



**1800 Gervais Street Renovation -
Demolition - Phase I**

Project # H27-Z008 - A

July 05, 2012

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Project Name: 1800 Gervais Street Renovation – Demolition – Phase I

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SE-311

Invitation for Minor Construction Quotes

SCBO NOTES 2, 4 and 5 APPLY TO THIS INVITATION FOR QUOTESPROJECT NAME: 1800 Gervais Street Renovation - Demolition - Phase IPROJECT NUMBER: H27-Z008-A PROJECT LOCATION: Columbia, SCBID SECURITY REQUIRED? Yes No PERFORMANCE BOND REQUIRED? Yes No PAYMENT BOND REQUIRED? Yes No CONSTRUCTION COST RANGE: Less than \$50,000

DESCRIPTION OF PROJECT:

Asbestos abatement includes the removal and proper disposal of asbestos-containing materials (ACM) and non-ACM within the limits of the abatement area. The abatement work will include removal of ACM to include floor tiles and mastic, black mastic on HVAC ductwork and piping, and removal of drywall and joint compound from the basement floor. Small and minority business participation is encouraged. Bidders are responsible for obtaining all updates to bidding documents from the USC Purchasing website: <http://purchasing.sc.edu>.

A/E NAME: F&ME A/E CONTACT: Glynn M. EllenADDRESS: 3112 Devine Street PHONE: 803-254-4540 Fax: 803-254-4542CITY: Columbia STATE: SC ZIP: 29205 E-MAIL: glynn@fmecol.com

PLANS ON FILE AT: AGC: _____

DODGE: _____

OTHER: _____

PLANS MAY BE OBTAINED FROM: <http://purchasing.sc.edu> - See Facilities/Construction Solicitation & Awards.PLAN DEPOSIT AMOUNT: \$0 IS DEPOSIT REFUNDABLE? Yes No PRE-QUOTE CONFERENCE? Yes No MANDATORY ATTENDANCE? Yes NoDATE: 7/19/12 TIME: 10:00 am PLACE: 743 Greene Street, Columbia, SC, Conference Room 53AGENCY: University of South CarolinaNAME AND TITLE OF AGENCY COORDINATOR: Kay KeislerADDRESS: 743 Greene Street PHONE: 777-5812 Fax: 777-8739CITY: Columbia STATE: SC ZIP: 29208 E-MAIL: kkeisler@fmc.sc.eduIFQ CLOSING DATE: 7/26/12 TIME: 2:00 pm LOCATION: 743 Greene Street, Cola, SC, CR#53

IFQ DELIVERY ADDRESSES:

HAND-DELIVERY:

Kay Keisler
743 Greene Street
Columbia, SC 29208

MAIL SERVICE:

Kay Keisler
743 Greene Street
Columbia, SC 29208

IS PROJECT WITHIN AGENCY CONSTRUCTION CERTIFICATION? (Agency MUST check one) YES NO

APPROVED BY: _____

(State Engineer)

(Date)

SE-331
Quote Form

2011 Edition

Quotes shall be submitted only on SE-331

QUOTE SUBMITTED BY: _____
(Offeror's Name)

QUOTE SUBMITTED TO: University of South Carolina
(Agency Name)

FOR PROJECT: H27-Z008-A 1800 Gervais Street Renovation - Demolition - Phase I
(Number) (Name)

OFFER

1. In response to the Form SE-311, *Request for Minor Construction Quotes*, and in compliance with the *Instructions to Bidders* for the above-named Project, the undersigned OFFEROR proposes and agrees, if this Quote is accepted, to enter into a Contract with the AGENCY in the form included in the Solicitation Documents, and to perform all Work as specified or indicated in the Solicitation Documents, for the prices and within the time frames indicated in the Solicitation and in accordance with the other terms and conditions stated.

2. Pursuant to Section 11-32-3030(1) of the SC Code of Laws, as amended, OFFEROR has submitted Bid Security as follows in the amount and form required by the Solicitation Documents:

Bid Bond with Power of Attorney Electronic Bid Bond Cashier's Check
(OFFEROR check one, if Bid Security is required)

3. OFFEROR acknowledges the receipt of the following Addenda to the Solicitation documents and has incorporated the effects of said Addenda into its Quote:

ADDENDUM No: _____

4. OFFEROR agrees that this Quote, including all bid alternates, if any, may not be revoked or withdrawn after the opening of bids, and shall remain open for acceptance for a period of 60 Days following the Quote Date, or for such longer period of time that OFFEROR may agree to in writing upon request of the AGENCY.

5. OFFEROR agrees that from the compensation to be paid, the AGENCY shall retain as Liquidated Damages the amount of for each calendar day the actual construction time required to achieve Substantial Completion exceeds the specified or adjusted Contract Time for Substantial Completion, as provided in the Contract Documents.

6. OFFEROR herewith submits its offer to provide all labor, materials, equipment, tools of trades and labor, accessories, appliances, warranties and guarantees, and to pay all royalties, fee, permits, licenses and applicable taxes necessary to complete the following items of construction work:

6.1 BASE BID _____
(enter BASE BID in figures only)

6.2 ALTERNATE NO. 1 _____ to be ADDED/DEDUCTED from BASE BID.
(circle one)

6.3 ALTERNATE NO. 2 _____ to be ADDED/DEDUCTED from BASE BID.
(circle one)

FEIN/SSN: _____

SC Contractor's License Number: _____

Address: _____

Telephone/Fax _____

E-mail _____

This Quote is hereby submitted on behalf of the Offeror named above.

BY: _____
(Signature of Offeror's Representative)

(Print or Type Name of Offeror's Representative)

ITS: _____

Project Name: 1800 Gervais Street Renovation -- Demolition -- Phase I

Project Number: H27-Z008-A

University of South Carolina

CONTRACTOR'S ONE YEAR GUARANTEE

STATE OF _____

COUNTY OF _____

WE _____
as General Contractor on the above-named project, do hereby guarantee that all work executed under the requirements of the Contract Documents shall be free from defects due to faulty materials and /or workmanship for a period of one (1) year from date of acceptance of the work by the Owner and/or Architect/Engineer; and hereby agree to remedy defects due to faulty materials and/or workmanship, and pay for any damage resulting wherefrom, at no cost to the Owner, provided; however, that the following are excluded from this guarantee;

Defects or failures resulting from abuse by Owner.

Damage caused by fire, tornado, hail, hurricane, acts of God, wars, riots, or civil commotion.

[Name of Contracting Firm]

*By _____

Title _____

*Must be executed by an office of the Contracting Firm.

SWORN TO before me this _____ day of _____, 2____ (seal)

_____ State

My commission expires _____

USC SUPPLEMENTAL GENERAL CONDITIONS
FOR CONSTRUCTION PROJECTS

1. Contractor's employees shall take all reasonable means not to interrupt the flow of student traffic in building corridors, lobbies and stairs. All necessary and reasonable safety precautions shall be taken to prevent injury to building occupants while transporting materials and equipment through the building to the work area. Providing safe, accessible, plywood pedestrian ways around construction may be required if a suitable alternative route is not available.
2. Fraternalization between Contractor's employees and USC students, faculty or staff is strictly prohibited - zero tolerance!
3. USC will not tolerate rude, abusive or degrading behavior on the job site. Heckling and cat-calling directed toward students, faculty or staff or any other person on USC property is strictly prohibited. Any contractor whose employees violate this requirement will be assessed a fine of up to \$500 per violation.
4. Contractor's employees must adhere to the University's policy of maintaining a drug-free and smoke-free/tobacco free workplace.
5. Contractor must sign a Contractor Key Receipt/Return form before any keys are issued. Keys must be returned immediately upon the completion of the work. The Contractor will bear the cost of any re-keying necessary due to the loss of or failure to return keys.
6. A welding permit must be issued by the University Fire Marshall before any welding can begin inside a building. Project Manager will coordinate.
7. Contractor must notify the University immediately upon the discovery of suspect material such as those potentially containing asbestos or other such hazardous materials. These materials **must not** be disturbed until approved by the USC Project Manager.
8. At the beginning of the project, the USC Project Manager will establish the Contractor's lay-down area. This area will also be used for the Contractors work vehicles. No personal vehicles will be allowed in this area, or in any areas surrounding the construction site that are not regular or authorized parking lots. Personal vehicles must be parked in the perimeter parking lots. Parking permits can be obtained at the USC Parking Office located in the Pendleton Street parking garage. The lay down area will be clearly identified to the contractor by the PM, with a sketch or drawing provided to Parking. In turn, the contractor will mark off this area with a sign containing the project name, PM name, Contractor name and contact number, and end date. Where this area is subject to foot traffic, protective barriers will be provided as specified by the PM. The area will be maintained in a neat and orderly fashion.
9. Contractor will be responsible for providing its own temporary toilet facilities, unless prior arrangements are made with the USC Project Manager.

10. Use of USC communications facilities (telephones, computers, etc.) by the Contractor is prohibited, unless prior arrangements are made with the USC Project Manager.
11. For all projects over \$100,000, including IDC's, an SE-395, Contractor Performance Evaluation, will be completed by the USC Project Manager and reviewed with the GC at the beginning of the project and a copy given to the GC. At the end of the project the form will be completed and a Construction Performance rating will be established.
12. Contractor is responsible for removal of all debris from the site, and is required to provide the necessary dumpsters which will be emptied at least one (1) times per week. Construction waste must not be placed in University dumpsters. The construction site must be thoroughly cleaned with all trash picked up and properly disposed of on a daily basis and the site must be left in a safe and sanitary condition each day. The University will inspect job sites regularly and will fine any contractor found to be in violation of this requirement an amount up to \$1,000.00 daily per violation.
13. Contractor must provide all O&M manuals, as-built drawings, and training of USC personnel on new equipment, controls, etc. prior to Substantial Completion. Final payment will not be made until this is completed.
14. Tree protection fencing is required to protect existing trees and other landscape features to be preserved within a construction area. The limits of this fence will be evaluated for each situation with the consultant, USC Arborist and USC Project Manager. The tree protection fence shall be 6' high chain link fence unless otherwise approved by USC Project Manager. No entry or materials storage will be allowed inside the tree protection zone. A 3" layer of mulch shall be placed over the tree protection area to maintain moisture in the root zone if USC Arborist determines that construction may decrease amount of moisture needed to sustain health of tree(s).
15. Contractor shall water trees and other landscape material as directed by USC Arborist until site is returned to Owner.
16. Where it is necessary to cross walks, tree root zones (i.e., under canopy) or lawns the following measures shall be taken: For single loads up to 9,000 lbs., a 3/4" minimum plywood base shall be placed over areas impacted. For single loads over 9,000 lbs., two layers of 3/4" plywood is required.
17. For projects requiring heavy loads to cross walks, tree root zones or lawns on a regular basis (as determined by USC Project Manager), a construction entry road consisting of 10' X 16' oak logging mats placed on 12" coarse, chipped, hardwood base. Mulch and logging mats shall be supplemented throughout the project to keep matting structurally functional.
18. Any damage to existing landscaping (including lawn areas) will be remediated at Contractor's expense before final payment is made.

Contractor Vehicle Requirements on Campus

1. All motorized vehicles on the University campus are expected to travel and park on roadways and/or in parking stalls.
2. All motorized vehicle traffic on USC walkways must first be authorized by USC Grounds Department and USC Project Manager. Violators may be subject to fines and penalties.
3. All motorized vehicles that leak or drip liquids are prohibited from traveling or parking on walks or landscaped areas.
4. Contractors, vendors, and delivery personnel are required to obtain prior parking authorization before parking in a designated space. Violators may be subject to fines and/or penalties. See Item 10 below.
5. Drivers of equipment or motor vehicles that damage university hardscape or landscape will be held personally responsible for damages and restoration expense.
6. Vehicle drivers who park on landscape or drives must be able to produce written evidence of need or emergency requiring parking on same.
7. All vehicles parked on landscape, hardscape, or in the process of service delivery, must display adequate safety devices, i.e. flashing lights, cones, signage, etc.
8. All drivers of equipment and vehicles will be respectful of University landscape, equipment, structures, fixtures and signage.
9. All incidents of property damage will be reported to Parking Services or the Work Management Center.
10. Parking on campus is restricted to spaces designated by Parking Services at the beginning of the project. Once the project manager and contractor agree on how many spaces are needed, the project manager will obtain a placard for each vehicle. This placard must be hung from the mirror of the vehicle, otherwise a ticket will be issued and these tickets cannot be Afixed@. Parking spaces are restricted to work vehicles only; no personal vehicles.

TECHNICAL SPECIFICATIONS

SECTION 02080

ASBESTOS ABATEMENT

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Documents affecting work of this Section include, but are not necessarily limited to, the Asbestos Containing Materials Investigation report (see appendix) prepared by F&ME Consultants, dated June 20, 2012, and abatement design drawings AB1.1, Selective Non-ACM Demolition Plan, and AB1.2, Asbestos Abatement Plan.

1.2 ASBESTOS ABATEMENT CONTRACTOR QUALIFICATIONS—SPECIAL STANDARDS OF RESPONSIBILITY

- A. Asbestos Abatement Contractor's Qualifications:
 1. A qualified firm that has not less than five (5) years experience in the removal and proper disposal of asbestos-containing materials (ACM).

1.3 SCOPE OF WORK – SUMMARY

- A. The scope of work for this asbestos abatement generally includes the removal and proper disposal of asbestos-containing materials (ACM) and non-ACM within the limits of the abatement area as indicated on the provided drawings and referenced herein. The abatement work will include removal of ACM to include floor tiles and mastic, black mastic on HVAC ductwork and piping, and removal of drywall and joint compound from the basement floor of the former Arts Commission Building located at 1800 Gervais Street in Columbia, South Carolina.
- B. Prior to commencement of abatement activities, Contractor shall submit required documents as outlined in Section 1.18 herein.
- C. Contractor shall remove ACM utilizing work practices outlined by the USEPA's and the SCDHEC's regulations.
- D. Contractor shall maintain intact and protect all facilities that are to remain after abatement operations are complete, such as any existing data, smoke/fire alarm systems, telephone, electrical and fire suppression lines located within the abatement area. Costs for repairs associated with damage incurred during abatement, demolition and put-back operations to those facilities to remain will be at the Contractor's expense.
- E. In the event of a fiber release (airborne or amended water), Contractor will follow procedures as outlined in Section 3.2, part A of these specifications.
- F. Quantities referred to in the ACM report prepared by F&ME (see appendix) are for informational purposes only and not for bidding estimates. The Contractor shall be responsible for verification of all site conditions and quantities associated with the abatement prior to the bid.
- G. ACM to be removed and/or impacted from the subject building structure during the abatement operations shall include the following:
 1. Floor Tile and associated Mastics. (Est. 5,000 S.F.)
 2. Drywall and associated joint compound. (Est. 1,500 S.F.)
 3. Black mastic on seams of fiberglass HVAC duct wrap insulation located in partial crawlspace. (Est. 150 L.F.)
 4. Black pipe mastic and associated fiberglass insulation located in Mechanical Room. (Est. 2 LF)
 5. Transite panels (aka Fibrous Board) located in Mechanical Room. (Est. 10 S.F.)

6. Unidentified Spray-Applied Fibrous Material and contaminated drywall ceiling beneath it (Est. 50 S.F.)

H. All materials and procedures described herein shall be implemented by the Contractor unless specifically noted otherwise.

1.4 SCOPE OF WORK – NON-ACM SELECTIVE DEMOLITION

- A. Abatement Contractor (Contractor) shall perform selective demolition on non-ACM as per the current renovation plans, as well as non-ACM that will be impacted by the abatement activities.
- B. This selective demolition will include the removal of some non-ACM from both the main level and the basement of the subject building. Contractor shall refer to drawing AB1.1 for limits of selective demolition.
- C. This work is to be performed prior to abatement activities, provided the non-ACM selective demolition activities will not impact ACM or assumed ACM. If the selective demolition activities impact materials that are or are assumed to be ACM, then the selective demolition work shall stop, full containment shall be established, and demolition shall continue under full friable containment.
- D. Contractor shall salvage all doors and hardware as required for selective demolition as well as abatement activities and stage in an area designated by the Owner.
- E. Non-ACM materials to be removed prior to abatement activities, to the extent feasible, include the following (See drawing AB1.1 for limits, locations, and notes):
 1. Suspended Ceiling System and associated components (Basement level only)
 2. Wood Partitions (Basement level only)
 3. Non-ACM Drywall Walls (Main level only)
 4. Carpeting and cove base (Basement and Main levels) – Contractor shall ensure that existing wall paper is not damaged during removal of cove base. On the basement level, the carpeting is located over asbestos-containing floor tiles and mastic. If removal of this carpet results in damage to the underlying tiles (breakage, delaminating, etc.), Contractor is to complete carpet removal under containment. Carpet over asbestos-containing floor tiles is to be disposed of as ACM.

1.5 SCOPE OF WORK – ABATEMENT ACTIVITIES

The following is a summary of the scope of abatement activities required during the abatement operations to be performed. All abatement work is limited to the basement level of the subject building. More detailed information regarding materials, execution, etc. are provided in other sections herein and abatement drawings AB1.1 and AB1.2.

- A. Floor Tiles and associated Mastics – These materials occur in the majority of the basement floor, with overlying carpet in most areas. Most tiles are 9” x 9” and are in a generally intact condition, while others are non-ACM 12” x 12” with asbestos-containing mastic. All floor tiles and associated mastics located in the basement are to be removed and disposed of as ACM, including any overlying carpet. Floor tile removal may vary between friable and non-friable methods based on the localized condition of the tiles. Should tiles come up with carpeting and break during carpet removal, Contractor shall stop work and continue removal under full containment.
- I. Drywall and Joint Compound – Drywall and joint compound in the basement of the subject building are ACM. The scope of the renovations requires removal of targeted walls within the basement. Contractor shall refer to drawings AB1.1 and AB1.2 to determine limits of abatement of drywall; Contractor shall protect walls not included in the abatement or selective demolition scope.
- J. Black mastic on seams of fiberglass HVAC duct wrap insulation located in partial crawlspace – Metal ductwork associated with the HVAC system was insulated with non-asbestos fiberglass duct wrap insulation. The seams were sealed with asbestos-containing black mastic. Contractor shall remove HVAC duct wrap insulation and associated mastic within the limits of the abatement and dispose of as ACM.

- K. Black pipe mastic and associated fiberglass insulation located in Mechanical Room – Pipes found in the partial crawlspace are insulated with fiberglass. Seams at elbows and joints are sealed and coated with asbestos-containing black mastic. Contractor shall remove under containment all black mastic and associated fiberglass pipe insulation found on mechanical and plumbing lines within the limits of the abatement and dispose of as ACM.
- L. Cementitious Transite Wall Boards (aka Fibrous Board) located in Mechanical Room – cementitious wall boards are mounted on the wall separating the Mechanical Room from the partial crawlspace in the basement of the subject structure. Contractor shall be allowed to remove these wall boards provided that means and methods utilized do not render the boards friable. If they cannot be removed without rendering them friable, Contractor shall remove them under full containment. These boards shall be disposed of as ACM.
- M. Unidentified Spray-Applied Fibrous Material and contaminated drywall ceiling – This friable material has been identified in an isolated space in the basement hidden above a drywall ceiling. Both the fibrous material and the drywall ceiling are to be removed under containment and disposed of as ACM. Should material be found in wall cavities or other spaces not requiring abatement as per the project scope, Contractor shall isolate those spaces by encapsulating or enclosing the space with non-combustible spray foam or construction of a permanent barrier wall.

1.6 CONTRACTOR'S DUTIES – SUMMARY

- A. The Contractor is to provide and pay for the following, except as specifically noted:
 - 1. Labor, material, tools, required equipment (i.e. scaffolding, *etc.*) and machinery.
 - 2. Other facilities and services necessary for proper execution and completion of Work.
 - 3. Pay legally required sales, consumer and use taxes.
- B. Contractor will absorb costs for the following:
 - 1. Permits
 - 5. Government fees
 - 6. Licenses
- C. Contractor shall provide notifications to appropriate entities based on applicable regulations.
- D. Contractor shall comply with codes, ordinances, rules, regulations, orders, and other legal requirements of public authorities which bear on performance of Work.
- E. Contractor shall enforce strict discipline and good order among employees. Do not employ on Work, on Project or Work Site:
 - 1. Unfit persons.
 - 2. Persons not skilled in assigned task.

1.7 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS

Pub #4545 (1994) OSHA Analytical Methods Manual

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z9.2 (1979; R 1991) Fundamentals Governing the Design and Operation of Local Exhaust Systems

ANSI Z87.1 (1989; Errata; Z87.1a) Occupational and Educational Eye and Face Protection

ANSI Z88.2 (1992) Respiratory Protection

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM E 1368 (1990) Visual Inspection of Asbestos Abatement Projects

CODE OF FEDERAL REGULATIONS (CFR)

CFR 29 Part 1910 Occupational Safety and Health Standards

CFR 29 Part 1926 Safety and Health Regulations for Construction

CFR 40 Part 61 National Emission Standards for Hazardous Air Pollutants

CFR 40 Part 763 Asbestos

DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

R 61-86.1 (2011) Standards of Performance for Asbestos Projects

ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA 340/1-90-018 (1990) Asbestos/NESHAP Regulated Asbestos Containing Materials Guidance

EPA 340/1-90-019 (1990) Asbestos/NESHAP Adequately Wet Guidance

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)

NIOSH Pub No. 84-100 (1984; Supple 1985, 1987, 1988 & 1990)

NIOSH Manual of Analytical Methods

UNDERWRITERS LABORATORIES (UL)

UL 586 (1990) High-Efficiency, Particulate, Air Filter Units

1.8 DEFINITIONS

A. Adequately Wet

1. 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 particulates. If visible emissions are observed coming from asbestos-containing material (ACM), then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wetted.

