU, Derryberry Hall

Project #: 18247187

2051 Valley View Lane

Lab Job No. : 24B-04141 Report Date : 04/12/2024

Page 3 of 5

Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
025	Caulking (Light Beige)	100%	Wollastonite	5%	04/12	AL
			Calcite	55%		
			Binders / Fillers	40%		
026	Caulking (Light Beige)	100%	Wollastonite	5%	04/12	AL
			Calcite	55%		
			Binders / Fillers	40%		
027	Caulking (Light Beige)	100%	Wollastonite	5%	04/12	AL
			Calcite	55%		
			Binders / Fillers	40%		
028	Window Glazing (White)	100%	Calcite	60%	04/12	AL
			Binders / Fillers	40%		
029	Window Glazing (White)	100%	Calcite	60%	04/12	SW
			Binders / Fillers	40%		
030	CMU (Grey)	79%	Aggregate	65%	04/12	SW
			Cement Binders	35%		
	Mortar (White)	20%	Aggregate	65%		
			Cement Binders	35%		
	Paint / Filler (Black)	1%	Pigment / Binders	100%		
031	CMU (Grey)	89%	Aggregate	65%	04/12	sw
			Cement Binders	35%		
	Mortar (White)	10%	Aggregate	65%		
			Cement Binders	35%		
	Paint / Filler (Black)	1%	Pigment / Binders	100%		
032	CMU (Grey)	79%	Aggregate	65%	04/12	SW
			Cement Binders	35%		
	Mortar (White)	20%	Aggregate	65%		
			Cement Binders	35%		
	Paint / Filler (Black)	1%	Pigment / Binders	100%		

### PLM Detail Report

Supplement to PLM Summary Report

NVLAP Lab Code 102056-0 TDSHS License No. 300084

Farmers Branch, TX 75234 Phone: (972) 241-8460

Client: Terracon - Nashville Lab Job No. : 24B-04141
Project: TTU, Derryberry Hall Report Date : 04/12/2024

Project #: 18247187

2051 Valley View Lane

Page 4 of 5

					0	C T OI S
Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
033	Drywall Material (White)	70%	Cellulose Fibers	5%	04/12	JS
			Gypsum / Binders	95%		
	DW Paper Facing (Tan)	10%	Cellulose Fibers	100%		
	Glass Fiber Mesh (White)	5%	Glass Wool Fibers	100%		
	Texture (White)	15%	Calcite / Talc / Binders	100%		
	Tan Mastic (Tan)	<1%	Glue Binders	100%		
034	Drywall Material (White)	45%	Glass Wool Fibers	2%	04/12	JS
			Gypsum / Binders	98%		
	DW Paper Facing (Tan)	15%	Cellulose Fibers	100%		
	Texture (White)	40%	Calcite / Talc / Binders	100%		
	No Mastic					
035	No Drywall Material	2			04/12	JS
	No DW Paper Facing					
	Texture (White)	100%	Calcite / Talc / Binders	100%		
036	Base Plaster (Tan)	5%	Aggregate	65%	04/12	JS
			Calcite / Binders	35%		
	Top Plaster (White)	95%	Calcite / Binders	100%		
037	Base Plaster (Tan)	10%	Aggregate	65%	04/12	JS
			Calcite / Binders	35%		
	Top Plaster (White)	90%	Calcite / Binders	100%		
038	Base Plaster (Tan)	5%	Aggregate	65%	04/12	JS
			Calcite / Binders	35%		
	Top Plaster (White)	95%	Calcite / Binders	100%		
039	Plaster (White)	100%	Calcite / Binders	100%	04/12	JS
040	Plaster (Tan)	100%	Aggregate	65%	04/12	JS
			Calcite / Binders	35%		
041	Texture (White)	100%	Calcite / Binders	100%	04/12	JS
042	Texture (White)	100%	Calcite / Binders	100%	04/12	JS
043	Texture (White)	100%	Calcite / Binders	100%	04/12	JS

#### **PLM Detail Report**

Supplement to PLM Summary Report

NVLAP Lab Code 102056-0 TDSHS License No. 300084

Farmers Branch, TX 75234 Phone: (972) 241-8460

Client: Terracon - Nashville Project: TTU, Derryberry Hall

Project #: 18247187

2051 Valley View Lane

Lab Job No. : 24B-04141 Report Date : 04/12/2024

Dogg 5 of

				Page 5 of 5
Sample Number	Layer	% Of Sample	Components	% of Analysis Layer Date Analyst
044	Caulking (White)	100%	Calcite	40% 04/12 JS
			Binders / Fillers	60%
045	Caulking (White)	100%	Calcite	40% 04/12 JS
			Binders / Fillers	60%



#### Chain of Custody

Lab Job #	24	4-04	741	11/	<u>n4</u>	7
 Lab Job #	<del>// \</del>	<u></u>		-1		-
Lab Job #						

	HOURS / WEEKEND WORK:  \[ \subseteq \text{ YES } \subseteq \text{ NO} \]  In advance for after hours / immediate pricing & availability*	Page of 2
ASBESTOS PL Bulk   Imr	mediate	MOLD  Direct Exam
Analy	mediate	TPC w/ Yeast & Mold (TYMC)**
TOTAL DUST	<u>(0500/0600)</u> ☐ 1 day ☐ 2 day	BACTERIA**
Air 7402 (Mo Bulk Water/Wipe/I Analyze Blar	ethod	Total Plate Count (TAMC)
Project:	any / city: Terracon/ Nashville TTU - Devry berry Hall	# of Samples: 45 Sample Date: 4 11 2024 Project #: TBD 13247 187
	rmation: Name: Aljus Alcineus & Joel Russ	
E-mail Results	to: aljus.alcineus@terrracon & joel.russ	
	SS:	P.O. #:ed / damaged / expired samples or excessive administrative requests may incur additional fees*
Notes:		and the second s
Sample #	Sample Description	Vol. / Area (if applicable) Location / Notes
001	CM Filer/Conting	HAO1 2m 354
002	1, 2	252
003		7 262
004	Carpet Mastic	HA 02 Rm 242
005		742
000	14/2 1 3 6 6 - 1 1 3	11 102 10 2112
001	Window Glize Interior	7/03 Km 242
008	Plaster Ceiling	HA04 Rm 242
019	Plaster Celling	HA04 Km 242
011		2.42
012		354
013	4	Balcom
014	Stair Tread Mastic	HA05 Rm 252
015	1	* Pu 252
Released B	Acres 4/1/24/1754	Received By:  Nu Fedex  4/12-30  Date / Time:  Date / Time:  Date / Time:



#### Chain of Custody

	2.11		
Lab Job #	7415-	14141	
Lab Job #_		OTI (	
Lab Job #_		5.00 Sec. 100 p. 5.111	

Project:	TU-Derry Derry Hall Project	t #: <i>\tag{\tau}</i>	$\overline{BD}$ Page $\overline{2}$ of $\overline{2}$
	Sample Description	Vol. / Area (if applicable)	Location / Notes
016	Striv Tread Mastic	HA05	2m 252
017	Popcorn Textured ceiling	HA06	Rm 141
018			283
019			283
070			252
021	4	¥	482
022	Cove base mastic (BIKCB)	HA07	lm 264
073			264
024	The state of the s	7	283
025	Door Cauting	HA 08	m 2.64
026	1		264
OT	1111	1)	764
028	Window Glazing Exterior	14409	Exterior
029	C 2011 (1)	11 12	0. 0.4
030	CMU filler / coating	HA12	Rm 264
03			
032	Caron 11 12 194 ali	HA13	D. 244
033	Caypsum Wall Board & Mastic	HAIS	254
035			, 244
036	Plaster Wall	HA14	Balcon
037	+ laster lover.	LALL T	Balcon
028			Balan
039			Balcon
040	*	1	Pm 351
241	Certing Plaster Patch texture	HA15	Rin 242
042	Letting Franker Vallet Banker	1	
043	<b>→</b>	4	+
044	Window Caulying	HA 16	Exterior
045	1	1	4
,,,,	*	3170	

Steve Moody Micro Services, Inc. 2051 Valley View Lane Farmers Branch, TX 75234 (972) 241-8460

RECEIVED

NVLAP Lab No. 102056 TDH License No. 30-0084 PAT ID # 102577

Client:

Terracon - Nashville, TN

AUG 1 7 2006

Lab Job No.: x6B-07002

Project:

Report Date: 08/10/2006

Project #:

18037064

Sample Date: Not Provided

TERRACON / NASHVILLE

Identification: Asbestos, Bulk Sample Analysis

Derryberry Hall, Div. #364, Loc. #01100

Test Method: Polarized Light Microscopy / Dispersion Staining (PLM/DS)

EPA Method 600 / R-93 / 116

Page 1 of 9

Sample Number	Client Sample Description / Location	Asbestos Content
01100-001	HA-01, Spray-Applied Acoustic Ceiling (White, Textured), Room No. 450A	10% Chrysotile - Old Acoustic Plaster None Detected - New Acoustic Plaster
01100-002	HA-01, Spray-Applied Acoustic Ceiling (White, Textured), Room No. 314	Not Analyzed - Positive Stop
01100-003	HA-01, Spray-Applied Acoustic Ceiling (White, Textured), Room No. 134	Not Analyzed - Positive Stop
01100-004	HA-01, Spray-Applied Acoustic Ceiling (White, Textured), Room No. 102A	Not Analyzed - Positive Stop
01100-005	HA-01, Spray-Applied Acoustic Ceiling (White, Textured), Room No. 143	Not Analyzed - Positive Stop
01100-006	HA-01, Spray-Applied Acoustic Ceiling (White, Textured), Room No. 201	Not Analyzed - Positive Stop
01100-007	HA-01, Spray-Applied Acoustic Ceiling (White, Textured), Room No. 227	Not Analyzed - Positive Stop
01100-008	HA-01, Spray-Applied Acoustic Ceiling (White, Textured), Room No. 390	Not Analyzed - Positive Stop
01100-009	HA-01, Spray-Applied Acoustic Ceiling (White, Textured), Room No. 450A	Not Analyzed - Positive Stop
01100-010	HA-02, Skimcoat (Brown, Cementitious), Room No. 102D	None Detected - White Plaster None Detected - Tan Plaster None Detected - Grey Plaster

Steve Moody Micro Services, Inc. 2051 Valley View Lane Farmers Branch, TX 75234 (972) 241-8460 NVLAP Lab No. 102056 TDH License No. 30-0084 PAT ID # 102577

Lab Job No.: x6B-07002

Report Date: 08/10/2006

Client:

Terracon - Nashville, TN

Project:

Derryberry Hall, Div. #364, Loc. #01100

Project #:

18037064

Sample Date: Not Provided

Identification: Asbestos, Bulk Sample Analysis

Test Method: Polarized Light Microscopy / Dispersion Staining (PLM/DS)

EPA Method 600 / R-93 / 116

Page 2 of 9

Sample Number	Client Sample Description / Location	Asbestos Content
01100-011	HA-02, Skimcoat (Brown, Cementitious), Room No. 144	None Detected - White Plaster None Detected - Tan Plaster None Detected - Grey Plaster
01100-012	HA-02, Skimcoat (Brown, Cementitious), Room No. 208A	None Detected - White Plaster None Detected - Tan Plaster None Detected - Grey Plaster
01100-013	HA-02, Skimcoat (Brown, Cementitious), Room No. 205	None Detected - Grey Plaster None Detected - White Plaster
01100-014	HA-02, Skimcoat (Brown, Cementitious), Room No. 314C	None Detected - Grey Plaster None Detected - White Plaster
01100-015	HA-02, Skimcoat (Brown, Cementitious), Room No. 301	None Detected - Tan Plaster None Detected - White Plaster
01100-016	HA-02, Skimcoat (Brown, Cementitious), Room No. 410	None Detected - Grey Plaster None Detected - White Plaster
01100-017	HA-03/03A, 9" x 9" Vinyl Floor Tile (Brown), Mastic (Black), Room No. 134	3% Chrysotile - Floor Tile None Detected - Yellow Mastic
01100-018	HA-03/03A, 9" x 9" Vinyl Floor Tile (Brown), Mastic (Black), Room No. 134	None Detected - Floor Tile None Detected - Yellow Mastic 5% Chrysotile - Black Mastic
01100-019	HA-03/03A, 9" x 9" Vinyl Floor Tile (Brown), Mastic (Black), Room No. 222	Not Analyzed - Positive Stop
01100-020	HA-04/04A, 9" x 9" Vinyl Floor Tile (Dark Beige with Brown and White), Mastic (Black), Room No. 134	3% Chrysotile - Floor Tile No Mastic

Steve Moody Micro Services, Inc. 2051 Valley View Lane Farmers Branch, TX 75234 (972) 241-8460 NVLAP Lab No. 102056 TDH License No. 30-0084 PAT ID # 102577

Client:

Terracon - Nashville, TN

Lab Job No.: x6B-07002

Project:

Derryberry Hall, Div. #364, Loc. #01100

Report Date: 08/10/2006

Project #:

18037064

Sample Date: Not Provided

Identification: Asbestos, Bulk Sample Analysis

Test Method: Polarized Light Microscopy / Dispersion Staining (PLM/DS)

EPA Method 600 / R-93 / 116

Page 3 of 9

Sample Number	Client Sample Description / Location	Asbestos Content
01100-021	HA-04/04A, 9" x 9" Vinyl Floor Tile (Dark Beige with Brown and White), Mastic (Black), Room No. 222	3% Chrysotile - Floor Tile 5% Chrysotile - Black Mastic
01100-022	HA-04/04A, 9" x 9" Vinyl Floor Tile (Dark Beige with Brown and White), Mastic (Black), Room No. 318	Not Analyzed - Positive Stop
01100-023	HA-05, Cove Base Mastic (Brown), Room No. 305	None Detected - Brown Mastic None Detected - Black Mastic
01100-024	HA-05, Cove Base Mastic (Brown), Room No. 206E	None Detected - Brown Mastic
01100-025	HA-05, Cove Base Mastic (Brown), Room No. 155	None Detected - Yellow Mastic None Detected - Brown Mastic
01100-026	HA-06, Carpet Mastic (Yellow), Room No. 161	None Detected - Yellow Mastic 10% Chrysotile - Black Mastic
01100-027	HA-06, Carpet Mastic (Yellow), Room No. 305B	Not Analyzed - Positive Stop
01100-028	HA-06, Carpet Mastic (Yellow), Room No. 208	Not Analyzed - Positive Stop
01100-029	HA-07/07A, 12" x 12" Vinyl Floor Tile (Beige with Blue and Brown), Mastic (Brown), Room No. 102E	None Detected - Floor Tile 3% Chrysotile - Black Mastic
01100-030	HA-07/07A, 12" x 12" Vinyl Floor Tile (Beige with Blue and Brown), Mastic (Brown), Room No. 102E	None Detected - Floor Tile 3% Chrysotile - Black Mastic
01100-031	HA-08/08A, 9" x 9" Vinyl Floor Tile (Green with Cream), Mastic (Black), Room No. 390	5% Chrysotile - Floor Tile 5% Chrysotile - Black Mastic
01100-032	HA-08/08A, 9" x 9" Vinyl Floor Tile (Green with Cream), Mastic (Black), Room No. 262	Not Analyzed - Positive Stop

Steve Moody Micro Services, Inc. 2051 Valley View Lane Farmers Branch, TX 75234 (972) 241-8460 NVLAP Lab No. 102056 TDH License No. 30-0084 PAT ID # 102577

Client:

Terracon - Nashville, TN

Lab Job No.: x6B-07002

Project:

Derryberry Hall, Div. #364, Loc. #01100

Report Date: 08/10/2006

Project #:

18037064

Sample Date: Not Provided

Identification: Asbestos, Bulk Sample Analysis

Test Method: Polarized Light Microscopy / Dispersion Staining (PLM/DS)

EPA Method 600 / R-93 / 116

Page 4 of 9

A, 9" x 9" Vinyl Floor Tile (Green with Cream), ack), Room No. 114  A, 9" x 9" Vinyl Floor Tile (Black and White), ack), Room No. 134  A, 9" x 9" Vinyl Floor Tile (Black and White), ack), Room No. 134  A, 9" x 9" Vinyl Floor Tile (Black and White), ack), Pages No. 218	Not Analyzed - Positive Stop  5% Chrysotile - Floor Tile None Detected - Brown Mastic  5% Chrysotile - Floor Tile None Detected - Brown Mastic
ack), Room No. 134  A, 9" x 9" Vinyl Floor Tile (Black and White), ack), Room No. 134  A, 9" x 9" Vinyl Floor Tile (Black and White),	None Detected - Brown Mastic  5% Chrysotile - Floor Tile
ack), Room No. 134  A, 9" x 9" Vinyl Floor Tile (Black and White),	
ack), Room No. 318	5% Chrysotile - Floor Tile None Detected - Brown Mastic 5% Chrysotile - Black Mastic
a, 9" x 9" Vinyl Floor Tile (Bronze and Brown), ack), Room No. 116	3% Chrysotile - Floor Tile 5% Chrysotile - Black Mastic
a, 9" x 9" Vinyl Floor Tile (Bronze and Brown), ack), Room No. 116	Not Analyzed - Positive Stop
A, 9" x 9" Vinyl Floor Tile (Bronze and Brown), ack), Room No. 100P	Not Analyzed - Positive Stop
A, 9" x 9" Vinyl Floor Tile Black and Cream), Mastic (Black), Room No. 450A	5% Chrysotile - Floor Tile None Detected - Black Mastic
A, 9" x 9" Vinyl Floor Tile Black and Cream), Mastic (Black), Room No. 450A	5% Chrysotile - Floor Tile None Detected - Black Mastic
ypsum Wallboard (White, Powdery), 200A	None Detected - Drywall Material None Detected - Joint Compound
y	Black and Cream), Mastic (Black), Room No. 450A rpsum Wallboard (White, Powdery),

Steve Moody Micro Services, Inc. 2051 Valley View Lane Farmers Branch, TX 75234 (972) 241-8460

NVLAP Lab No. 102056 TDH License No. 30-0084 PAT ID # 102577

Client:

Terracon - Nashville, TN

Lab Job No.: x6B-07002

Project:

Derryberry Hall, Div. #364, Loc. #01100

Report Date: 08/10/2006

Project #:

18037064

Sample Date: Not Provided

Identification: Asbestos, Bulk Sample Analysis

Test Method: Polarized Light Microscopy / Dispersion Staining (PLM/DS)

EPA Method 600 / R-93 / 116

Page 5 of 9

ample Number	Client Sample Description / Location	Asbestos Content
01100-043	HA-15, Gypsum Wallboard (White, Powdery), Room No. 305	None Detected - Drywall Material None Detected - Joint Compound
01100-044	HA-15, Gypsum Wallboard (White, Powdery), Room No. 331	None Detected - Drywall Material None Detected - Joint Compound
01100-045	HA-16/16A, 12" x 12" Vinyl Floor Tile (Medium Gray with Dark Gray), Mastic (Yellow), Room No. 168	None Detected - Floor Tile No Mastic
01100-046	HA-16/16A, 12" x 12" Vinyl Floor Tile (Medium Gray with Dark Gray), Mastic (Yellow), Room No. 168	None Detected - Floor Tile No Mastic
01100-047	HA-16/16A, 12" x 12" Vinyl Floor Tile (Medium Gray with Dark Gray), Mastic (Yellow), Room No. 100D	None Detected - Floor Tile None Detected - Yellow Mastic
01100-048	HA-17/17A, 12" x 12" Vinyl Floor Tile (Light Gray with Dark Gray), Mastic (Yellow), Room No. 100N	None Detected - Floor Tile None Detected - Yellow Mastic
01100-049	HA-17/17A, 12" x 12" Vinyl Floor Tile (Light Gray with Dark Gray), Mastic (Yellow), Room No. 100N	None Detected - Floor Tile None Detected - Yellow Mastic
01100-050	HA-18, Sink Undercoating (Cream), Room No. 100F	None Detected - Sink Undercoating
01100-051	HA-18, Sink Undercoating (Cream), Room No. 206E	None Detected - Sink Undercoating
01100-052	HA-18, Sink Undercoating (Cream), Room No. 314	None Detected - Sink Undercoating
01100-053	HA-19/19A, 9" x 9" Vinyl Floor Tile (Gray with Black and Pink), Mastic (Black), Room No. 132	5% Chrysotile - Floor Tile 3% Chrysotile - Black Mastic
01100-054	HA-19/19A, 9" x 9" Vinyl Floor Tile (Gray with Black and Pink), Mastic (Black), Room No. 133	Not Analyzed - Positive Stop

Steve Moody Micro Services, Inc. 2051 Valley View Lane Farmers Branch, TX 75234 (972) 241-8460

NVLAP Lab No. 102056 TDH License No. 30-0084 PAT ID # 102577

Client:

Terracon - Nashville, TN

Lab Job No.: x6B-07002

Project:

Derryberry Hall, Div. #364, Loc. #01100

Report Date: 08/10/2006

Project #:

18037064

Sample Date: Not Provided

Identification: Asbestos, Bulk Sample Analysis

Test Method: Polarized Light Microscopy / Dispersion Staining (PLM/DS)

EPA Method 600 / R-93 / 116

Page 6 of 9

Sample Number	Client Sample Description / Location	Asbestos Content
01100-055	HA-19/19A, 9" x 9" Vinyl Floor Tile (Gray with Black and Pink), Mastic (Black), Room No. 450A	Not Analyzed - Positive Stop
01100-056	HA-20, Linoleum (Gray and White), Room No. 146	None Detected - Sheet Flooring None Detected - Fiber Backing
01100-057	HA-20, Linoleum (Gray and White), Room No. 146	None Detected - Sheet Flooring None Detected - Fiber Backing
01100-058	HA-21/21A, 9" x 9" Vinyl Floor Tile (Tan with Dark Brown and Cream), Mastic (Black), Room No. 146C	5% Chrysotile - Floor Tile 10% Chrysotile - Black Mastic
01100-059	HA-21/21A, 9" x 9" Vinyl Floor Tile (Tan with Dark Brown and Cream), Mastic (Black), Room No. 450A	Not Analyzed - Positive Stop
01100-060	HA-21/21A, 9" x 9" Vinyl Floor Tile (Tan with Dark Brown and Cream), Mastic (Black), Room No. 256	Not Analyzed - Positive Stop
01100-061	HA-22, 2' x 2' Drop Ceiling Tile (Indent), Room No. 167	None Detected - Acoustical Tile
01100-062	HA-22, 2' x 2' Drop Ceiling Tile (Indent), Room No. 150	None Detected - Acoustical Tile
01100-063	HA-22, 2' x 2' Drop Ceiling Tile (Indent), Room No. 209	None Detected - Acoustical Tile
01100-064	HA-23/23A, 9" x 9" Vinyl Floor Tile (Gray with Black and Cream), Mastic (Black), Room No. 410	3% Chrysotile - Floor Tile 5% Chrysotile - Black Mastic
01100-065	HA-23/23A, 9" x 9" Vinyl Floor Tile (Gray with Black and Cream), Mastic (Black), Room No. 283	Not Analyzed - Positive Stop
01100-066	HA-23/23A, 9" x 9" Vinyl Floor Tile (Gray with Black and Cream), Mastic (Black), Room No. 135	Not Analyzed - Positive Stop