B. Aggressive Method

1. Removal or disturbance of building material by sanding, abrading, grinding, or other method that breaks, crumbles, or disintegrates intact ACM.

C. Amended Water

1. Water containing a wetting agent or surfactant with a surface tension of at least 29 dynes per square centimeter when tested in accordance with ASTM D 1331.

D. Asbestos

1. Asbestos includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any of these minerals that have been chemically treated and/or altered.

E. Asbestos-Containing Construction Material (OSHA)

1. Any manufactured construction material that contains more than one tenth of one percent asbestos by weight.

F. Asbestos-Containing Material (ACM)

1. Any material containing more than one percent asbestos

G. Asbestos Regulated Work Area

1. An asbestos regulated work area is an area established by the Contractor to demarcate areas where Class I, II and III asbestos work is conducted, and any adjoining area where debris and waste from such asbestos work accumulate; and a work area within which airborne concentrations of asbestos exceed or there is a reasonable possibility they may exceed the permissible exposure limit.

H. Authorized Person

1. Any person certified and authorized by the Contractor, Owners Representative and/or Owner and required by work duties to be present in regulated areas.

I. Category I Non-friable ACM

1. A term as defined in CFR 40 Part 61, Subpart M and EPA 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.

J. Category II Non-friable ACM

1. A term as defined in CFR 40 Part 61, Subpart M and EPA 340/1-90-018 that means any material, excluding Category I Non-friable ACM, containing more than 1 percent asbestos as determined using the methods specified in Appendix A, Subpart F, CFR 40 Part 763, Section 1, Polarized Light Microscopy, that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

K. Class I Asbestos Work

1. Activities that involve the removal of thermal system insulation (TSI) and surfacing ACM.

L. Class II Asbestos Work

1. Abatement activities involving the removal of ACM, which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastic.

M. Competent Person

1. In addition to the definition in CFR 29 1926.32 (f), one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, and who has the authority to take prompt corrective measures to eliminate them.

N. Critical Barrier

1. One or more layers of 6-mil plastic sealed over all openings into a work area or any other similarly placed physical barrier sufficient to prevent airborne asbestos in a work area from migrating to an adjacent area.

O. Disturbance

1. Contact, which releases fibers from ACM or debris containing ACM. This term includes activities that disrupt the matrix of ACM, render ACM friable, or generate visible debris. Disturbance includes cutting away small amounts of ACM no greater than the amount that can be contained in one standard sized glove bag or waste bag in order to access a building component. In no event shall the amount of ACM so disturbed exceed that which can be contained in one glove bag or waste bag which shall not exceed 60 inches in length and width.

P. Friable ACM

1. 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 as determined using the method specified in

CFR 40 Part 763, Appendix A, Subpart F, Section 1, Polarized Light Microscopy, that when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. If the asbestos content is less than 10 percent as determined by a method other than point counting by polarized light microscopy (PLM), verify the asbestos content by point counting using PLM.

Q. Glove Bag

1. A term as defined by CFR 29 Part 1926.1101 that means a sealed compartment with attached inner gloves used for the handling of asbestos containing materials.

R. Intact

1. ACM which has not crumbled, been pulverized, or otherwise deteriorated so that it is no longer likely to be bound with its matrix.

S. Negative Initial Exposure Assessment

1. A demonstration by the Contractor that employee exposure during an operation is expected to be consistently below the PELs (TWA and Excursion Limit).

T. Non-friable ACM

1. 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 as determined using the method specified in CFR 40 Part 763, Appendix A, Subpart F, Section 1, Polarized Light Microscopy, that, when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure.

U. Time-Weighted Average (TWA)

1. 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 1926.58.

1.9 DESCRIPTION OF WORK

- A. The work covered by this section includes the requirements for the removal, transportation, disposal, storage, containment of, and housekeeping activities involving asbestos containing materials and asbestos contaminated materials located within the Former Arts Commission building located at 1800 Gervais Street in Columbia, South Carolina. CFR 40 Part 763 and R 61-86.1 govern this abatement work.

1.10 SECURITY

- A. Security shall be provided for each asbestos regulated work area. A logbook shall be kept documenting entry into and out of the asbestos regulated work area. Entry into asbestos regulated work areas shall only be by personnel authorized by the Abatement Contractor, Owners Representative and Owner. Personnel authorized to enter asbestos regulated work areas shall be trained, medically evaluated and wear the personal protective equipment, as required by this specification, for the specific asbestos regulated work area to be entered.

1.11 MEDICAL REQUIREMENTS

- A. Medical requirements shall conform to CFR 29 Part 1926, Section 1926.58.

1. Medical Examinations

- a. The Contractor shall provide medical examinations for all workers who may encounter an airborne fiber level of 0.1 f/cc or greater for an 8 hour time weighted average. In the absence of specific airborne fiber data provide medical examination for all workers who will enter the work area for any reason. Examination shall as a minimum meet OSHA requirements as set forth in 29 CFR 1926.1101(m) and, in addition, provide an evaluation of the individuals' ability to work in environments capable of producing heat stress in the worker.

2. Medical and Exposure Records

- a. The Contractor shall maintain complete and accurate records of employees' medical examinations for a period of 30 years after termination of employment as required by 29 CFR 1926.1101(n) and make records of the required medical examinations available for inspection and copying to: The Assistant Secretary for Occupational Safety and Health, The Director of The National Institute for Occupational Safety and Health (NIOSH), authorized representatives of either of them, and an employee's physician upon the request of the employee or former employee.

1.12 TRAINING

- A. All Contractor personnel involved with asbestos work must be trained and tested prior to any work, and shall be thoroughly familiar with the Contractor's standard operating procedure for the abatement work. All personnel shall undergo the specific medical examinations required by OSHA. The superintendent and the foreman shall be thoroughly familiar with all applicable regulations and practices for asbestos work and shall have participated in at least two abatement projects of similar size and scope within the past two years. All personnel shall be in possession of valid respirator fit test Paperwork.

1.13 RESPIRATORY PROTECTION PROGRAM

- A. The Contractor shall establish in writing, and implement a respiratory protection program in accordance with CFR 29 Part 1926, Section 1926.58, CFR 29 Part 1910, Section 1910.134, ANSI Z88.2, CGA G-7 and CGA G-7.1. The Contractor shall establish minimum respiratory protection requirements based on measured or anticipated levels of airborne asbestos fiber concentrations encountered during the performance of the asbestos abatement work. The Contractor's respiratory protection program shall include, but not be limited to, the following elements:
 1. The company policy, used for the assignment of individual responsibility, accountability, and implementation of the respiratory protection program.
 2. The standard operating procedures covering the selection and use of respirators. Respiratory selection shall be determined by the hazard to which the worker is exposed.
 3. Medical evaluation of each user to verify that the worker may be assigned to an activity where respiratory protection is required.
 4. Training in the proper use and limitations of respirators.
 5. Respirator fit testing (i.e., quantitative, qualitative and individual functional fit checks).
 6. Regular cleaning and disinfection of respirators.
 7. Routine inspection of respirators during cleaning and after each use when designated for emergency use.
 8. Storage of respirators in convenient, clean, and sanitary locations.
 9. Surveillance of work area conditions and degree of employee exposure (e.g., through air monitoring).
 10. Regular evaluation of the continued effectiveness of the respiratory protection program.
 11. Recognition and procedures for the resolution of special problems as they affect respirator use (e.g., no facial hair that comes between the respirator face piece and face or interferes with valve function; prescription eyewear usage; prohibition of wearing contact lenses; etc.).
 12. Proper training in putting on and removing respirators.

1.14 HAZARD COMMUNICATION PROGRAM

- A. A hazard communication program shall be established and implemented in accordance with CFR 29 Part 1926, Section 1926.59.

1.15 SAFETY AND HEALTH COMPLIANCE

- A. In addition to detailed requirements of this specification, the work shall comply with applicable laws, ordinances, criteria, rules, and regulations of Federal, state, regional, and local authorities regarding handling, storing, transporting, and disposing of asbestos waste materials and with the applicable requirements of CFR 29 Part 1910, CFR 29 Part 1926, CFR 40 Part 61, Subpart A, and CFR 40 Part 61, Subpart M, NFPA 10, NFPA 70, NFPA 90A, NFPA 101. Matters of interpretation of standards shall be submitted to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, rules, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirement as defined by the Owner shall apply.

1.16 COMPETENT PERSON

- A. When the contractor has employees engaged in Class I or II asbestos work, he shall have a Competent Person performing or supervising the following duties, as applicable:
1. Set up the regulated area, enclosure, or other containment;
 2. Ensure (by on-site inspection) the integrity of the enclosure or containment;
 3. Set up procedures to control entry to and exit from the enclosure and/or area;
 4. Supervise all employee exposure monitoring and ensure that it is conducted as required;
 5. Ensure that employees working within the enclosure and/or using glove bags wear protective clothing and respirators as required.
 6. Ensure through on-site supervision that employees set up and remove engineering controls, use work practices and personal protective equipment in compliance within all requirements;
 7. Ensure that employees use the hygiene facilities and observe the decontamination procedures specified;
 8. Ensure through on-site inspections that engineering controls are functioning properly and employees are using proper work practices; and,
 9. Ensure notification of other employees on site.

1.17 PERMITS, LICENSES AND NOTIFICATIONS

- A. The Contractor shall obtain all necessary permits and licenses in conjunction with the project asbestos abatement, transportation and disposal actions and timely notification furnished of such actions required by Federal, state, regional, and local authorities and as otherwise specified herein. The Contractor shall notify the SCDHEC and the Owner in writing at least 10 days prior to the commencement of work in accordance with CFR 40 Part 61, Subpart M, state and local requirements to include the mandatory "Notification of Demolition and Renovation Record" form and other required notification documents. Notification shall be by Certified Mail - Return Receipt Requested. The Contractor shall furnish copies of the receipts to the Owner prior to the commencement of work.
- B. The Contractor shall notify the Owner if any of the following occur:
1. If the Contractor or any of its subcontractors are served with notice of violation of any law, regulation, permit or license which relates to this Contract.
 2. Proceedings are commenced which could lead to revocation of related permits or licenses.
 3. Permits, licenses or other Owner authorizations relating to this Contract are revoked.
 4. Litigation is commenced which would affect this Contract.
 5. If the Contractor or any of its Subcontractors become aware that its equipment or facilities are not in compliance or may fail to comply in the future with applicable laws or regulations.

1.18 SUBMITTALS

The following shall be submitted to the Owner and/or the Owner's Representative prior to the start of abatement operations:

- A. Manufacturer’s catalog data for all materials and equipment to be used in the work, including brand name, model, capacity, performance characteristics and any other pertinent information.
- B. Asbestos Abatement Work Plan
 - 1. A written work plan outlining the project sequencing, methods, proposed work areas, etc. must be accepted in writing by the Owners’ Representative prior to start of any site work.
- C. Safety Plan
 - 1. A written safety plan and comprehensive site-specific accident prevention plan at least 30 days prior to start of work. This plan must be accepted in writing by the Owners’ Representative prior to start of any site work.
- D. Initial Exposure Assessment
 - 1. The Contractor shall ensure that a “competent person” conducts an exposure assessment immediately before or at the initiation of all operations to determine expected exposures. The assessment must be based on the competent person’s review of all aspects of the Contractor’s performance doing similar jobs. Only if similar controls are used and the work supervised by the same or similarly trained personnel, may past data be relied on. The assessment shall include consideration of all observations, information or calculations that indicate employee exposure to asbestos, including any previous monitoring conducted in the workplace, or of the operations of the Contractor that indicate the levels of airborne asbestos likely to be encountered on the job. However, the assessment may conclude that exposures are likely to be consistently below the PELs only as a conclusion of a “negative exposure assessment”. The Contractor shall monitor employees at the beginning of the project. The exposure assessment shall be updated to reflect actual conditions based on the results of exposure monitoring.
- E. Employee Training and Certification of Worker Acknowledgement

The following training documentation for each employee to be engaged in the abatement work:

 - 1. Copy of certification of accreditation for completion of “workers” course (for workers) or “Contractor/Supervisor” Course (for Contractors and onsite supervisory staff) meeting the requirements of EPA’s CFR 40 Part 763 or more stringent state criteria, and all subsequent annual refresher training certificates meeting same requirements.
 - 2. A copy of a Contractor generated form entitled Certificate of Workers Acknowledgment shall be completed for each employee.
- F. Encapsulant
 - 1. A certificate stating that encapsulant meets the applicable specified performance requirements.
- G. Negative Exposure Assessment
 - 1. The Contractor may demonstrate that employee exposures will be below the PELs by data, which conform to the following criteria:
 - a. Objective data demonstrating that the product or material containing asbestos minerals or the activity involving such product or material cannot release airborne fibers in concentrations exceeding the TWA and excursion limit under those work conditions having the greatest potential for releasing asbestos; or
 - b. Where the Contractor has monitored prior asbestos jobs for the PEL and the excursion limit within 12 months of the current or projected job, the monitoring and analysis were performed in compliance with CFR 29 Part 1926.1101; and the data were obtained during work operations conducted under workplace conditions “closely resembling” the processes, type of material, control methods, work practices, and environmental conditions used and prevailing in the Contractor’s current operations, the operations were conducted by employees whose training and experience were no more extensive than that of employees performing the current job, and these data show that under the conditions

prevailing and which will prevail in the current workplace there is a high degree of certainty that employee exposures will not exceed the TWA and excursion limit; or

- c. The results of initial exposure monitoring of the current job made from breathing zone samples that are representative of the 8-hour TWA and 30-minute short-term exposures of each employee covering the operations that are most likely during the performance of the entire asbestos job to result in exposures over the PELs.

H. Field Tests

1. Air sampling reports.
2. Pressure differential recording local exhaust system.
3. Asbestos disposal waste disposal record report.

I. Air Sampling Results

1. Area Air Sampling (supplied by the Owner) and Personnel Air Sampling (provided by the Contractor)
2. Air sample fiber counting shall be completed and results provided within 24 hours after completion of a sampling period. The Owner shall be notified immediately of any airborne levels of asbestos fibers in excess of established requirements. Written sampling results shall be provided within 5 working days of the date of collection. The air sampling results shall be documented on a daily air-monitoring log.

J. Pressure Differential Recordings

1. Pressure differential recordings shall be provided daily on the same day collected. The Contractor's competent person shall review the readings prior to being submitted. The Owner shall be notified immediately of any variance in the pressure differential which could cause adjacent unsealed areas to have asbestos fiber concentrations in excess of 0.005 fiber per cubic centimeter (f/cc) or background, whichever is higher.

K. Notifications

1. The Owner shall be notified in writing 10 days prior to the start of asbestos work. A copy of the written notification shall be provided to any rental company concerning the intended use of rental equipment and the possibility of asbestos contamination, the decontamination procedures that will be used prior to the return of the equipment. A copy of the rental company's written acknowledgment and agreement shall be included in the submittal.

L. Certificates

1. Vacuum, Filtration and Ventilation Equipment
2. Manufacturer's certifications showing compliance with ANSI Z9.2 for:
 - a. Vacuums
 - b. Water filtration equipment
 - c. Ventilation equipment
 - d. Other equipment required for containing airborne asbestos fibers.

M. Records

1. Respirator Program
 - a. Records of the respirator program as required by ANSI Z88.2, CFR 29 Part 1910, Section 1910.134, CFR 29 Part 1926, Section 1926.58.
2. Asbestos Waste Shipment

- a. Final completed copies of the Waste Shipment Record for all shipments of waste material as specified in CFR 40 Part 61, Subpart M and other required state waste manifest shipment records as specified herein. Detailed information of all asbestos waste disposals on the “MANDATORY WASTE SHIPMENT RECORD” form in accordance with revised CFR 40 Part 61, Subpart M. Such completed forms signed and dated by the agent of the landfill shall be submitted within 3 days after date of delivery of ACM to the landfill.

1.19 PERSONAL PROTECTIVE EQUIPMENT

A. Respirators

Respiratory protection shall be worn by all individuals inside the work area from the initiation of the asbestos project until all areas have successfully passed clearance air monitoring:

1. Respirator Selection:
2. Where respirators are used, the Contractor shall select and provide, at no cost to the employee, the appropriate respirator, and shall ensure that the employee uses the respirator provided.
3. The Contractor shall select respirators from among those jointly approved as being acceptable for protection by the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety and Health (NIOSH) under the provisions of 30 CFR 11.
4. The Contractor shall provide a tight fitting powered, air-purifying respirator in lieu of any negative-pressure respirator specified whenever:
 - a. An employee chooses to use this type of respirator, and
 - b. This respirator will provide adequate protection to the employee.

A. Respirator Program:

1. Where respiratory protection is used, the Contractor shall institute a respirator program in accordance with CFR 29 Part 1910.134. The Contractor shall permit each employee who uses a filter respirator to change the filter elements whenever an increase in breathing resistance is detected and shall maintain an adequate supply of filter elements for this purpose.
2. Employees who wear respirators shall be permitted to leave work areas to wash their faces and respirator face pieces whenever necessary to prevent skin irritation associated with respirator use.

B. Respirator Fit Testing:

1. The Contractor shall ensure that the respirator issued to the employee exhibits the least possible face piece leakage and that the respirator is fitted properly. The Contractor shall perform either quantitative or qualitative face fit tests at the time of initial fitting and at least every 6 months thereafter for each employee wearing a negative-pressure respirator. The qualitative fit tests may be used only for testing the fit of half-mask respirators where they are permitted to be worn or of full-face piece air purifying respirators where they are worn at levels at which half-face piece air purifying respirators are permitted. A qualitative or quantitative fit test conforming to CFR 29 Part 1926, Appendix C shall be conducted by the Contractor for each Contractor worker required to wear a respirator, and for the Owner and authorized visitors who enter an asbestos regulated work area where respirators are required to be worn.

C. Whole Body Protection

1. Personnel exposed to asbestos shall be provided with whole body protection, as specified herein and such protection shall be worn properly. The Contractor and competent person supervisor shall select and approve the whole body protection to be used. The competent

person shall examine work suits worn by employees at least once per work shift for rips or tears that may occur during performance of work. When rips or tears are detected while an employee is working, rips and tears shall be immediately mended, or the work suit shall be immediately replaced. Disposable whole body protection shall be disposed of as asbestos contaminated waste upon exiting from the asbestos regulated work area. Reusable whole body protection worn shall be either disposed of as asbestos contaminated waste upon exiting from the asbestos regulated work area or be properly laundered in accordance with CFR 29 Part 1926 and as specified in the Contractor's Asbestos Hazard Abatement Plan. A worker shall not remove asbestos abatement whole body protection from the work site to be cleaned.

2. Disposable-impermeable coveralls with a zipper front shall be provided. Sleeves shall be secured at the wrists, and foot coverings secured at the ankles.
3. Gloves shall be provided to protect hands. Cloth gloves may be worn inside the plastic or rubber gloves for comfort, but shall not be used alone. Where there is the potential for hand injuries (i.e., scrapes, punctures, cuts, etc.) an appropriate glove shall be provided and used.
4. An additional coverall similar to that required in paragraph Coveralls shall be provided when the abatement and control method employed does not provide for the exit from the asbestos regulated work area directly into an attached decontamination unit. Cloth work clothes shall be provided for wear under the protective coverall and foot coverings when work is being conducted in low temperature conditions. Cloth work clothes shall be either disposed of as asbestos contaminated material or properly laundered in accordance with CFR 29 Part 1926 and as specified in the Contractor's Asbestos Hazard Abatement Plan.
5. Cloth socks shall be provided and worn next to the skin. If rubber boots are not used, footwear and disposable foot coverings shall be provided. Rubber boots shall be used in moist or wet areas. Only rubber boots shall be removed from the asbestos regulated work area after being thoroughly decontaminated. All other protective foot covering shall be disposed of as ACM.
6. Hood type disposable head covering shall be provided. In addition, protective headgear (hard hats) shall be provided as required. Hard hats shall only be removed from the asbestos regulated work area after being thoroughly decontaminated.
7. Contact lenses shall not be worn in asbestos regulated work areas. When vision correction is necessary to perform the work task, prescription safety eyewear shall be used. Personnel engaged in asbestos abatement activities in the asbestos regulated work area shall wear fog-proof goggles when the use of a full face-piece respirator is not required. Eye protection provided shall be in accordance with ANSI Z87.1.
8. All other items of whole body protection shall be provided as required and approved by the Contractor.

1.20 DECONTAMINATION AND LOAD OUT UNIT

- A. Decontamination and load out units shall be the sized, constructed and located so as to not impede the access to ACM to be abated. If access to ACM above the decontamination and load out units require abatement personnel to utilize them to gain access (i.e. get on top of the units) to the ACM, they shall be constructed meeting all OSHA safety guidelines.
- B. Provide each work area with separate personnel decontamination unit and equipment load out unit. Ensure that the decontamination unit is the only means of ingress and egress for the work area and that all equipment, bagged waste material and other material exit the work area only through the decontamination unit and equipment load out unit.
- C. All persons entering and exiting the work area will follow the entry and exit procedures required by the applicable regulations and these specifications. Process all equipment and material exiting the work area through the decontamination unit and equipment load out unit and decontaminate as required by the specifications.

- D. Construct walls and ceilings of decontamination unit and equipment load out unit airtight with at least 6 mil polyethylene sheeting and attach to existing building components or to a temporary framework. The decontamination unit and equipment load out unit may be combined if the size of the work area will not permit both.
- E. Use a minimum of two layers of 6-mil opaque polyethylene to cover floor under decontamination unit. Construct doors from overlapping polyethylene sheets so that they overlap adjacent surfaces. Weight sheets at bottom so that they quickly close after release. Put arrows on sheets showing direction of overlap and travel.
- F. Provide temporary water service connection to the decontamination unit and equipment load out unit. Provide backflow protection at the point of connection to the Owner's system.
- G. Water supply must be properly pressured and temperature balanced at shower discharge.
- H. Provide adequate temporary electric power with ground fault protection and overhead wiring throughout the decontamination unit and equipment load out unit. Provide a sub-panel for all temporary power in changing room.
- I. Provide a decontamination unit consisting of serial arrangement of clean room, showers room and equipment room. Provide adequately sized decontamination unit to accommodate the number of employees scheduled for the project. The center chamber of the three chamber decontamination unit will be fitted with as many portable walk through shower stalls as necessary so that all employees will be able to go through the entire decontamination procedure within 15 minutes. Construct decontamination unit of opaque or colored polyethylene for privacy. Construct decontamination unit so that it will not allow for parallel routes of exit without showering

1.21 WARNING SIGNS AND TAPE

- A. Contractor shall ensure that all personnel understand the warning signs. Warning signs and tape printed in English and Spanish shall be provided at the regulated boundaries and entrances to asbestos regulated work areas. Signs shall be located at such a distance that personnel may read the sign and take the necessary protective steps required before entering the area. Warning signs shall be in vertical format conforming to CFR 29 Part 1910, and CFR 29 Part 1926, minimum 500 by 360 mm 20 by 14 inches and displaying the following legend in the lower panel:
- B. Legend Lettering
 - 1. Danger 3-inch Sans Serif Gothic or Block
 - 2. Asbestos 1-inch Sans Serif Gothic or Block
 - 3. Cancer and Lung Disease Hazard 1-inch Sans Serif Gothic or Block
 - 4. Authorized Personnel Only 1-inch Sans Serif Gothic or Block
 - 5. Authorized Personnel Only 1-inch Gothic
 - 6. Respirators and Protective Clothing are required in this Area 1-inch Gothic
 - 7. Spacing between lines shall be at least equal to the height of the upper of any two lines. Warning tape shall be provided

1.22 WARNING LABELS

- A. Warning labels shall be affixed to all asbestos disposal containers used to contain asbestos materials, scrap, waste debris, and other products contaminated with asbestos. Containers with preprinted warning labels conforming to requirements specified herein are acceptable. Warning labels shall conform to CFR 29 Part 1926 and shall be of sufficient size to be clearly legible displaying the following legend:

DANGER

CONTAINS ASBESTOS FIBERS

AVOID CREATING DUST

CANCER AND LUNG DISEASE

HAZARD

1.23 LOCAL EXHAUST SYSTEM

- A. A local exhaust system shall be provided in the asbestos regulated work area in accordance with ANSI Z9.2 and CFR 29 Part 1926. The system will provide at least 4 air changes per hour inside of the containment. The local exhaust system shall be operated 24 hours per day, until the asbestos regulated containment area is removed and shall be leak proof to the filter and equipped with HEPA filters. Local exhaust equipment shall be sufficient to maintain a minimum pressure differential of minus 0.51 mm (0.02 inch) 0.02 inch of water column relative to adjacent, unsealed areas. Pressure differential shall be monitored continuously, 24 hours per day, with an automatic recording instrument. In no case shall the building ventilation system be used as the local exhaust system for the asbestos regulated work area. Filters on local exhaust system equipment shall conform to ANSI Z9.2 and UL 586. Filter shall be UL labeled. The local exhaust system shall terminate out of doors. All filters used shall be new at the beginning of the project and shall be periodically changed as necessary and disposed of as ACM waste.
- B. Prior to the start of the abatement the Contractor shall inspect all negative air machines and insure that all gaskets are in place, that all HEPA filters in the units are properly seated and mechanical brackets that secure the HEPA filters are intact. This inspection will be conducted in conjunction with the Owners Representative prior to the start of abatement activities. All deficiencies associated with the negative air machines shall be repaired prior to the start of the abatement. All defective units shall be removed and replaced.

1.24 TOOLS

- A. Vacuums shall be leak proof to the filter, equipped with HEPA filters, be of sufficient capacity and provide the necessary capture velocity at the nozzle or nozzle attachment to efficiently collect, transport and retain the ACM waste material. Power tools shall not be used to remove ACM unless the tool is equipped with effective, integral HEPA filtered exhaust ventilation capture and collection system or has otherwise been approved for use by the Owner. All residual asbestos shall be removed from reusable tools prior to storage and reuse. Reusable tools shall be thoroughly decontaminated prior to being removed from asbestos regulated work areas.

1.25 RENTAL EQUIPMENT

- A. If rental equipment is to be used, written notification shall be provided to the rental agency, concerning the intended use of the equipment, the possibility of asbestos contamination of the equipment and the steps that will be taken to decontaminate such equipment. A written acceptance of the terms of the Contractor's notification shall be obtained from the rental agency.

1.26 PERSONNEL AIR MONITORING EQUIPMENT (CONTRACTOR PROVIDED)

- A. The Contractor is responsible for all personnel sampling as outlined in Section 3.12 herein, and shall select and approve the air monitoring equipment to be provided and used by the Contractor for evaluation of personnel exposure levels to airborne asbestos fiber concentrations within the work area. The equipment shall include, but not be limited to:
 - 1. Low-volume, battery powered, body-attachable, portable personal pumps that can be calibrated to a constant airflow up to approximately 3.5 liters per minute when equipped with a sampling train of tubing and filter cassette, and a self-contained rechargeable power pack capable of sustaining the calibrated flow rate for a minimum of 10 hours. The pumps shall also be equipped with an automatic flow control unit, which shall maintain a constant flow even as filter resistance increases due to accumulation of fiber and debris on the filter surface,

2. Standard 25 millimeter diameter, 0.8 micrometer micron pore size, mixed cellulose ester membrane filters and cassettes with nonconductive barrels and shrink bands, to be used with low flow pumps in accordance with CFR 29 Part 1926, for personal air sampling,
3. Standard 25 millimeter diameter, 0.45 micrometer micron pore size, mixed cellulose ester membrane filters and cassettes with non-conductive barrels and shrink bands, to be used with high flow pumps when conducting environmental area sampling using NIOSH Pub No. 84-100 Methods 7400 and 7402 and the transmission electric microscopy method specified at CFR 40 Part 763,
4. Appropriate plastic tubing to connect the air sampling pump to the selected filter cassette,
5. A flow calibrator capable of calibration to within plus or minus 2 percent of reading over a temperature range of minus 4 degrees Fahrenheit to plus 140 degrees Fahrenheit and traceable to a National Institute for Standards and Technology (NIST) primary standard.

1.27 EXPENDABLE SUPPLIES

A. Glove Bag

1. Glove bags shall be provided as described in CFR 29 Part 1926. The glove bag assembly shall be prefabricated with a preprinted OSHA warning label and shall typically be constructed of 6 mil thick transparent polyethylene or polyvinyl chloride sheeting and at least two inward projecting long sleeves and an internal pouch. The glove bag shall be constructed and installed in such a manner that it surrounds the object or material to be removed and contains all asbestos fibers released during the process. The glove bag shall have sufficient capacity to hold removed materials and permit leak-tight sealing.

B. Duct Tape

1. Industrial grade duct tape shall be provided in 2 inch and 3 inch widths and shall be suitable for bonding sheet plastic and disposal containers specified herein.

C. Disposal Containers

1. Leak-tight disposal containers shall be provided for ACM generated as specified herein. Leak-tight means neither solids, liquids or dust can escape or spill out. All disposal containers shall be either pre-labeled or affixed with OSHA warning label as specified in CFR 29 Part 1926.

D. Disposal Bags

1. 6-mil thick leak-tight pre-labeled (OSHA warning label) bags shall be provided for placement of asbestos generated waste.

E. Leak-tight Wrapping

1. Two layers of 6-mil (minimum) thick polyethylene sheeting stock shall be used for the containment of removed asbestos-containing components or materials such as reactor vessels, large tanks, boilers, insulated pipe segments and other materials too large to be placed in disposal bags. Upon placement of the ACM component or material, each layer shall be individually leak-tight sealed with duct tape.

F. Fiberboard Drums

1. Fiberboard drums shall be provided if required by state or local requirements.

G. Cardboard Boxes

1. Heavy-duty corrugated cardboard boxes coated with plastic or wax to retard deterioration from moisture shall be provided if required by state and local requirements. Boxes shall fit into selected ACM disposal bags. Filled boxes shall be sealed leak-tight with duct tape.

H. Sheet Plastic

1. Sheet plastic shall be provided as specified herein and in the largest sheet size necessary to minimize seams, as indicated on the project drawings.

I. Polyethylene Sheet – General

1. 6-mil (minimum) thick polyethylene sheeting shall be clear, frosted and/or black and conform to ASTM D 4397.

J. Polyethylene Sheet - Flame Resistant

1. Where a potential for fire exists, 6-mil (minimum) thick flame-resistant polyethylene sheet shall be provided. Flame-resistant polyethylene film shall be frosted and/or black and shall conform to the requirements of NFPA 701.

K. Polyethylene Sheet-Reinforced

1. 6-mil thick reinforced polyethylene sheet shall be provided where high skin strength is required such as where it constitutes the only barrier between the asbestos regulated work area and the outdoor environment. The sheet stock shall consist of translucent, nylon-reinforced or woven-polyethylene thread laminated between two layers of polyethylene film. Film shall meet flame resistant standards of NFPA 701.

L. Viewing Inspection Window

1. Where feasible, a minimum of one clear 1/8-inch thick acrylic sheet, 18 inches by 24 inches, shall be installed as a viewing inspection window at eye level on a wall in each containment enclosure. All such windows shall be sealed leak-tight with industrial grade duct tape.

M. Wetting Agents

1. Amended water shall meet the requirements of ASTM D 1331.

N. Removal Encapsulant

1. Removal encapsulant (a penetrating encapsulant) shall be provided when conducting removal abatement activities that require a longer removal time or are subject to rapid evaporation of amended water. The removal encapsulant shall be capable of wetting the ACM and retarding fiber release during disturbance of the ACM equal to or greater than provided by amended water

O. Strippable Coating

1. Strippable coating found in aerosol cans, will be used to adhere to surfaces and to be removed cleanly by stripping at the completion of work. Since these coatings have a hydrocarbon-carrying agent, its use shall be confined to well ventilated areas only.

P. Non-combustible Foam

1. All foam shall be Hilti CF 810 CJ Insulating Foam or an approved equivalent.

1.28 MATERIAL SAFETY DATA SHEETS

- A. Material safety data sheets (MSDS) shall be provided for all hazardous materials brought onto the work-site. One copy shall be provided to the Owner's onsite Representative and one copy shall be included in the Contractor's Hazard Communication Program.

1.29 OTHER ITEMS

- A. A sufficient quantity of other items shall be provided that may include, but not be limited to: scrapers, brushes, brooms, staple guns, tarpaulins, shovels, rubber squeegees, dust pans, other tools, scaffolding, staging, enclosed chutes, wooden ladders, lumber necessary for the construction of asbestos regulated containment work areas, UL approved temporary electrical equipment, material and chords, ground fault circuit interrupters, water hoses of sufficient length, fire extinguishers, first aid kits, portable toilets, logbooks, log forms, markers with indelible ink, spray paint in bright color to mark areas, project boundary fencing, etc.

1.30 PRECONSTRUCTION CONFERENCE

- A. The Contractor, and the Contractor's designated onsite "competent person," shall meet with the Owners Representative and Owner prior to beginning work at a preconstruction conference to discuss the details of the Contractor's Asbestos Hazard Abatement Plan, including work procedures and safety precautions. Once accepted by the Owners Representative and Owner, the Asbestos Hazard Abatement Plan, will be enforced as if an addition to the specification.

PART 2 - PRODUCTS

2.1 ENCAPSULANTS

- A. Encapsulant shall conform to USEPA requirements, shall contain no toxic or hazardous substances.

PART 3 - EXECUTION

3.1 GENERAL

- A. Asbestos abatement work shown on plans and drawings shall be performed as specified herein. Personnel shall wear and utilize protective clothing and equipment as specified herein. Eating, smoking, drinking, or applying cosmetics shall not be permitted in the asbestos regulated work area. All hot work (burning, cutting, welding, etc.) shall be conducted under strictly controlled conditions in conformance with CFR 29 Part 1926. Personnel of other trades not engaged in asbestos abatement activities shall not be exposed at any time to airborne concentrations of asbestos unless all the administrative and personal protective provisions as required by the Contractors Asbestos Abatement Plan are complied with. The building heating, ventilating, and air conditioning system shall be shut down, all openings to the system capped leading into the abatement work area.
- B. Electrical service shall be disconnected where necessary to facilitate wet removal. Temporary electrical service shall be provided by the Contractor as needed. Temporary power provided by the Contractor shall be adequate to power for the Owners' Representatives' air monitoring equipment.
- C. If an asbestos spill occurs outside of the asbestos regulated work area, work shall be stopped and the Owners' Representative and Owner shall be notified. The condition shall be corrected to the satisfaction of the Owners' Representative and Owner including air sampling, prior to resumption of work.

3.2 PROTECTION OF ADJACENT WORK OR AREAS TO REMAIN

- A. Asbestos abatement work shall be performed without damage or contamination of adjacent work or areas. Where such work or area is damaged or contaminated as verified by the Owners Representative using visual inspection and/or sample analysis, it shall be restored to its original condition or decontaminated by the Contractor at no expense to the Owner as deemed appropriate by the Owners Representative. This includes inadvertent spill of dirt, dust or debris in which it is reasonable to conclude that asbestos may exist. When these spills occur, work shall stop in all affected areas immediately and the spill shall be cleaned. When satisfactory visual inspection and/or sampling analysis results are obtained and have been evaluated by the Contractor and the Owners Representative, work may proceed.

3.3 FURNISHINGS, FIXTURES AND EQUIPMENT

A. Removal of Furnishings and Equipment

1. The Owner will remove all sensitive equipment and furniture from the work areas before asbestos abatement work begins.

B. Items to Remain

1. Contractor shall protect all mechanical, electrical, plumbing and IT cabling that is to remain located in areas affected by abatement operations. Only those components designated for removal/demolition shall be removed. Costs for repairs associated with damage incurred during abatement, demolition and put-back operations will be at the Contractor's expense.

3.4 BUILDING VENTILATION SYSTEM AND CRITICAL BARRIERS

- A. Any building ventilating system supplying air into or returning air out of an asbestos regulated work area shall be shut down and isolated by lockable switch or other positive means in accordance with CFR 29 Part 1910, Section 1910.147, to prevent accidental start-up and isolated by airtight seals to prevent contaminant spread through the system. Air-tight critical barriers shall be installed on all building ventilating openings that supply, or return air from the building ventilation system or serves to exhaust air from the building, that are located inside the asbestos regulated work area. The critical barriers shall consist of air-tight rigid covers for building ventilation supply and exhaust grills where the ventilation system is required to remain in service during abatement. Edges to wall, ceiling and floor surfaces shall be sealed with industrial grade duct tape.

3.5 PRECLEANING

- A. Surfaces shall be cleaned by HEPA vacuum and adequately wet wiped prior to establishment of containment.

3.6 ASBESTOS CONTROL AREA REQUIREMENTS

- A. Regulated containment areas shall be established and maintained for each abatement work task. Viewing inspection window shall be installed on the wall of the containment enclosure, as specified herein. The following procedures shall be performed sequentially and each activity shall be completed before proceeding to the next. Various steps may be omitted for an individual containment area when that work is not specified on the drawings.
 1. Furnishings in the asbestos regulated work area shall be cleaned, protected in place removed as specified herein.
 2. Tools, scaffolding, staging, and incidentals necessary for the work shall be placed in the area to be isolated prior to erection of work area enclosed containment.
 3. Building ventilating systems serving the work area shall be shutdown or isolated.
 4. Power to the asbestos regulated work area shall be locked-out by switching off all breakers serving power or lighting to this area in accordance with CFR 29 Part 1910.
 5. Surfaces shall be pre-cleaned as required herein.
 6. Personnel Decontamination Unit shall be installed as specified. Load-Out unit shall be installed as specified herein.
 7. Critical barriers shall be installed as required for building ventilation system and in the plenum space as required herein.
 8. Local exhaust ventilation system shall be installed as specified.

9. Containment area shall be installed as required for each abatement task as specified.

3.7 CLEAN-UP

- A. The Contractor shall maintain a clean work area by performing on a daily basis the following housekeeping functions at the end of each shift:
 1. Loose ACM shall be prepared for disposal by packaging the waste and removing it from the work area to the load-out area.
 2. Work area shall be HEPA vacuumed.
 3. Polyethylene in work and high traffic areas shall be inspected and repaired.
 4. Containment area shall be wet wiped if air sample results exceed prescribed level.

3.8 GLOVE BAG

- A. Asbestos regulated work areas shall be established as specified for glove bag abatement should it be required. Designated boundary limits for the asbestos work shall be established with rope or other continuous barriers and all other requirements for asbestos control areas shall be maintained including area signage and boundary warning tape as specified. Area monitoring of airborne asbestos fibers shall be conducted during the work shift at the designated boundary limits and personal air monitoring shall be performed for each worker engaged in asbestos handling (removal, disposal, transport and other associated work) at such frequency as specified in the Contractor's air monitoring plan. If the concentration of asbestos fibers monitored at the breathing zone of the workers or within the designated limits at any times exceeds 0.01 f/cc or the pre-abatement level, whichever is greater, work shall be stopped and the Owner shall be notified. The Contractor shall correct the condition to the satisfaction of the Owners' Representative and Owner to include visual inspection and air sampling. The Owners' Representative and Owner will only allow resumption of work upon notification. If adjacent areas outside the regulated work area are contaminated, the Contractor at his expense, shall clean the contaminated area, visually inspect the cleaned area, and conduct air monitoring.

3.9 ASBESTOS HANDLING PROCEDURES

- A. The Contractor shall employ proper handling procedures in accordance with CFR 29 Part 1926 and CFR 40 Part 61, Subpart M and the specification requirements herein. The specific abatement techniques and items identified shall be detailed in the Contractor's Asbestos Hazard Abatement Plan including but not limited to details of construction materials, equipment, and handling procedures. The following task descriptions detail the required abatement handling technique.
 1. Removal of ACM From Interior Architectural System
 - a. After completion of all asbestos removal work, surfaces from which asbestos-containing materials have been removed shall be wet wiped or sponged clean, or cleaned by some equivalent method to remove all visible residue. After the gross amounts of asbestos have been removed from every surface, all remaining visible accumulations of asbestos on floors shall be collected using plastic shovels, rubber squeegees, rubber dustpans and HEPA vacuum cleaners as appropriate to maintain the integrity of the containment barrier. When all ACM has been removed, workmen shall use HEPA vacuum cleaners to vacuum every surface. Particular attention shall be paid to those surfaces or locations that could harbor accumulations or residual asbestos dust.
 2. Sealing Contaminated Items Designated for Disposal
 - a. Contaminated architectural, mechanical, and electrical appurtenances and other contaminated items designated for removal shall be coated with an asbestos lockdown

encapsulant at the demolition site before being removed from the asbestos control area. These items need to be vacuumed prior to application of the lock-down encapsulant.

- b. The asbestos lockdown encapsulant shall be tinted a contrasting color. It shall be spray applied by airless method. Thoroughness of sealing operation shall be visually gauged by the extent of colored coating on exposed surfaces.

3.10 FINAL CLEANING AND PRE-VISUAL INSPECTION

- A. The asbestos regulated work area shall be cleaned at the completion of the abatement by collecting, packing, and storing all gross contamination. A final cleaning shall include HEPA vacuum and wet cleaning of all exposed surfaces and equipment in the asbestos regulated work area. Upon completion of the cleaning, the Contractor's competent person shall conduct a pre-visual inspection of the cleaned area in preparation for the final inspection to be conducted with the Owners Representative. The Contractor shall re-clean, as necessary. Upon completion of the final cleaning, the Contractor and the Owners Representative shall conduct a final visual inspection of the cleaned work area in accordance with ASTM E 1368 and document the results on the Final Cleaning and Visual Inspection. If the Owners Representative rejects the abatement area as not meeting final cleaning requirements, the Contractor shall re-clean as necessary and have a follow-up inspection with the Owners Representative. Re-cleaning and follow-up re-inspections by the Owners Representative shall be at the Contractor's expense.

3.11 LOCKDOWN

- A. Prior to removal of plastic barriers and after clean up of gross contamination and final visual inspection, a post removal (lockdown) encapsulant shall then be spray applied to foundation walls, underside of floors, and all vertical and horizontal surfaces within the work area. The abatement area shall include but not be limited to constructed enclosures, barriers, polyethylene sheeting that covers any furnishings, and equipment articles to be discarded, critical barriers, air locks, load out units for bag removal, and onsite constructed decontamination unit.