Steve Moody Micro Services, Inc. 2051 Valley View Lane Farmers Branch, TX 75234 (972) 241-8460 NVLAP Lab No. 102056 TDH License No. 30-0084 PAT ID # 102577

Client:

Terracon - Nashville, TN

Lab Job No.: x6B-07002

Project:

Derryberry Hall, Div. #364, Loc. #01100

Report Date: 08/10/2006

Project #:

18037064

Sample Date: Not Provided

Identification: Asbestos, Bulk Sample Analysis

Test Method: Polarized Light Microscopy / Dispersion Staining (PLM/DS)

EPA Method 600 / R-93 / 116

Page 7 of 9

Sample Number	Client Sample Description / Location	Asbestos Content
01100-067	HA-25, Linoleum (Gray and Black Marble), Room No. 206E	None Detected - Sheet Flooring None Detected - Fiber Backing None Detected - Yellow Mastic
01100-068	HA-25, Linoleum (Gray and Black Marble), Room No. 206E	None Detected - Sheet Flooring None Detected - Fiber Backing None Detected - Yellow Mastic
01100-069	HA-26, PIH Pipe Insulation (Gray, Powdery), Hard Packed Line, Room No. 205	65% Chrysotile - Thermal Insulation
01100-070	HA-26, PIH Pipe Insulation (Gray, Powdery), Hard Packed Line, Room No. 205	Not Analyzed - Positive Stop
01100-071	HA-26, PIH Pipe Insulation (Gray, Powdery), Hard Packed Line, Room No. 205	Not Analyzed - Positive Stop
01100-072	HA-27, PJH Pipe Insulation (Gray, Powdery), Hard Packed Joint, Room No. 205	65% Chrysotile - Thermal Insulation
01100-073	HA-27, PJH Pipe Insulation (Gray, Powdery), Hard Packed Joint, Room No. 205	Not Analyzed - Positive Stop
01100-074	HA-27, PJH Pipe Insulation (Gray, Powdery), Hard Packed Joint, Room No. 205	Not Analyzed - Positive Stop
01100-075	HA-28, Tar (Black) on Joint, Room No. 205	10% Chrysotile - Tar None Detected - Paper/Tar Wrap
01100-076	HA-28, Tar (Black) on Joint, Room No. 205	Not Analyzed - Positive Stop
01100-077	HA-28, Tar (Black) on Joint, Room No. 205	Not Analyzed - Positive Stop

Steve Moody Micro Services, Inc. 2051 Valley View Lane Farmers Branch, TX 75234 (972) 241-8460 NVLAP Lab No. 102056 TDH License No. 30-0084 PAT ID # 102577

Client:

Terracon - Nashville, TN

Lab Job No.: x6B-07002

Project:

Derryberry Hall, Div. #364, Loc. #01100

Report Date: 08/10/2006

Page 8 of 9

Project #:

18037064

Sample Date: Not Provided

Identification: Asbestos, Bulk Sample Analysis

Test Method: Polarized Light Microscopy / Dispersion Staining (PLM/DS)

EPA Method 600 / R-93 / 116

Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

On 7/31/2006, ninety-three (93) bulk material samples were submitted by Pat Solomon of Terracon - Nashville, TN for asbestos analysis by PLM/DS.

Sample Number	Client Sample Description / Location	Asbestos Content
01100-078	HA-29, Sink Undercoating (Gray), Room No. 200A	None Detected - Sink Undercoating
01100-079	HA-29, Sink Undercoating (Gray), Room No. 200A	None Detected - Sink Undercoating
01100-080	HA-30, 2' x 2' Drop Ceiling Tile (Squiggly), Room No. 326	None Detected - Acoustical Tile
01100-081	HA-30, 2' x 2' Drop Ceiling Tile (Squiggly), Room No. 200A	None Detected - Acoustical Tile
01100-082	HA-30, 2' x 2' Drop Ceiling Tile (Squiggly), Room No. 244	None Detected - Acoustical Tile
01100-083	HA-31, 12" x 12" Suspended Ceiling Tile (Fissured), Room No. 209B	None Detected - Acoustical Tile
01100-084	HA-31, 12" x 12" Suspended Ceiling Tile (Fissured), Room No. 314B	None Detected - Acoustical Tile
01100-085	HA-31, 12" x 12" Suspended Ceiling Tile (Fissured), Room No. 314D	None Detected - Acoustical Tile
01100-086	HA-32, Sink Undercoating (Black), Room No. 209D	5% Chrysotile - Sink Undercoating
01100-087	HA-32, Sink Undercoating (Black), Room No. 209D	Not Analyzed - Positive Stop
01100-088	HA-33, 2' x 2' Drop Ceiling Tile (Fissured), Room No. 314C	None Detected - Acoustical Tile
01100-089	HA-33, 2' x 2' Drop Ceiling Tile (Fissured), Room No. 314C	None Detected - Acoustical Tile
01100-090	HA-34, 2' x 2' Drop Ceiling Tile (Holes), Room No. 314E	None Detected - Acoustical Tile
01100-091	HA-34, 2' x 2' Drop Ceiling Tile (Holes), Room No. 314E	None Detected - Acoustical Tile

Project#18037064

Terracon ACM Sample Form - NoShviilk, てん

Other ID No. Building Name Demy Cary Hall

LOCATION No. COLLOD - DIVISION NO. 364

LaB-04002 pr.m:93

Inspectors: P. Solomon, E. Anderson

Material Description	white textured	٥	Λ	3	,	7.	స. <b>.</b>			brown comentitions	in Sin		l)	N.	И	5	gyglorown, black mastic	<b>5</b>		9x9 dark baise willown & white, black mastic	s	٤	Drown
Material	SAC	5	J	3	5	3	11	1	,	610 Sim cont	3	'n	3	3	3	3	OF VETA	3	3	DOO VET/VETH		,	CBM
Sample No.	01100-00110	700-	-003	400	\$00	900	100	200-	6001	000	g	202	510	410	215	906	100	20/8	60	070	120-	220	-023
HA No.	10	5	5	,	s	3	3	5	s	20	3	3	3	3	3	7	03/030	٤	,	888	. '	s	050
Room No.	450A	3/4	34	152A	143	107	722	390	450A	1020	144	108A	205	3.40	301	410	134	134	222	134	222	318	305

9.50台

Rec'vd for lab by: CAMILLA PULL VIOLE

Relinquished by: Zinca (Malessan)
Date: 07/28/06, Time:

Notes: \* Postve stop Analysis \*

Project# 18037064 Terracon ACM Sample Form

Lab-07002

Other ID No. Building Name Derry Derry Hall
DIVISION No. 364 Other IDA LOCATION NO. 61106

Inspectors: P. Solomon, E. Anderson

Material Description		5		5		CXC Constant Sund Sund Sund CXC	4	9x9 avren w orrain black mastic	7	1,	grapholack of white black mastic	2		9x9 bronze & brown West in asti	,	3	9x9 olive w black & gream black massic	1	TO STORY OF THE STORY	'n		12x12 medium gray what a read well and market		
Material	CBM	3	3	5	٤	NFT/VFT	5	エピラ/ビョン		7	レドナノノドナス	. 3	2	-037 NFT/VFTH		s	PATONETA 040		GBW		٤	-045 VFT/VFTM	3	
Sample No.	01100-024	270-	-0260	120-	270		950	52(	250	550	-034	-025	050	-637	-038	250	040	-140-	-042	-043	-044	-045	-040	
HA No.	ひの	3	90	5	د	OT/OIA	. 1	O8/08/A	. 3	2	10/10V	. 5	3	11/11/11	1,6	3	五百五	. ::	5	1,1	ņ	16/16A	3	
Room No.	26E	いら	101	3050	208	102E	102巨	390	262	114	134	134	318	9	116	loop .	450A	450A	200A	305	188	168	168	

Notes: A Positive Stop Aralysis &

Relinquished by: Such (Mullum)
Date: 671/28 02, Time:

Rec'd for lab by: Melhou Plean 7-3100 9: SOFM

Building Name Denryberm Hall

COCATION No. 61100 DIVISION No. 364

Other ID No.

Terracon ACM Sample Form Project #18037064 Page 3 of 4

Inspectors: P. Solomon, E. Anderson

Notes: K Positive - Stop Fralysis &

Relinquished by: Mile Anderson Date: 67/28/026, Time:

Rec'vd for lab by: U

Other ID No. Building Name Derry John Hall LOCATION No. BILDD DIVISION No. 3/04

Terracon ACM Sample Form
Project #18037064

Page 4 of 4 (gB-07002

Inspectors: P.Soloman, E. Anderson

. Material Description	gray, Douglery		gran bonden	2 3	3	black on iont	) .	3.	drai	- , o	2x2 Savigala	700 - 50	7	12x12 fissured	1 3	2	black	***	2x2 fissured	5	2x2 holes		12x12 black & white, black mastic		
Material	PIH	3	PSH	د	د	tar	<i>t</i> s	\$	SU	. 2	DCT	7	,	SCT	د	\$	Sy	3	DCT	٤	DCT	7	VET/VETM.	17	
Sample No.	01100-070	110	210	-073	270	275	200	110	278	-079	080	-061	782	-083	480	785	980-	180-	-088	-084	060	160	-012	-093	
HA No.	26	3	77	11	3	28	4	3	62	3	300	ت	د	3	z	3	32	3	33	5	B		35/2SA	.5	
Room No.	205	205	205	205	205	205	205	205	200A	200A	326	200A	244	209B	314B	340	269D	209D	3140	340	345	314E	282	252	

\* Positive- Stap Analysis \*

Relinquished by: Date: 07 28 0

Rec'vd for lab by: Date: 7-3 i-0



# APPENDIX D Lead-Containing Paint Sample Summary Table



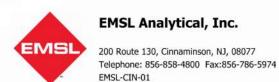
#### **LEAD-CONTAINING PAINT SAMPLE SUMMARY TABLE**

#### DERRYBERRY AUDITORIUM RENOVATIONS TENNESSEE TECHNOLOGICAL RENOVATIONS COOKEVILLE, TENNESSEE

SAMPLE NO.	PAINT COLOR	PAINT SUBSTRATE	SAMPLE LOCATION	SURFACE CONDITION	RESULT % by weight
Pb-1	Brown	Wood Window Frame	Room 242	Poor	0.034
Pb-2	White	CMU Wall	Room 252	Good	0.23
Pb-3	White	Wood Window Frame	Exterior	Poor	0.42



# APPENDIX E Lead-Containing Paint Analytical Laboratory Report



EMSL Order ID: 012413558 LIMS Reference ID: AC13558

EMSL Customer ID: 32TERA63

Attention: Aljus Alcineus

Terracon Consultants, Inc. [32TERA63] 1922 Old Murfreesboro Pike, Suite 905

Nashville, TN 37217-3155

(615) 333-6444

aljus.alcineus@terracon.com

Project Name: TTU - Derryberry Hall Cookeville TN/TBD

**Customer PO:** 

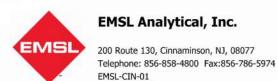
 EMSL Sales Rep:
 Jason McDonald

 Received:
 04/12/2024 10:00

 Reported:
 04/15/2024 17:56

#### **Analytical Results**

Analyte	Results	RL	Weight(g)	Prep Date & Tech	Prep Method	Analysis Date & Analyst	Analytical Method	Q	DF
Client Sample	ID: 01Pb/Rm 242 Windo	ow .					Date Sam	pled: 04	4/11/24
Matrix: Chips							LIMS Reference I	D: AC13	3558-01
Lead	0.034 % wt	0.008 % wt	0.2612	04/15/24 NP2	SW-846 3050B	04/15/24 PMx	SW846-7000B		1
	Sample Comments:								
153	ID: 02Pb/Rm 252 White	Wall					Date Sam		
Client Sample Matrix: Chips	ID: 02Pb/Rm 252 White	Wall							
1,53	ID: 02Pb/Rm 252 White	0.008 % wt	0.2647	04/15/24 NP2	SW-846 3050B	04/15/24 PMx			
Matrix: Chips			0.2647	04/15/24 NP2	SW-846 3050B	04/15/24 PMx	LIMS Reference I		
Matrix: Chips Lead	0.23 % wt	0.008 % wt	0.2647	04/15/24 NP2	SW-846 3050B	04/15/24 PMx	LIMS Reference I	D: AC13	3558 <b>-0</b> 2
Matrix: Chips Lead Client Sample	0.23 % wt Sample Comments:	0.008 % wt	0.2647	04/15/24 NP2	SW-846 3050B	04/15/24 PMx	SW846-7000B	D: AC13	3558-02 1 4/11/24
Matrix: Chips Lead	0.23 % wt Sample Comments:	0.008 % wt	0.2647	04/15/24 NP2 04/15/24 NP2	SW-846 3050B SW-846 3050B	04/15/24 PMx 04/15/24 PMx	SW846-7000B  Date Sam	D: AC13	3558-02 1 4/11/24



EMSL Order ID: 012413558 LIMS Reference ID: AC13558

EMSL Customer ID: 32TERA63

Attention: Aljus Alcineus

Terracon Consultants, Inc. [32TERA63] 1922 Old Murfreesboro Pike, Suite 905

Nashville, TN 37217-3155

(615) 333-6444

aljus.alcineus@terracon.com

Project Name:

TTU - Derryberry Hall Cookeville TN/TBD

**Customer PO:** 

 EMSL Sales Rep:
 Jason McDonald

 Received:
 04/12/2024 10:00

 Reported:
 04/15/2024 17:56

#### **Certified Analyses included in this Report**

Analyte Certifications

SW846-7000B in Chips

Lead AIHA LAP

#### **List of Certifications**

Code	Description	Number	Expires
NJDEP	New Jersey Department of Environmental Protection	03036	06/30/2024
AIHA LAP	EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-ELLAP Accredited	100194	01/01/2025
NYSDOH	New York State Department of Health	10872	04/01/2025
California ELAP	California Water Boards	1877	06/30/2024
A2LA	A2LA Environmental Certificate	2845.01	07/31/2024
PADEP	Pennsylvania Department of Environmental Protection	68-00367	11/30/2024
MADEP	Massachusetts Department of Environmental Protection	M-NJ337	06/30/2024
CTDPH	Connecticut Department of Public Health	PH-0270	06/23/2024

Please see the specific Field of Testing (FOT) on <a href="www.emsl.com">www.emsl.com</a> for a complete listing of parameters for which EMSL is certified.



200 Route 130, Cinnaminson, NJ, 080// Telephone: 856-858-4800 Fax:856-786-5974

EMSL-CIN-01

Attention: Aljus Alcineus

Terracon Consultants, Inc. [32TERA63] 1922 Old Murfreesboro Pike, Suite 905

Nashville, TN 37217-3155

(615) 333-6444

aljus.alcineus@terracon.com

Project Name:

TTU - Derryberry Hall Cookeville TN/TBD

EMSL Order ID: 012413558

LIMS Reference ID: AC13558

EMSL Customer ID: 32TERA63

**Customer PO:** 

 EMSL Sales Rep:
 Jason McDonald

 Received:
 04/12/2024 10:00

 Reported:
 04/15/2024 17:56

#### **Notes and Definitions**

Item	Definition
С	post spike within control limits
D	Analyte was reported from a dilution run.
(Dig)	For metals analysis, sample was digested.
[2C]	Reported from the second channel in dual column analysis.
DF	Dilution Factor
MDL	Method Detection Limit.
ND	Analyte was NOT DETECTED at or above the detection limit.
Q	Qualifier
RL	Reporting Limit
	For paint chips, the RL is 0.008% by wt. (equiv. to 80 mg/kg, or ppm) based upon a minimum sample weight of 0.25 grams.
	For soils, the RL is 40 mg/kg (ppm) based upon a minimum sample weight of 0.5 grams.
	For dust wipes, the RL is 10 $\mu$ g/wipe; reporting units of $\mu$ g/sq. ft. are not validated by the lab based upon data provided by non-lab personnel.

Measurement of uncertainty and any applicable definitions of method modifications are available upon request. Per EPA NLLAP policy, sample results are not blank corrected.



#### Owen McKenna Laboratory Manager or other approved signatory

EMSL maintains liability limited to coast of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. QC sample results are within quality control criteria and met method specifications unless otherwise noted.

Analysis following EMSL SOP for the Determination of Environmental Lead by FLAA. The laboratory has a reporting limit of 0.008% by wt., based upon a minimum sample weight of 0.25g submitted to the lab, and is not responsible for any result or reporting limit provided in mg/cm2 since it is dependent upon an area value provided by non-lab personnel. A "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty and definitions of modifications are available upon request. Results in this report are not blank corrected unless specified.

#### **Lead Chain of Custody**

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc. 200 Route 130 North Cinnaminson, NJ 08077

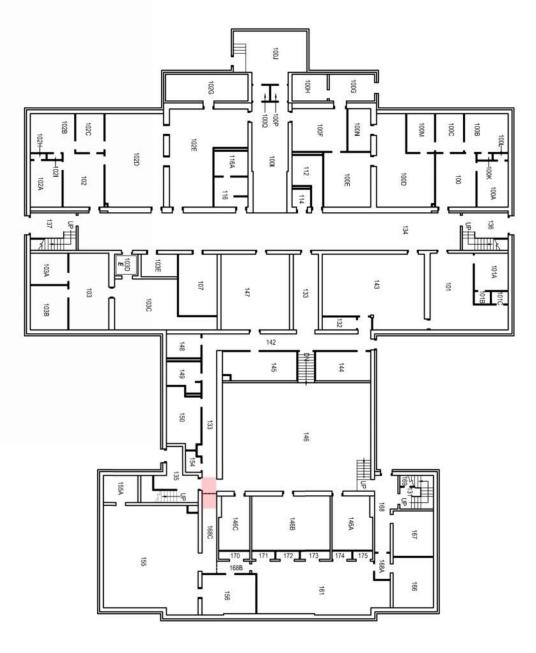
MSL ANALYTICAL, INC.	1/1250-2				PH	ONE: (800) 220-3675
ESTING LABS - PRODUCTS - TRAINING	AUDISO		+	<del>    </del>	EN	MAIL: CinnaminsonLeadLab@em
Customer ID:	and the second control of the second control	Billing ID:			£.	
Company Name: Terracon Consu	ultants, Inc.	S Company Name	e:	Terracon C	Consultants, Inc.	
Company Name: Terracon Consuction Contact Name: Aljus Alcineus Street Address: 1922 Old Murfr	- 12- 17 M 12 M	Billing Contact:	1	Tonya Ber		
Street Address: 4000 Old Manufacture	anahara Dika Cuita 005	Street Address:	+-	1922 Old M	Suito 005	
- TOLL OIG MIGHT					Control of the Contro	s promise configuración.
City, State, Zip: Nashville, TN 3	7217 Country: U.S			Nashville,		Country:
Phone: 615-333-6444		Phone:		615-333-6	6444	
Email(s) for Report: aljus.alcineus@to	erracon.com and joel.russell@terraco	n.com Email(s) for Inve	dice:	tonya.bert	olino@terracon.c	om
		oject Information				
Project TTU - Derryberry	Hall, Cookeville, TN/ T	TBD.			Purchase Order:	
MSL LIMS Project ID:	riam, Gookermo, riar i	US State where	₩.	State	Connecticut (CT) must sele	ct project location:
If applicable, EMSL will roylde)		samples collected:	Ш		Commercial (Taxable)	Residential (Non-Taxable)
Sampled By Name: Aljus Alcineus	Sampled By Signature:					No. of Samples
/ tijdo / tioli icus		-Around-Time (TAT)	+	1		in Shipment
3 Hour 6 Hour	24 Hour 32 Hour	48 Hour		Hour	7 as uour —	1 Week 2 Week
4 L L				1 4	96 Hour	1 Week 2 Week
MATRIX	all ahead for large projects and/or turneround times 6 Hours or METHOD	INSTRUMENT	-		EPORTING LIMIT	SELECTION
+ <del>- /</del>			11	t		<u>SELECTION</u>
CHIPS A by wt. ppm (mg/kg) mg/cm <sup>4</sup> Reporting Limit based on a minimum 0.25g	SW 846-7000B	Flame Atomic Absor	rotio	1	0.008% (80ppm)	
ample weight. *Not appropriate for Ceramic Tiles - XRF is	SW 846-6010D*	ICP-OES			0.0004% (4ppm)	
acommended			<u> </u>	1		
19 ST	NIOSH 7082	Flame Atomic Absor	rptio	f	4µg/filter	
uR -	NIOSH 7300M / NIOSH 7303M	ICD OF	1	1	A F / Ell	
	NIOSH 7300M / NIOSH 7303M	ICP-OES	+	+ + +	0.5µg/filter	
<del></del>	K			<del>        </del>	0.05μg/fitter	<del>   </del> -
MPE ASTM NON-ASTM	SW 846-7000B	Flame Atomic Absor	rptio	t	10µg/wipe	
If no box is checked, non-ASTM Wipe is	SW 846-6010D*	ICP-OES	ICP-OES		1.0µg/wipe	
	SW 846-1311 / 7000B / SM 3111B	Flame Atomic Absor	ptio	<b>k</b>	0.4 mg/L (ppm)	
CLP	SW 846-1311 / SW 846-6010D*	ICP-OES	1		0.1 mg/L (ppm)	
PLP	SW 846-1312 / 7000B / SM 3111B	Flame Atomic Absor	ptio	h	0.4 mg/L (ppm)	
	SW 846-1312 / SW 846-6010D*	ICP-OES			0.1 mg/L (ppm)	
nic	22 CCR App. II, 7000B	Flame Atomic Absor	ptio	<b>†</b>	40mg/kg (ppm)	
	22 CCR App. II, SW 846-6010D*	ICP-OES		1	2mg/kg (ppm)	
TLC -	22 CCR App. II, 7000B	Flame Atomic Absor	Ptio	+++	0.4 mg/L (ppm)	
	22 CCR App. II, SW 846-6010D* SW 846-7000B	Flame Atomic Absor	mtio	+ +++	0.1 mg/L (ppm) 40mg/kg (ppm)	-
idli -	SW 846-6010D*	ICP-OES	Puo	<del>"</del> +- ++	2mg/kg (ppm)	
Vastewater	SM 3111B / SW 846-7000B	Flame Atomic Absor	ptio	<del>,                                    </del>	0.4 mg/L (ppm)	
Impreserved	EPA 200.7	ICP-OES	1	******		
reserved with HNO3 PH<2			1		0.020 mg/L (ppm)	
Inpreserved	EPA 200.5	ICP-OES	-	10	0.003 mg/L (ppm)	
reserved with HNO3 PH<2	EPA 200.8	ICP-MS			0.001 mg/L (ppm)	
SP/SPM Filter	40 CFR Part 50	ICP-OES		<del>                                     </del>	12 μg/filter	H
Ather:			-		12 pgrinter	<u></u>
Sample Number	Sample Location		F			
+	A	<i>i</i> — —	5	Volume / A	vrea :	Date / Time Sampled
01Pb	Lm 242 Window	/wood	1	mund	1	111124
)2P).	D. 252 1 1.to 110	dicaste 1	17	7		
<u> </u>	CM 252 anicum	CALCA	~	nite		
J3Pb	Rm 242 window Rm 252 white was Exterior Window,	/ Wood	u	Inte		~
4P	- A A A A CO	-				
			1			42.2
la had of Chinasa						
lethod of Shipment:		Sample Condition	on U	on Receipt:		100
Reinquished by: Aljus Alcineus	Date/Tine:	Received by	-		Date/T	ime , l , \ lo
Aijus Aicineus	4/11/24/17	1.59	7	(>		"" U-)2. Hy 18
elinquished by:	Date/Time:	Received by:			Date/T	
onfolled Document - COC-25 Lead R17 05/09/2022	\$50400 A	see Peauset	-			
	*6010C Available Up	on Request				