3.12 AIR MONITORING

Air Monitoring by the Contractor:

- A. The Contractor shall provide daily 8-hour TWA PEL and daily 30-minute Excursion Limit personal breathing zone air monitoring in accordance with and in addition to 29 CFR 1926.1101(f), including all amendments, and Appendix A of the OSHA standard within the work sites throughout all asbestos work site enclosure, material stripping, removal, cleaning encapsulation operations, or any other activities which might disturb asbestos-containing materials to insure that the workers are adequately protected at all times.
- B. Samples shall be collected by calibrated pumps whose flow rates can be determined to an accuracy of plus or minus 5 percent. Calibrate pumps both prior to and after each use with a representative filter in line.
- C. Analysis of samples shall be done in accordance with 29 CFR 1926.1101(f) and Appendix A of the OSHA standard. The results of all samples shall be posted outside the containment area within 48 hours of sampling and maintained there until the project has been concluded. This data shall include both the results of individual samples and the results of 8 hour TWA and 30-minute Excursion Limit determinations. Posted results shall include a synopsis of work activities for which the results are representative. Records shall be made of each employee's personal monitoring results and the employee shall be notified of these results within 15 days either individually or by posting them in a central location in accordance with 29 CFR 1926.1101(f).
- D. All analytical results from the Contractor's air monitoring shall be posted at the work site entrance as soon as they become available and not more than 48 hours from the time in which the samples were taken. Copies of all personnel air monitoring results shall be supplied to the Owner's Representative.

Air Monitoring by the Owner:

- A. The Owner shall provide the services of an independent testing laboratory with qualified analysts and appropriate equipment to conduct sample analyses of area air samples using the methods prescribed in CFR 29 Part 1926 Section 1926.58 to include NIOSH Pub No. 84-100 Method 7400. Sampling performed in accordance with CFR 29 Part 1926 Section 1926.58 shall be performed by the Owners Representative. The Owners Representative shall perform final clearance air sampling utilizing Phase Contract Microscopy (PCM) analysis. For environmental quality control and final air clearance NIOSH Pub No. 84-100 Method 7400 (PCM) with optional confirmation of results by NIOSH Pub No. 84-100 Method 7402 Transmission Electron Microscopy (TEM) the mandatory EPA TEM Method specified at CFR 40 Part 763 shall be used. For environmental and final clearance samples, sampling will be conducted at a sufficient velocity and time to collect a sample volume necessary to establish the limit of detection of the method used at 0.01 f/cc. Asbestos fiber concentration confirmation of the total fiber concentration results of environmental, quality assurance and final air clearance samples, collected and analyzed by NIOSH Pub No. 84-100 Method 7400, may be conducted.
1. Sampling Prior to Asbestos Work
 - a. The baseline air sampling shall be established one day prior to the masking and sealing operations for each abatement area site. The background shall be established by performing area sampling in similar but uncontaminated sites in the building. Pre-abatement (NIOSH Pub No. 84-100 Method 7400, PCM, and EPA TEM Method specified at CFR 40 Part 763) air samples shall be collected at a minimum of three locations. These locations are: outside the building, inside the building, but outside the abatement area perimeter and inside each abatement area. One sample shall be collected for every 185 square meters 2000 square feet of floor space. At least two sample locations shall be collected outside the building. The PCM samples shall be analyzed immediately; and if any result in fiber concentration greater than 0.01 f/cc, asbestos fiber concentration shall be confirmed using NIOSH Pub No. 84-100 Method 7402 (TEM) at Owner expense.
 2. Sampling During Asbestos Abatement Work
 - a. The Owner shall provide area air sampling as indicated in CFR 29 Part 1926 Section 1926.58, and meet state and local requirements. Area air sampling shall be conducted at least once every shift, close to the work in the containment area, outside the clean room entrance to the containment area, (outside air lock for mini and modified containment areas), inside the clean room (inside the air lock for mini and modified containment areas), outside the load-out unit exit, if used, and at the exhaust discharge point of the local exhaust system.
 3. Sampling After Final Clean-Up (Clearance Sampling)
 - a. Prior to conducting final air clearance sampling, the Contractor and the Owners Representative shall conduct a final visual inspection of the Contractor's final cleanup of the abated asbestos regulated work area as specified. Final clearance air monitoring shall not begin until acceptance of this final cleaning by the Owners Representative. The Owners Representative will provide area sampling of airborne fibers using air sampling techniques as defined in the EPA 560/5-85-024 or as otherwise required by Federal or state requirements.
 4. Air Clearance Failure
 - a. Should clearance-sampling results fail to meet the final clean-up requirements, the Contractor shall pay all costs associated with all required re-cleaning, re-sampling and analysis until final clean-up requirements are met.

3.13 SITE INSPECTION

- A. While performing asbestos removal work, the Contractor shall be subject to onsite inspection by the Owners Representative who may be assisted by or represented by quality assurance, safety and industrial hygiene personnel. If the work is found to be in violation of this specification, the Owner or his representative will issue a stop work order to be in effect immediately and until the violation is resolved. Standby time required to resolve the violation shall be at the Contractor's expense.

3.14 CLEAN-UP AND DISPOSAL

A. Housekeeping

1. Surfaces of the regulated work area shall be kept free of accumulation of asbestos-containing debris. Meticulous attention shall be given to restricting the spread of dust and debris during the abatement activities. HEPA filtered vacuum cleaners shall be used. The space shall not be blown down with compressed air.

B. Title to Materials

1. Material resulting from abatement work, except as specified otherwise, shall become the property of the Contractor and shall be disposed of as specified in applicable local, state, and Federal regulations and herein.

C. Collection and Disposal of Asbestos

1. Asbestos waste, asbestos contaminated water, scrap, debris, bags, containers, equipment, and asbestos contaminated clothing, shall be collected and placed in sealed leak-tight, containers (e.g. double 6-mil plastic bags), sealed 6-mil double wrapped polyethylene sheet, sealed fiberboard boxes or other approved containers. Waste within the containers must be wetted in case the container is breached. A warning and Department of Transportation (DOT) label shall be affixed or preprinted on each bag. Waste asbestos material shall be disposed of at an EPA, state and local approved asbestos landfill. For temporary storage, sealed impermeable containers shall be stored in asbestos waste load-out unit or in a storage/transportation conveyance (i.e.; dumpster, roll-off waste boxes, etc.) in a manner as accepted by and in an area as assigned by the Owner. Procedure for hauling and disposal shall comply with CFR 40 Part 61, Subpart M, and state, regional, and local standards.

D. Asbestos Waste Shipment Record

1. The Contractor shall complete and provide final completed copies of the Waste Shipment Record for all shipments of waste material as specified in CFR 40 Part 61, Subpart M and other required state waste manifest shipment records within 3 days of delivery to the landfill.

APPENDIX

**ASBESTOS CONTAINING MATERIALS
INVESTIGATION REPORT**

**FORMER SOUTH CAROLINA ARTS
COMMISSION BUILDING**

**1800 GERVAIS STREET
COLUMBIA, SOUTH CAROLINA**

REPORT PREPARED FOR:



**UNIVERSITY OF
SOUTH CAROLINA**

UNIVERSITY OF SOUTH CAROLINA

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BY:

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June 20, 2012

E5200.08

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APPENDIX D

- SCDHEC Regulation Summary
- SCDHEC Abatement Project Forms

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I. EXECUTIVE SUMMARY

As requested, on June 1, 2012, F&ME Consultants completed a limited Asbestos Containing Materials (ACM) investigation of the former South Carolina Arts Commission building structure located at 1800 Gervais Street in Columbia, South Carolina. This investigation was performed in anticipation of planned renovations to the interior of the existing building structure, and was conducted in accordance with SCDHEC, AHERA, USEPA, ASHARA, NESHAP, and OSHA regulations.

It is our understanding that the scope of the planned renovations consists of the reconfiguration of the existing interior space to accommodate future occupants, to include the removal and replacement of select interior drywall walls, interior finishes and modifications of the existing mechanical systems. Therefore, the scope of this investigation was limited to identifying, sampling and assessing suspect asbestos-containing materials located within the interior of the subject structure that may be affected by the renovation activities. This investigation was limited to the interior of the subject structure; no exterior materials were sampled or assessed.

Our investigation identified multiple asbestos containing materials located in the subject building structure. The confirmed ACM include the following: black mastic on HVAC ducts; fibrous board located in the mechanical room; pipe mastic located in the mechanical room; floor tile mastic; an unidentified fibrous material; and joint compound in the basement floor. These materials are in addition to the ACM that were identified during previous ACM investigations and as outlined in the partial O&M plan provided to F&ME, which includes 9" x 9" floor tiles and associated mastic.

Additionally, at the request of the University, F&ME did not include the floor tiles or stair tread mastic located within the stairwells because they were recently installed. Furthermore, none of the exterior materials (roofing, window glazing/ caulking, breezeways, etc.) were inventoried or sampled as a part of this limited investigation. Therefore, for the purposes of this report, these materials (stairwell and exterior finishes) are also to be assumed positive and handled accordingly.

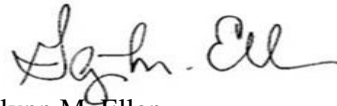
The results, conclusions and recommendations from this limited investigation are representative of the conditions observed at the site on the dates of the field inspection. F&ME does not assume responsibility for any changes in conditions or circumstances that occur after the inspection. No other environmental concerns were addressed during this investigation.

We sincerely appreciate the opportunity to assist you with this project. Should you have any questions or require additional information concerning this report, please do not hesitate to contact our office at (803) 254-4540.

Sincerely,
F&ME CONSULTANTS



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II. INTRODUCTION

As requested, on June 1, 2012, F&ME Consultants completed a limited Asbestos Containing Materials (ACM) investigation of the former South Carolina Arts Commission building structure located at 1800 Gervais Street in Columbia, South Carolina. This investigation was performed in anticipation of planned renovations to the interior of the existing building structure, and was conducted in accordance with SCDHEC, AHERA, USEPA, ASHARA, NESHAP, and OSHA regulations. This investigation was limited to the interior of the subject structure; no exterior materials were sampled or assessed.

The University's HAZMAT staff supplied a portion of the SC Budget and Control Board's O&M Plan that was developed for the subject structure in addition to general building plans. The O&M Plan indicated that there are previously-identified asbestos-containing materials located within the subject building. These materials are carpet mastic/ adhesive; black mastic on pipe insulation; sheet vinyl flooring; and various 9" x 9" floor tiles and mastic. For the purposes of this report, some materials listed in the O&M were re-sampled, specifically the carpet adhesive and pipe mastic. However, since 9" x 9" floor tiles are widely recognized as asbestos-containing materials, the various 9" x 9" tiles in the subject building were not re-sampled during this investigation and are assumed to be positive for asbestos.

The results, conclusions and recommendations from this investigation are representative of the conditions observed at the site on the date of the field inspection. F&ME does not assume responsibility for any changes in conditions or circumstances that occur after the inspection. Use of this document for bidding purposes is not recommended without prior consultation with F&ME. No other environmental concerns are addressed in this report.

III. INVESTIGATION RESULTS

The purpose of this limited ACM investigation was to locate, sample and record the physical characteristics of suspect ACM located within the interior of the subject building structure that will be impacted by the planned renovations; to provide estimated quantities of those materials; and to obtain laboratory analytical results for determining the existence or non-existence of asbestos minerals. All remaining building materials (i.e. concrete, wood, brick, carpet, etc.) were not considered suspect.

Our visual inspection revealed a concrete and brick-framed building structure with poured-in-place support columns and floor slabs. The exterior building envelope is constructed of precast panels. Interior finishes include masonry block and concrete walls; plaster walls and ceilings; sheetrock walls; spray applied textured ceiling surfacing material (both interior and exterior); carpet over concrete and/or floor tiles; various floor tiles and brick floors.

Suspect materials identified during the investigation consisted of various HVAC mastics; HVAC and pipe wrap; a fibrous (transite) board; mudded elbows; various baseboard adhesives; brown fire stop at wall and floor penetrations; various 2' x 4' and 12" x 12" ceiling panels; 12" x 12" floor tiles and associated mastic; carpet adhesives; drywall with joint compound representing multiple installation dates; mastic on block walls; plaster walls and ceilings; and spray-applied acoustical ceiling material. Additionally, during a visit of the subject facility on June 13, 2012, F&ME found an unidentified fibrous surfacing material above drywall ceilings in one location. This suspect material was sampled and submitted for analysis.

Bulk samples of suspect materials were analyzed by Polarized Light Microscopy (PLM) in accordance with EPA 600/R-93/116. Confirmation Transmission Electron Microscopy (TEM) was also performed on any non-friable organically bound materials that tested negative for asbestos content as per SCDHEC

regulations effective June 27, 2008. Proper sampling and chain-of-custody protocol were followed to ensure appropriate handling and delivery of samples to the analytical laboratory. See Appendix A for the Sample Location Plans (Figures 2 & 3) and the Homogeneous Area Plans (Figures 4 & 5).

A total of ninety (90) samples were collected during the initial investigation. Due to multiple layering of the materials and activation of our “first positive stop” protocol, ninety-two (92) samples were analyzed by PLM and eleven (11) samples were TEM-confirmed. Of the materials analyzed, five (5) tested positive for asbestos mineral content (see Table II in Appendix B), to include: black mastic on HVAC ducts; a fibrous board in the mechanical room; black pipe mastic in the mechanical room; floor tile mastic under non-asbestos floor tiles; and joint compound. Additionally, the unidentified fibrous surfacing material was found to be positive for asbestos. The laboratory bulk sample analytical reports are located in Appendix B.

Further scrutiny of the laboratory results indicated that of the twelve (12) joint compound samples collected throughout the building, one (1) sample located in the basement was positive for asbestos. Since all eight (8) joint compound samples collected on the main floor were negative, it was decided that the volume of samples effectively demonstrates that there is not asbestos-containing joint compound on the main floor. In order to further differentiate between the drywall/ joint compound on the main and basement floors, F&ME returned to the subject building and collected three (3) additional drywall/ joint compound samples from the basement on June 14, 2012. Of the seven (7) total joint compound samples collected in the basement, only one indicated positive results. Therefore, for the purposes of this investigation report, the drywall/ joint compound located in the basement of the subject building will be recognized as an ACM. However, since only one (1) of seven (7) samples was positive, it might be possible to perform additional sampling to further delineate the location of the asbestos-containing joint compound. For example, should future renovations target specific walls within the basement, additional samples of the targeted walls could be collected in order to determine whether the asbestos-containing joint compound is present on the walls of interest.

At the request of the University, the floor tiles and associated mastic and the stair tread mastic were not sampled due to their recent date of installation and the fact that they are not to be impacted as a part of the renovations. Therefore, these materials are assumed to be ACM. Furthermore, various 9” x 9” floor tiles located throughout the building were assumed positive based on information located within the partial O&M Plan provided to F&ME by the USC HAZMAT personnel. No exterior materials (ex. roofing, window caulking/ glazing, breezeways, etc) were sampled as a part of this investigation and are therefore assumed to be positive for asbestos. Should future renovations require disturbing these materials, they must be handled as ACM unless bulk sample analyses (PLM, TEM) demonstrate otherwise.

IV. ASBESTOS CONTAINING MATERIALS DESCRIPTION/ASSESSMENT

The following is a list of the confirmed asbestos containing materials (See Figures 4 & 5, Homogeneous Area Plans):

- HA-1 – Various 9” x 9” Floor Tiles and Mastic (~4,800 S.F.)
Floor tiles and associated mastics were not sampled as a component of this investigation, but were documented as being asbestos containing materials in the partial O&M Plan. They are material is located throughout the basement portion of the facility, and are found both exposed and beneath carpeting. This material appears to be in a fair and stable condition

overall with only localized damage and wear identified in the janitor's closet. These materials will require abatement prior to any renovation activities that will disturb them.

- HA-2 – Black Mastic on HVAC Ducts (~150 S.F.)

Metal ductwork associated with the original HVAC system located within the building structure was insulated with a non-asbestos duct wrap insulation. Seams of this insulation were sealed with a black mastic. This material was found mainly in the basement floor the building. Overall, this material appears to be in a good condition with little to no damage being noted.
- HA-3 – Fibrous Board (~5 S.F.)

This material is located in the basement floor mechanical room on the wall separating the mechanical room from the crawl space, but may be uncovered during actual renovation activities. It appears to be in overall good condition. However, it will require abatement prior to any renovation activities that will disturb this material.
- HA-4 – Black Pipe Mastic (~2 S.F.)

This material is located in the basement floor mechanical room on domestic water line joints but may be uncovered during actual renovation activities. It appears to be in overall good condition. However, it will require abatement prior to any renovation activities that will disturb this material.
- HA-5 – Floor Tile Mastic beneath Non-Asbestos Floor Tiles (~480 S.F.)

This material is found in the storage room (40), computer room (39A), the bathroom, and the break room (51) all located on the basement floor level of the subject building. While the material appears to be in overall good condition, it will require abatement prior to any renovation activities that will disturb it.
- HA-6 – Basement Floor Joint Compound (5,500 S.F.)

This material is located throughout the basement of the subject structure, primarily located on the Gervais Street side of the building. Even though current data indicate that only one sample was positive for asbestos content, all joint compound located throughout the basement floor is assumed to be positive for asbestos. This material is in an overall good condition, and will require abatement prior to any renovation activities that will disturb it.
- HA-7 – Stair Tread Adhesive (~100 S.F.)

This material is located throughout the stairwells and was recently installed. For this reason, the University requested that we do not collect bulk samples; therefore, for the purposes of this investigation the materials will be assumed to be positive for asbestos. However, should future renovation or demolition activities impact this material, it is recommended that it be analyzed to determine whether or not it is an actual ACM.
- HA-8 – 12" x 12" Floor Tile and Mastic (~80 S.F.)

These materials are located throughout the stairwells and were recently installed. For this reason, the University requested that bulk samples not be collected. Therefore, for the purposes of this investigation these materials will be assumed to be positive for asbestos. However, should future renovation or demolition activities impact these materials, it is recommended that they be analyzed to determine whether or not they are ACM.

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- HA-9 – Unidentified Fibrous Surfacing Material (~60 S.F.)

This material is located above a drywall ceiling in the basement. This is a friable material and must be handled accordingly. Should the renovation plans require removing the drywall ceiling beneath this material, it must be performed under proper containment, as there is evidence of contamination from this fibrous debris.

Quantities for the above-referenced asbestos containing materials are estimates and are not to be used for bidding purposes. No exterior materials were sampled or inspected as a part of this investigation. Should renovation plans change to include impacting the exterior of this building, a SCDHEC-certified asbestos inspector or management planner must perform an inspection of the exterior materials.

The Appendices include a Site Location Map (Figure 1), Sample Location Plans (Figures 2 & 3), Homogeneous Area Plans (Figures 4 & 5), a Summary of Samples (Table I), a Summary of Asbestos Containing Materials (Table II), Physical Assessment Data Sheets, Bulk Sample Analysis Reports, Personnel Certifications, and the SCDHEC Regulations and associated Abatement Project Forms.

This report has been prepared exclusively for the University of South Carolina, and shall not be disseminated in whole or part to other parties without prior consent from the University of South Carolina or F&ME Consultants, Inc. No other environmental issues are addressed in this report.

V. RECOMMENDATIONS

Due to the planned renovation activities, it is recommended that the ACM identified herein are removed prior to the commencement of any activities that will impact them. This recommendation is specifically in reference to ACM that are located within the limits of the renovation. Based on the quantity of the ACM identified within the subject structure, this abatement project will require a project design developed by a SCDHEC-certified Asbestos Project Designer. The abatement work must be performed by AHERA-certified and SCDHEC-licensed Abatement Contractors in accordance with all applicable regulations and guidelines. The SCDHEC must be notified at least ten (10) days prior to abatement activities. All asbestos waste, including contaminated building materials (i.e. non-asbestos floor tiles with asbestos containing mastics, etc.), must be deposited in a landfill permitted by the SCDHEC for receiving ACM.

The SCDHEC's Standards of Performance for Asbestos Projects (R 61-86.1) includes requirements for abatement projects regarding notifications, project design, air sampling and analysis, etc. For informational purposes, some of these requirements are summarized below:

- *Notifications.* Written notification (SCDHEC Form 3430) must be submitted to SCDHEC at least two (2) calendar weeks prior to initiation of abatement activities for renovation/demolition projects. A copy of this inspection report and applicable fee payment must be attached to the notification. Additional fees may be required. Copies of all notifications and documents pertinent to the abatement operations must be posted on the job site during abatement work.

Furthermore, the Owner/Operators must notify all parties involved with this project of the nature of the work as well as the locations and quantities of asbestos materials to be disturbed or those located near demolition/removal work areas. This notification requirement is also extended to any persons/employees who work near the demolition/removal work areas.

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- *Project Design.* Furthermore, abatement projects that will remove more than 3,000 square, 1,500 linear or 656 cubic feet of asbestos-containing materials are required to have a licensed and certified Abatement Project Designer submit a project design to SCDHEC prior to the commencement of any abatement activities. The design must address all information as directed by the regulations and must be adhered to by the Abatement Contractor.
 - *Air Monitoring.* The Abatement Contractor is responsible for daily personal air sampling for Abatement Workers in compliance with current OSHA standard 29 CFR 1926.1101. All remaining air monitoring services required for a renovation project (i.e. backgrounds, areas, and clearances) will be provided by the Owner or the Owner's Representative, as required by SCDHEC.
 - *ACM Waste Disposal.* SCDHEC legally tracks the dumping of all ACM into landfills. Therefore, SCDHEC must be notified prior to abatement and demolition projects in order to legally arrange for the proper disposal of ACM and associated contaminated debris. Most landfills will not accept ACM or asbestos-contaminated debris. This is an important consideration for the owner because it is more expensive to dispose of ACM than normal debris. If the abatement/demolition contractor selects a landfill that accepts ACM, the abatement/demolition debris could be transported to the permitted landfill. However, since the ACM would be mixed in with the total demolition debris, all of the debris would be considered to be ACM resulting in much higher disposal costs. Therefore, it is recommended that removal of all asbestos is conducted prior to and separate from building demolition activities.

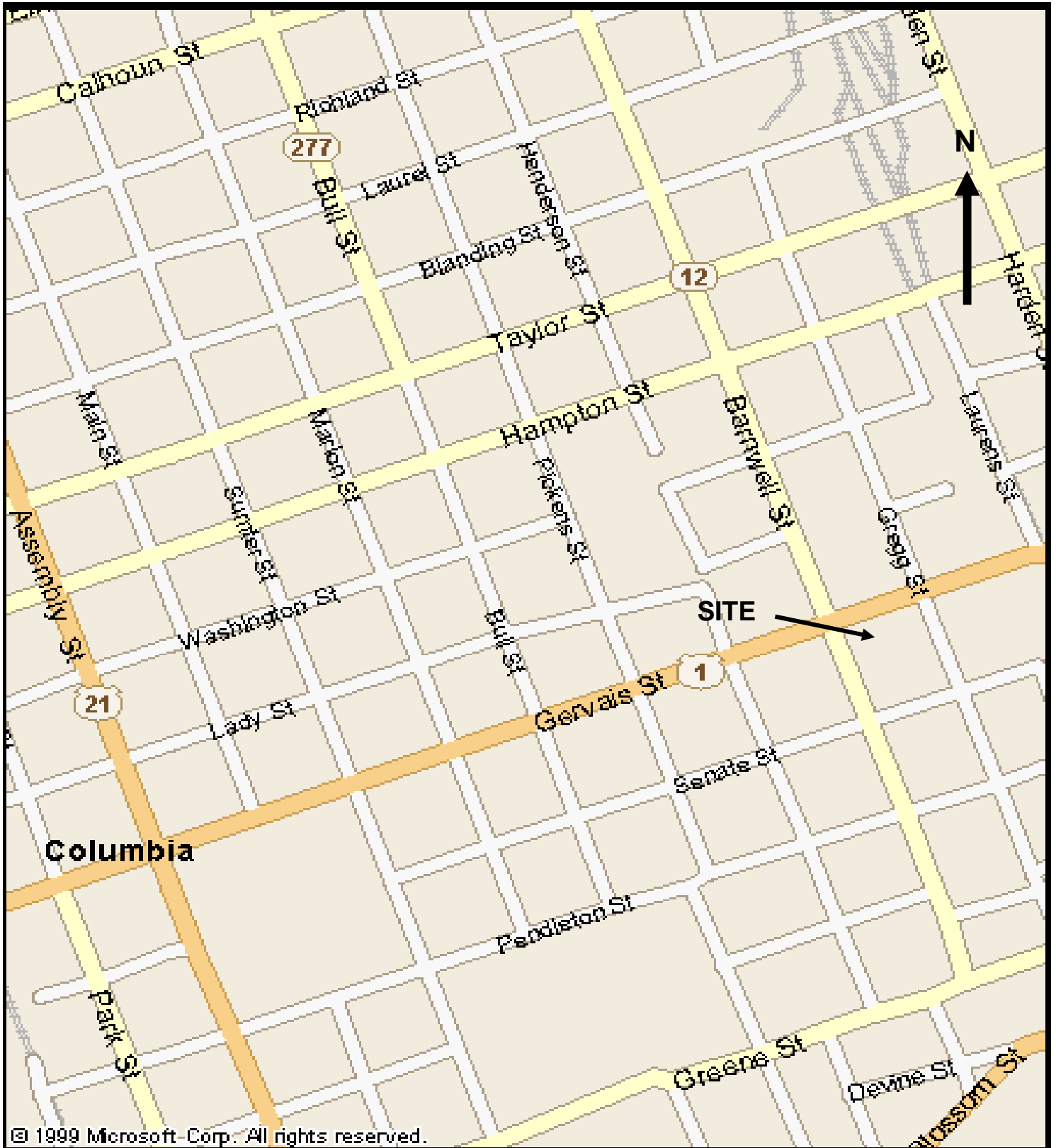
If any concealed and/or inaccessible ACM is encountered during asbestos abatement or renovation activities, the affected contractor(s) must stop work, take appropriate actions, and notify the Owner/ Abatement Contractor/ Asbestos Consultant for an appropriate response action. The SCDHEC must be notified in the event that any additional ACM is discovered, as well as if there are any changes in the condition of any identified ACM.

APPENDIX A

Site Vicinity Map (Figure 1)

ACM Sample Location Plans (Figures 2 & 3)

Homogeneous Area Plans (Figures 4 & 5)



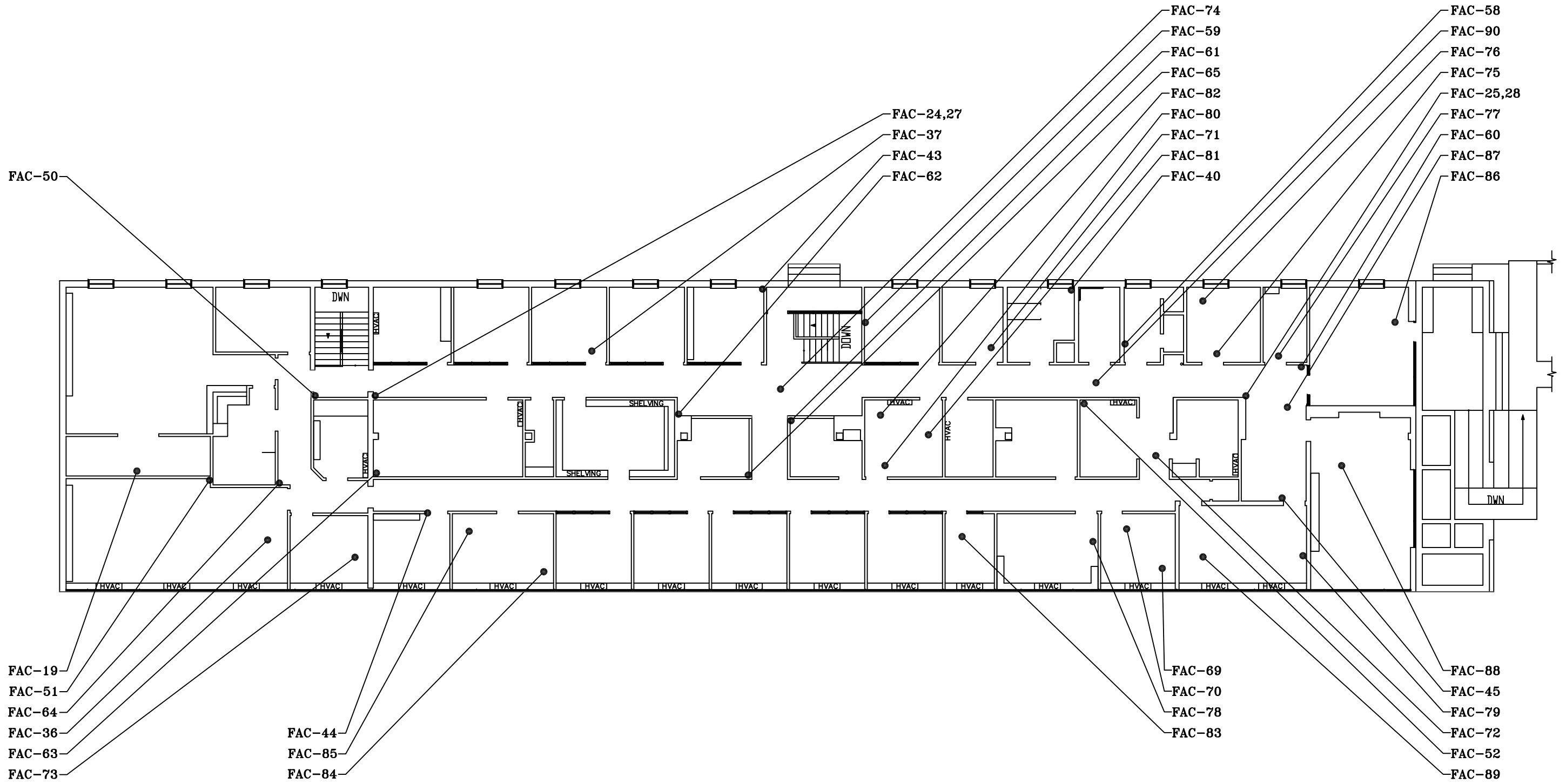
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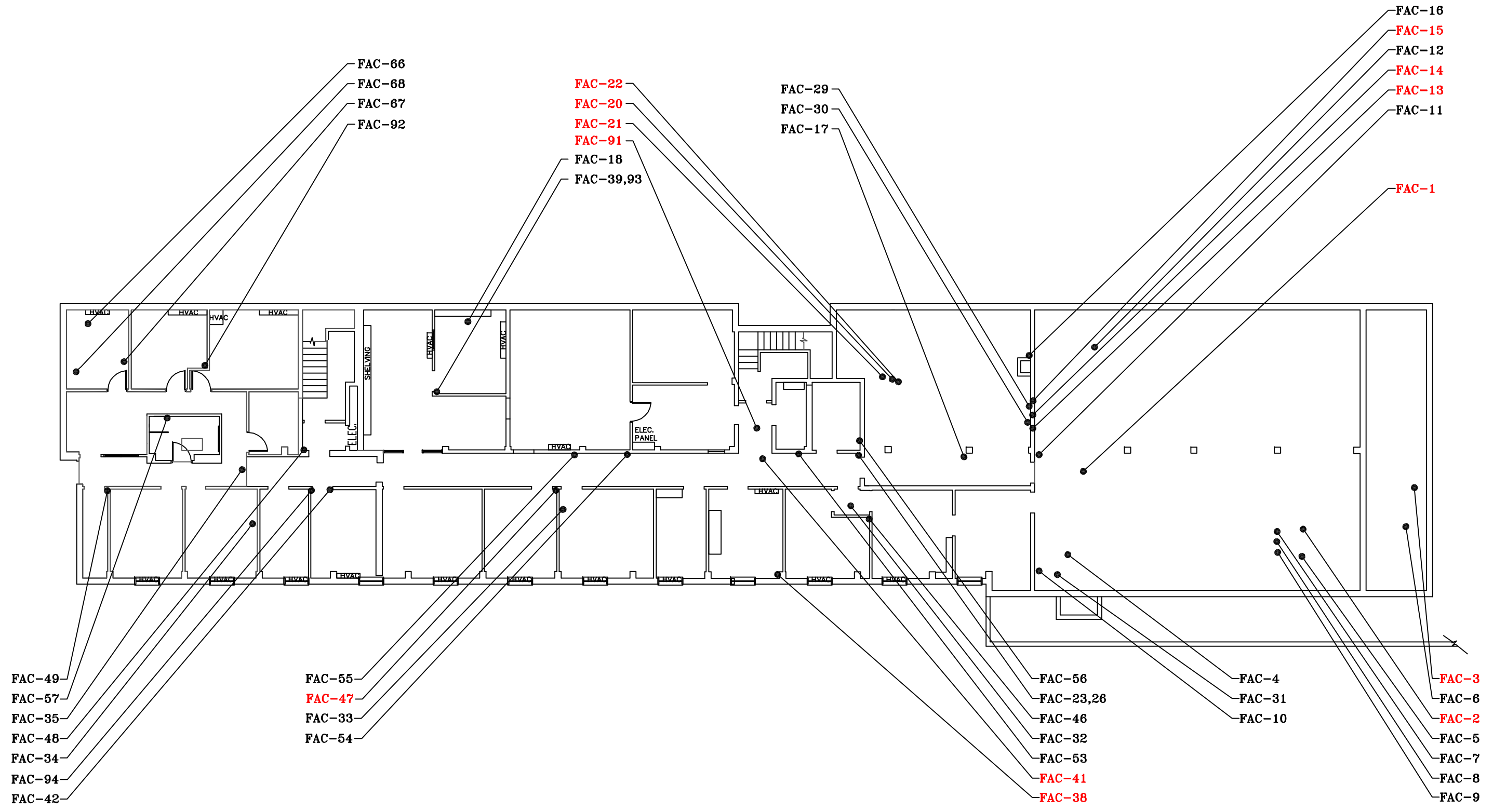
SITE VICINITY MAP
Former S.C. Arts Commission Bld.- 1800 Gervais St.
Columbia, South Carolina

University of South Carolina

Drawn By:	N/A	Scale:	N.T.S.
Checked By:	N/A	Project:	E5200.08
Approved By:	N/A	Figure:	1



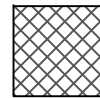
F&ME CONSULTANTS		SAMPLE LOCATION PLAN FORMER S.C. ARTS COMMISSION BLD. - 1ST FLOOR COLUMBIA, SOUTH CAROLINA	
UNIVERSITY OF SOUTH CAROLINA		DRAWN BY: <u>MSM</u> CHECKED BY: <u>JLS</u> APPROVED BY: <u>GME</u>	SCALE: <u>1"=16'</u> PROJECT: <u>E5200.08</u> FIGURE: <u>2</u>



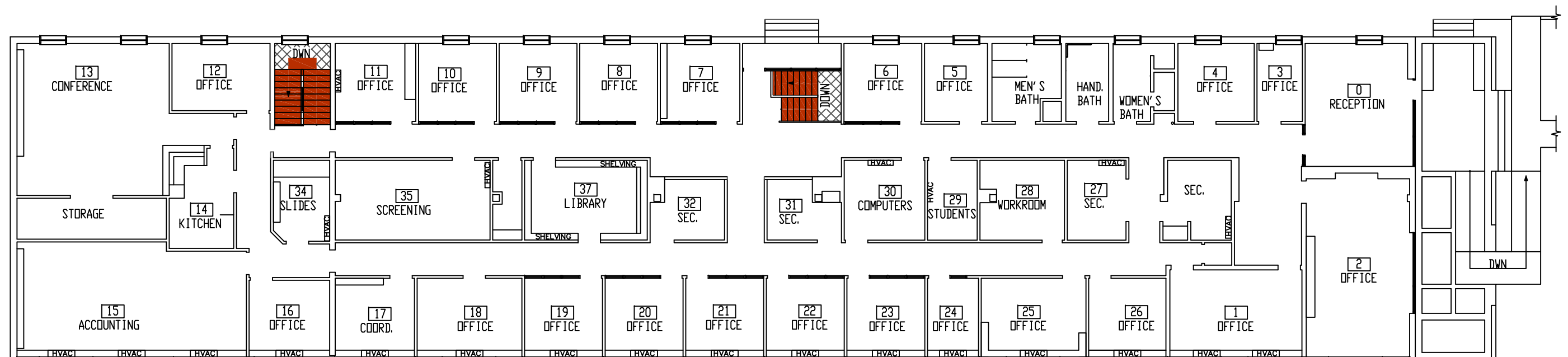
F&ME CONSULTANTS		SAMPLE LOCATION PLAN FORMER S.C. ARTS COM. BLD. - GROUND FLOOR. COLUMBIA, SOUTH CAROLINA	
UNIVERSITY OF SOUTH CAROLINA		DRAWN BY: <u>MSM</u> CHECKED BY: <u>JLS</u> APPROVED BY: <u>GME</u>	SCALE: <u>1"=16'</u> PROJECT: <u>E5200.08</u> FIGURE: <u>3</u>









Stair Tread Adhesive



12" x 12" Gray Floor Tile & Mastic




F&ME CONSULTANTS		HOMOGENEOUS AREA PLAN FORMER S.C. ARTS COM. BLD. - GROUND FLOOR. COLUMBIA, SOUTH CAROLINA	
UNIVERSITY OF SOUTH CAROLINA		DRAWN BY: <u>MSM</u> CHECKED BY: <u>JLS</u> APPROVED BY: <u>GME</u>	SCALE: <u>1"=16'</u> PROJECT: <u>E5200.08</u> FIGURE: <u>4</u>

-  HA-1 9" x 9" Floor Tile & Mastic
-  HA-7 Stair Tread Adhesive
-  HA-2 Black Mastic on HVAC Ducts
-  HA-8 12" x 12" Gray Floor Tile & Mastic
-  HA-3 Fibrous Board (Transite)
-  HA-9 Unidentified Spray Applied Fibrous Material



-  HA-4 Black Pipe Mastic
-  HA-5 Floor Tile Mastic Under Non-ACM Floor Tile
-  HA-6 Joint Compound
-  Carpet

		HOMOGENEOUS AREA PLAN FORMER S.C. ARTS COM. BLD. - GROUND FLOOR. COLUMBIA, SOUTH CAROLINA	
UNIVERSITY OF SOUTH CAROLINA		DRAWN BY: <u>MSM</u> CHECKED BY: <u>JLS</u> APPROVED BY: <u>GME</u>	SCALE: <u>1"=16'</u> PROJECT: <u>E5200.08</u> FIGURE: <u>5</u>

APPENDIX B

Summary of Samples (Table I)

Summary of Asbestos Containing Materials (Table II)

Summary of Inspection

Physical Assessment Data Sheets

Bulk Asbestos Analytical Reports

Chain of Custody

TABLE I. SUMMARY OF SAMPLES

Sample ID	Sample Description	Floor
FAC-1	Black HVAC Mastic	Basement
FAC-2	Black HVAC Mastic	Basement
FAC-3	Black HVAC Mastic	Basement
FAC-4	Tan HVAC Mastic	Basement
FAC-5	Tan HVAC Mastic	Basement
FAC-6	Tan HVAC Mastic	Basement
FAC-7	Gray HVAC Mastic	Basement
FAC-8	Gray HVAC Mastic	Basement
FAC-9	Gray HVAC Mastic	Basement
FAC-10	Old Pipe Wrap Fiberglass Insulation	Basement
FAC-11	Old Pipe Wrap Fiberglass Insulation	Basement
FAC-12	Old Pipe Wrap Fiberglass Insulation	Basement
FAC-13	Fibrous Board	Basement
FAC-14	Fibrous Board	Basement
FAC-15	Fibrous Board	Basement
FAC-16	Mudded Elbow	Basement
FAC-17	White Pipe Mastic	Basement
FAC-18	White Pipe Mastic	Basement
FAC-19	White Pipe Mastic	Main
FAC-20	Black Pipe Mastic	Basement
FAC-21	Black Pipe Mastic	Basement
FAC-22	Black Pipe Mastic	Basement
FAC-23	Tan Baseboard Adhesive	Basement
FAC-24	Tan Baseboard Adhesive	Main
FAC-25	Tan Baseboard Adhesive	Main
FAC-26	Brown Baseboard Adhesive	Basement
FAC-27	Brown Baseboard Adhesive	Main
FAC-28	Brown Baseboard Adhesive	Main
FAC-29	Brown Fire Stop Caulking	Basement
FAC-30	Brown Fire Stop Caulking	Basement
FAC-31	Brown Fire Stop Caulking	Basement
FAC-32	2' x 4' Small Pinhole Ceiling Panels	Basement
FAC-33	2' x 4' Small Pinhole Ceiling Panels	Basement
FAC-34	2' x 4' Small Pinhole Ceiling Panels	Basement
FAC-35	2' x 4' Small/Medium Pinhole Ceiling Panels	Basement
FAC-36	2' x 4' Small/Medium Pinhole Ceiling Panels	Main
FAC-37	2' x 4' Small/Medium Pinhole Ceiling Panels	Main
FAC-38	12" x 12" Off-White w/Light Gray/Dark Gray Floor Tile & Mastic	Basement
FAC-39	12" x 12" Off-White w/Light Gray/Dark Gray Floor Tile & Mastic	Basement
FAC-40	12" x 12" Off-White w/Light Gray/Dark Gray Floor Tile & Mastic	Main
FAC-41	Carpet Adhesive Ground Floor	Basement