# APPENDIX F Renovation Area Drawings

# FLOOR: FIRST

Approximate Extent of Renovation Area



LEGEND

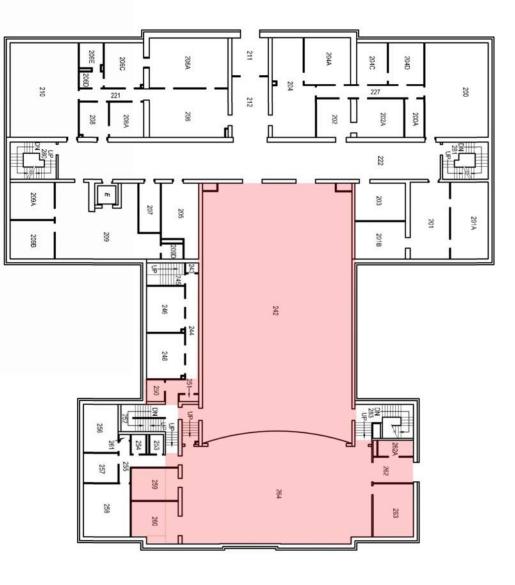
ROOM IDENTIFICATION NUMBER

ASBESTOS FLOOR PLAN DIAGRAM Tennessee Tech University
Tennessee Board of Regents Derryberry Hall

NOT TO SCALE

# FLOOR: SECOND

Approximate Extent of Renovation Area





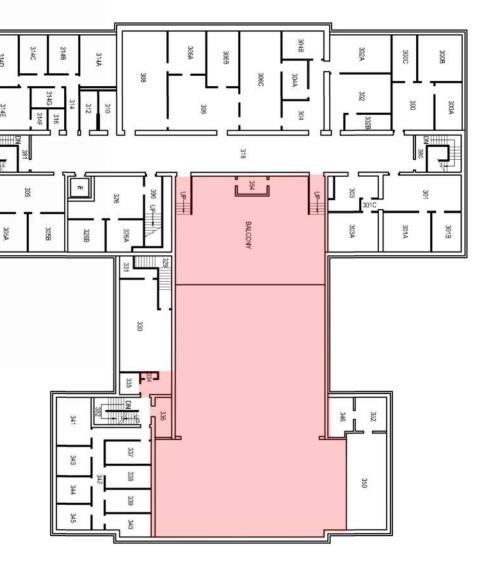
ROOM IDENTIFICATION NUMBER

ASBESTOS FLOOR PLAN DIAGRAM Derryberry Hall
Tennessee Tech University
Tennessee Board of Regents

NOT TO SCALE

# FLOOR: THIRD

Approximate Extent of Renovation Area





ROOM IDENTIFICATION NUMBER

ASBESTOS FLOOR PLAN DIAGRAM

Derryberry Hall

Tennessee Tech University

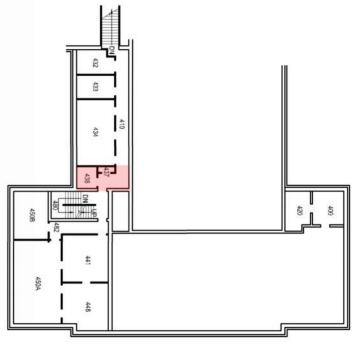
Tennessee Board of Regents

NOT TO SCALE





Approximate Extent of Renovation Area



LEGEND

ROOM IDENTIFICATION NUMBER

ASBESTOS FLOOR PLAN DIAGRAM

Derryberry Hall

Tennessee tech University

Tennessee Board of Regents

NOT TO SCALE



# APPENDIX G Site Photographs

Derryberry Auditorium Renovations TTU - Cookeville, Tennessee Project Number: 18247187 Photos Taken: April 11, 2024





Photo #1 ACM black mastic beneath carpet (HA 02)



Photo #2 ACM filler material beneath paint on the concrete block walls (HA 01)



Photo #3 ACM interior window glazing (HA 03)



Photo #4 ACM textured plaster ceiling (HA 06)



**Photo #5** ACM 9" vinyl floor tile and associated black mastic



# APPENDIX H Certifications



### THE STATE OF TENNESSEE

Department of Environment and Conservation Division of Solid Waste Management
Toxic Substances Program
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 14th Floor Nashville TN 37243

By virtue of the authority vested by the Division of Solid Waste Management, the Company named below is hereby accreditted to offer and/or conduct Asbestos activities pursuant to Rule 1200-01-20:

### Terracon Consultants, Inc.

1922 Old Murfreesboro Pike, Ste. 905 Nashville TN, 37217

To conduct ASBESTOS ACTIVITIES in schools or public and commercial buildings in Tennessee. This firm is responsible for compliance with the applicable requirements of Rule 1200-01-20.

Discipline	Туре	Accreditation Number	Effective Date	Expiration Date
Accreditation	Re-Accreditation	A-F-692-156847	December 01, 2023	December 31, 2024



Given under the Seal of the State of Tennessee in Nashville.

This 17th Day of November 2023

Division of Solid Waste Management Toxic Substance Program

CN-1324 (Rev 6/13)

RDA-3020

THE STATE OF TENNESSEE
Department of Environment and Conservation
Division of Solid Waste Management
Toxic Substances Program

52774-73834

 
 Discipline
 Accreditation
 Expiration

 Inspector
 A-48203-135623
 May-31-2024

 Management Planner
 A-MP-48203-135621
 May-31-2024

 Project Monitor
 A-PM-48203-135622
 May-31-2024
 Aljus Lindsey-Alcineus

Asbestos Accreditation

Date Issued: 6/21/2023 Re-Accreditation



Toxic Substances Program

#### Joel T. Russell

Discipline

DOB Sex HGT 14-Dec-1983 M 6'1" Accreditation

Expiration

A-1-48757-157099 Inspector Management Planner A-MP-48757-157097
Project Designer A-PD-48757-157098

Dec-31-2024 Dec-31-2024

Dec-31-2024

Asbestos Accreditation

#### ABBREVIATIONS PLUS/MINUS J.O. JOB OBSERVATION AIR CONDITIONING JOINT ACOUSTICAL TILE KITCHEN ADIACENT ABOVE FINISHED FLOOR LANDSCAPE ARCHITECT ANOD. ANODIZED LAMINATE(D) LAV. ARCH. ARCHITECT(URAL LAVATORY AUTO. LEFT HAND AUTOMATIC LOWER LEVE LOUVER BUILDING BLKG. MASONR BLOCKING BLW. BELOW MAXIMUN MECH. BENCH MARK MECHANICAL BIDDING & NEGOTIATION MEDIUM BY OTHERS MANUFACTUR(ER BEARING MINIMUM BOTH SIDES MISCELLANEOUS BOTTOM MOLDING, MOULDING MASONRY OPENING MTL. METAL CONSTRUCTION ADMINISTRATION MULL. MULLION NORTH CLOSED CAPTION TELEVISION C.C.TV. N.I.C. CONSTRUCTION DOCUMENT NOT IN CONTRACT NO. CAST IN PLACE NUMBER CONTROL JOINT NOMINA N.T.S. NOT TO SCALE CLG. CEILING O.D. CLEAR OUTSIDE DIAMETER OH. OPNG. OPP. CONCRETE MASONRY UNIT OVERHEAD OPENING CASED OPENING OPPOSITE COMBO. COMBINATION PARTITION CONCRETE CONSTRUCTIO P.C.C. PRECAST CONCRETE C.P.D. CIVIL PROPOSED DRAWING PROPERTY LINE CARPET(ED) PLUMB. PLUMBING CAST STONE PLYWD PLYWOOD CERAMIC TILE PRE-FINISHED PRESSURE TREAT(ED), POST TENSIONED DESIGN DEVELOPMENT DEMOLISH, DEMOLITION PAVEMEN1 DRINKING FOUNTAIN QUARRY TILE DIAMETER DIMENSION DOWN RETURN AIR GRILLE DOWNSPOL DETAIL RUBBER BASE **DETAILS** REFLECTED CEILING PLAN DWG. DRAWING ROOF DRAIN RE-INFORCED REFRIGERATOR EACH FACE REQUIRED EXPANSION JOIN REVISION(S), REVISED ELECTRIC(AL) REQUEST FOR INFORMATION R.O. ROUGH OPENING EMER. **EMERGENCY** RIGHT OF WAY RUBBER TILE ENG. ENGINEER EQUAL EQUIP. EQUIPMENT **ESTIMATE** SOLID CORE **ECETERA** SCHEDULE **EXHAUST** STORM DRAIN, SCHEMATIC DESIGN EXISTING SECTION EXTERIOR SIMILAR F.B.O. FURNISHED BY OTHERS SPECIFICATION FLOOR DRAIN STAINLESS STEI FIRE EXTINGUISHER STANDARD FIRE EXTINGUISHER CABINE STORAGE STRUCTURAL FINISHED FLOOR ELEVATIO SUSPENDED SYSTEM FLOOR(ING) FLUR. FLUORESCENT FINISHED OPENING TELECOM TELECOMMUNICATIONS FACE OF FINISH F.O.M. FACE OF MASONRY TO BE DETERMINED F.O.S. FACE OF STUDS TONGUE AND GROOV FOOTING TOILET PARTITION F.W.C. FABRIC WALL COVERING T.O.S. TOP OF STEEL T.O.W. TOP OF WALL TELEVISION/DISPLAY SCREEN GAGE, GUAGE GALVANIZED TYPICAL GENERAL CONTRACT(OR) GROUND FACE U.N.O. UNLESS NOTED OTHERWISE GLASS, GLAZING GILBERT/MCLAUGHLIN/CASELLA ARCHITECTS UTIL. UTILITY G.M.A. GRT. GROUT V.C.T. VINYL COMPOSITION TILE GRAVEL GYP. BD. GYPSUM BOARD VEN. VERT. VENEER VERTICAL HEIGHT VEST. VESTIBULE HOSE BIBB WEST, WIDTH, WIDE HOLLOW CORE WATER CLOSET, WATER COOLER HDR. HEADER W.D. WOOD H.M. HOLLOW METAL HOR. HORIZONTAL WASHER/DRYER W.G. HR. HOUR WIRED GLASS HEIGHT W.H. WATER HEATER HEATING WINDOW HEATING, VENTILATING & AIR CONDITIONING WIRE MESH HWD. HARDWOOD W.T.W. WALL TO WALL W.W.F. WELDED WIRE FABRIC INSIDE DIAMETER W/O WITHOUT INFO. INFORMATION INSUL. INSULATE(D/ION) INTERIOR INV. INVERT

### GENERAL NOTES

#### GENERAL:

1) THE ARCHITECT IS SOLELY RESPONSIBLE FOR THE DESIGN INTERPRETATION OF THE CONSTRUCTION

2) UNLESS OTHERWISE PROVIDED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL SECURE AND PAY FOR THE BUILDING PERMIT AND OTHER PERMITS AND GOVERNMENTAL FEES, LICENSES AND INSPECTIONS NECESSARY FOR PROPER EXECUTION AND COMPLETION OF THE WORK. THESE ARE CUSTOMARILY SECURED AFTER EXECUTION OF THE CONTRACT AND ARE LEGALLY REQUIRED WHEN BIDS ARE RECEIVED OR NEGOTIATIONS CONCLUDED. THE CONTRACTOR SHALL COMPLY WITH AND GIVE NOTICES REQUIRED BY LAWS, ORDINANCES, RULES REGULATIONS AND LAWFUL ORDERS OF PUBLIC AUTHORITIES BEARING ON PERFORMANCE OF THE WORK.

3) THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS AND VERIFY FIELD CONDITIONS AND SHALL CAREFULLY COMPARE SUCH FIELD MEASUREMENTS AND CONDITIONS AND OTHER INFORMATION KNOWN TO THE CONTRACTOR WITH THE CONTRACT DOCUMENTS BEFORE COMMENCING ACTIVITIES. ERRORS, INCONSISTENCIES OR OMISSIONS DISCOVERED SHALL BE REPORTED TO THE ARCHITECT AT ONCE.

4) THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, USING THE CONTRACTOR'S BEST SKILL AND ATTENTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND HAVE CONTROL OVER CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT, UNLESS THE CONTRACT DOCUMENTS GIVE SPECIFIC INSTRUCTIONS CONCERNING THESE MATTERS.

5) THE CONTRACTOR SHALL BE RESPONSIBLE TO THE OWNER FOR ACTS AND OMISSIONS OF THE CONTRACTOR'S EMPLOYEES, SUBCONTRACTORS AND THEIR AGENTS AND EMPLOYEES, AND OTHER PERSONS PERFORMING PORTIONS OF THE WORK UNDER A CONTRACT WITH THE CONTRACTOR.

6) THE GENERAL CONTRACTOR SHALL COORDINATE THE LOCATION AND INSTALLATION OF BUILDING SYSTEMS AND EQUIPMENT AND VERIFY THAT REQUIRED CLEARANCES FOR INSTALLATION AND MAINTENANCE OF THE EQUIPMENT AND ASSOCIATED WORK ARE PROVIDED. THIS INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING SYSTEMS: MECHANICAL, ELECTRICAL, LIGHTING, PLUMBING, AND TELEPHONE.

7) THE GENERAL CONTRACTOR SHALL COORDINATE WITH ALL BUILDING TRADES INVOLVED IN THE PROJECT FOR PREPARATION OF SHOP DRAWINGS TO INSURE PROPER CLEARANCES FOR FIXTURES, DUCTS, CEILING, ETC. SO AS TO MAINTAIN THE SPECIFIED CEILING HEIGHT NOTED ON THE DRAWINGS. CLARIFY ANY CONFLICTS WITH ARCHITECT.

8) INSTALL ALL MANUFACTURED ITEMS, MATERIALS AND EQUIPMENT IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDED SPECIFICATIONS, EXCEPT WHERE THEY DIFFER FROM SPECIFICATIONS HEREIN. THE MORE STRINGENT SPECIFICATION SHALL BE THE BASIS FOR THE WORK. NOTIFY THE ARCHITECT OF ANY CONFLICTING RECOMMENDATIONS.

9) THE GENERAL CONTRACTOR SHALL SUBMIT PLANS FOR ALL FIXED FIRE PROTECTION EQUIPMENT SUCH AS STANDPIPES, SPRINKLER SYSTEMS, AND FIRE ALARM SYSTEMS, AND HAVE THEM APPROVED BY GOVERNING REGULATORY AGENCIES BEFORE EQUIPMENT IS INSTALLED. SPRINKLER HEAD LOCATIONS ARE SHOWN IN AREAS WITH FINISHED CEILINGS FOR COORDINATION PURPOSES ONLY. THE CONTRACTOR SHALL INCLUDE SUFFICIENT HEADS IN ALL SPACES TO PROVIDE 100% COMPLETE COVERAGE OF ROOM (SPACE) DEFINED IN NFPA STANDARD 13. IN ROOMS WITH LAY-IN CEILING TILE SPRINKLER HEADS SHALL BE LOCATED IN THE CENTER OF THE CEILING TILE UNLESS NOTED OTHERWISE.

10) FIRE EXTINGUISHERS, ELECTRICAL PANELS, TELEPHONE EQUIPMENT BOARDS, ETC. SHALL BE LOCATED IN ACCORDANCE WITH REQUIREMENTS OF GOVERNING AGENCIES. ANY LOCATIONS NOT SHOWN SHALL BE VERIFIED WITH ARCHITECT PRIOR TO ROUGH-OUT AND INSTALLATION. U.N.O., THE ABOVE PANELS AND/OR EQUIPMENT SHALL BE FULLY RECESSED AND MAINTAIN INTEGRITY OF WALL FIRE RATING REQUIREMENTS.

11) DASHED-IN EQUIPMENT SHOWN AND NOTED SHALL BE FURNISHED BY THE OWNER: RECEIVED, STORED AND INSTALLED BY THE GENERAL CONTRACTOR EQUIPMENT NOTED AS "N.I.C." IS NOT IN THIS CONTRACT.

# AND INSTALLED BY THE GENERAL CONTRACTOR. EQUIPMENT NOTED AS "N.I.C." IS NOT IN THIS CONTRACT. TELEPHONE WORK

1) ALL TELEPHONE WORK SHALL BE COORDINATED BY THE GENERAL CONTRACTOR WITH OWNERS CONSULTANT AND ANY OR ALL TELEPHONE COMPANIES CONTRACTED TO PROVIDE SERVICE.

2) THE CONTRACTOR SHALL PROVIDE TELEPHONE COMPANIES WITH ALL CONDUIT, POWER, TELEPHONE BOARDS, ETC. NECESSARY TO ACCOMMODATE OWNER'S REQUIREMENTS (TELEPHONE EQUIPMENT N.I.C. UNLESS OTHERWISE NOTED)

3) THE TELEPHONE SYSTEM AND FIXTURES SHALL BE PROVIDED BY THE TELEPHONE SYSTEM COMPANY

3) THE TELEPHONE SYSTEM AND FIXTURES SHALL BE PROVIDED BY THE TELEPHONE SYSTEM COMPANY SELECTED BY OWNER. RELATED PRE-WIRING AND REQUIRED CONDUIT SHALL BE PROVIDED BY THE GENERAL CONTRACTOR. THE LOCATION OF SYSTEMS CONTROLS AND ELECTRICAL REQUIREMENTS ADJACENT TO CONTROLS SHALL BE COORDINATED WITH THE SELECTED TELEPHONE COMPANY AND THE ARCHITECT.

# 1) "TYPICAL" OR "TYP." MEANS IDENTICAL FOR ALL CONDITIONS WHICH MATCH ORIGINAL CONDITION INDICATED, U.N.O.

2) "SIMILAR" OR "SIM." MEANS COMPARABLE CHARACTERISTICS FOR THE CONDITIONS NOTED. VERIFY DIMENSIONS AND ORIENTATION OF CONDITIONS WHICH VARY FROM TYPICAL OR SIMILAR CONDITIONS INDICATED.

3) "ALIGN" MEANS ALIGNMENT OF SIMILAR COMPONENTS OF CONSTRUCTION, (WALLS, JAMBS, ETC.) WHICH ARE ADJACENT OR SHALL BE IN LINE WITH EACH OTHER ACROSS VOIDS.

4) REFER TO THE ABBREVIATION SECTION ON THIS SHEET FOR ABBREVIATED TERMINOLOGY.

### 1) PARTITIONS WHICH

1) PARTITIONS WHICH EXTEND TO THE UNDERSIDE OF STRUCTURE SHALL BE TIGHTLY SEALED. THE INTEGRITY OF RATED PARTITIONS AND SMOKE PARTITIONS SHALL BE MAINTAINED AT CORNERS AND AT INTERSECTIONS OF OTHER PARTITION TYPES. FILL ALL VOIDS AS DETAILED AND/ OR AS REQUIRED USING MATERIALS APPROVED BY GOVERNING CODES. SMOKE AND RATED PARTITIONS SHALL CONTINUE TO INSIDE FACE OF EXTERIOR WALL AND SHALL BE SEALED COMPLETELY ACCORDING TO GOVERNING CODES.

# DIMENSIONS:

4) DIMENSIONS ARE INDICATED AS FOLLOWS U.N.O.:

1) THE CONTRACTOR SHALL NOT SCALE THE DRAWINGS.
2) DIMENSIONS ARE NOT ADJUSTABLE UNLESS NOTED WITH A PLUS/MINUS TOLERANCE.
3) ALL FLOOR TO FLOOR AND CEILING HEIGHTS SHOWN ON DRAWINGS ARE FROM TOP OF FLOOR LINE UNLESS OTHERWISE NOTED "AFF" (ABOVE FINISH FLOOR)

COLUMNS: FROM CENTERLINE TO CENTERLINE
METAL FRAMING: FROM FACE OF STUD TO FACE OF STUD
CONCRETE: FROM FACE OF CONCRETE TO FACE OF CONCRETE
MASONRY: FROM FACE OF MASONRY TO FACE OF MASONRY
EXTERIOR WALLS: FROM EXTERIOR FACE OF WALL TO INTERIOR FACE OF STUD

# DOORS:

1) DOORS SHALL BE LOCATED 4" FROM CLEAR OPENING TO ADJACENT WALL U.N.O.
2) THE CONTRACTOR SHALL UNDERCUT INTERIOR DOORS AS REQUIRED TO CLEAR FINISH FLOOR BY 1/4"

# BLOCKING:

1) THE GENERAL CONTRACTOR SHALL PROVIDE WOOD BLOCKING AS REQUIRED ABOVE CEILINGS; AND IN PARTITIONS BEHIND WALL HUNG EQUIPMENT, SHELVING, CABINETS, ETC. PROVIDE FIRE RETARDANT WOOD BLOCKING AT FIRE RATED WALL OR CEILING ASSEMBLY LOCATIONS.

# 1) CASEWORK DIMENSIONS SHALL BE FIELD VERIFIED BEFORE UNIT FABRICATION OR INSTALLATION.

1) ARCHITECTURAL REFLECTED CEILING PLANS SHALL BE USED TO DETERMINE THE LOCATION OF LIGHT FIXTURES, MECHANICAL DIFFUSERS, AND GRILLES.
2) U.N.O., SPECIFIED PERIMETER CEILING ANGLES FOR LAY-IN CEILINGS OR DRYWALL SHALL BE INSTALLED TIGHT TO PARTITION SURFACES, FREE FROM DIPS, KINKS, BREAKS AND OTHER IRREGULARITIES.

# GENERAL RENOVATION NOTES

1) EXISTING CONSTRUCTION (PARTITIONS, DOORS, PLUMBING FIXTURES, CASEWORK, EQUIPMENT, ETC.) IS INDICATED ON THE FLOOR PLANS, WITH LINES IN A LIGHTER SHADE (SCREENED). NEW CONSTRUCTION IS INDICATED BY FULL INTENSITY (SOLID) LINES. REFER TO DEMOLITION DRAWINGS FOR EXISTING CONSTRUCTION TO BE REMOVED.

2) THE GENERAL CONTRACTOR SHALL PROVIDE PROTECTIVE COVERING FOR CARPET, FURNISHINGS AND FINISHES (INCLUDING STAGE FLOORS) IN EXISTING AREAS NOT DESIGNATED FOR DEMOLITION OR NEW CONSTRUCTION. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGE CAUSED BY HIS WORK OR ANY SUBCONTRACTOR.

CONSTRUCTION. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGE CAUSED BY HIS WORK OR ANY SUBCONTRACTOR.

3) THE GENERAL CONTRACTOR SHALL MEET WITH THE OWNER'S AUTHORIZED REPRESENTATIVE TWO (2) WEEKS IN ADVANCE OF CONSTRUCTION COMMENCEMENT TO:

a) SCHEDULE, SEQUENCE AND COORDINATE ALL WORK.
 b) MAINTAIN EXITS AND EGRESS WIDTHS REQUIRED BY CODES DURING ALL PHASES OF CONSTRUCTION.
 c) KEEP DISRUPTION OF THE FACILITY'S FUNCTIONS TO A MINIMUM DURING CONSTRUCTION.

4) THE GENERAL CONTRACTOR SHALL VERIFY THAT INSTALLATION OF NEW CEILINGS CAN BE INSTALLED IN EXISTING SPACES TO CLEAR DUCTWORK AND OTHER CONSTRUCTED ITEMS AND MAINTAIN FLOOR TO CEILING HEIGHTS INDICATED ON DRAWINGS. IF DISCREPANCIES OCCUR DUE TO EXISTING CONDITIONS, CONSULT WITH THE ARCHITECT BEFORE PROCEEDING.

5) WHERE NEW CEILINGS MEET EXISTING CEILINGS, THEY SHALL MATCH THE EXISTING IN HEIGHT, PATTERN AND MATERIAL U.N.O. WHERE AN EXISTING SPACE IS ENLARGED, ALIGN THE NEW CEILING GRID WITH EXISTING. IF EXISTING CEILING TILES CANNOT BE MATCHED IN COLOR OR TYPE, REPLACE EXISTING TILES IN THAT SPACE WITH NEW TILES AS APPROVED BY THE ARCHITECT.

6) THE FINISH FACE OF MATERIAL OF NEW PARTITIONS SHALL ALIGN ON BOTH SIDES OF THE PARTITIONS (FLUSH) WITH THE FACE OF MATERIALS ON EXISTING COLUMNS OR PARTITIONS.

7) THE GENERAL CONTRACTOR SHALL VERIFY THAT THE CONSTRUCTION OF EXISTING FIRE ASSEMBLIES, (PARTITIONS, FLOORS, ROOF, DOORS AND FRAMES) MEET THE RATINGS DESIGNATED ON THE DRAWINGS. IF DISCREPANCIES ARE DISCOVERED, THE CONTRACTOR SHALL MAKE ANY REPAIRS OR MODIFICATIONS NECESSARY TO ATTAIN THE PROPER RATINGS AND TO MEET LOCAL GOVERNING CODES.

8) THE INTEGRITY OF FIRE PROTECTIVE CONSTRUCTION SHALL BE MAINTAINED ON EXISTING COLUMNS, BEAMS AND FLOOR-CEILING ASSEMBLIES. PATCH ALL FIREPROOFING REQUIRED AND SEAL PENETRATIONS TO MAINTAIN RATINGS.

9) THE GENERAL CONTRACTOR SHALL VERIFY DIMENSIONS OF AS-BUILT CONDITIONS, AND NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES. ALL INFORMATION SHOWN ON THE CONSTRUCTION DOCUMENTS IS BASED ON FIELD OBSERVATIONS AND/OR THE ORIGINAL CONSTRUCTION DOCUMENTS OF THE FACILITY.

10) THE GENERAL CONTRACTOR SHALL SURVEY AND DETERMINE THE REMOVAL OF EXISTING CONSTRUCTION, EITHER WHOLE OR IN PART, AS REQUIRED FOR THE INSTALLATION OF THE NEW MECHANICAL, PLUMBING AND ELECTRICAL WORK.

11) THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING DEFECTIVE WORK IN EXISTING CONSTRUCTION WITHIN THE LIMITS OF THE CONSTRUCTION AREA. THIS INCLUDES, BUT IS NOT LIMITED TO, UNEVEN SURFACES AND FINISHES AT PLASTER OR GYPSUM BOARD. THE GENERAL CONTRACTOR SHALL PATCH AND REPAIR SURFACES TO MATCH NEW ADJACENT SURFACES.

12) ALL ELECTRICAL PANELS, FIRE EXTINGUISHER CABINETS, ETC. LOCATED IN RATED PARTITIONS SHALL BE BACKED WITH APPROPRIATE MATERIALS TO RETAIN APPLICABLE PARTITION FIRE RATING.

13) ALL PIPING ABOVE GRADE AND INSIDE THE BUILDING REQUIRED BY THE CONSTRUCTION DOCUMENTS SHALL BE INSTALLED IN AREAS WHERE IT WILL BE CONCEALED. THE CONTRACTOR SHALL CONSULT WITH THE ARCHITECT AND COORDINATE WITH OTHER TRADES TO PROVIDE FURRING FOR PIPING INSTALLED IN

14) REMOVE MECHANICAL, ELECTRICAL, AND PLUMBING FIXTURES AND CAP OR REMOVE EXISTING BRANCH LINES AS INDICATED IN THE MECHANICAL, PLUMBING AND ELECTRICAL DOCUMENTS.

15) IN THE EVENT THE CONTRACTOR ENCOUNTERS ON THE SITE MATERIAL REASONABLY BELIEVED TO BE ASBESTOS, POLYCHLORINATED BIPHENYL (PCB) OR OTHER TOXIC MATERIAL WHICH HAS NOT BEEN RENDERED HARMLESS, THE CONTRACTOR SHALL IMMEDIATELY STOP WORK IN THE AREA AFFECTED AND REPORT THE CONDITION TO THE OWNER IN WRITING.

16) EXISTING EQUIPMENT, STRUCTURE, PIPING, ETC. LOCATED ON PLANS SHOWN FOR POINTS OF REFERENCE ONLY. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE BEGINNING WORK. BEGINNING OF WORK SHALL SIGNIFY CONTRACTOR'S ACCEPTANCE OF EXISTING CONDITIONS.

OWNER TWO (2) WEEKS IN ADVANCE. WORK SHALL BE PERFORMED AT SUCH TIMES AND UNDER SUCH CONDITIONS AS SUITS THE OWNER.

17) IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SCHEDULE ALL DEMOLITION WORK WITH THE

18) THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE PRICING OF THIS PROJECT AND REVIEW ALL AREAS CONCERNED WITH THIS PROJECT.19) PATCH HOLES LEFT IN WALLS AND FLOORS AFTER REMOVAL OF EXISTING DUCTWORK, PIPING CONDUIT,

20) FIRE SAFE ALL FLOOR PENETRATIONS. THIS INCLUDES EXISTING FLOOR PENETRATIONS THAT HAVE NOT BEEN PROPERLY SEALED.

ETC. TO MATCH NEW OR EXISTING CONSTRUCTION AND FIRE RATING.

# OWNER/GC COORDINATION ITEMS

# IT SCOPE OF WORK

THE GC IS TO PROVIDE J-BOXES, CONDUIT (IN CONCEALED LOCATIONS), HANGERS, & LOW-VOLTAGE CABLING (SEE PROJECT MANUAL FOR SPECIFICATIONS). THE OWNER WILL MAKE FINAL CONNECTIONS.

THEATRICAL AUDIO/VIDEO/LIGHTING SCOPE OF WORK:

FOR THE FOLLOWING ITEMS, THE GC IS TO PROVIDE POWER (WHERE REQUIRED), CONDUIT W/ PULL CORDS (IN CONCEALED LOCATIONS) FOR LOW-VOLTAGE CABLING (CABLING INSTALLED/PROVIDED BY A/V VENDOR), AND ANCHORING MATERIALS AT CEILINGS & WALLS WHERE REQUIRED. PATHWAYS WILL BE REQUIRED FROM THE THEATRICAL AUDIO/VIDEO/LIGHTING EQUIPMENT/CONTROLS/DEVICES BACK TO IT & A/V ROOM #336. THE "BASIS FOR DESIGN" EQUIPMENT LISTED BELOW IS PROVIDED FOR PRELIMINARY COORDINATION ONLY. THE GC IS TO COORDINATE WITH THE AWARDED THEATRICAL VENDORS AFTER FINAL SELECTION IS MADE BY THE OWNER.

VIDEO WALL EQUIPMENT (BASE):

SPRINGTREE PH2.955NATION: 2.9 PITCH LED PANEL 500mmX50mmNATIONSTAR 2020 LEDS (45 PIECES) FOR A TOTAL VIDEO WALL SIZE OF 8.2' HIGH X 14.76' WIDE (TOTAL EQUIPMENT

WEIGHT = 828 LBS.)

NOVASTAR VX400:

ST-HANGBAR:

WINCH:

WEIGHT = 828 LBS.)

NOVASTAR-VX400 LED VIDEO WALL PROCESSOR (1 PIECE)

SPRINGTREE HANGBAR FOR PH2.9 LED VIDEO PANELS (9 PIECES)

REPLACE EXISTING PROJECTOR SCREEN WINCH AT WALL AS REQUIRED TO CONTROL THE NEW VIDEO WALL

# VIDEO WALL EQUIPMENT (ALTERNATE):

SPRINGTREE PH2.955NATION: 2.9 PITCH LED PANEL 500MMX50MMNATIONSTAR 2020 LEDS (66 PIECES) FOR A TOTAL VIDEO WALL SIZE OF 9.83' HIGH X 14.76' WIDE (TOTAL EQUIPMENT WEIGHT = 1215 LBS.)

NOVASTAR VX400: NOVASTAR-VX400 LED VIDEO WALL PROCESSOR (1 PIECE)

ST-HANGBAR: CONFIGURATION TBD

WINCH: REMOVE EXISTING WINCH. NEW WINCH EQUIPMENT TO BE ABOVE VIDEO WALL AT SUPPORT POINTS. EQUIPMENT & CONFIGURATION TBD.

# THEATRICAL LIGHTING EQUIPMENT:

L-C120w-RGBWW: SPRINGTREE SPATIAL WASH COB RGBWW, 120W,50 DEGREE. DMX (24 PIECES)

HD202-WW: SPRINGTREE 200W ELLIPSOIDAL-WW. CR190, 3000K, - NO LENS ( PIECES)

SPRINGTREE INTERCHANGABLE LENS BARREL FOR HD200 ELLIPSOIDAL-36 DEGREE (12 PIECES)

SUBDICTORE SUBDICTORE

SILENTPAR-1210: SPRINGTREE SILENTPAR 1210 LED PAR-DMX, RED, GREEN, BLUE, WHITE, AMBER, LED'S
(8 PIECE)

SM-8 SWITCH: SPRINGTREE DMX RECORDER MASTER 8 SCENE DESKTOP CONTROLLER WITH DMX
SWITCH (1 PIECE)

XPRESS 1024: CHAUVET DJ 2 UNIVERSE USB TO DMX INTERFACE (1 PIECE)

ST-CUSTOM: TOUCH SCREEN PC (1 PIECE)

SS-8-W: SPRINGTREE DMX RECORDER SLAVE 8 SCENE WALL CONTROLLER WHITE (2 PIECES)
CLP-05: CHAUVET-PRO C CLAMP (44 PIECES)
AC3PDMX10: ELATION ACCU CABLE 10' 3 PIN DMX CABLE (44 PIECES)
DMXBOOSTER8: SPRINGTREE-8 WAY DMX DISTRIBUTER (1 PIECE)

# THEATRICAL SOUND EQUIPMENT:

AH-SQ-7:

ALLEN & HEATH-48 CHANNEL/36 BUS DIGITAL MIXER, 33-FADER SURFACE, 96kHz XCVI FPGA ENGINE (1 PIECE)

AH-DX168:

ALLEN & HEATH-dLIVE STAGE BOX WITH 16 dLIVE 96 kHz MIC PREAMPS AND 8 OUTPUTS (2 PIECES)

VIO L208:

DB TECHNOLOGIES - 2 WAY ACTIVE LINE ARRAY MODULE MAX SPL 133.5dB-DUAL 8"

LOW FREQUENCY DRIVERS, 1X1.4" NEODYMIUM HF DRIVER-1800 WATT PEAK DIGIPRO
G3 AMPLIFIER-40 LBS-POWER CHORD NOT INCLUDED (14 PIECES)

DRK-208: DB TECHNOLOGIES-FLYBAR FOR VIO L208 (2 PIECES)
VIO S218F: DB TECHNOLOGIES-ACTIVE BASSREFLEX FLYABLE SEMI-HORN-LOADED
SUBWOOFER-28Hz-CUT FREQUENCY (CROSSOVER POINT DEPENDENT) FREQUENCY

RESPONSE-28Hz-CUT FREQUENCY (CROSSOVER POINT DEPENDENT) FREQUENCY RESPONSE-2X18" LOW FREQUENCY DRIVERS-6400 WATT PEAK DIGIPRO G4

AMPLIFIER-UP TO 9.9ms DELAY-CROSSOVER-51.18"X20.47"X31.5"229.06 LBS (1 PIECE)

DRK-218F:

IS 26TB:

DB TECHNOLOGIES - FLYBAR FOR VIO S218F (1 PIECE)

DB TECHNOLOGIES - PASSIVE WOODEN SPEAKER, 2X6.5"+DRIVER, 80hms, 250W RMS

POWER, 00X15DEGREE WAVEGUIDE, PHOENIX CONNECTION, BLACK FINISH, SAME

ACCESSORIES AS VIO X 206 (3 PIECES)

DVX DM28:

DB TECHNOLOGIES - 2-WAY STAGE MONITOR, 2X"RCF NEODYMIUM WOOFERS WITH

2.5" VC, 1"X1" NEODYMIUM HF-DRIVER WITH 1.75" VC, ASYMMETRICAL CD-HORN (30

DEGREE+45 DEGREE v), 750W/RMS, 70 Hz-20KHz, SPL MAX, 130dB, DIMENSIONS
480X265X418mm, WEIGHT 14kg/30.8 LBS (2 PIECES)

ALC-1604D: COMMUNITY - 4 CHANNEL, 1600W AMPLIFIER, WITH ONBOARD DSP AND DANTE
DIGITAL NETWORKING (1 PIECE)

RDNET CONTROL 8: DB TECHNOLOGIES - RDNET CONTROL 8 IS A HARDWARE INTERFACE TO CONNEC

DIGITAL NETWORKING (1 PIECE)

RDNET CONTROL 8: DB TECHNOLOGIES - RDNET CONTROL 8 IS A HARDWARE INTERFACE TO CONNECT

DB TECHNOLOGIES RDNET COMPATIBLE DEVICES (DVA T12, T8, DVA S30N, ETC.), TO

A PERSONAL COMPUTER (PC) BY MEANS OF A USB CONNECTION

# PROJECT TEAM

# OWNER

TENNESSEE TECH UNIVERSITY 242 EAST 10th STREET FOUNDATION HALL, SUITE 317 PO BOX 5011 COOKEVILLE, TN 38505

CONTACT: CHRISTINE DANIELS cdaniels@tntech.edu

ARCHITECTURE

931.372.3524

@tntech.edu

GILBERT | MCLAUGHLIN | CASELLA ARCHITECTS, PLC 2305 KLINE AVENUE, SUITE 200 NASHVILLE, TN 37211 615.322.9649

ADD-003 —

(SHEET ADDED)

CONTACT: JEFF CASELLA jcasella@gilmc.com

TREY CUNNINGHAM tcunningham@gilmc.com

STRUCTURAL
EMC STRUCTURAL ENGINEERS
601 GRASSMERE PARK, SUITE 1B
NASHVILLE, TN 37211

CONTACT:
BEN FARIS
faris@emcnashville.com

615.781.8199

# MECHANICAL, PLUMBING, & ELECTRICAL

ENFINITY ENGINEERING
214 CENTERVIEW DRIVE, SUITE 200
BRENTWOOD, TN 37027
615.377.0093

CONTACT (MECHANICAL/PLUMBING):

HUNTER DANIEL
hdaniel@enfinityeng.com

CONTACT (ELECTRICAL):
PAULINA STEEN
psteen@enfinityeng.com

### INTERIORS

CASELLA INTERIORS
1500 4TH AVENUE NORTH, SUITE 103
NASHVILLE, TN 37208
615.255.2251

CONTACT:

LARET CASELLA laret@casellainteriors.com

KATE SMITH ksmith@casellainteriors.com

ADD-003 (MISSING TITLE
ADDED TO INDEX,
BUT SHEET WAS
PREVIOUSLY IN SET)

# – ADD-003

- ADD-003

(ONLY THE UNDERLINED SECTION IN THE PARAGRAPH WAS ADDED)

# ALTERNATES

#1. DEDIACEMENT OF MECHANICAL DIDING

ALTERNATE #1: REPLACEMENT OF MECHANICAL PIPING:

IN LIEU OF THE EXISTING CHILL WATER PIPING AND HEATING WATER
PIPING TO REMAIN "AS-IS", PROVIDE ADDITIONAL COST TO REMOVE AND
REPLACED WITH NEW CHILL WATER PIPING AND HEATING WATER PIPING.
SEE MECHANICAL DRAWINGS FOR SPECIFIC INFORMATION.

ALTERNATE #2: UPGRADE LIGHTING FIXTURE D6 (HOUSE LIGHTING):
IN LIEU OF THE SPECIFIED D6 LIGHTING FIXTURE, PROVIDE A DMX
SYSTEM-COMPATIBLE LIGHTING FIXTURE AND OMIT THE CURRENTLY

SPECIFIED DMX CONVERTOR PANEL. SEE ELECTRICAL FOR SPECIFIC

LIFT EQUIPMENT LIMITS

THE MAIN AUDITORIUM FLOOR HAS A LIVE LOAD OF 100 PSF AND A

MAXIMUM LIFT WEIGHT OF 1,700 LBS.