TABLE I

TABLE I. SUMMARY OF SAMPLES

Sample ID	Sample Description	Floor
FAC-42	Carpet Adhesive Ground Floor	Basement
FAC-43	Carpet Adhesive Main Floor	Main
FAC-44	Carpet Adhesive Main Floor	Main
FAC-45	Carpet Adhesive Main Floor	Main
FAC-46	Drywall/Joint Compound	Basement
FAC-47	Drywall/Joint Compound	Basement
FAC-48	Drywall/Joint Compound	Basement
FAC-49	Drywall/Joint Compound	Basement
FAC-50	Drywall/Joint Compound	Main
FAC-51	Drywall/Joint Compound	Main
FAC-52	Drywall/Joint Compound	Main
FAC-53	Brown Mastic On Block Wall	Basement
FAC-54	Brown Mastic On Block Wall	Basement
FAC-55	Brown Mastic On Block Wall	Basement
FAC-56	Plaster (Skim & Brown Coats)	Basement
FAC-57	Plaster (Skim & Brown Coats)	Basement
FAC-58	Plaster (Skim & Brown Coats)	Main
FAC-59	Plaster (Skim & Brown Coats)	Main
FAC-60	Plaster (Skim & Brown Coats)	Main
FAC-61	Drywall w/Wall Paper	Main
FAC-62	Drywall w/Wall Paper	Main
FAC-63	Drywall w/Wall Paper	Main
FAC-64	Drywall w/Wall Paper	Main
FAC-65	Drywall w/Wall Paper	Main
FAC-66	2' x 4' Medium/Large Pinhole Recessed Ceiling Panels	Basement
FAC-67	2' x 4' Medium/Large Pinhole Recessed Ceiling Panels	Basement
FAC-68	2' x 4' Medium/Large Pinhole Recessed Ceiling Panels	Basement
FAC-69	2' x 4' Smooth Ceiling Panels	Main
FAC-70	2' x 4' Smooth Ceiling Panels	Main
FAC-71	2' x 4' Smooth Ceiling Panels	Main
FAC-72	2' x 4' Small/Medium Pinhole Recessed Ceiling Panels	Main
FAC-73	2' x 4' Small/Medium Pinhole Recessed Ceiling Panels	Main
FAC-74	2' x 4' Small/Medium Pinhole Recessed Ceiling Panels	Main
FAC-75	12" x 12" Wavy Pattern Ceiling Panels	Main
FAC-76	12" x 12" Wavy Pattern Ceiling Panels	Main
FAC-77	12" x 12" Wavy Pattern Ceiling Panels	Main
FAC-78	Plaster (Skim & Brown Coats)	Main
FAC-79	Plaster (Skim & Brown Coats)	Main
FAC-80	12" x 12" Heavy Textured Ceiling Panels	Main
FAC-81	12" x 12" Heavy Textured Ceiling Panels	Main
FAC-82	12" x 12" Heavy Textured Ceiling Panels	Main
FAC-83	2' x 4' Medium/Large Pinhole Ceiling Panels	Main
FAC-84	2' x 4' Medium/Large Pinhole Ceiling Panels	Main
FAC-85	2' x 4' Medium/Large Pinhole Ceiling Panels	Main

TABLE I

TABLE I. SUMMARY OF SAMPLES

Sample ID	Sample Description	Floor
FAC-86	Spray Applied Acoustical Ceiling Material	Main
FAC-87	Spray Applied Acoustical Ceiling Material	Main
FAC-88	Spray Applied Acoustical Ceiling Material	Main
FAC-89	Spray Applied Acoustical Ceiling Material	Main
FAC-90	Spray Applied Acoustical Ceiling Material	Main
FAC-91	Brown Fibrous Material	Basement
FAC-92	Drywall/Joint Compound	Basement
FAC-93	Drywall/Joint Compound	Basement
FAC-94	Drywall/Joint Compound	Basement

TABLE I

TABLE II. SUMMARY OF ASBESTOS CONTAINING MATERIALS

Sample ID	Sample Description	% Asbestos
FAC-1	Black HVAC Mastic	8% Chrysotile
FAC-2	Black HVAC Mastic	Positive Stop
FAC-3	Black HVAC Mastic	Positive Stop
FAC-13	Fibrous Board	20% Chrysotile
FAC-14	Fibrous Board	Positive Stop
FAC-15	Fibrous Board	Positive Stop
FAC-20	Black Pipe Mastic	8% Chrysotile
FAC-21	Black Pipe Mastic	Positive Stop
FAC-22	Black Pipe Mastic	Positive Stop
FAC-38	12" x 12" Off-White w/Light Gray/Dark Gray Floor Tile Mastic (Mastic Only)	3% Chrysotile
FAC-39	12" x 12" Off-White w/Light Gray/Dark Gray Floor Tile Mastic (Mastic Only)	Positive Stop
FAC-40	12" x 12" Off-White w/Light Gray/Dark Gray Floor Tile Mastic (Mastic Only)	Positive Stop
FAC-46	Drywall/Joint Compound (Joint Compound Only)	3% Chrysotile
FAC-91	Brown Fibrous Material	4% Chrysotile
--	9" x 9" Floor Tiles & Mastic(Various Colors)	Assumed
--	12" x 12" Floor Tiles & Mastic (Stairwells)	Assumed
--	Stair Tread Mastic	Assumed
--	Exterior materials (roofing materials, caulking, etc.)	Assumed

TABLE II

SUMMARY OF INSPECTION

The following tables summarize the physical assessment data, sampling and assessment results.

As exhibited on these tables, coding is used to abbreviate the asbestos containing materials' (ACM) locations, characteristics and results. These codes are as follows:

TYPES OF ACM:

Misc. = Miscellaneous

Sur. = Surfacing

TSI = Thermal System Insulation

ACM LOCATIONS:

Homogeneous areas = Indicated by Roman Numerals, Room Number or Area Designation

Functional Space No.: Functional Space Type:

1.	MR	=	Mechanical Room
2.	PC	=	Partial Crawlspace
3.	B	=	Basement Floor
4.	H	=	Hallway
5.	O	=	Office
6.	S	=	Studio
7.	BA	=	Bathroom
8.	BR	=	Break room
9.	CR	=	Computer Room
10.	K	=	Kitchen
11.	ST	=	Storage Room
12.	SW	=	Stairwell

ACM CHARACTERISTICS:

F = Friable

NF = Non-Friable

ASSESSMENT RESULTS:

(Refer to Physical Assessment Data)

POTENTIAL FOR DISTURBANCE:

(Refer to Physical Assessment Data)

PHYSICAL ASSESSMENT CATAGORIES:

1. Damaged or significantly damaged friable thermal system insulation ACM.
2. Damaged friable surfacing ACM.
3. Significantly damaged friable surfacing ACM.
4. Damaged or significantly damaged friable miscellaneous ACM.
5. ACM with potential for significant damage.
6. ACM with potential for damage.
7. Any remaining friable ACM or friable suspect ACM.
8. Non-friable ACM.

CLASSIFICATION FOR HAZARD POTENTIAL:

(Tabular Display)

<u>Hazard Rank</u>	<u>ACM Condition</u>	<u>ACM Disturbance Potential</u>
7	Significantly Damaged	Any
6	Damaged	Potential for Significant Damage
5	Damaged	Potential for Damage
4	Damaged	Low
3	Good	Potential for Significant Damage
2	Good	Potential for Damage
1	Good	Low

PHYSICAL ASSESSMENT DATA SHEET

Building: Former Arts Center, 1800 Gervais Street

Functional Space No: 3,4,5,6,11 **Type:** B,H,O,S,ST **Location:** (See Homogeneous Area Plan)

Type of Suspect Material: _____ **TSI** _____ **Surfacing** X **Misc.** _____

Description: HA-1, Various 9" x 9" Floor Tiles and Mastic

Approximate Amount of Material (SF or LF): ~4,800 S.F.

Condition:

Percent Damage: X >0% _____ <10% _____ >10% _____ <25% _____ >25%

Extent of Damage : X Localized _____ X Distributed _____

Type of Damage: X Deterioration _____ X Water _____ Physical _____

Description:

Floor tiles and associated mastics were not sampled as a component of this investigation, but were documented as being asbestos containing materials in the partial O&M Plan. They are material is located throughout the basement portion of the facility, and are found both exposed and beneath carpeting. This material appears to be in a fair and stable condition overall with only localized damage and wear identified in the janitor's closet.

Overall Condition Rating: _____ Sig. Damaged _____ Damaged _____ Good X

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:	_____	_____	<u>X</u>	_____
Influence of Vibration	_____	_____	<u>X</u>	_____
Frequency of Air Erosion	_____	_____	<u>X</u>	_____
Potential of Water Erosion	_____	_____	<u>X</u>	_____

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
_____	_____	<u>8</u>

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
_____	_____	_____	<u>1</u>

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility. Impending renovation activities may impact this material.

Signed: Mike Minay **Date:** 06/01/12

PHYSICAL ASSESSMENT DATA SHEET

Building: Former Arts Center, 1800 Gervais Street

Functional Space Number: 2 **Type:** PC **Location:** (See Homogeneous Area Plan)

Type of Suspect Material: TSI **Surfacing** X **Misc.**

Description: HA-2, Black Mastic on HVAC Ducts

Approximate Amount of Material (SF or LF): ~150 L.F.

Condition:

Percent Damage: X >0% <10% >10% <25% >25%

Extent of Damage : Localized X Distributed

Type of Damage: X Deterioration Water Physical

Description:

Black mastic on seams of original HVAC duct insulation

Overall Condition Rating: Sig. Damaged Damaged Good X

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
Influence of Vibration	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
Frequency of Air Erosion	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
Potential of Water Erosion	<u> </u>	<u> </u>	<u>X</u>	<u> </u>

Overall Potential Disturbance Rating:

Potential for Sig. Damage Potential for Damage Low Potential for Damage
8

Overall Hazard Rank #:

Sig. Damaged Pot. Sig. Damage Potential Damage Low Pot. Damage
1

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility. Impending renovation activities may impact this material.

Signed: Mike Minay **Date:** 06/01/12

PHYSICAL ASSESSMENT DATA SHEET

Building: Former Arts Center, 1800 Gervais Street

Functional Space No: 1 **Type:** MR **Location:** (See Homogeneous Area Plan)

Type of Suspect Material: TSI **Surfacing** X **Misc.**

Description: HA-3, Fibrous Board

Approximate Amount of Material (SF or LF): ~5 S.F.

Condition:

Percent Damage: X >0% <10% >10% <25% >25%

Extent of Damage : Localized X Distributed

Type of Damage: X Deterioration Water Physical

Description:

Located on the wall(s) in the basement floor mechanical room.

Overall Condition Rating: Sig. Damaged Damaged Good X

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
Influence of Vibration	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
Frequency of Air Erosion	<u> </u>	<u> </u>	<u>X</u>	<u> </u>
Potential of Water Erosion	<u> </u>	<u> </u>	<u>X</u>	<u> </u>

Overall Potential Disturbance Rating:

Potential for Sig. Damage Potential for Damage Low Potential for Damage
8

Overall Hazard Rank #:

Sig. Damaged Pot. Sig. Damage Potential Damage Low Pot. Damage
1

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility. Impending renovation activities may impact this material.

Signed: Mike Minay **Date:** 06/01/12

PHYSICAL ASSESSMENT DATA SHEET

Building: Former Arts Center, 1800 Gervais Street

Functional Space No: 1 **Type:** MR **Location:** (See Homogeneous Area Plan)

Type of Suspect Material: TSI **Surfacing** X **Misc.**

Description: HA-4, Black Pipe Mastic

Approximate Amount of Material (SF or LF): ~2 L.F.

Condition:

Percent Damage: X >0% <10% >10% <25% >25%

Extent of Damage : Localized X Distributed

Type of Damage: X Deterioration Water Physical

Description:

Located in the basement floor mechanical room, this material was attached to the top of block wall.

Overall Condition Rating: Sig. Damaged Damaged Good X

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:	<u> </u>	<u> </u>	<u> X </u>	<u> </u>
Influence of Vibration	<u> </u>	<u> </u>	<u> X </u>	<u> </u>
Frequency of Air Erosion	<u> </u>	<u> </u>	<u> X </u>	<u> </u>
Potential of Water Erosion	<u> </u>	<u> </u>	<u> X </u>	<u> </u>

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
<u> </u>	<u> </u>	<u> 8 </u>

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
<u> </u>	<u> </u>	<u> </u>	<u> 1 </u>

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility. Impending renovation activities may impact this material.

Signed: Mike Minay **Date:** 06/01/12

PHYSICAL ASSESSMENT DATA SHEET

Building: Former Arts Center, 1800 Gervais Street

Functional Space No: 7,8,9 **Type:** BA, BR, CR **Location:** (See Homogeneous Area Plan)

Type of Suspect Material: TSI **Surfacing** X **Misc.** _____

Description: HA-5, Floor Tile Mastic beneath Non-Asbestos Floor Tile

Approximate Amount of Material (SF or LF): ~480 S.F.

Condition:

Percent Damage: X >0% _____ <10% _____ >10% _____ <25% _____ >25%

Extent of Damage : _____ Localized _____ X Distributed

Type of Damage: X Deterioration _____ Water _____ Physical

Description:

This mastic is covered by 12" x 12" non-asbestos floor tiles which are therefore to be considered contaminated. If removed, both the floor tiles and the mastic should be treated as asbestos containing waste and properly handled and disposed of accordingly.

Overall Condition Rating: Sig. Damaged _____ Damaged _____ Good X

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:	_____	_____	<u>X</u>	_____
Influence of Vibration	_____	_____	<u>X</u>	_____
Frequency of Air Erosion	_____	_____	<u>X</u>	_____
Potential of Water Erosion	_____	_____	<u>X</u>	_____

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
_____	_____	<u>8</u>

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
_____	_____	_____	<u>1</u>

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility. Impending renovation activities may impact this material.

Signed: Mike Minay Date: 06/01/12

PHYSICAL ASSESSMENT DATA SHEET

Building: Former Arts Center, 1800 Gervais Street

Functional Space No: 4,5,7,8,9,10 **Type:** H, O, BA, BR, CR, K **Location:** (See Homogeneous Area Plan)

Type of Suspect Material: X **TSI** _____ **Surfacing** _____ **Misc.** _____

Description: HA-6, Joint Compound

Approximate Amount of Material (SF or LF): ~5,500 S.F.

Condition:

Percent Damage: X >0% _____ <10% _____ >10% _____ <25% _____ >25%

Extent of Damage: _____ Localized X Distributed

Type of Damage: X Deterioration _____ Water _____ Physical

Description:

This material is located throughout both floors of the subject facility.

Overall Condition Rating: Sig. Damaged _____ Damaged _____ Good X

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:	_____	_____	<u>X</u>	<u>X</u>
Influence of Vibration	_____	_____	<u>X</u>	<u>X</u>
Frequency of Air Erosion	_____	_____	<u>X</u>	<u>X</u>
Potential of Water Erosion	_____	_____	<u>X</u>	<u>X</u>

Overall Potential Disturbance Rating:

Potential for Sig. Damage _____ Potential for Damage 6 Low Potential for Damage _____

Overall Hazard Rank #:

Sig. Damaged _____ Pot. Sig. Damage _____ Potential Damage 2 Low Pot. Damage _____

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility. Impending renovation activities may impact this material.

Signed: Mike Minay **Date:** 06/01/12

PHYSICAL ASSESSMENT DATA SHEET

Building: Former Arts Center, 1800 Gervais Street

Functional Space No: 12 **Type:** SW **Location:** (See Homogeneous Area Plan)

Type of Suspect Material: TSI **Surfacing** X **Misc.**

Description: HA-7, Stair Tread Adhesive

Approximate Amount of Material (SF or LF): ~200 S.F.

Condition:

Percent Damage: X >0% <10% >10% <25% >25%

Extent of Damage : Localized X Distributed

Type of Damage: Deterioration Water X Physical

Description:

This material is located on both stairwells leading to main floor.

Overall Condition Rating: Sig. Damaged Damaged Good X

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:	<u> </u>	<u> </u>	<u> X</u>	<u> </u>
Influence of Vibration	<u> </u>	<u> </u>	<u> X</u>	<u> </u>
Frequency of Air Erosion	<u> </u>	<u> </u>	<u> X</u>	<u> </u>
Potential of Water Erosion	<u> </u>	<u> </u>	<u> X</u>	<u> </u>

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
<u> </u>	<u> </u>	<u> 8</u>

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
<u> </u>	<u> </u>	<u> </u>	<u> 1</u>

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility. Impending renovation activities may impact this material.

Signed: Mike Minay **Date:** 06/01/12

PHYSICAL ASSESSMENT DATA SHEET

Building: Former Arts Center, 1800 Gervais Street

Functional Space No: 12 **Type:** SW **Location:** (See Homogeneous Area Plan)

Type of Suspect Material: TSI **Surfacing** X **Misc.** _____

Description: HA-8, 12" x 12" Gray Floor Tile and Mastic

Approximate Amount of Material (SF or LF): ~80 S.F.

Condition:

Percent Damage: X >0% _____ <10% _____ >10% _____ <25% _____ >25%

Extent of Damage : _____ Localized _____ X Distributed

Type of Damage: _____ Deterioration _____ Water _____ X Physical

Description:

This material is located on both stairwells leading to main floor.

Overall Condition Rating: Sig. Damaged _____ Damaged _____ Good X

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:	_____	_____	<u>X</u>	_____
Influence of Vibration	_____	_____	<u>X</u>	_____
Frequency of Air Erosion	_____	_____	<u>X</u>	_____
Potential of Water Erosion	_____	_____	<u>X</u>	_____

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
_____	_____	<u>8</u>

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
_____	_____	_____	<u>1</u>

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility. Impending renovation activities may impact this material.

Signed: Mike Minay **Date:** 06/01/12

PHYSICAL ASSESSMENT DATA SHEET

Building: Former Arts Center, 1800 Gervais Street

Functional Space No: 12 **Type:** SW **Location:** (See Homogeneous Area Plan)

Type of Suspect Material: TSI X **Surfacing** **Misc.**

Description: HA-9, Unidentified Spray-Applied Fibrous Material

Approximate Amount of Material (SF or LF): ~60 S.F.

Condition:

Percent Damage: X >0% <10% >10% <25% >25%

Extent of Damage : Localized X Distributed

Type of Damage: X Deterioration Water X Physical

Description:

This material is located above a drywall ceiling adjacent to a stairwell on the basement floor. There is evidence of debris falling from the decking and collecting on the upper surface of the drywall ceiling.

Overall Condition Rating: Sig. Damaged Damaged Good X

Potential for Disturbance:

	High	Moderate	Low	Friable ACM
Frequency of Potential Contact:	<u> </u>	<u> </u>	<u>X</u>	<u>X</u>
Influence of Vibration	<u> </u>	<u> </u>	<u>X</u>	<u>X</u>
Frequency of Air Erosion	<u> </u>	<u> </u>	<u>X</u>	<u>X</u>
Potential of Water Erosion	<u> </u>	<u> </u>	<u>X</u>	<u>X</u>

Overall Potential Disturbance Rating:

Potential for Sig. Damage	Potential for Damage	Low Potential for Damage
<u> </u>	<u> </u>	<u>7</u>

Overall Hazard Rank #:

Sig. Damaged	Pot. Sig. Damage	Potential Damage	Low Pot. Damage
<u> </u>	<u> </u>	<u> </u>	<u>1</u>

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the facility. Impending renovation activities may impact this material.