#### SHEET INDEX CURRENT ISSUE REVISION DRAWING DESCRIPTION DATE CURRENT REVISION DESCRIPTION DATE COVER | COVER, APPLICABLE CODES, BUILDING DATA INDEX INDEX, GENERAL NOTES, PROJECT TEAM, VICINITY MAP 03/08/24 ADDENDUM #3 (SFM COMMENTS) 04/22/24 **ARCHITECTURAL** A0.1 FIRE-RATED DESIGN ASSEMBLIES 03/08/24 03/08/24 A0.2 FIRE-RATED DESIGN ASSEMBLIES 03/08/24 A1.0 OVERALL PLANS - SCOPE OF WORK DIAGRAMS A1.0a OCCUPANCY SEPARATION BUILDING SECTION DIAGRAM 03/08/24 A1.0b LIFE SAFETY EGRESS DIAGRAMS 04/22/24 ADDENDUM #3 (SFM COMMENTS) 04/22/24 AD1.1 LEVEL 2 - ENLARGED DEMOLITION PLAN AD1.2 LEVELS 3 & 4 - ENLARGED DEMOLITION PLANS 03/08/24 ADDENDUM #3 (SFM COMMENTS) 04/22/24 AD9.1 LEVELS 1 & 2 - DEMOLITION REFLECTED CEILING PLANS 03/08/24 AD9.2 LEVELS 3 & 4 - DEMOLITION REFLECTED CEILING PLANS 03/08/24 03/08/24 A1.1 LEVEL 2 - ENLARGED PLAN A1.2 LEVELS 3 & 4 - ENLARGED PLANS 03/08/24 03/08/24 A2.1 INTERIOR ELEVATIONS A2.2 INTERIOR ELEVATIONS 03/08/24 A2.3 INTERIOR/EXTERIOR RENDERINGS 03/08/24 03/08/24 A4.1 WALL SECTIONS 03/08/24 A4.2 WALL SECTIONS 03/08/24 A5.1 DETAILS 03/08/24 A5.2 DETAILS A5.3 DETAILS 03/08/24 03/08/24 A5.5 DETAILS 03/08/24 03/08/24 03/08/24 A5.7 DETAILS A5.8 DETAILS 03/08/24 03/08/24 A8.1 DOOR SCHEDULE & DETAILS A9.1 LEVELS 1 & 2 - REFLECTED CEILING PLANS 03/08/24 A9.2 LEVELS 3 & 4 - REFLECTED CEILING PLANS 03/08/24 STRUCTURAL SO.1 GENERAL NOTES 03/08/24 03/08/24 SO.2 QUALITY ASSURANCE PLAN 03/08/24 \$1.1 SECOND FLOOR FRAMING PLAN & DETAILS 03/08/24 \$1.2 THIRD FLOOR FRAMING PLAN & DETAILS 03/08/24 \$1.3 FOURTH FLOOR & ATTIC FRAMING PLAN \$1.4 WINDOW FRAMING ELEVATION & DETAILS 03/08/24 MECHANICAL MO.1 MECHANICAL LEGEND & NOTES 03/08/24 M0.2 MECHANICAL SCHEDULE 03/08/24 MD1.2 SECOND FLOOR HVAC DEMOLITION PLAN 03/08/24 MD1.3 THIRD FLOOR HVAC DEMOLITION PLAN MD1.4 PARTIAL FOURTH FLOOR HVAC DEMOLITION PLAN MD1.5 ATTIC HVAC DEMOLITION PLAN

03/08/24

03/08/24

03/08/24

03/08/24

03/08/24

03/08/24

03/08/24

03/08/24

03/08/24

03/08/24

03/08/24

03/08/24

03/08/24

03/08/24

03/08/24

03/08/24

03/08/24

03/08/24 | ADDENDUM #3 (SFM COMMENTS)

03/08/24 ADDENDUM #3 (SFM COMMENTS)

03/08/24 ADDENDUM #3 (SFM COMMENTS)

03/08/24 | ADDENDUM #3 (SFM COMMENTS)

04/22/2

04/22/24

04/22/2

04/22/24

04/22/24

04/22/24

04/22/24

M1.2 SECOND FLOOR HVAC NEW WORK PLAN

M1.4 PARTIAL FOURTH FLOOR HVAC NEW WORK PLAN

M1.3 THIRD FLOOR HVAC NEW WORK PLAN

M1.5 ATTIC HVAC NEW WORK PLAN

M3.1 MECHANICAL DETAILS

M3.2 MECHANICAL DETAILS

M4.1 MECHANICAL CONTROLS

M4.2 MECHANICAL CONTROLS

FP0.1 FIRE PROTECTION NOTES

ELECTRICAL

E3.4 ELECTRICAL ATTIC PLAN

E7.1 ELECTRICAL DETAILS

FIRE PROTECTION

FP1.2 FIRE PROTECTION SECOND FLOOR PLAN

E1.2 | ELECTRICAL DEMOLITION PLAN - LEVELS 1 & 2

E3.2 ELECTRICAL POWER & SYSTEMS PLAN - LEVEL 2

E3.3 ELECTRICAL POWER & SYSTEMS PLAN - LEVEL 3 & 4

ID1.1 INTERIOR FINISH PLAN AND SCHEDULE - LEVEL 1 & 2

ID1.2 INTERIOR FINISH PLAN AND SCHEDULE - LEVEL 3 & 4

E5.0 ELECTRICAL POWER DISTRIBUTION DIAGRAM & SCHEDULES 03/08/24

E1.3 ELECTRICAL DEMOLITION PLAN - LEVEL 3 & 4

E2.2 ELECTRICAL LIGHTING PLAN - LEVEL 2

E2.3 ELECTRICAL LIGHTING PLAN - LEVEL 3

E4.1 ELECTRICAL CONDUIT PLAN - LEVEL 1

ID1.0 INTERIOR FINISH LISTING AND NOTES

FP1.3 FIRE PROTECTION THIRD FLOOR PLAN

E0.1 ELECTRICAL LEGENDS & NOTES

TENNESSEE
DERRYB
BUILDING UPG
1 WILLIAM L. JONES
COOKEVILLE, TN 385

— ADD-003

W/ REVISION

(INDEX REORGANIZED

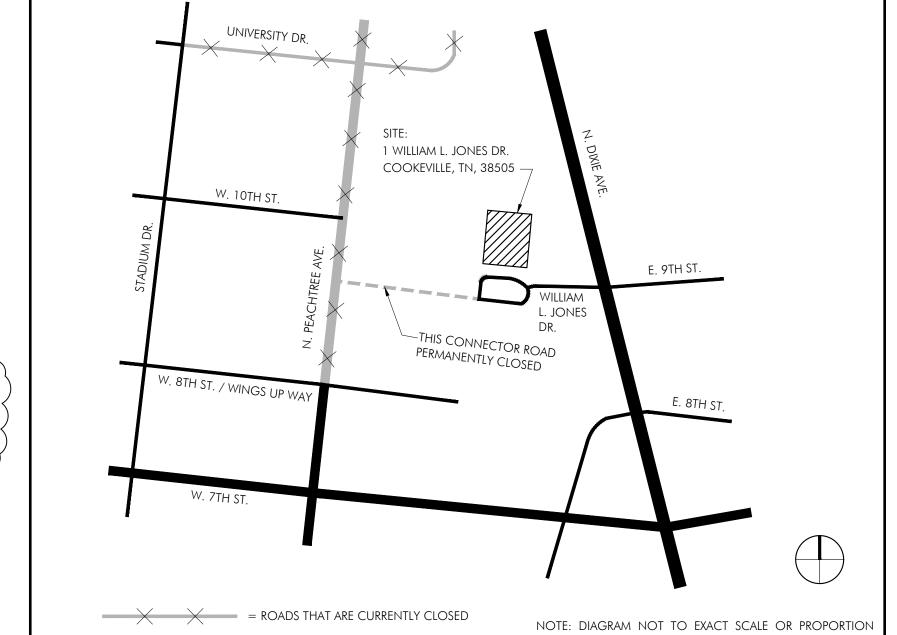
TRACKING INFO.)

ISSUED: 03.08.24 SBC PROJECT #: 364/011-05-2021 GMCA PROJECT #: 202113 TDH

REVISED:

# DATE DESCRIPTION

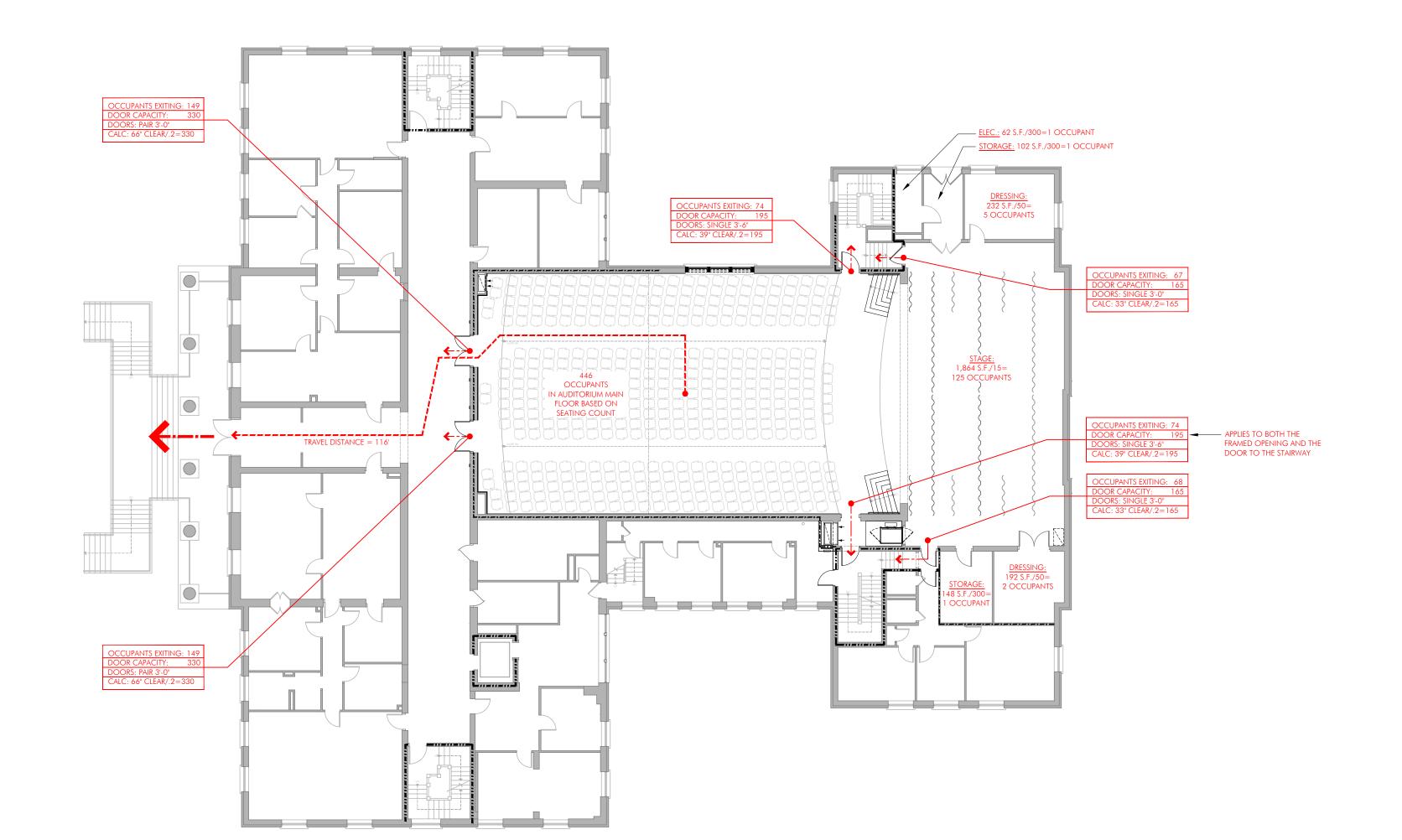
ADD-003 04.22.24 ADDENDUM #3

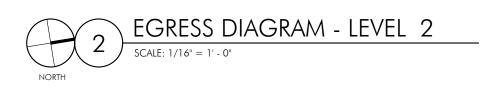


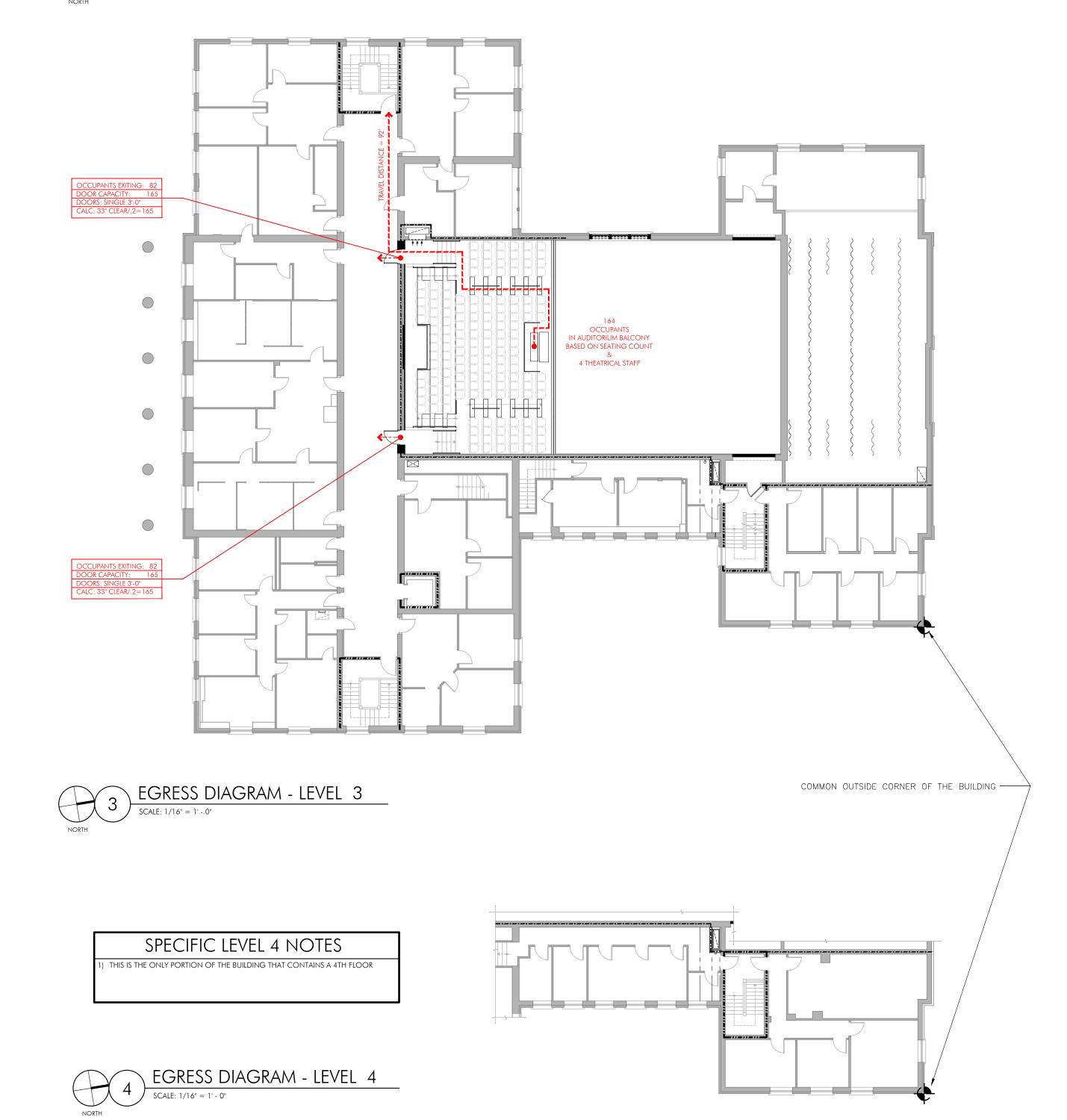
VICINITY MAP

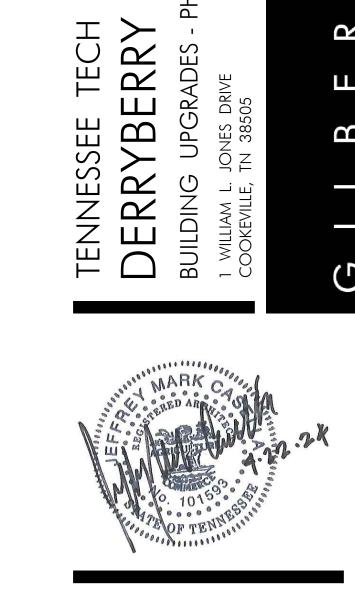
INDEX

SCALE: 1/16" = 1' - 0"







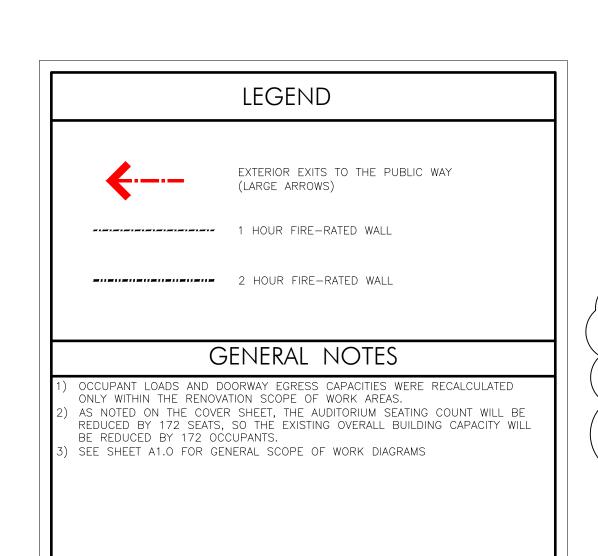


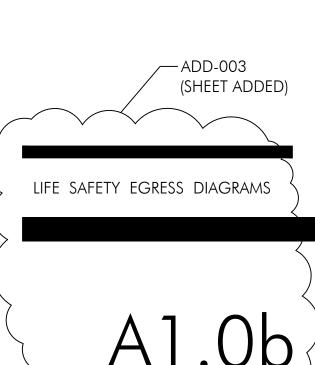
ISSUED: 04.22.24 SBC PROJECT #: 364/011-05-2021 GMCA PROJECT #: 202113 TDH

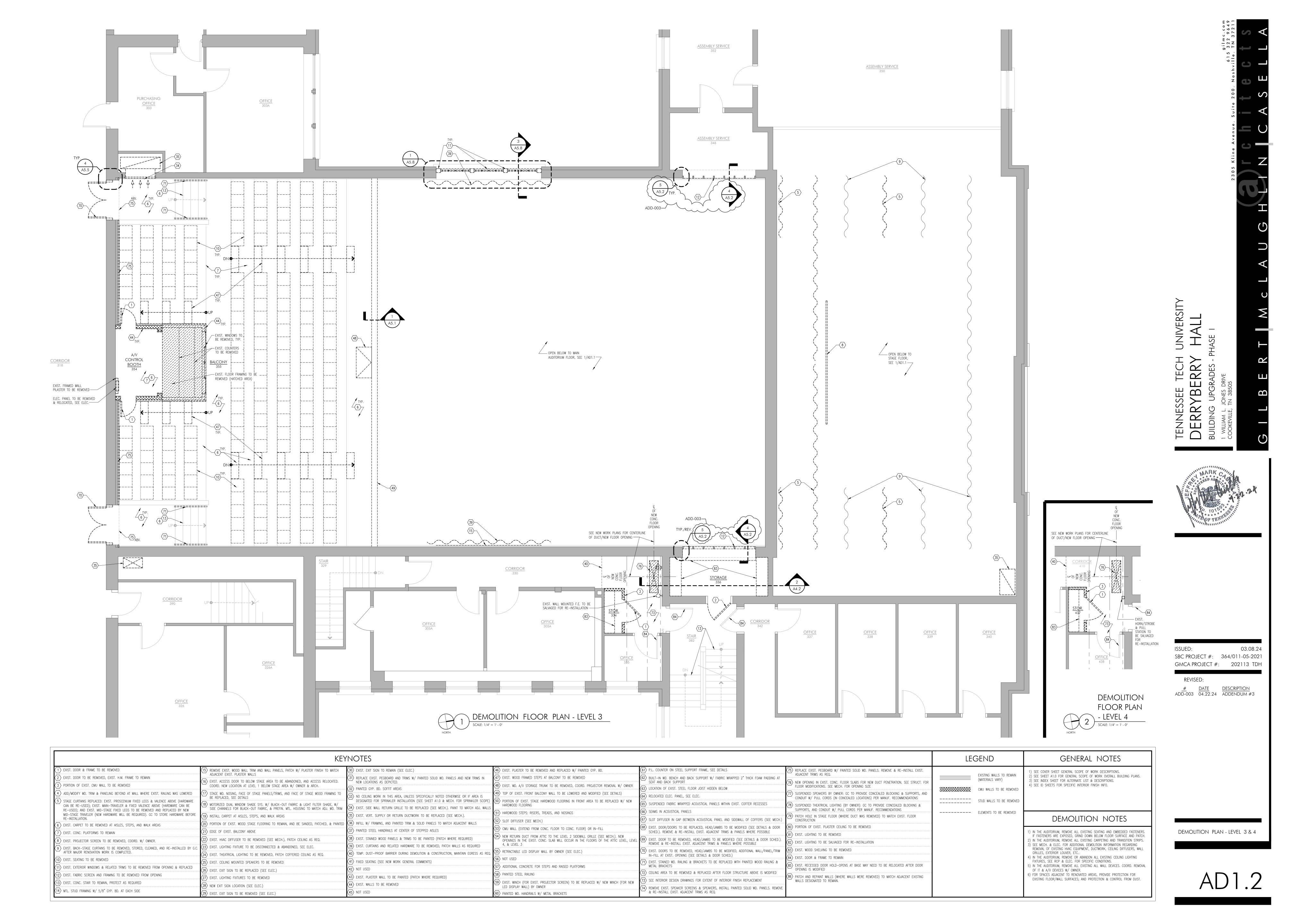
REVISED:

<u>#</u> <u>DATE</u> <u>DESCRIPTION</u>

ADD-003 04.22.24 ADDENDUM #3







Enfinity Project # 21206

NEW/EXISTING LEGEND

NEW WORK ----

EXISTING TO REMAIN (ETR)

# GENERAL LIGHTING NOTES

- A. FOR EXACT OUTLET AND DEVICE PLACEMENT, COORDINATE WITH ARCHITECT & OWNER'S REPRESENTATIVE, ARCHITECTURAL CASEWORK, AND LARGE SCALE AND ROOM ELEVATION DRAWINGS.
- B. VERIFY LIGHTING FIXTURES AND CEILING TYPES FOR COMPATIBILITY. COORDINATE WITH OTHER TRADES FOR LIGHTING FIXTURE LOCATIONS.
- C. HALF OF "D6" AUDITORIUM LIGHT FIXTURES SHALL BE CONNECTED TO BATTERY
- D. COORDINATE ALL DEVICE FINISHES WITH ARCHITECT & OWNER'S REPRESENTATIVE PRIOR TO ORDERING.
- INVERTER) SHALL PROVIDE POWER FOR A DURATION OF NOT LESS THAN 90

CONTRACTOR TO PROVIDE CONDUIT WITH PULLWIRE ROUTED FROM IT/AV ROOM  $\int$ #336 (AT CONCEALED LOCATIONS) TO THEATRICAL LIGHTING LOCATIONS.

KEYED NOTES:

TIE NEW LIGHTING INTO EXISTING LIGHTING CONTROL PANEL AND RETAINED

- REFER TO SHEET E5.0 FOR INFORMATION REGARDING ALTERNATE #2. PROVIDE (1) POWER SUPPLY TO POWER S1 FIXTURE. POWER SUPPLY TO BE INSTALLED IN CONCEALED LOCATION, COORDINATE FINAL LOCATION OF POWER SUPPLY WITH OWNER AND ARCHITECT. TIE INTO NEAREST EXISTING RECEPTACLE CIRCUIT SERVING THIS SPACE.
- ROUTE CIRCUIT THROUGH LIGHTING INVERTER FOR EMERGENCY POWER. TIE NEW EXIT LIGHTING INTO EXISTING RETAINED CIRCUIT SERVING THIS SPACE. PROVIDE BACKBOX AND LEHIGH CapT LIGHTING SCENE CONTROL PANEL, TO INTEGRATE WITH NEW LEHIGH E-FLEX LIGHTING CONTROL SYSTEM. COORDINATE ALL ELECTRICAL REQUIREMENTS, MOUNTING HEIGHT, AND EXACT LOCATION PRIOR TO ROUGH-IN AND INSTALLATION. ACCEPTABLE MANUFACTURERS ARE ACUITY PROVIDE LUTRON ENTRY STATION SWITCHES. SWITCHES ARE TO BE QS SEE TOUCH
- PROCESSOR AND CIRCUIT SELECTOR IN EXISTING HOUSE LIGHTING CONTROL PANEL.

  8. PROVIDE (2) DUAL-LITE DLS-2100-120-A-20-1 LIGHTING INVERTERS, OR APPROVED

  1. THE RESERVENCE TO HALE OF "DO" ALIDITORIUM EQUAL, TO PROVIDE EMERGENCY EGRESS POWER TO HALF OF "D6" AUDITORIUM LIGHT FIXTURES. COORDINATE FINAL LOCATION WITH OWNER.
- ISOLITE & IOTA. 10. EXISTING LIGHT SWITCH MADE AVAILABLE DURING DEMOLITION. EXTEND EXISTING FEEDERS TO NEW LOCATION AND RECONNECT TO EXISTING CIRCUIT. 1. EXISTING EXIT SIGN MADE AVAILABLE DURING DEMOLITION. EXTEND EXISTING

CIRCUIT TO 20A/1P BREAKER IN PANEL A. ACCEPTABLE MANUFACTURERS ARE

- 12. EXISTING LIGHT FIXTURE MADE AVAILABLE DURING DEMOLITION. REPLACE WIRING AND RECONNECT TO EXISTING CIRCUIT.
- 3. PROVIDE LEHIGH E-FLEX H2810 DMX TO 0-10V CONVERTER PANEL. ACCEPTABLE MANUFACTURERS ARE ACUITY BRANDS & LUTRON. 14. TIE NEW LIGHTING INTO EXISTING LIGHTING CIRCUIT PREVIOUSLY SERVING THIS
- 5. PROVIDE (1) TIVOLI INFINITY DRIVER: INF-J-60-1-5-12 FOR SEAT SIDE PANEL LIGHTING OR APPROVED EQUAL. COORDINATE ALL ELECTRICAL REQUIREMENTS AND DRIVER MOUNTING LOCATION(S) WITH OWNER AND VENDOR PRIOR TO ROUGH IN. CIRCUIT TO NEW 20A/1P BREAKER IN PANEL A. ACCEPTABLE MANUFACTURERS ARE TEMPO &
- LUTRON CONTROL HOUSE PANEL CIRCUIT SELECTOR. 17. PROVIDE (1) LUTRON ATHENA TOUCH SCREEN TO UPGRADE EXISTING GRAPHIC EYE
- 18. PROVIDE BACKBOX AND COLOR CHANGING LIGHTING CONTROL TOUCH SCREEN WITH COLOR PICKER TO CONTROL D6R FIXTURES. CONTROL PANEL SHALL BE COMPATIBLE WITH CAP-T WALL STATIONS AND LEHIGH E-FLEX DMX SYSTEM. COORDINATE ALL ELECTRICAL REQUIREMENTS, MOUNTING HEIGHT, AND EXACT LOCATION PRIOR TO ROUGH-IN AND INSTALLATION. ACCEPTABLE MANUFACTURERS

LIGHTING CIRCUIT SERVING THIS SPACE.

WALL STATION STYLE TO BE COMPATIBLE WITH UPGRADED LUTRON ATHENA

FEEDERS TO NEW LOCATION AND RECONNECT TO EXISTING CIRCUIT.

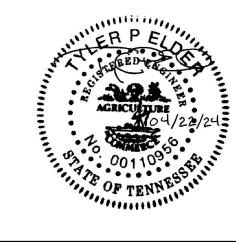
HUSSEY SEATING COMPANY.

16. PROVIDE (1) LUTRON ATHENA CIRCUIT SELECTOR TO UPGRADE EXISTING HOUSE

ARE ACUITY BRANDS & LUTRON. 

DRESSING ROOM 260

OFFICE 256





VESTIBULE

OFFICE 206A

OFFICE 206C

DEAN'S CONFERENCE ROOM 200

OFFICE 202A

OFFICE 206

<u>WOMEN</u> 203

MECH. RM 205

RECEPTION 209

ELECTRICAL LIGHTING PLAN

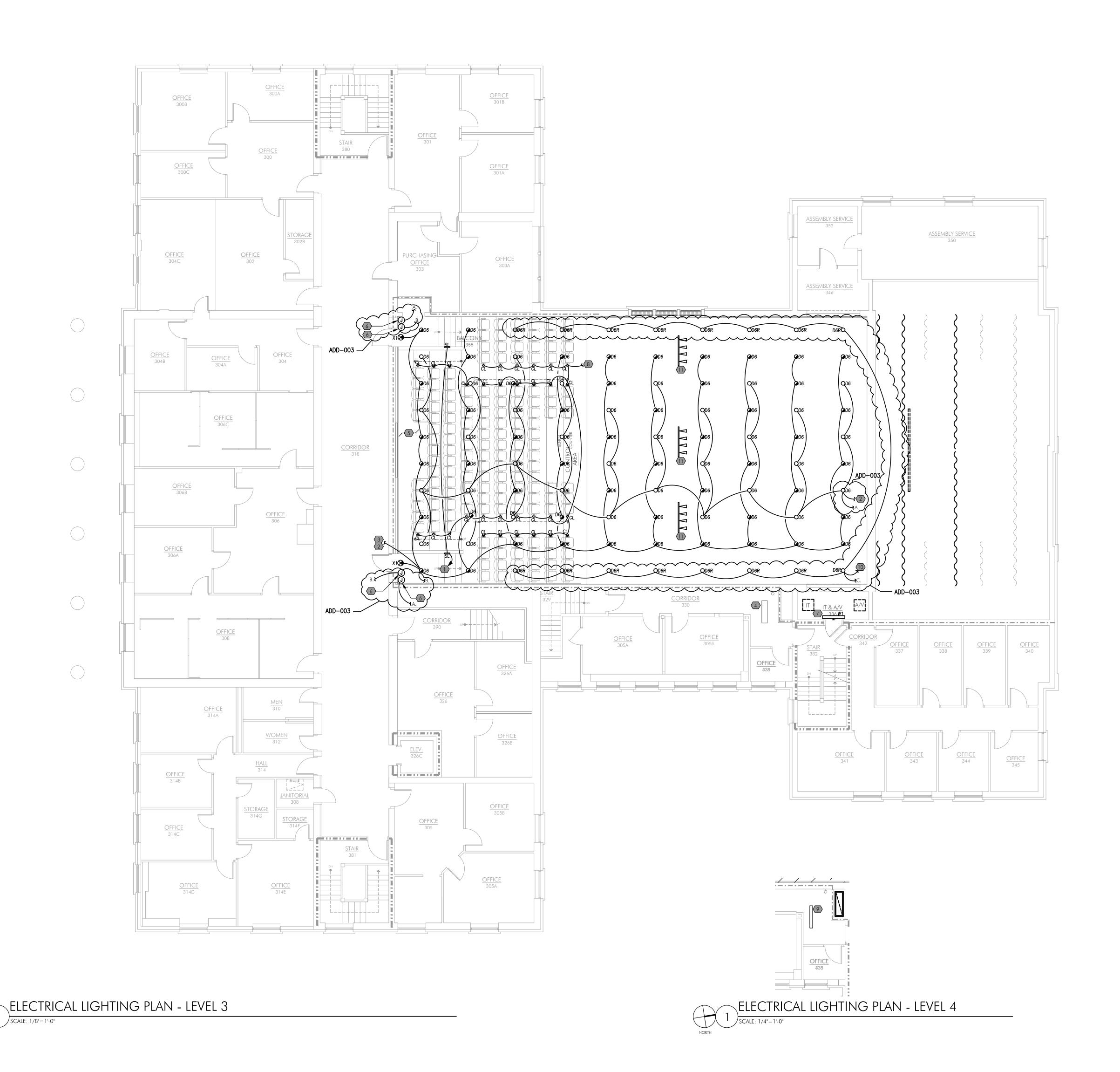


ISSUED: 03.08.24 SBC PROJECT #: 364/011-05-2021 GMCA PROJECT #: 202113 TDH

 #
 DATE
 DESCRIPTION

 ADD-003
 04.22.24
 ADDENDUM #3

ELECTRICAL LIGHTING PLAN



NEW/EXISTING LEGEND

NEW WORK — EXISTING TO REMAIN (ETR)

# GENERAL LIGHTING NOTES

- A. FOR EXACT OUTLET AND DEVICE PLACEMENT, COORDINATE WITH ARCHITECT & OWNER'S REPRESENTATIVE, ARCHITECTURAL CASEWORK, AND LARGE SCALE AND ROOM ELEVATION DRAWINGS.
- B. VERIFY LIGHTING FIXTURES AND CEILING TYPES FOR COMPATIBILITY. COORDINATE WITH OTHER TRADES FOR LIGHTING FIXTURE LOCATIONS.
- C. HALF OF "D6" AUDITORIUM LIGHT FIXTURES SHALL BE CONNECTED TO BATTERY INVERTER.
- D. COORDINATE ALL DEVICE FINISHES WITH ARCHITECT & OWNER'S REPRESENTATIVE PRIOR TO ORDERING.
- E. EMERGENCY POWER SYSTEM(S) (E.G. INTEGRAL BATTERY LIGHTS AND BATTERY INVERTER) SHALL PROVIDE POWER FOR A DURATION OF NOT LESS THAN 90 MINUTES.

F. CONTRACTOR TO PROVIDE CONDUIT WITH PULLWIRE ROUTED FROM IT/AV ROOM
#336 (AT CONCEALED LOCATIONS) TO THEATRICAL LIGHTING LOCATIONS.

# KEYED NOTES:

- PROVIDE 120V CONNECTION FOR NEW STAIR LIGHTS. PROVIDE 20A/1P BREAKER IN PANEL A, MATCH EXISTING AIC AND BREAKER TYPE. COORDINATE ALL ELECTRICAL REQUIREMENTS, MOUNTING HEIGHT, AND EXACT LOCATION PRIOR TO ROUGH-IN AND INSTALLATION.
- TIE NEW LIGHTING INTO EXISTING LIGHTING CONTROL PANEL AND RETAINED LIGHTING CIRCUIT SERVING THIS SPACE.
   ROUTE CIRCUIT THROUGH LIGHTING INVERTER FOR EMERGENCY POWER.
   EXISTING LIGHT FIXTURE MADE AVAILABLE DURING DEMOLITION. REPLACE WIRING
- AND RECONNECT TO EXISTING CIRCUIT.

  REFER TO SHEET ES & FOR INFORMATION REGARDING ALTERNATE #2

  PROVIDE LUTRON ENTRY STATION SWITCHES. SWITCHES ARE TO BE QS SEE TOUCH WALL STATION STYLE TO BE COMPATIBLE WITH UPGRADED LUTRON ATHENA PROCESSOR AND CIRCUIT SELECTOR IN EXISTING HOUSE LIGHTING CONTROL
- PANEL.

  7. CONNECT NEW LIGHTING FIXTURE TO EXISTING CIRCUIT PREVIOUSLY SERVING
  THIS SPACE.

  8. PROVIDE (1) TIVOLI INFINITY DRIVER: INF-J-60-1-5-12 FOR SEAT SIDE PANEL
  LIGHTING. COORDINATE ALL ELECTRICAL REQUIREMENTS AND DRIVER MOUNTING
- 20A/1P BREAKER IN PANEL A. ACCEPTABLE MANUFACTURERS ARE TEMPO &
  HUSSEY SEATING COMPANY.

  9. EXISTING LIGHT FIXTURE SALVAGED DURING DEMOLITION. RECONNECT TO
  EXISTING CIRCUIT. REFER TO ABCHITECTURAL RCP FOR EXACT LOCATION

  10. CONNECT D6R DMX FIXTURES TO SPARE BREAKER IN PANEL SERVING EXISTING
  LIGHTING CIRCUITS.

LOCATION(S) WITH OWNER AND VENDOR PRIOR TO ROUGH IN. CIRCUIT TO NEW

LIGHTING CIRCUITS.

11. PROVIDE (1)-120V 20A RECEPTACLE 1N GEILING FOR THEATRICAL FOR LIGHTING.

PROVIDE 20A/1P BREAKER IN PANEL PA, MATCH EXISTING AIC AND BREAKER TYPE.

TENNESSEE TECH UNIVERSITY

DERRYBERRY HALL

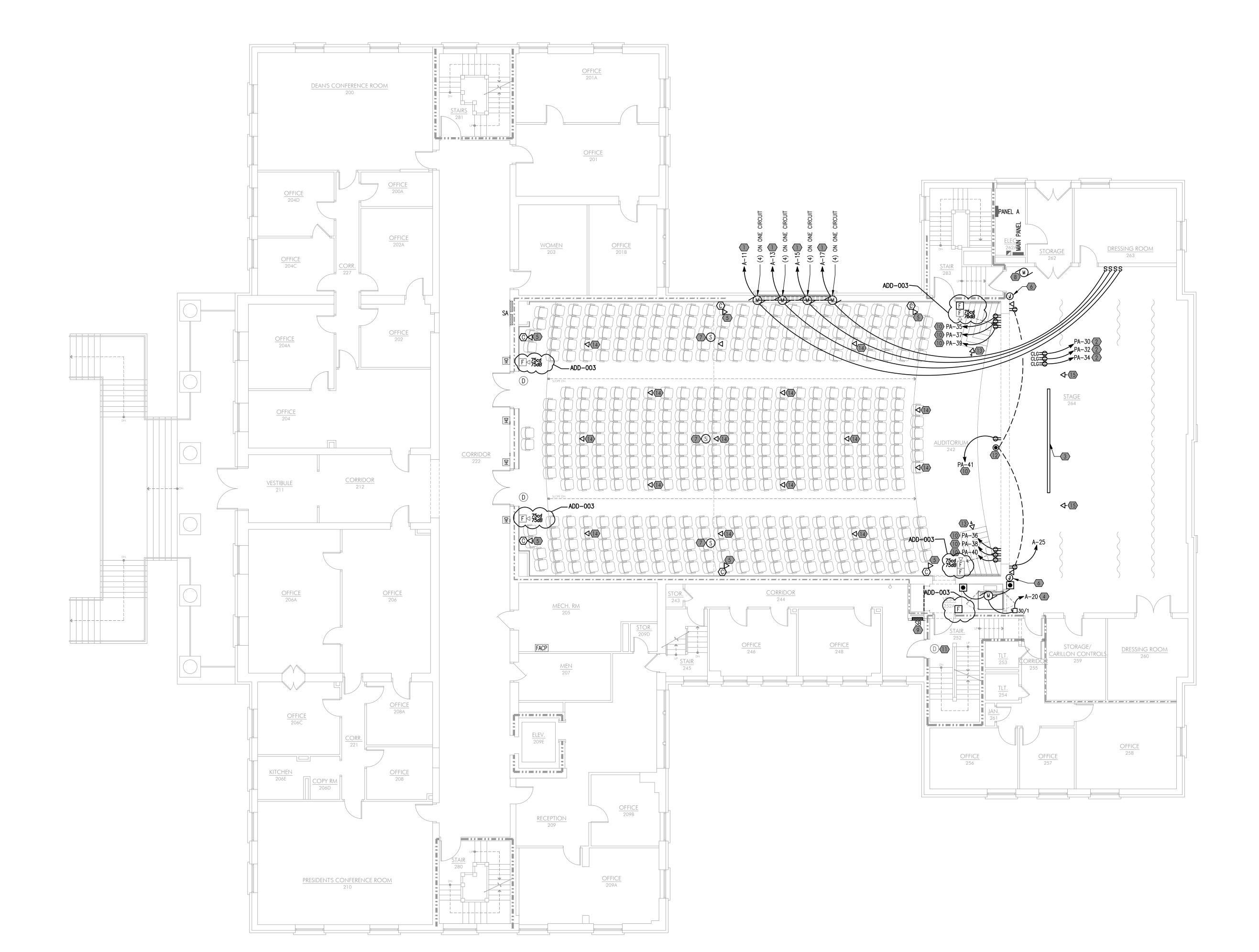
BLILDING UPGRADES - PHASE 1

ISSUED: 03.08.24 SBC PROJECT #: 364/011-05-2021 GMCA PROJECT #: 202113 TDH

 #
 DATE
 DESCRIPTION

 ADD-003
 04.22.24
 ADDENDUM #3

ELECTRICAL POWER & SYSTEMS PLAN



NEW/EXISTING LEGEND

NEW WORK — EXISTING TO REMAIN (ETR) —

# GENERAL POWER NOTES

- A. FOR EXACT OUTLET AND DEVICE PLACEMENT, COORDINATE WITH ARCHITECT & OWNER'S REPRESENTATIVE, ARCHITECTURAL CASEWORK, AND LARGE SCALE AND ROOM ELEVATION DRAWINGS.
- B. REFER TO VENDOR DRAWINGS AND PROVIDE ALL ITEMS NOTED THEREIN AS CONTRACTOR FURNISHED AND/OR INSTALLED.
- ADDITIONAL AV AND THEATRICAL LIGHTING FIXTURES, GRID RECEPTACLES, AND CONTROLS MAY BE REQUIRED BY FUTURE AV VENDOR DRAWINGS. CONTROLS FOR THESE LIGHTING FIXTURES MAY REQUIRE DMX WIRING, RELAY PANELS, LOW VOLTAGE WIRING, ETC.
- D. COORDINATE ALL DEVICE FINISHES WITH ARCHITECT & OWNER'S REPRESENTATIVE PRIOR TO ORDERING.
- E. CONTRACTOR TO PROVIDE CONDUIT WITH PULLWIRE, J-BOXES, AND CABLING FOR I.T. DATA & A/V LOCATIONS. CONDUIT IS TO BE ROUTED FROM IT/AV ROOM #336 AT CONCEALED LOCATIONS. OWNER TO PROVIDE FINAL TERMINATIONS.

# KEYED NOTES:

- PROVIDE 120V CONNECTION FOR MOTORIZED SHADES. PROVIDE 30A/1P BREAKER IN PANEL A, MATCH EXISTING AIC AND BREAKER TYPE. EACH CIRCUIT WILL CONTAIN (4) MOTORS PER CIRCUIT. COORDINATE FINAL MOTOR AND CONTROL ELECTRICAL REQUIREMENTS, MOUNTING HEIGHT, AND EXACT LOCATION WITH MANUFACTURER.
- PROVIDE 120V POWER CONNECTION FOR 20A RECEPTACLE AT PIPE FOR VIDEO WALL. PROVIDE 20A/1P BREAKER IN PANEL PA, MATCH EXISTING AIC AND BREAKER TYPE.
   LED DISPLAY WALL PROVIDED BY OWNER. PROVIDE 120V CONNECTION AND TIE INTO EXISTING MOTORIZED PROJECTOR SCREEN CIRCUIT. COORDINATE FINAL

ELECTRICAL REQUIREMENTS, MOUNTING HEIGHT, AND EXACT LOCATION WITH

- 4. PROVIDE DEDICATED 120V POWER CONNECTION FOR WHEELCHAIR LIFT. PROVIDE 20A/1P BREAKER IN PANEL A, MATCH EXISTING AIC AND BREAKER TYPE. COORDINATE FINAL MOTOR AND CONTROL ELECTRICAL REQUIREMENTS, MOUNTING HEIGHT, AND EXACT LOCATION WITH MANUFACTURER.
- PROVIDE BACKBOX & 1" CONDUIT TO A/V CLOSET FOR CAMERA CONNECTION MOUNTED LOW ON WALL.
- PROVIDE BACKBOX & 1" CONDUIT TO A/V CLOSET FOR AUDIO CONNECTION.
   CEILING MOUNTED SPEAKER. COORDINATE ALL ELECTRICAL REQUIREMENTS WITH OWNER AND MANUFACTURER PRIOR TO ROUGH-IN AND INSTALLATION.
- 8. NEW WINCH FOR LED DISPLAY WALL PROVIDED BY OWNER. CONNECT TO EXISTING POWER CONNECTION MADE AVAILABLE DURING DEMOLITION.
- NEW LOCATION OF EXISTING PANEL SB.
   PROVIDE 120V POWER CONNECTION FOR 20A RECEPTACLE AT BOTTOM OF PROSCENIUM. PROVIDE 20A/1P BREAKER IN PANEL PA, MATCH EXISTING AIC AND BREAKER TYPE.
- NEW LOCATION OF SMOKE DETECTOR SALVAGED DURING DEMOLITION.
   PROVIDE 3-GANG FLOOR BOX ON STAGE, LEGRAND EVOLUTION SERIES OR APPROVED EQUAL, WITH (2) PRE-WIRED DUPLEX RECEPTACLES AND (2) DATA
- CONNECTIONS. ACCEPTABLE MANUFACTURERS ARE LEVITON & PASS&SEYMOUR.

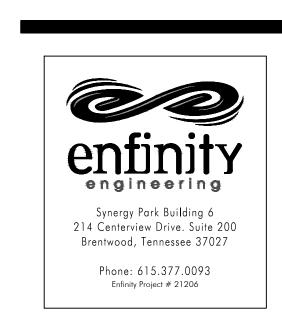
  13. PROVIDE 4 DATA PORTS ON FACE OF BOTTOM STEP.

  14. PROVIDE (1)1"C FROM IT-145 FOR VENTEV VNV-US-WE NETWORK DROP UNDER
- SEAT. ACCEPTABLE MANUFACTURERS ARE OBERON & RUCKUS.