Signed: Mike Minay **Date:** 06/15/12

**EMSL Analytical, Inc.**

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EMSL Order: 021203317

CustomerID: FMEC62

CustomerPO: E5200.08

ProjectID:

Attn: **Glynn Ellen**
F & ME Consultants
3112 Divine Street

Columbia, SC 29205Project: **Former Arts Center, 1800 Gervais St/E5200.08**

Phone: (803) 254-4540
 Fax: (803) 254-4542
 Received: 06/04/12 10:00 AM
 Analysis Date: 6/6/2012
 Collected:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
FAC-1 021203317-0001	HVAC Mastic	Black Fibrous Heterogeneous		92% Non-fibrous (other)	8% Chrysotile
FAC-2 021203317-0002	HVAC Mastic				Stop Positive (Not Analyzed)
FAC-4 021203317-0003	HVAC Mastic	Beige Non-Fibrous Heterogeneous	2% Cellulose	98% Non-fibrous (other)	None Detected
FAC-5 021203317-0004	HVAC Mastic	Gray Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-7 021203317-0005	HVAC Mastic	Gray Non-Fibrous Heterogeneous	2% Cellulose 1% Glass	97% Non-fibrous (other)	None Detected
FAC-8 021203317-0006	HVAC Mastic	Gray Fibrous Heterogeneous	2% Cellulose 1% Glass	97% Non-fibrous (other)	None Detected
FAC-10 021203317-0007	Pipe Wrap Fiberglass Insulation	Brown/Black/Silver Fibrous Heterogeneous	55% Cellulose	45% Non-fibrous (other)	None Detected
FAC-11 021203317-0008	Pipe Wrap Fiberglass Insulation	Tan/Silver Fibrous Heterogeneous	55% Cellulose	45% Non-fibrous (other)	None Detected

Analyst(s)

Eric Loomis (29)

Kristie Elliott (56)

Kyle Collins (6)

Stephen Bennett, Laboratory Manager
or other approved signatory

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Report Amended: 06/06/2012 16:00:41 Replaces the Initial Report 06/06/2012 11:43:23. Reason Code: Client-Additional Analysis



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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
FAC-13 021203317-0009	Fibrous Board	Gray Fibrous Heterogeneous		80% Non-fibrous (other)	20% Chrysotile
FAC-14 021203317-0010	Fibrous Board				Stop Positive (Not Analyzed)
FAC-15 021203317-0011	Fibrous Board				Stop Positive (Not Analyzed)
FAC-16 021203317-0012	Mudded Elbow	Tan Fibrous Heterogeneous	20% Min. Wool 5% Cellulose	75% Non-fibrous (other)	None Detected
FAC-17 021203317-0013	Pipe Mastic				Not Analyzed
Sample bag received empty.					
FAC-18 021203317-0014	Pipe Mastic	Beige Non-Fibrous Heterogeneous	2% Wollastonite <1% Cellulose	98% Non-fibrous (other)	None Detected
FAC-20 021203317-0015	Pipe Mastic	Black Fibrous Heterogeneous	2% Glass 1% Cellulose	89% Non-fibrous (other)	8% Chrysotile
FAC-21 021203317-0016	Pipe Mastic				Stop Positive (Not Analyzed)

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
FAC-23 021203317-0017	Baseboard Adhesive	Beige Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-24 021203317-0018	Baseboard Adhesive	Beige Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-26 021203317-0019	Baseboard Adhesive	Brown/Tan Non-Fibrous Heterogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected
FAC-27 021203317-0020	Baseboard Adhesive	Brown Fibrous Heterogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected
FAC-29 021203317-0021	Fire Stop Caulking	Brown Fibrous Heterogeneous	3% Synthetic	97% Non-fibrous (other)	None Detected
FAC-30 021203317-0022	Fire Stop Caulking	Brown Fibrous Heterogeneous	3% Synthetic	97% Non-fibrous (other)	None Detected
FAC-32 021203317-0023	Ceiling Panels	White/Beige Fibrous Heterogeneous	70% Min. Wool 1% Cellulose	29% Non-fibrous (other)	None Detected
FAC-33 021203317-0024	Ceiling Panels	White/Beige Fibrous Heterogeneous	70% Min. Wool 1% Cellulose	29% Non-fibrous (other)	None Detected

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
FAC-34 021203317-0025	Ceiling Panels	Gray Fibrous Heterogeneous	70% Min. Wool 1% Cellulose	29% Non-fibrous (other)	None Detected
FAC-35 021203317-0026	Ceiling Panels	White/Beige Fibrous Heterogeneous	40% Cellulose 20% Min. Wool	40% Non-fibrous (other)	None Detected
FAC-36 021203317-0027	Ceiling Panels	White/Beige Fibrous Heterogeneous	40% Cellulose 20% Min. Wool	40% Non-fibrous (other)	None Detected
FAC-37 021203317-0028	Ceiling Panels	Black Non-Fibrous Heterogeneous	40% Cellulose 20% Min. Wool	40% Non-fibrous (other)	None Detected
FAC-38-Floor Tile 021203317-0029	Floor Tile & Masstic	Gray/Beige Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-38-Mastic 021203317-0029A	Floor Tile & Masstic	Tan/Black Non-Fibrous Heterogeneous		97% Non-fibrous (other)	3% Chrysotile
FAC-39-Floor Tile 021203317-0030	Floor Tile & Masstic	Gray Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-39-Mastic 021203317-0030A	Floor Tile & Masstic				Stop Positive (Not Analyzed)

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
FAC-41 021203317-0031	Carpet Adhesive	Tan Non-Fibrous Heterogeneous	<1% Cellulose <1% Synthetic	100% Non-fibrous (other)	None Detected
FAC-43 021203317-0032	Carpet Adhesive	Tan Non-Fibrous Heterogeneous	<1% Cellulose <1% Synthetic	100% Non-fibrous (other)	None Detected
FAC-44 021203317-0033	Carpet Adhesive	Tan Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-46-Drywall 021203317-0034	Drywall/Joint Compound	Brown/Gray Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
FAC-46-Joint Compound 021203317-0034A	Drywall/Joint Compound	Tan Non-Fibrous Heterogeneous		97% Non-fibrous (other)	3% Chrysotile
FAC-47-Drywall 021203317-0035	Drywall/Joint Compound	Brown/Gray Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
FAC-47-Joint Compound 021203317-0035A	Drywall/Joint Compound	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-48-Drywall 021203317-0036	Drywall/Joint Compound	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
FAC-48-Joint Compound 021203317-0036A	Drywall/Joint Compound	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-49-Drywall 021203317-0037	Drywall/Joint Compound	Brown/Gray Fibrous Heterogeneous	8% Cellulose 1% Glass	91% Non-fibrous (other)	None Detected
FAC-49-Joint Compound 021203317-0037A	Drywall/Joint Compound	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-50-Drywall 021203317-0038	Drywall/Joint Compound	Brown/Gray Fibrous Heterogeneous	5% Cellulose 1% Glass	94% Non-fibrous (other)	None Detected
FAC-50-Joint Compound 021203317-0038A	Drywall/Joint Compound	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-51-Drywall 021203317-0039	Drywall/Joint Compound	Brown/Gray Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
FAC-51-Joint Compound 021203317-0039A	Drywall/Joint Compound	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
FAC-52-Drywall <i>021203317-0040</i>	Drywall/Joint Compound				Not Analyzed
No drywall present					
FAC-52-Joint Compound <i>021203317-0040A</i>	Drywall/Joint Compound	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-53 <i>021203317-0041</i>	Mastic	Brown Non-Fibrous Heterogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected
FAC-54 <i>021203317-0042</i>	Mastic	Brown Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-56-Skim Coat <i>021203317-0043</i>	Plaster	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-56-Rough Coat <i>021203317-0043A</i>	Plaster	Tan Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-57-Skim Coat <i>021203317-0044</i>	Plaster	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-57-Rough Coat <i>021203317-0044A</i>	Plaster	Tan Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected

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			% Fibrous	% Non-Fibrous	% Type
FAC-58-Skim Coat 021203317-0045	Plaster	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-58-Rough Coat 021203317-0045A	Plaster	Tan Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-59-Skim Coat 021203317-0046	Plaster	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-59-Rough Coat 021203317-0046A	Plaster	Gray Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-60-Skim Coat 021203317-0047	Plaster	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-60-Rough Coat 021203317-0047A	Plaster	Gray Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-61-Drywall 021203317-0048	Drywall with Wall Paper	Brown/Gray Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
FAC-61-Joint Compound 021203317-0048A	Drywall with Wall Paper	White Non-Fibrous Heterogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected

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			% Fibrous	% Non-Fibrous	% Type
FAC-62-Drywall 021203317-0049	Drywall with Wall Paper	Brown/Gray Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
FAC-62-Joint Compound 021203317-0049A	Drywall with Wall Paper	White Non-Fibrous Heterogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected
FAC-63-Drywall 021203317-0050	Drywall with Wall Paper	Brown/Gray Fibrous Heterogeneous	8% Cellulose 1% Glass	91% Non-fibrous (other)	None Detected
FAC-63-Joint Compound 021203317-0050A	Drywall with Wall Paper	White Non-Fibrous Heterogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected
FAC-64-Drywall 021203317-0051	Drywall with Wall Paper	Gray Fibrous Heterogeneous	5% Cellulose 2% Glass	93% Non-fibrous (other)	None Detected
FAC-64-Joint Compound 021203317-0051A	Drywall with Wall Paper	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-65-Drywall 021203317-0052	Drywall with Wall Paper	Gray Fibrous Heterogeneous	5% Cellulose 2% Glass	93% Non-fibrous (other)	None Detected

Analyst(s)

Eric Loomis (29)

Kristie Elliott (56)

Kyle Collins (6)

Stephen Bennett, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Charlotte, NC

Report Amended: 06/06/2012 16:00:41 Replaces the Initial Report 06/06/2012 11:43:23. Reason Code: Client-Additional Analysis

**EMSL Analytical, Inc.**

706 Gralin Street, Kernersville, NC 27284

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EMSL Order: 021203317

CustomerID: FMEC62

CustomerPO: E5200.08

ProjectID:

Attn: **Glynn Ellen**
F & ME Consultants
3112 Divine Street

Columbia, SC 29205Project: **Former Arts Center, 1800 Gervais St/E5200.08**

Phone: (803) 254-4540
 Fax: (803) 254-4542
 Received: 06/04/12 10:00 AM
 Analysis Date: 6/6/2012
 Collected:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
FAC-65-Joint Compound <i>021203317-0052A</i>	Drywall with Wall Paper	White Fibrous Heterogeneous	2%	Cellulose	98% Non-fibrous (other) None Detected
FAC-66 <i>021203317-0053</i>	Ceiling Panels	Tan/White Fibrous Heterogeneous	55% 5%	Cellulose Min. Wool	40% Non-fibrous (other) None Detected
FAC-67 <i>021203317-0054</i>	Ceiling Panels	Tan/White Fibrous Heterogeneous	55% 5%	Cellulose Min. Wool	40% Non-fibrous (other) None Detected
FAC-68 <i>021203317-0055</i>	Ceiling Panels	Gray Fibrous Heterogeneous	55% 5%	Cellulose Min. Wool	40% Non-fibrous (other) None Detected
FAC-69 <i>021203317-0056</i>	Ceiling Panels	Gray/White Fibrous Heterogeneous	45% 10%	Cellulose Min. Wool	45% Non-fibrous (other) None Detected
FAC-70 <i>021203317-0057</i>	Ceiling Panels	Gray/White Fibrous Heterogeneous	45% 10%	Cellulose Min. Wool	45% Non-fibrous (other) None Detected
FAC-71 <i>021203317-0058</i>	Ceiling Panels	Gray Fibrous Heterogeneous	45% 10%	Cellulose Min. Wool	45% Non-fibrous (other) None Detected
FAC-72 <i>021203317-0059</i>	Ceiling Panels	Gray/White Fibrous Heterogeneous	55% 2%	Cellulose Min. Wool	43% Non-fibrous (other) None Detected

Analyst(s)

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Kristie Elliott (56)

Kyle Collins (6)

Stephen Bennett, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Charlotte, NC

Report Amended: 06/06/2012 16:00:41 Replaces the Initial Report 06/06/2012 11:43:23. Reason Code: Client-Additional Analysis

**EMSL Analytical, Inc.**

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CustomerID: FMEC62

CustomerPO: E5200.08

ProjectID:

Attn: **Glynn Ellen**
F & ME Consultants
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Columbia, SC 29205Project: **Former Arts Center, 1800 Gervais St/E5200.08**

Phone: (803) 254-4540
 Fax: (803) 254-4542
 Received: 06/04/12 10:00 AM
 Analysis Date: 6/6/2012
 Collected:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
FAC-73 021203317-0060	Ceiling Panels	Gray/White Fibrous Heterogeneous	55% Cellulose 2% Min. Wool	43% Non-fibrous (other)	None Detected
FAC-74 021203317-0061	Ceiling Panels	Gray Fibrous Heterogeneous	55% Cellulose 2% Min. Wool	43% Non-fibrous (other)	None Detected
FAC-75 021203317-0062	Ceiling Panels	Tan/White Fibrous Heterogeneous	20% Cellulose 40% Min. Wool	40% Non-fibrous (other)	None Detected
FAC-76 021203317-0063	Ceiling Panels	Tan/White Fibrous Heterogeneous	20% Cellulose 40% Min. Wool	40% Non-fibrous (other)	None Detected
FAC-77 021203317-0064	Ceiling Panels	Gray Fibrous Heterogeneous	40% Min. Wool 20% Cellulose	40% Non-fibrous (other)	None Detected
FAC-78-Skim Coat 021203317-0065	Plaster	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-78-Rough Coat 021203317-0065A	Plaster	Tan Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-79-Skim Coat 021203317-0066	Plaster	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)

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Kyle Collins (6)

Stephen Bennett, Laboratory Manager
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Samples analyzed by EMSL Analytical, Inc. Charlotte, NC

Report Amended: 06/06/2012 16:00:41 Replaces the Initial Report 06/06/2012 11:43:23. Reason Code: Client-Additional Analysis



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Phone: (803) 254-4540
Fax: (803) 254-4542
Received: 06/04/12 10:00 AM
Analysis Date: 6/6/2012
Collected:

Project: **Former Arts Center, 1800 Gervais St/E5200.08**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
FAC-79-Rough Coat <i>021203317-0066A</i>	Plaster	Gray Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-80 <i>021203317-0067</i>	Ceiling Panels	Tan/White Fibrous Heterogeneous	75% Min. Wool	25% Non-fibrous (other)	None Detected
FAC-81 <i>021203317-0068</i>	Ceiling Panels	Tan/White Fibrous Heterogeneous	75% Min. Wool	25% Non-fibrous (other)	None Detected
FAC-82 <i>021203317-0069</i>	Ceiling Panels	Gray Fibrous Heterogeneous	75% Min. Wool	25% Non-fibrous (other)	None Detected
FAC-83 <i>021203317-0070</i>	Ceiling Panels	Gray/White Fibrous Heterogeneous	50% Cellulose 2% Min. Wool	48% Non-fibrous (other)	None Detected
FAC-84 <i>021203317-0071</i>	Ceiling Panels	Gray/White Fibrous Heterogeneous	55% Cellulose 2% Min. Wool	43% Non-fibrous (other)	None Detected
FAC-85 <i>021203317-0072</i>	Ceiling Panels	Gray Fibrous Heterogeneous	50% Cellulose 2% Min. Wool	48% Non-fibrous (other)	None Detected
FAC-86 <i>021203317-0073</i>	Acoustical Ceiling Material	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)

Eric Loomis (29) *Kristie Elliott (56)*
Kyle Collins (6)

Stephen Bennett, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Charlotte, NC

Report Amended: 06/06/2012 16:00:41 Replaces the Initial Report 06/06/2012 11:43:23. Reason Code: Client-Additional Analysis

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Project: **Former Arts Center, 1800 Gervais St/E5200.08**


Phone: (803) 254-4540
 Fax: (803) 254-4542
 Received: 06/04/12 10:00 AM
 Analysis Date: 6/6/2012
 Collected:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
FAC-87 021203317-0074	Acoustical Ceiling Material	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-88 021203317-0075	Acoustical Ceiling Material	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-89 021203317-0076	Acoustical Ceiling Material	White Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
FAC-90 021203317-0077	Acoustical Ceiling Material	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)

Eric Loomis (29) Kristie Elliott (56)
Kyle Collins (6)


 Stephen Bennett, Laboratory Manager
 or other approved signatory

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 Samples analyzed by EMSL Analytical, Inc. Charlotte, NC

Report Amended: 06/06/2012 16:00:41 Replaces the Inital Report 06/06/2012 11:43:23. Reason Code: Client-Additional Analysis

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Columbia, SC 29205Phone: (803) 254-4540
Fax: (803) 254-4542
Received: 06/04/12 10:00 AM
Analysis Date: 6/6/2012
Collected:Project: **Former Arts Center, 1800 Gervais St/E5200.08****Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM
via EPA/600/R-93/116 Section 2.5.5.1**

SAMPLE ID	DESCRIPTION	APPEARANCE	% MATRIX MATERIAL	% NON-ASBESTOS FIBERS	ASBESTOS TYPES
FAC-6 021203317-0078	HVAC Mastic	Tan Non-Fibrous Heterogeneous	99.4	0.62 Fibrous (other)	No Asbestos Detected
FAC-9 021203317-0079	HVAC Mastic	Gray Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
FAC-12 021203317-0080	Pipe Wrap Fiberglass Insulation	Tan /Silver Fibrous Heterogeneous	99.8	<0.25 Fibrous (other)	No Asbestos Detected
FAC-19 021203317-0081	Pipe Mastic	Beige Non-Fibrous Heterogeneous	99.5	0.46 Fibrous (other)	No Asbestos Detected
FAC-25 021203317-0082	Baseboard Adhesive	Tan Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
FAC-28 021203317-0083	Baseboard Adhesive	Brown Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
FAC-31 021203317-0084	Fire Stop Caulking	Brown Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
FAC-40-Floor Tile 021203317-0085	Floor Tile & Masstic	Beige Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
FAC-42 021203317-0086	Carpet Adhesive	Tan Non-Fibrous Heterogeneous	100	None	No Asbestos Detected

Analyst(s)

Christopher Estes (11)Stephen Bennett, Laboratory Manager
or other approved signatory

This laboratory is not responsible for % asbestos in total sample when the residue only is submitted for analysis. The above report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. Samples received in good condition unless otherwise noted. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample.
Samples analyzed by EMSL Analytical, Inc. Charlotte, NC

Initial report from 06/06/2012 16:07:59



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EMSL Order: 021203317
CustomerID: FMEC62
CustomerPO: E5200.08
ProjectID:

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Columbia, SC 29205


Project: **Former Arts Center, 1800 Gervais St/E5200.08**

Phone: (803) 254-4540
Fax: (803) 254-4542
Received: 06/04/12 10:00 AM
Analysis Date: 6/6/2012
Collected:

**Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM
via EPA/600/R-93/116 Section 2.5.5.1**

SAMPLE ID	DESCRIPTION	APPEARANCE	% MATRIX MATERIAL	% NON-ASBESTOS FIBERS	ASBESTOS TYPES
FAC-45 021203317-0087	Carpet Adhesive	Tan Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
FAC-55 021203317-0088	Mastic	Brown Non-Fibrous Heterogeneous	100	None	No Asbestos Detected

Analyst(s) _____
Christopher Estes (11)


Stephen Bennett, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Charlotte, NC

Initial report from 06/06/2012 16:07:59

Chain of Custody

3317

EMSL Analytical, Inc.
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Kernersville, NC 27284

Asbestos Lab Services

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Fax: (336) 992-4175
<http://www.emsl.com>

Please print all information legibly.

Company:	F&ME Consultants	Bill To:	F&ME Consultants
Address:	3112 Devine Street	Address:	P.O. Box 5855
City/State:	Columbia, South Carolina	City/State:	Columbia, South Carolina
Zip:	29205	Zip:	29250
Country:	USA	Country:	USA
Name:	Glynn Ellen	Name:	Jim Kelleher
Phone:	803 254-4540	Phone:	803 777-1208
Fax:	803 254-4542	Fax:	803 777-1028
Email:	glynn@fmecon.com	Email:	jkelleher@fmecon.com
Analyst:	Jason McDonald	Analyst:	E5200.08
Location:	Former Arts Center, 1800 Gervais St/E5200.08		

MATRIX			TURNAROUND			
<input type="checkbox"/> Air	<input type="checkbox"/> Soil	<input type="checkbox"/> Micro-Vac	<input type="checkbox"/> 3 Hours	<input type="checkbox"/> 6 Hours	<input type="checkbox"/> Same Day or 12 Hours*	<input type="checkbox"/> 24 Hours (1day)
<input checked="" type="checkbox"/> Bulk	<input type="checkbox"/> Drinking Water		<input type="checkbox"/> 48 Hours (2 days)	<input checked="" type="checkbox"/> 72 Hours (3 days)	<input checked="" type="checkbox"/> 96 Hours (4 days)	<input type="checkbox"/> 120 Hours (5 days)
<input type="checkbox"/> Wipe	<input type="checkbox"/> Wastewater		<input type="checkbox"/> 144+ hours (6-10 days)			

TEM AIR, 3 hours, 6 hours, Please call ahead to schedule. There is a premium charge for 3-hour tat, please call 1-800-220-3675 for price prior to sending samples. You will be asked to sign an authorization form for this service.

*12 hours (must arrive by 11:00a.m. Mon -Fri.), Please Refer to Price Quote

<u>PCM - Air</u>	<u>TEM Air</u>	<u>TEM WATER</u>
<input type="checkbox"/> NIOSH 7400(A) Issue 2: August 1994	<input type="checkbox"/> AHERA 40 CFR, Part 763 Subpart E	<input type="checkbox"/> EPA 100.1
<input type="checkbox"/> OSHA w/TWA	<input type="checkbox"/> NIOSH 7402	<input type="checkbox"/> EPA 100.2
<input type="checkbox"/> Other:	<input type="checkbox"/> EPA Level II	<input type="checkbox"/> NYS 198.2
<u>PLM - Bulk</u>	<u>TEM BULK</u>	<u>TEM Microvac/Wipe</u>
<input checked="" type="checkbox"/> EPA 600/R-93/116	<input type="checkbox"/> Drop Mount (Qualitative)	<input type="checkbox"/> ASTM D 5755-95 (quantative method)
<input type="checkbox"/> EPA Point Count	<input type="checkbox"/> Chatfield SOP - 1988-02	<input type="checkbox"/> Wipe Qualitative
<input type="checkbox"/> NY Stratified Point Count	<input checked="" type="checkbox"/> TEM NOB (Gravimetric) NYS 198.4	
<input type="checkbox"/> PLM NOB (Gravimetric) NYS 198.1	<input type="checkbox"/> EMSL Standard Addition:	<u>XRD</u>
<input type="checkbox"/> NIOSH 9002:		<input type="checkbox"/> Asbestos
<input type="checkbox"/> EMSL Standard Addition:	<u>PLM Soil</u>	<input type="checkbox"/> Silica NIOSH 7500
<u>SEM Air or Bulk</u>	<input type="checkbox"/> EPA Protocol Qualitative	
<input type="checkbox"/> Qualitative	<input type="checkbox"/> EPA Protocol Quantitative	<u>OTHER</u>
<input type="checkbox"/> Quantitative	<input type="checkbox"/> EMSL MSD 9000 Method fibers/gram	<input type="checkbox"/>

3317

Chain of Custody

EMSL Analytical, Inc.
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Kernersville, NC 27284

Asbestos Lab Services

Phone: (336) 992-1025
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<http://www.emsl.com>

Please print all information legibly.