  15. PROVIDE DATA AT STAGE RIGGING. COORDINATE EXACT LOCATION WITH ARCHITECT & I.T. DEPARTMENT PRIOR TO ROUGH IN.

Tennessee tech university DERRYBERRY HALL

	SCALE: 1/8"=1'-0"	POWER	PLAN -	LEVEL 2
	SCALE: 1/8"=1'-0"			
NORTH				



SBC PROJECT #: 364/011-05-2021 GMCA PROJECT #: 202113 TDH

REVISED: # DATE DESCRIPTION ADDENDUM #3

ELECTRICAL POWER & SYSTEMS PLAN LEVEL 3



NEW/EXISTING LEGEND

NEW WORK ----EXISTING TO REMAIN (ETR)

# GENERAL POWER NOTES

- A. FOR EXACT OUTLET AND DEVICE PLACEMENT, COORDINATE WITH ARCHITECT & OWNER'S REPRESENTATIVE, ARCHITECTURAL CASEWORK, AND LARGE SCALE AND ROOM ELEVATION DRAWINGS.
- B. REFER TO VENDOR DRAWINGS AND PROVIDE ALL ITEMS NOTED THEREIN AS CONTRACTOR FURNISHED AND/OR INSTALLED.
- ADDITIONAL AV AND THEATRICAL LIGHTING FIXTURES, GRID RECEPTACLES, AND CONTROLS MAY BE REQUIRED BY FUTURE AV VENDOR DRAWINGS. CONTROLS FOR THESE LIGHTING FIXTURES MAY REQUIRE DMX WIRING, RELAY PANELS, LOW VOLTAGE WIRING, ETC.

D. COORDINATE ALL DEVICE FINISHES WITH ARCHITECT & OWNER'S REPRESENTATIVE PRIOR TO ORDERING.

E. CONTRACTOR TO PROVIDE CONDUIT WITH PULLWIRE, J-BOXES, AND CABLING FOR I.T. DATA & A/V LOCATIONS. CONDUIT IS TO BE ROUTED FROM IT/AV ROOM #336 AT CONCEALED LOCATIONS. OWNER TO PROVIDE FINAL TERMINATIONS. 

# KEYED NOTES:

# . [NOT USED] . PROVIDE BACKBOX FOR CAMERA CONNECTION MOUNTED LOW ON WALL.

- 3. NEW LOCATION OF EXISTING PANEL PA.
  4. NEW LOCATION OF FIRE ALARM HORN/STROBE & PULL STATION SALVAGED DURING
- PROVIDE (1)1"C FROM IT-145 FOR VENTEV VNV-US-WE NETWORK DROP UNDER SEAT. ACCÉPTABLE MANUFACTURERS ARE OBERON & RUCKUS.

TENNESSEE TECH
DERRYBERRY

1500 4th Avenue North, Suite 103

Nashville, TN 37208

INTERIOR FINISH LISTING AND NOTES

ACT-I NOTE: **EXISTING ACT & GRID TO BE** REMOVED & REINSTALLED OR REPLACED TO MATCH EXIST. KNOLL, TWISTER, FLURRY W1923/2 66" WIDE CEILING PANEL WRAP NOTE: CONC SEALED CONCRETE TARKETT CONTACT: KIM FULTON 615.393.4054 PRODUCT: AIDA CLOTH ADD-002 COLOR: CUSTOM COLOR STRIKEOFF #: 114349112-110 TILE  $18 \times 36$ **INSTALLATION:** VERTICAL ASHLAR PATCRAFT CPT-2 MFG.: NOTE: OWNER PROVIDED, CONTRACTOR INSTALLED PRODUCT: DAZZLE I0119 COLOR: EXQUISITE 00512 TYPE: TILE **INSTALLATION:** (MATCH EXISTING METHOD) MFG.: STONHARD PRODUCT: STONCRETE EFX COLOR: URBAN SCAPE STONE MATTE STONECLAD TO PATCH EXISTING CONC FLOOR WITH EPOXY AS TOP COAT ADD-002 / **FORMICA** CONTACT: **AMBER VEACH** (615) 793-7746 PRODUCT: NATURAL TEAK 8849-58 MFG: SHERWIN WILLIAMS COLOR: PURE WHITE SW 7005 MFG: PT-2 SHERWIN WILLIAMS COLOR: HIGH REFLECTIVE WHITE SW 7757 MFG: SHERWIN WILLIAMS COLOR: **EGRET WHITE SW 7570** MFG: PT-4 SHERWIN WILLIAMS COLOR: CITYSCAPE SW 7067 NOTE: MATCH EXISTING COLOR & SHERWIN WILLIAMS MFG: COLOR: TRICORN BLACK SW 6258 NOTE: STAGE FRONT & RECESSED LETTERS. COLOR: TBD **TARKETT** MFG: NOTE MATCH COLOR & PROFILE OF ADJACENT EXISTING RB TARKETT RB-2 COLOR: 20 CHARCOAL VCT-I MFG: ARMSTRONG PRODUCT: IMPERIAL TEXTURE 51910 CLASSIC BLACK COLOR: INSTALLATION: MATCH EXISTING METHOD WB-I NOTE: PAINT EXIST. WD BASE PT-3 NOTE: WD-I STAIN TO MATCH ARCH. SAMPLE SPECIES: MAPLE WD-2 **NOT USED** WD-3 NEW PAINTED WOOD PANEL, TRIM. BASE. & TRIM AT CEILING UNDERNEATH BALCONY. PAINT COLOR TO BE PT-3. (SEE ARCH. DRAWINGS FOR EXTENTS) **SPECIES:** (TO MATCH EXISTING)

WD-4

NOTE:

SAND EXIST. WOOD FLOORS AND

PAINT PT-6

INTERIOR FINISH LEGEND / BASIS OF DESIGN FINISHES

INTERIOR FINISH SYMBOLS

ACOUSTICAL PANEL

**EPOXY FLOORING** 

**EXISTING TO REMAIN** 

PLASTIC LAMINATE

EXTENT OF FINISH

CONC SEALED CONCRETE

CARPET

PAINT

WOOD

**RUBBER BASE** 

WOOD BASE

**FLOORING** 

**TRANSITION** 

ACOUSTICAL CEILING TILE

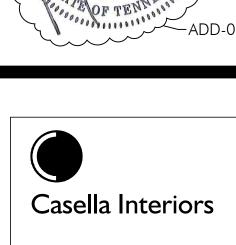
### GENERAL FINISH NOTES

- I. ALL FINISHES LISTED ARE BASIS OF DESIGN. ANY SUBSTITUTIONS MUST BE EQUAL IN COLOR, PATTERN, MATERIAL, YARN TYPE (WHERE APPLICABLE), & DURABILITY. SUBSTITUTIONS MUST BE SUBMITTED TO DESIGN TEAM FOR APPROVAL.
- DO NOT SCALE DRAWINGS.
- REFER TO FINISH LEGEND FOR SYMBOL DEFINITIONS.
- 4. SUBMIT SAMPLES OF ALL FINISHES TO INTERIOR DESIGNER FOR APPROVAL BEFORE INSTALLATION OR FABRICATION.
- 5. REFER TO ELEVATIONS, REFLECTED CEILING PLANS AND ENLARGED PLANS FOR CLARIFICATION OF FINISHES.
- 6. ALL FINISHES TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
- 7. ALL GYPSUM BOARD OR EXISTING PLASTER WALLS SCHEDULED TO BE PAINTED ARE TO HAVE AN EGGSHELL LOW VOC FINISH.
- 8. ALL GYPSUM BOARD OR EXISTING PLASTER CEILINGS SCHEDULED TO BE PAINTED ARE TO HAVE A FLAT LOW VOC FINISH.
- 9. PATCH, REPAIR, OR MATCH EXISTING MATERIALS WHERE AFFECTED BY CONSTRUCTION.
- 10. ALL DOORS & DOOR FRAMES TO BE PAINTED TO MATCH ADJACENT WALL, UNLESS OTHERWISE NOTED.

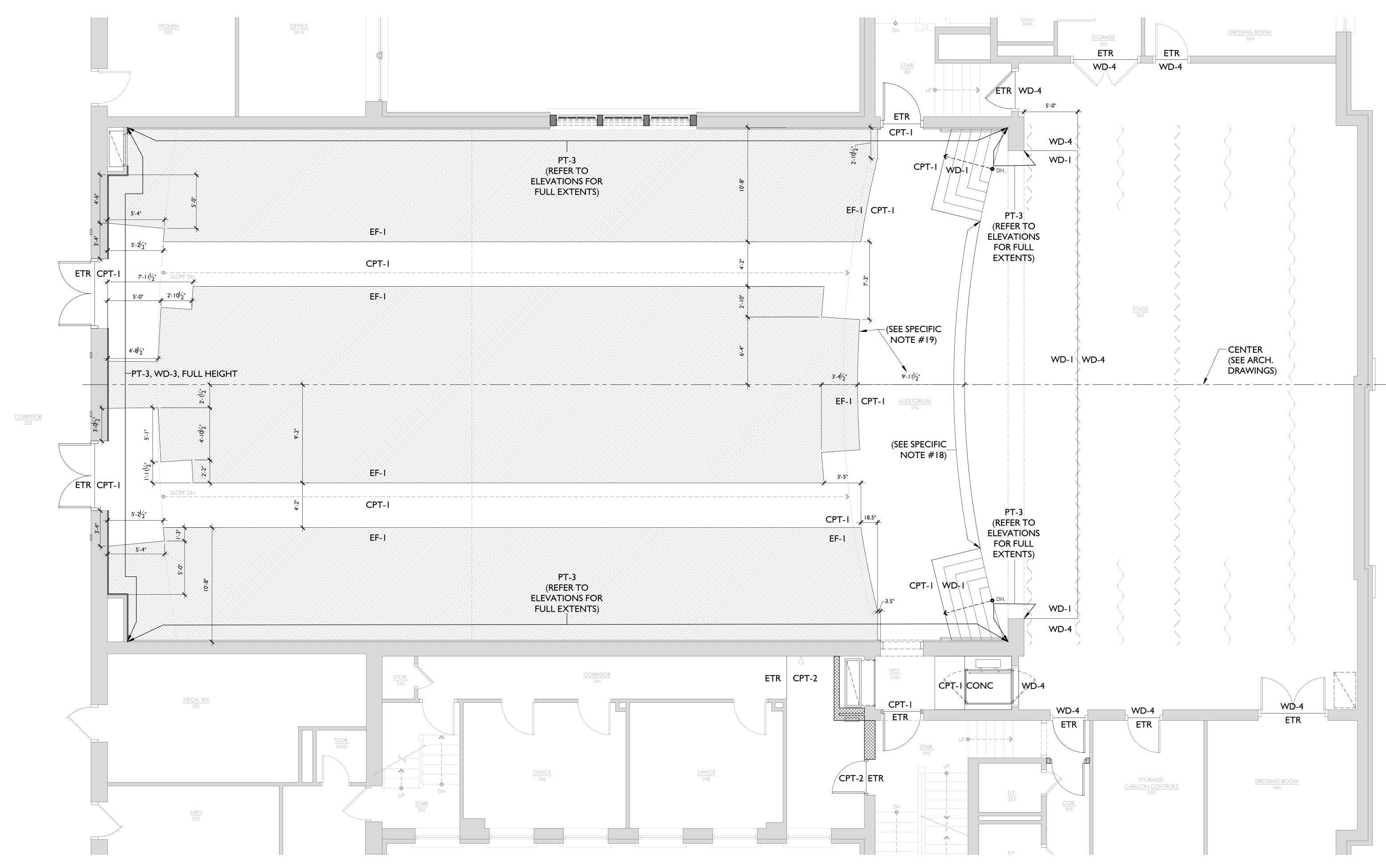
#### SPECIFIC FINISH NOTES

- 1. TABLE TOP TO BE PL-1. EDGE PROFILE: STRAIGHT. METAL SUPPORT FRAME TO BE PAINTED PT-4, HIGH-GLOSS
- 2. PAINT HANDRAIL & GUARDRAIL AGAINST PAINTED WD WALLS PT-3, HIGH-GLOSS FINISH. PAINT ALL OTHER HANDRAILS & GUARDRAILS PT-4, HIGH-GLOSS FINISH.
- 3. SEATING BASIS OF DESIGN TO BE IRWIN ANDANTE. (SEE PROJECT MANUAL FOR APPROVED MANUF. TO PROVIDE EQUAL PRODUCT).
- BACK: NO. 6 (NO.17 INDIA TEAK ON MAPLE, FABRIC: STINSON, ARTISAN, COLOR: VIOLET 65081)
- SEAT: NO. 12 (FINISH: CHARCOAL GREY (CHL), FABRIC: STINSON, ARTISAN; COLOR: VIOLET 65081) w/ SEAT NUMBER PLATE (FINISH TBD).
- AISLE PANEL: NO.14 (NO.17 INDIA TEAK ON MAPLE) w/ ROW LETTER PLATE (FINISH TBD).
- ARMREST: COMFORT-CURVED WOOD (FINISH: NO.17 INDIA TEAK ON MAPLE)
- SEE ARCH. DRAWINGS FOR CONFIGURATION, SEAT COUNTS, AND WIDTHS.
- CHAIR PLATFORMS: NO. 4 (FINISH: CHARCOAL GREY (CHL)).
- PROVIDE BUILT-IN LED LIGHTING AT SIDE PANELS WHERE NOTED IN THE ARCH. DRAWINGS.
- 4. COLOR OF NEW STAGE TRAVELER CURTAIN & VALANCE TO BE BLACK. (EXISTING REAR BLACK CURTAINS TO REMAIN). SEE PROJECT MANUAL & ARCH. DRAWINGS FOR ADDITIONAL DETAILS.
- 5. MOTORIZED WINDOW SHADE WITH BLACK OUT FABRIC AND LIGHT FILTER SHADE, SIDE CHANNELS AND PRE-FINISHED METAL HOUSING. BLACK OUT FABRIC TO BE TBD. LIGHT FILTER FABRIC TBD. METAL HOUSING FINISH TO MATCH THE ADJACENT PAINTED WOOD WINDOW TRIM.
- 6. STAGE NOSING, TRIM, LIGHT COVE TRIM, FACE OF STAGE BASE, STAGE STAIR TREADS & RISERS TO BE WD-1. PROVIDE CAT STAINLESS STEEL STAIR INSERT PLATES (FPSS 10x3) AS INLAY AT STAIR TREAD NOSING. (SEE ARCH. DRAWINGS FOR DETAILS).
- 7. PROVIDE TARKETT SLN STAIR NOSING AT BALCONY STAIRS. COLOR: 40 BLACK. AT 12"D STEP, MITER SLN NOSING. AT 24"D STEP, CLEANLY CUT SLN NOSING TO TERMINATE AT SPECIFIC NOTE #8 TRANSITION. RUN
- SPECIFIC NOTE #8 TRANSITION CONTINUOUSLY AT ANY OTHER EXPOSED EDGE OF CPT. TREADS AND RISERS TO HAVE CPT-I. (REVIEW THESE STAIR NOSINGS & TRANSITIONS W/ INTERIOR DESIGNER PRIOR TO FABRICATION).
- 8. PROVIDE TARKETT SLIM LINE TRANSITION STRIP FROM CPT TO EF/CONC. COLOR: 20 CHARCOAL
- 9. PROVIDE TARKETT SLIM LINE TRANSITION FROM CPT TO EXISTING VCT FLOORING. COLOR: 20 CHARCOAL
- 10. AT CORRIDOR OR STAIRWELL SIDE, PAINT NEW WOOD OR NEW HM DOORS & NEW DOOR TRIM OR HM FRAMES. PAINT (CORNER TO CORNER) NEW OR PATCHED WALLS TO MATCH EXISTING ADJACENT WALLS. INSTALL NEW WALL BASES AT PATCHED OR NEW WALLS (CORNER TO CORNER) TO MATCH EXISTING WALL BASE. (SEE ALSO: ALTERNATE #1)
- 11. AT MAIN AUDITORIUM COFFERED CEILING, PAINT EXISTING PLASTER COFFERS & BEAMS PT-2. INSTALL FLOATING ACOUSTICAL CLOUD SYSTEMS WITHIN THE COFFERS. SUSPENDED CLOUD PANELS TO BE WRAPPED WITH AP-I. (SEE RCP FOR DETAILS).
- 12. AT CEILING BELOW THE BALCONY, REMOVE EXISTING PLASTER & INSTALL NEW GYP. BOARD (SEE ARCH DRAWINGS FOR DETAILS). PAINT GYP. BOARD PT-3.
- 13. AT ANY DAMAGED OR NEW WALLS, ADD NEW BASE & PAINT CORNER TO CORNER, COLOR TO MATCH
- 14. AT ANY DAMAGED OR NEW CEILINGS, PAINT FULL FACE, COLOR TO MATCH EXISTING.
- 15. THE EXTENT OF NEW FINISHES IN STAGE 264 ARE LIMITED TO THE PROSCENIUM SURROUND, STAGE NOSING, REPLACEMENT OF THE FRONT PORTION OF STAGE FLOORING, REPLACEMENT OF MAIN PROSCENIUM GRAND TRAVELER & VALENCE, AND THE INSTALLATION OF A NEW MID-STAGE TRAVELER. SEE ARCHITECT FOR FURTHER CLARIFICATION OF EXTENTS.
- 16. BENCH & BACK SUPPORT TO BE WD-1 W/ FABRIC WRAPPED CUSHIONS. CUSHION FABRIC TO MATCH AUDIENCE SEATING FABRIC.
- 17. CPT-I IN VESTIBULE 252A TO RUN UNDERNEATH LIP OF LIFT RAMP TO ENSURE SMOOTH TRANSITION. FLOOR OF LIFT TO HAVE CPT-1.
- 18. INDICATED EXTENTS OF STAGE FRONT. STAGE FRONT WILL BE STAINED WOOD BASE/TRIM & VENEER PLYWOOD (WD-I) OVER MULTIPLE LAYERS OF MDF BOARDS. THE RECESSED PORTIONS OF THE CUT-OUT AREAS OF THE LETTERING WILL BE PAINTED (BACK AND CUT-OUT SIDE).
- 19. GIVEN DIMENSION AND BOUNDARY CURVE ARE APPROXIMATE. EXACT LOCATION OF ARC TO BE COORDINATED W/ ARCHITECT AND APPROVED SEATING LAYOUT BEFORE INSTALLATION OF ANY FLOOR FINISH MATERIALS. (LOCATION & RADIUS OF ARC TO BE BASED UPON THE ARC TO BE BASED OFF THE LOCATION & RADIUS OF SEATING ARRANGEMENT).
- 20. PAINT EXISTING WOOD PANELS, TRIM, & BASE PT-3.
- 21. ALL RISER FACES ADJACENT TO CPT-1 ARE TO HAVE CPT-1. ALL OTHER RISER FACES ARE TO HAVE EF-1.

RSIT SEE YBI  $\Delta$ ΖШ



ISSUED: 03.08.24 SBC PROJECT #: 364/011-05-2021 GMCA PROJECT #: 202113 TDH



FINISH PLAN - LEVEL 2

SCALE: I/4" = I'-0"

SPECIFIC NOTES

13, 14

13, 14

CLG.

ETR, PT-5

ETR, ACT-I

	FINISH SCHEDULE - LEVEL 2								
	SPACE	FLOORS	BASE	WALLS	CI C	SPECIFIC NOTES			
NO.	NAME	FLOOKS	DASE	VVALL3	CLG.	SPECIFIC NOTES			
222	CORRIDOR	ETR	ETR, RB-I	ETR, PT-5	ETR	10			
242	AUDITORIUM	CPT-1, EF-1, WD-1	WB-I	PT-1, PT-3, WD-1, WD-3	AP-1, PT-2, PT-3	2, 3, 5, 6, 7, 8, 9, 11, 12, 18, 19, 20			
244	CORRIDOR	ETR, CPT-2	ETR, RB-I	ETR, PT-5	ETR, ACT-I	9, 13, 14			
252A	VESTIBULE	CPT-I, CONC	RB-2	PT-3	PT-2	9, 10, 17			
252	STAIR	ETR	ETR, RB-I	ETR, PT-5	ETR, PT-5	9, 10, 14			
255	CORRIDOR	ETR	RB-I	ETR, PT-5	ETR, PT-5	10			
259	STORAGE	ETR	ETR	ETR	ETR				
260	DRESSING ROOM	ETR	ETR	ETR	ETR				
262	STORAGE	ETR	ETR	ETR	ETR				
263	DRESSING ROOM	ETR	ETR	ETR	ETR				
264	STAGE	WD-1, WD-4	ETR	WD-I, ETR	-	2, 4, 5, 6, 15, 18			
283	STAIR	ETR	ETR	ETR	ETR	9, 10			

		FINISH	SCHEDULE -	LEVEL 2			
	SPACE		DACE	\A/A   C	CLC	CDECIFIC NOTES	
NO.	NAME	FLOORS	BASE	WALLS	CLG.	SPECIFIC NOTES	
222	CORRIDOR	ETR	ETR, RB-I	ETR, PT-5	ETR	10	
242	AUDITORIUM	CPT-I, EF-I, WD-I	WB-I	PT-1, PT-3, WD-1, WD-3	AP-1, PT-2, PT-3	2, 3, 5, 6, 7, 8, 9, 11, 12, 18, 19, 20	
244	CORRIDOR	ETR, CPT-2	ETR, RB-I	ETR, PT-5	ETR, ACT-I	9, 13, 14	
252A	VESTIBULE	CPT-I, CONC	RB-2	PT-3	PT-2	9, 10, 17	
252	STAIR	ETR	ETR, RB-I	ETR, PT-5	ETR, PT-5	9, 10, 14	
255	CORRIDOR	ETR	RB-I	ETR, PT-5	ETR, PT-5	10	
259	STORAGE	ETR	ETR	ETR	ETR		
260	DRESSING ROOM	ETR	ETR	ETR	ETR		
262	STORAGE	ETR	ETR	ETR	ETR		
263	DRESSING ROOM	ETR	ETR	ETR	ETR		
264	STAGE	WD-1, WD-4	ETR	WD-I, ETR	-	2, 4, 5, 6, 15, 18	
283	STAIR	ETR	ETR	ETR	ETR	9, 10	

SPECIFIC FINISH NOTES I. TABLE TOP TO BE PL-I. EDGE PROFILE: STRAIGHT. METAL SUPPORT FRAME TO BE PAINTED PT-4, HIGH-GLOSS FINISH.

2. PAINT HANDRAIL & GUARDRAIL AGAINST PAINTED WD WALLS PT-3, HIGH-GLOSS FINISH. PAINT ALL OTHER HANDRAILS & GUARDRAILS PT-4, HIGH-GLOSS FINISH.

3. SEATING BASIS OF DESIGN TO BE IRWIN -ANDANTE. (SEE PROJECT MANUAL FOR APPROVED MANUF. TO PROVIDE EQUAL

 BACK: NO. 6 (NO.17 INDIA TEAK ON MAPLE, FABRIC: STINSON, ARTISAN, COLOR: VIOLET

 SEAT: NO. 12 (FINISH: CHARCOAL GREY (CHL), FABRIC: STINSON, ARTISAN; COLOR: VIOLET 65081) w/ SEAT NUMBER PLATE

 AISLE PANEL: NO.14 (NO.17 INDIA TEAK ON MAPLE) w/ ROW LETTER PLATE (FINISH TBD).

ARMREST: COMFORT-CURVED WOOD

(FINISH: NO.17 INDIA TEAK ON MAPLE)

 SEE ARCH. DRAWINGS FOR CONFIGURATION, SEAT COUNTS, AND WIDTHS.

 CHAIR PLATFORMS: NO. 4 (FINISH: CHARCOAL GREY (CHL)).

(FINISH TBD).

 PROVIDE BUILT-IN LED LIGHTING AT SIDE PANELS WHERE NOTED IN THE ARCH. DRAWINGS.

4. COLOR OF NEW STAGE TRAVELER CURTAIN & VALANCE TO BE BLACK. (EXISTING REAR BLACK CURTAINS TO REMAIN). SEE PROJECT MANUAL & ARCH. DRAWINGS FOR ADDITIONAL DETAILS.

5. MOTORIZED WINDOW SHADE WITH BLACK OUT FABRIC AND LIGHT FILTER SHADE, SIDE CHANNELS AND PRE-FINISHED METAL HOUSING. BLACK OUT FABRIC TO BE TBD. LIGHT FILTER FABRIC TBD. METAL HOUSING FINISH TO MATCH

THE ADJACENT PAINTED WOOD WINDOW TRIM. 6. STAGE NOSING, TRIM, LIGHT COVE TRIM, FACE OF STAGE BASE, STAGE STAIR TREADS & RISERS TO BE WD-I. PROVIDE CAT STAINLESS STEEL STAIR INSERT PLATES (FPSS 10x3) AS INLAY AT STAIR TREAD NOSING. (SEE ARCH. DRAWINGS FOR DETAILS).

PROVIDE TARKETT SLN STAIR NOSING AT BALCONY STAIRS. COLOR: 40 BLACK. AT 12"D STEP, MITER SLN NOSING, AT 24"D STEP, CLEANLY CUT SLN NOSING TO TERMINATE AT SPECIFIC NOTE #8 TRANSITION. RUN SPECIFIC NOTE #8 TRANSITION CONTINUOUSLY AT ANY OTHER EXPOSED EDGE OF CPT. TREADS AND RISERS TO HAVE CPT-I. (REVIEW THESE STAIR NOSINGS & TRANSITIONS W/ INTERIOR DESIGNER PRIOR TO

PROVIDE TARKETT SLIM LINE TRANSITION STRIP FROM CPT TO EF/CONC. COLOR: 20 CHARCOAL 9. PROVIDE TARKETT SLIM LINE TRANSITION FROM CPT TO EXISTING VCT FLOORING. COLOR: 20

CHARCOAL 10. AT CORRIDOR OR STAIRWELL SIDE, PAINT NEW WOOD OR NEW HM DOORS & NEW DOOR TRIM OR HM FRAMES. PAINT (CORNER TO CORNER) NEW OR PATCHED WALLS TO MATCH EXISTING ADJACENT WALLS. INSTALL NEW WALL BASES AT PATCHED OR NEW WALLS (CORNER TO CORNER) TO MATCH EXISTING WALL BASE. (SEE ALSO: ALTERNATE #1)

11. AT MAIN AUDITORIUM COFFERED CEILING, PAINT EXISTING PLASTER COFFERS & BEAMS PT-2. INSTALL FLOATING ACOUSTICAL CLOUD SYSTEMS WITHIN THE COFFERS. SUSPENDED CLOUD PANELS TO BE WRAPPED WITH AP-1. (SEE RCP FOR DETAILS).

12. AT CEILING BELOW THE BALCONY, REMOVE

EXISTING PLASTER & INSTALL NEW GYP. BOARD (SEE ARCH DRAWINGS FOR DETAILS). PAINT GYP. BOARD PT-3. 13. AT ANY DAMAGED OR NEW WALLS, ADD NEW

BASE & PAINT CORNER TO CORNER, COLOR TO MATCH EXISTING. 14. AT ANY DAMAGED OR NEW CEILINGS, PAINT

FULL FACE, COLOR TO MATCH EXISTING. 15. THE EXTENT OF NEW FINISHES IN STAGE 264 ARE LIMITED TO THE PROSCENIUM SURROUND, STAGE NOSING, REPLACEMENT OF THE FRONT PORTION OF STAGE FLOORING, REPLACEMENT OF MAIN PROSCENIUM GRAND TRAVELER & VALENCE, AND THE INSTALLATION OF A NEW MID-STAGE TRAVELER. SEE ARCHITECT FOR

FURTHER CLARIFICATION OF EXTENTS. 16. BENCH & BACK SUPPORT TO BE WD-I W/ FABRIC WRAPPED CUSHIONS. CUSHION FABRIC TO

MATCH AUDIENCE SEATING FABRIC. 17. CPT-1 IN VESTIBULE 252A TO RUN UNDERNEATH LIP OF LIFT RAMP TO ENSURE SMOOTH

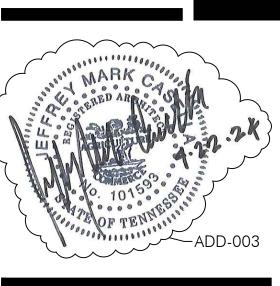
TRANSITION. FLOOR OF LIFT TO HAVE CPT-1. 18. INDICATED EXTENTS OF STAGE FRONT. STAGE FRONT WILL BE STAINED WOOD BASE/TRIM & VENEER PLYWOOD (WD-I) OVER MULTIPLE LAYERS OF MDF BOARDS. THE RECESSED PORTIONS OF THE CUT-OUT AREAS OF THE LETTERING WILL BE PAINTED (BACK AND CUT-OUT SIDE).

19. GIVEN DIMENSION AND BOUNDARY CURVE ARE APPROXIMATE. EXACT LOCATION OF ARC TO BE COORDINATED W/ ARCHITECT AND APPROVED SEATING LAYOUT BEFORE INSTALLATION OF ANY FLOOR FINISH MATERIALS. (LOCATION & RADIUS OF ARC TO BE BASED UPON THE ARC TO BE BASED OFF THE LOCATION & RADIUS OF

SEATING ARRANGEMENT). 20. PAINT EXISTING WOOD PANELS, TRIM, & BASE

21. ALL RISER FACES ADJACENT TO CPT-1 ARE TO HAVE CPT-1. ALL OTHER RISER FACES ARE TO HAVE EF-I.

UNIVERSITY HALL TENNESSEE TECH
DERRYBERRY



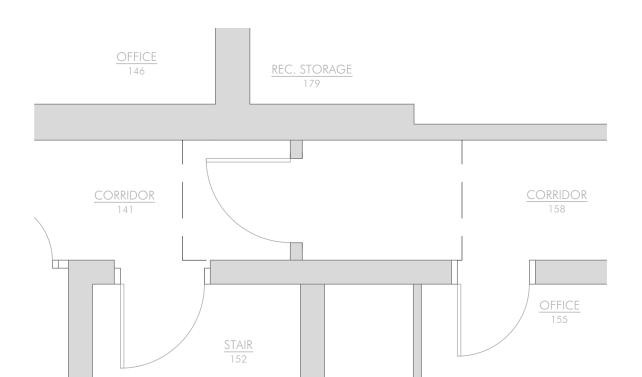


03.08.24 SBC PROJECT #: 364/011-05-2021 GMCA PROJECT #: 202113 TDH

REVISED:

DATE <u>DESCRIPTION</u> ADD-002 04.05.24 Addendum #2 ADD-003 04.22.24 Addendum #3

INTERIOR FINISH PLAN AND SCHEDULE - LEVEL 1 & LEVEL 2



TINISH PLAN - LEVEL I (BELOW WHEELCHAIR LIFT AREA)

SCALE: I/4" = I'-0"

FINISH SCHEDULE - LEVEL I SPACE **FLOORS** NAME 141 CORRIDOR ETR 158 CORRIDOR ETR

BASE

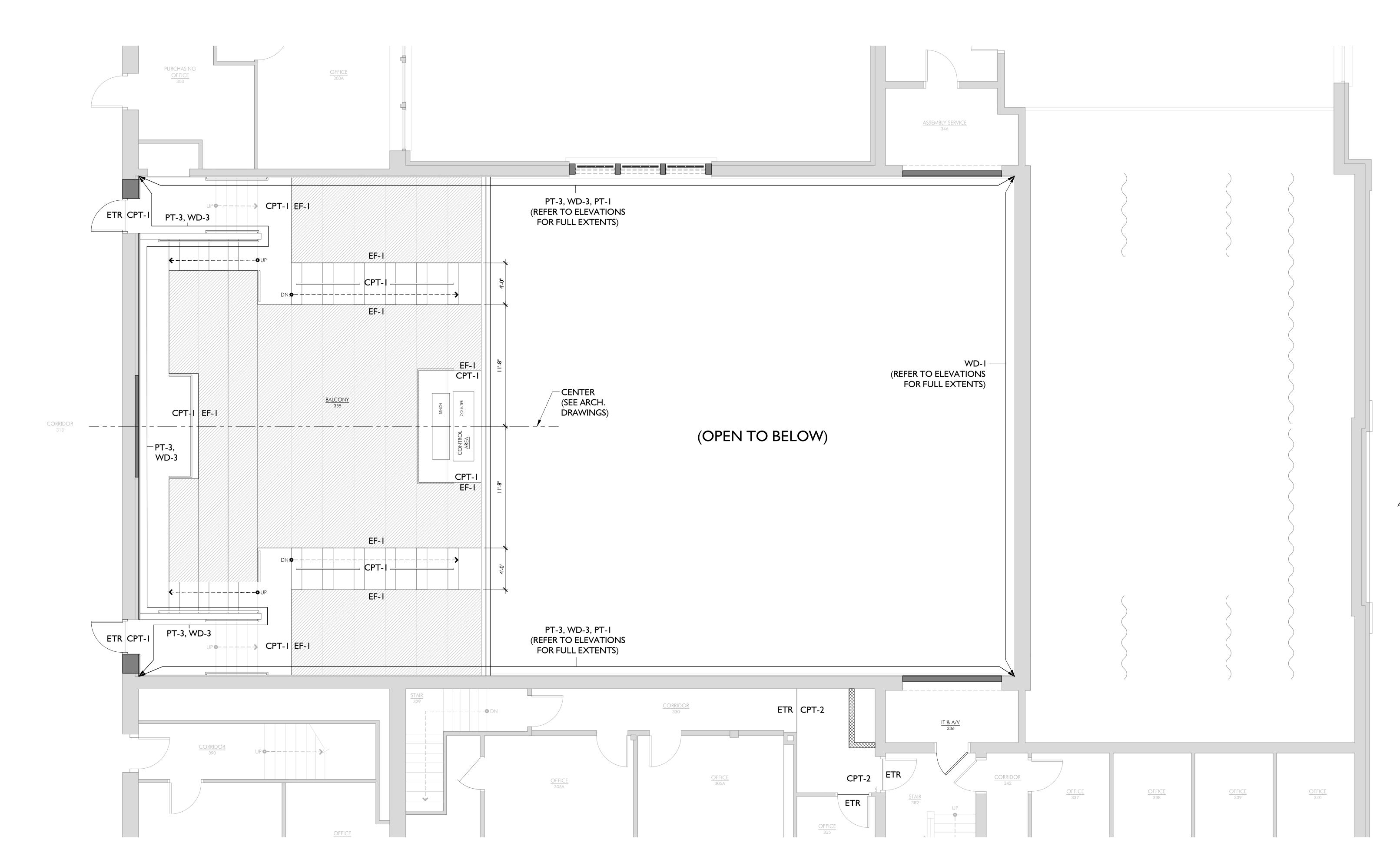
ETR

ETR

**WALLS** 

ETR

ETR





EIR VCT-I								
CORRIDOR 410								
				FINIS	H SCHEDULE - LE	EVEL 4		
			SPACE	FLOORS	BASE	WALLS	CLG.	SPECIFIC NOTES
		NO.	NAME	FLOOKS	DASE	WALLS	CLG.	SPECIFIC NOTES
		410	CORRIDOR	ETR, VCT-I	ETR, RB-I	ETR, PT-5	ETR, PT-5	13, 14
	VCT-I ETR							
OFFICE 438	ETR STAIR 480							

FINISH PLAN - LEVEL 4 (PARTIAL)

SCALE: I/4" = I'-0"

SPACE		FLOORS	BASE	WALLS	CLG.	SPECIFIC NOTES
NO.	NAME	I LOOKS	DA3L	VVALLS	CLG.	31 LCII IC NOTES
318	CORRIDOR	ETR	ETR, RB-I	ETR, PT-5	ETR	9, 10
330	CORRIDOR	ETR, CPT-2	ETR, RB-I	ETR, PT-5	ETR, PT-5	9, 13, 14
336	IT & A/V	ETR	RB-2	PT-5	ETR	10, 13
346	ASSEMBLY SERVICES	ETR	RB-2	PT-5	ETR	13
355	BALCONY	CPT-I, EF-I	PT-3, WD-3	PT-1, PT-3, WD-3	PT-2, AP-I	1, 2, 3, 7, 8, 9, 11,16, 20, 21
382	STAIR	ETR	ETR	ETR	ETR	10

FINISH SCHEDULE - LEVEL 3

SPECIFIC FINISH NOTES

1. TABLE TOP TO BE PL-1. EDGE PROFILE: STRAIGHT.

METAL SUPPORT FRAME TO BE PAINTED PT-4,

HIGH-GLOSS FINISH.

PAINT HANDRAIL & GUARDRAIL AGAINST
 PAINTED WD WALLS PT-3, HIGH-GLOSS FINISH.
 PAINT ALL OTHER HANDRAILS & GUARDRAILS
 PT-4 HIGH-GLOSS FINISH

PT-4, HIGH-GLOSS FINISH.

SEATING BASIS OF DESIGN TO BE IRWIN ANDANTE. (SEE PROJECT MANUAL FOR
APPROVED MANUF. TO PROVIDE EQUAL

 PRODUCT).
 BACK: NO. 6 (NO.17 INDIA TEAK ON MAPLE, FABRIC: STINSON, ARTISAN, COLOR: VIOLET

- SEAT: NO. 12 (FINISH: CHARCOAL GREY (CHL), FABRIC: STINSON, ARTISAN; COLOR: VIOLET 65081) w/ SEAT NUMBER PLATE
- (FINISH TBD).AISLE PANEL: NO.14 (NO.17 INDIA TEAK ON
- MAPLE) w/ ROW LETTER PLATE (FINISH TBD).

   ARMREST: COMFORT-CURVED WOOD
- (FINISH: NO.17 INDIA TEAK ON MAPLE)
- SEE ARCH. DRAWINGS FOR CONFIGURATION,
- SEAT COUNTS, AND WIDTHS.CHAIR PLATFORMS: NO. 4 (FINISH:
- CHARCOAL GREY (CHL)).
   PROVIDE BUILT-IN LED LIGHTING AT SIDE PANELS WHERE NOTED IN THE ARCH.
- 4. COLOR OF NEW STAGE TRAVELER CURTAIN & VALANCE TO BE BLACK. (EXISTING REAR BLACK CURTAINS TO REMAIN). SEE PROJECT MANUAL & ARCH. DRAWINGS FOR ADDITIONAL DETAILS.

DRAWINGS.

- 5. MOTORIZED WINDOW SHADE WITH BLACK OUT FABRIC AND LIGHT FILTER SHADE, SIDE CHANNELS AND PRE-FINISHED METAL HOUSING.
  BLACK OUT FABRIC TO BE TBD. LIGHT FILTER FABRIC TBD. METAL HOUSING FINISH TO MATCH THE ADJACENT PAINTED WOOD WINDOW TRIM.
- 6. STAGE NOSING, TRIM, LIGHT COVE TRIM, FACE
  OF STAGE BASE, STAGE STAIR TREADS & RISERS TO
  BE WD-I. PROVIDE CAT STAINLESS STEEL STAIR
  INSERT PLATES (FPSS 10x3) AS INLAY AT STAIR
  TREAD NOSING. (SEE ARCH. DRAWINGS FOR
  DETAILS).
- BALCONY STAIRS. COLOR: 40 BLACK. AT 12"D

  STEP, MITER SLN NOSING. AT 24"D STEP, CLEANLY

  CUT SLN NOSING TO TERMINATE AT SPECIFIC

  NOTE #8 TRANSITION. RUN SPECIFIC NOTE #8

  TRANSITION CONTINUOUSLY AT ANY OTHER

  EXPOSED EDGE OF CPT. TREADS AND RISERS TO

  HAVE CPT-1. (REVIEW THESE STAIR NOSINGS &

  TRANSITIONS W/ INTERIOR DESIGNER PRIOR TO

PROVIDE TARKETT SLN STAIR NOSING AT

- 8. PROVIDE TARKETT SLIM LINE TRANSITION STRIP
  FROM CPT TO EF/CONC. COLOR: 20 CHARCOAL
  9. PROVIDE TARKETT SLIM LINE TRANSITION FROM
  CPT TO EXISTING VCT FLOORING. COLOR: 20
  CHARCOAL
- CHARCOAL

  10. AT CORRIDOR OR STAIRWELL SIDE, PAINT NEW
  WOOD OR NEW HM DOORS & NEW DOOR TRIM
  OR HM FRAMES. PAINT (CORNER TO CORNER)
  NEW OR PATCHED WALLS TO MATCH EXISTING
  ADJACENT WALLS. INSTALL NEW WALL BASES AT
  PATCHED OR NEW WALLS (CORNER TO CORNER)
  TO MATCH EXISTING WALL BASE. (SEE ALSO:
  ALTERNATE #1)
- 11. AT MAIN AUDITORIUM COFFERED CEILING, PAINT EXISTING PLASTER COFFERS & BEAMS PT-2.
  INSTALL FLOATING ACOUSTICAL CLOUD SYSTEMS WITHIN THE COFFERS. SUSPENDED CLOUD PANELS TO BE WRAPPED WITH AP-1. (SEE RCP FOR DETAILS).
- 12. AT CEILING BELOW THE BALCONY, REMOVE
  EXISTING PLASTER & INSTALL NEW GYP. BOARD
  (SEE ARCH DRAWINGS FOR DETAILS). PAINT GYP.
  BOARD PT-3.
- 13. AT ANY DAMAGED OR NEW WALLS, ADD NEW BASE & PAINT CORNER TO CORNER, COLOR TO MATCH EXISTING.
- 14. AT ANY DAMAGED OR NEW CEILINGS, PAINT FULL FACE, COLOR TO MATCH EXISTING.
- 15. THE EXTENT OF NEW FINISHES IN STAGE 264 ARE LIMITED TO THE PROSCENIUM SURROUND, STAGE NOSING, REPLACEMENT OF THE FRONT PORTION OF STAGE FLOORING, REPLACEMENT OF MAIN PROSCENIUM GRAND TRAVELER & VALENCE, AND THE INSTALLATION OF A NEW MID-STAGE TRAVELER. SEE ARCHITECT FOR FURTHER CLARIFICATION OF EXTENTS.
- FURTHER CLARIFICATION OF EXTENTS.

  16. BENCH & BACK SUPPORT TO BE WD-1 W/ FABRIC WRAPPED CUSHIONS. CUSHION FABRIC TO
- MATCH AUDIENCE SEATING FABRIC.

  17. CPT-1 IN VESTIBULE 252A TO RUN UNDERNEATH
  LIP OF LIFT RAMP TO ENSURE SMOOTH
- TRANSITION. FLOOR OF LIFT TO HAVE CPT-I.

  18. INDICATED EXTENTS OF STAGE FRONT. STAGE
  FRONT WILL BE STAINED WOOD BASE/TRIM &
  VENEER PLYWOOD (WD-I) OVER MULTIPLE
  LAYERS OF MDF BOARDS. THE RECESSED
  PORTIONS OF THE CUT-OUT AREAS OF THE
  LETTERING WILL BE PAINTED (BACK AND
  CUT-OUT SIDE).
- 19. GIVEN DIMENSION AND BOUNDARY CURVE ARE
  APPROXIMATE. EXACT LOCATION OF ARC TO BE
  COORDINATED W/ ARCHITECT AND APPROVED
  SEATING LAYOUT BEFORE INSTALLATION OF
  ANY FLOOR FINISH MATERIALS. (LOCATION &
  RADIUS OF ARC TO BE BASED UPON THE ARC TO
  BE BASED OFF THE LOCATION & RADIUS OF
- SEATING ARRANGEMENT).

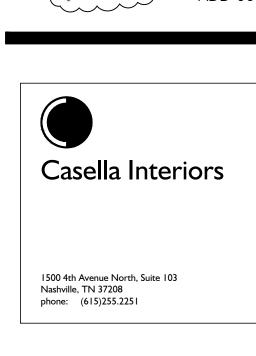
  20. PAINT EXISTING WOOD PANELS, TRIM, & BASE

  BT 2
- PT-3.

  21. ALL RISER FACES ADJACENT TO CPT-1 ARE TO HAVE CPT-1. ALL OTHER RISER FACES ARE TO

2305 Kline Avenue. Suite 200

UNIVERSITY HALL



ISSUED: 03.08.24 SBC PROJECT #: 364/011-05-2021 GMCA PROJECT #: 202113 TDH

REVISED:

# DATE DESCRIPTION
ADD-002 04.05.24 Addendum #2
ADD-003 04.22.24 Addendum #3

INTERIOR FINISH PLAN AND SCHEDULE - LEVEL 3 & LEVEL 4

ID1 2