Client Sample # FAC-1 to FAC-90

Total Samples #: 90

Relinquished: Mike Mincey *Mike Mincey* Date: 06/01/12

Time: 17:00

Received: *MV* Date: *6-4-12*

Time: *9:30*

Relinquished: _____ Date: _____

Time: _____

Received: _____ Date: _____

Time: _____

SAMPLE NUMBER	SAMPLE DESCRIPTION/LOCATION	VOLUME (if applicable)
NOTE: FIRST POSITIVE STOP PROTOCOL. ALSO, FOR SAMPLES DENOTED WITH AN ASTERICK (*), IF THE FIRST TWO SAMPLES' RESULTS ARE NEGATIVE, RUN LAST SAMPLE AS TEM BULK FOR NEGATIVE CONFIRMATION. SOUTH CAROLINA GUIDELINES. TEST DRYWALL/JOINT COMPOUND ONLY, NO TAPE TESTING.		
*FAC-1	Black HVAC Mastic	
*FAC-2	Black HVAC Mastic	
*FAC-3	Black HVAC Mastic	
*FAC-4	Tan HVAC Mastic	
*FAC-5	Tan HVAC Mastic	
*FAC-6	Tan HVAC Mastic	
*FAC-7	Gray HVAC Mastic	
*FAC-8	Gray HVAC Mastic	
*FAC-9	Gray HVAC Mastic	
*FAC-10	Old Pipe Wrap Fiberglass Insulation	
*FAC-11	Old Pipe Wrap Fiberglass Insulation	
*FAC-12	Old Pipe Wrap Fiberglass Insulation	
FAC-13	Fibrous Board	
FAC-14	Fibrous Board	
FAC-15	Fibrous Board	
FAC-16	Mudded Elbow	
*FAC-17	White Pipe Mastic	
*FAC-18	White Pipe Mastic	
*FAC-19	White Pipe Mastic	
*FAC-20	Black Pipe Mastic	
*FAC-21	Black Pipe Mastic	
*FAC-22	Black Pipe Mastic	

*FAC-23	Tan Baseboard Adhesive	
*FAC-24	Tan Baseboard Adhesive	
*FAC-25	Tan Baseboard Adhesive	
*FAC-26	Brown Baseboard Adhesive	
*FAC-27	Brown Baseboard Adhesive	
*FAC-28	Brown Baseboard Adhesive	
*FAC-29	Brown Fire Stop Caulking	
*FAC-30	Brown Fire Stop Caulking	
*FAC-31	Brown Fire Stop Caulking	
FAC-32	2' x 4' Small Pinhole Ceiling Panels	
FAC-33	2' x 4' Small Pinhole Ceiling Panels	
FAC-34	2' x 4' Small Pinhole Ceiling Panels	
FAC-35	2' x 4' Small/Medium Pinhole Ceiling Panels	
FAC-36	2' x 4' Small/Medium Pinhole Ceiling Panels	
FAC-37	2' x 4' Small/Medium Pinhole Ceiling Panels	
*FAC-38	12" x 12" Off-White w/Light Gray/Dark Gray Floor Tile & Mastic	
*FAC-39	12" x 12" Off-White w/Light Gray/Dark Gray Floor Tile & Mastic	
*FAC-40	12" x 12" Off-White w/Light Gray/Dark Gray Floor Tile & Mastic	
*FAC-41	Carpet Adhesive Ground Floor	
*FAC-42	Carpet Adhesive Ground Floor	
*FAC-43	Carpet Adhesive Main Floor	
*FAC-44	Carpet Adhesive Main Floor	
*FAC-45	Carpet Adhesive Main Floor	
FAC-46	Drywall/Joint Compound	
FAC-47	Drywall/Joint Compound	
FAC-48	Drywall/Joint Compound	
FAC-49	Drywall/Joint Compound	
FAC-50	Drywall/Joint Compound	
FAC-51	Drywall/Joint Compound	
FAC-52	Drywall/Joint Compound	
*FAC-53	Brown Mastic On Block Wall	
*FAC-54	Brown Mastic On Block Wall	
*FAC-55	Brown Mastic On Block Wall	
FAC-56	Plaster (Skim & Brown Coats)	
FAC-57	Plaster (Skim & Brown Coats)	
FAC-58	Plaster (Skim & Brown Coats)	
FAC-59	Plaster (Skim & Brown Coats)	
FAC-60	Plaster (Skim & Brown Coats)	
FAC-61	Drywall w/Wall Paper	
FAC-61	Drywall w/Wall Paper	

3317



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Columbia, SC 29205

Project: **Former Arts Center, 1800 Gervais St/E5200.08**


Phone: (803) 254-4540
Fax: (803) 254-4542
Received: 06/14/12 9:45 AM
Analysis Date: 6/14/2012
Collected:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
FAC-91 <i>021203599-0001</i>	Brown Fibrous Material	Tan Fibrous Heterogeneous	1% Cellulose	95% Non-fibrous (other)	4% Chrysotile

Analyst(s)

Kristie Elliott (1)


Stephen Bennett, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported 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. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample.
Samples analyzed by EMSL Analytical, Inc. Kernersville, NC NVLAP Lab Code 102104-0, CA ELAP 2689, Virginia 3333-000228, West Virginia LT000321

Initial report from 06/14/2012 10:40:50

Asbestos Lab Services

Phone: (336) 992-1025
Fax: (336) 992-4175
<http://www.emsl.com>

Please print all information legibly.

F&ME Consultants	F&ME Consultants
3112 Devine Street	P.O. Box 5855
Columbia, South Carolina	Columbia, South Carolina
29205	29250
USA	USA
Glynn Ellen	Jim Kelleher
803 254-4540	803 777-1208
803 254-4542	803 777-1028
glynn@fmecon.com	jkelleher@fmecon.com
Jason McDonald	E5200.08
Former Arts Center, 1800 Gervais St/E5200.08	

MATRIX			TURNAROUND			
<input type="checkbox"/> Air	<input type="checkbox"/> Soil	<input type="checkbox"/> Micro-Vac	<input type="checkbox"/> 3 Hours	<input type="checkbox"/> 6 Hours	<input type="checkbox"/> Same Day or 12 Hours*	<input checked="" type="checkbox"/> 24 Hours (1day)
<input checked="" type="checkbox"/> Bulk	<input type="checkbox"/> Drinking Water		<input type="checkbox"/> 48 Hours (2 days)	<input type="checkbox"/> 72 Hours (3 days)	<input type="checkbox"/> 96 Hours (4 days)	<input type="checkbox"/> 120 Hours (5 days)
<input type="checkbox"/> Wipe	<input type="checkbox"/> Wastewater		<input type="checkbox"/> 144+ hours (6-10 days)			

TEM AIR, 3 hours, 6 hours, Please call ahead to schedule. There is a premium charge for 3-hour tat, please call 1-800-220-3675 for price prior to sending samples. You will be asked to sign an authorization form for this service.
*12 hours (must arrive by 11:00a.m. Mon -Fri.), Please Refer to Price Quote

<u>PCM - Air</u>	<u>TEM Air</u>	<u>TEM WATER</u>
<input type="checkbox"/> NIOSH 7400(A) Issue 2: August 1994	<input type="checkbox"/> AHERA 40 CFR, Part 763 Subpart E	<input type="checkbox"/> EPA 100.1
<input type="checkbox"/> OSHA w/TWA	<input type="checkbox"/> NIOSH 7402	<input type="checkbox"/> EPA 100.2
<input type="checkbox"/> Other:	<input type="checkbox"/> EPA Level II	<input type="checkbox"/> NYS 198.2
<u>PLM - Bulk</u>	<u>TEM BULK</u>	<u>TEM Microvac/Wipe</u>
<input checked="" type="checkbox"/> EPA 600/R-93/116	<input type="checkbox"/> Drop Mount (Qualitative)	<input type="checkbox"/> ASTM D 5755-95 (quantative method)
<input type="checkbox"/> EPA Point Count	<input type="checkbox"/> Chatfield SOP - 1988-02	<input type="checkbox"/> Wipe Qualitative
<input type="checkbox"/> NY Stratified Point Count	<input type="checkbox"/> TEM NOB (Gravimetric) NYS 198.4	
<input type="checkbox"/> PLM NOB (Gravimetric) NYS 198.1	<input type="checkbox"/> EMSL Standard Addition:	<u>XRD</u>
<input type="checkbox"/> NIOSH 9002:		<input type="checkbox"/> Asbestos
<input type="checkbox"/> EMSL Standard Addition:	<u>PLM Soil</u>	<input type="checkbox"/> Silica NIOSH 7500
<u>SEM Air or Bulk</u>	<input type="checkbox"/> EPA Protocol Qualitative	
<input type="checkbox"/> Qualitative	<input type="checkbox"/> EPA Protocol Quantitative	<u>OTHER</u>
<input type="checkbox"/> Quantitative	<input type="checkbox"/> EMSL MSD 9000 Method fibers/gram	<input type="checkbox"/>

**EMSL Analytical, Inc.**

706 Gralin Street, Kernersville, NC 27284

Phone/Fax: (336) 992-1025 / (336) 992-4175

greensborolab@emsl.com

EMSL Order: 021203626

CustomerID: FMEC62

CustomerPO: E5200.08

ProjectID:

Attn: **Glynn Ellen**
F & ME Consultants
3112 Divine Street

Columbia, SC 29205Project: **Former Arts Center, 1800 Gervais St/E5200.08**

Phone: (803) 254-4540
 Fax: (803) 254-4542
 Received: 06/15/12 10:00 AM
 Analysis Date: 6/15/2012
 Collected:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
FAC-92-Drywall 021203626-0001	Drywall/Joint Compound	Brown/Gray Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
FAC-92-Joint Compound 021203626-0001A	Drywall/Joint Compound	White Non-Fibrous Heterogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected
FAC-93-Drywall 021203626-0002	Drywall/Joint Compound	Brown/Gray Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
FAC-93-Joint Compound 021203626-0002A	Drywall/Joint Compound	White Non-Fibrous Heterogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected
FAC-94-Drywall 021203626-0003	Drywall/Joint Compound	Brown/Gray Fibrous Heterogeneous	10% Cellulose 2% Glass	88% Non-fibrous (other)	None Detected
FAC-94-Joint Compound 021203626-0003A	Drywall/Joint Compound	White Non-Fibrous Heterogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected

Analyst(s)

Nicole Shutts (4)
 Stephen Bennett (2)

Stephen Bennett, Laboratory Manager
 or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Kernersville, NC NVLAP Lab Code 102104-0, CA ELAP 2689, Virginia 3333-000228, West Virginia LT000321

Initial report from 06/15/2012 11:37:29

Chain of Custody

3626

EMSL Analytical, Inc.
706 Gralin Street
Kernersville, NC 27284

Asbestos Lab Services

Phone: (336) 992-1025
Fax: (336) 992-4175
<http://www.emsl.com>

Please print all information legibly.

Company:	F&ME Consultants	Bill To:	F&ME Consultants
Address1:	3112 Devine Street	Address1:	P.O. Box 5855
Address2:		Address2:	
City, State:	Columbia, South Carolina	City, State:	Columbia, South Carolina
Zip/Post Code:	29205	Zip/Post Code:	29250
Country:	USA	Country:	USA
Contact Name:	Glynn Ellen	Attn:	Jim Kelleher
Phone:	803 254-4540	Phone:	803 777-1208
Fax:	803 254-4542	Fax:	803 777-1028
Email:	glynn@fmeacol.com	Email:	jkelleher@fmeacol.com
EMSL Rep:	Jason McDonald	P.O. Number:	E5200.08
Project Name/Number:	Former Arts Center, 1800 Gervais St/E5200.08		

MATRIX			TURNAROUND			
<input type="checkbox"/> Air	<input type="checkbox"/> Soil	<input type="checkbox"/> Micro-Vac	<input type="checkbox"/> 3 Hours	<input checked="" type="checkbox"/> 6 Hours	<input type="checkbox"/> Same Day or 12 Hours*	<input type="checkbox"/> 24 Hours (1day)
<input checked="" type="checkbox"/> Bulk	<input type="checkbox"/> Drinking Water		<input type="checkbox"/> 48 Hours (2 days)	<input type="checkbox"/> 72 Hours (3 days)	<input type="checkbox"/> 96 Hours (4 days)	<input type="checkbox"/> 120 Hours (5 days)
<input type="checkbox"/> Wipe	<input type="checkbox"/> Wastewater		<input type="checkbox"/> 144+ hours (6-10 days)			

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<u>PCM - Air</u>	<u>TEM Air</u>	<u>TEM WATER</u>
<input type="checkbox"/> NIOSH 7400(A) Issue 2: August 1994	<input type="checkbox"/> AHERA 40 CFR, Part 763 Subpart E	<input type="checkbox"/> EPA 100.1
<input type="checkbox"/> OSHA w/TWA	<input type="checkbox"/> NIOSH 7402	<input type="checkbox"/> EPA 100.2
<input type="checkbox"/> Other:	<input type="checkbox"/> EPA Level II	<input type="checkbox"/> NYS 198.2
<u>PLM - Bulk</u>	<u>TEM BULK</u>	<u>TEM Microvac/Wipe</u>
<input checked="" type="checkbox"/> EPA 600/R-93/116	<input type="checkbox"/> Drop Mount (Qualitative)	<input type="checkbox"/> ASTM D 5755-95 (quantative method)
<input type="checkbox"/> EPA Point Count	<input type="checkbox"/> Chatfield SOP - 1988-02	<input type="checkbox"/> Wipe Qualitative
<input type="checkbox"/> NY Stratified Point Count	<input type="checkbox"/> TEM NOB (Gravimetric) NYS 198.4	
<input type="checkbox"/> PLM NOB (Gravimetric) NYS 198.1	<input type="checkbox"/> EMSL Standard Addition:	<u>XRD</u>
<input type="checkbox"/> NIOSH 9002:		<input type="checkbox"/> Asbestos
<input type="checkbox"/> EMSL Standard Addition:	<u>PLM Soil</u>	<input type="checkbox"/> Silica NIOSH 7500
<u>SEM Air or Bulk</u>	<input type="checkbox"/> EPA Protocol Qualitative	
<input type="checkbox"/> Qualitative	<input type="checkbox"/> EPA Protocol Quantitative	<u>OTHER</u>
<input type="checkbox"/> Quantitative	<input type="checkbox"/> EMSL MSD 9000 Method fibers/gram	

APPENDIX C

Personnel Certifications

SCDHEC ISSUED
Asbestos ID Card

Michael Mincey

Expires



CONSULTMP
AIRSAMPLER
SUPERAHERA

MP-00161 02/12/13
AS-00272 02/12/13
SA-01424 02/12/13

SCDHEC ISSUED
Asbestos ID Card

Glynn M Ellen

Expires



AIRSAMPLER
CONSULTPD
CONSULTMP
SUPERHERA

AS-00079 02/13/13
PD-00098 06/30/12
ASB-22641 02/12/13
SA-00455 02/13/13

APPENDIX D

SCDHEC Regulation Summary

SCDHEC Abatement Project Forms

Air Quality

Asbestos - Regulatory Information

RENOVATIONS & DEMOLITIONS

Note: This information should serve as a guide only and is not intended to replace the regulations. For additional information concerning DHEC and EPA regulations, contact DHEC's Asbestos Section at (803) 898-4289. Information regarding the OSHA asbestos standards may be obtained from the South Carolina Department of Labor, Licensing and Regulation at (803) 734-9669.

APPLICABILITY

Renovation and demolition of most facilities, including buildings, structures, and other installations, are subject to State and Federal asbestos regulations. Certain residential buildings may be exempt unless the property was used in the past for non-residential purposes (contact the Asbestos Section for additional information) or is part of a larger development such as highway right-of-way, mall development, urban renewal or other type of similar development. The facility owner and the renovation or demolition contractor are both responsible for ensuring compliance with these regulations.

DEFINITIONS

Renovation means altering a facility or one or more facility components in any way, including the stripping or removal of regulated asbestos-containing material (RACM) from a facility component. "Remodeling" is considered renovation.

Demolition is the wrecking or taking out of any load-supporting structural member of a facility and any related handling operations. Structural burns are prohibited by State Open Burning Regulations.

INSPECTION FOR ASBESTOS

Before a facility or a portion of a facility is renovated or demolished, the owner/operator of the facility or renovation or demolition activity must ensure that the facility or portion of the facility being renovated or demolished has been thoroughly inspected for the presence of asbestos. The inspection must be performed by a person who has been trained and licensed as an Asbestos Building Inspector or management planner in accordance with State training and licensing requirements.

The inspector must identify, quantify, and assess the condition of all suspect asbestos-containing materials, either friable or non-friable, on interior and exterior portions of the facility. The inspector must also comply with the procedures specified in 40 CFR 763.86 in determining sampling locations and the number of representative samples to be collected. In addition, the

inspector is required to prepare a written report detailing the findings of the inspection. At a minimum, the report must include information required in 40 CFR 763.85 (a)(4)(vi)(A)-(E), as well as the date of inspection and the name, license number, and signature of the licensed Asbestos Building Inspector or Management Planner who performed the inspection and completed the report. A legible copy of the building inspection report must be provided to the Department prior to each demolition, and upon request for renovations. **(Note: "BUILDING INSPECTIONS" can be consulted for a detailed explanation of the aforementioned sampling and reporting protocols.)**

A building inspection will only be acceptable if performed **within three years** prior to the demolition or renovation. If an inspection report is more than three years old, then it must be confirmed and verified by a licensed Asbestos Building Inspector or Management Planner.-

FRIABLE ASBESTOS-CONTAINING MATERIALS

If friable asbestos-containing materials (e.g., pipe insulation) are present, they must be removed prior to being disturbed during renovation or demolition activities. Removal (abatement) must be performed by trained, licensed persons using procedures detailed in State and Federal regulations.

A project design must be prepared for each asbestos abatement project involving the abatement of greater than 3,000 square feet, 1,500 linear feet and/or 656 cubic feet of RACM in a facility to be reoccupied. Such designs must be prepared by a person licensed by the Department as an Asbestos Project Designer.

NON-FRIABLE ASBESTOS-CONTAINING MATERIALS

During renovations, removal of non-friable materials (e.g., vinyl-asbestos floor tiles and sheet flooring, mastics, asphaltic roofing, and asbestos-cement siding and roofing tiles) may be regulated. Applicability is dependent upon the removal methods to be used. If it can be anticipated that non-friable materials will be ground, crumbled, sanded, abraded, chipped or pulverized, the removal is subject to the same rules as removal of friable materials.

Prior to any demolition, non-friable asbestos-cement products (e.g., transite siding, exterior siding and roofing shingles) must be removed. Asbestos-containing sheet flooring and floor tiles, as well as asphaltic roofing products, need not be removed if they are in good condition and have not become brittle and are not peeling, cracking, or crumbling. Otherwise, they must also be removed prior to demolition. If it can be anticipated that non-friable materials will be ground, crumbled, sanded, abraded, chipped or pulverized, the materials must be removed and the removal is subject to the same rules as removal of friable materials. The amount of any non-friable asbestos that will remain in place during demolition must also be indicated on the written notification form.

All asbestos-containing materials must be removed if the facility will be demolished by non-standard demolition techniques such as implosion, explosion, or intentional burning.

NOTIFICATION FOR RENOVATIONS AND DEMOLITIONS

Prior to removing regulated asbestos-containing materials, written notification must be submitted to the Department (up to 10 working days in advance, depending on the amount of asbestos to be removed). The notification must include certain required items of information about the owner, the contractor, the facility, and the asbestos removal project. Required fees must be submitted along with the notification. You must obtain a permit from the Department prior to the renovation activity.

Prior to the demolition of any regulated facility, written notification must be submitted to the Department *at least 10 working days* in advance **even if a building inspector determines that asbestos is not present at the facility**. The notification must include certain required items of information about the owner, the contractor, the facility, and the demolition project. Required fees and a copy of the building inspector's report must be submitted along with the notification of demolition. You must obtain a permit from the Department prior to the demolition activity.

DISPOSAL

Never burn any asbestos-containing waste material.

Non-asbestos-containing demolition debris and debris which contains only non-regulated roofing or flooring may be disposed of at a DHEC-approved disposal site for cellulosic or inert waste. Waste consolidation activities involving grinding, cutting, or compacting of non-friable asbestos-containing materials will subject these materials to more stringent State and Federal asbestos disposal regulations.

Regulated asbestos waste must be handled by properly licensed asbestos abatement personnel and disposed of at a landfill permitted to accept regulated asbestos waste. A list of approved landfills may be obtained from the Asbestos Section.

REGULATORY REQUIREMENTS FOR BUILDING INSPECTION

As required by the National Emission Standard for Hazardous Air Pollutants (NESHAP) and SCDHEC Regulation 61-86.1, an owner/operator shall ensure that a building inspection to detect the presence of asbestos-containing materials (ACM) has been performed prior to any renovation or demolition activity at a regulated facility.

Under SCDHEC Regulation 61-86.1, Section VI.A.6., an inspection cannot have been performed more than three years prior to a renovation or demolition activity. If more than three years have elapsed since the most recent inspection, the previous inspection shall be confirmed and verified by a licensed building inspector and/or management planner.

SCDHEC Regulation 61-86.1 requires that all inspections be performed by persons trained and licensed as either a building inspector and/or management planner. In order to be licensed in these disciplines, persons must have successfully completed a Department approved initial training course specific to inspecting for ACM in a building and/or a course specific to

management planning for ACM in a building. Persons must also have taken and passed an examination at the end of the course with a score of 70 percent or above.

In performing inspections, SCDHEC Regulation 61-86.1 requires that a building inspector and/or management planner comply with the requirements of Section VI, Asbestos Building Inspection Requirements. An inspection shall include samples from suspect friable and non-friable ACM on interior and exterior portions of a facility or its facility components.

In performing inspections, SCDHEC Regulation 61-86.1 requires that a building inspector and/or management planner follow specific sampling procedures. According to Section IV.B.3.a of the regulation, a building inspector and/or management planner shall comply with the procedures specified in **40 CFR 763.86** in determining sampling locations and the number of representative samples to be collected. An inspection shall include samples from suspect friable and non-friable ACM on interior and exterior portions of a facility or its facility components.

Under 40 CFR Part 763.86, suspect ACM are divided into three categories: surfacing materials, thermal system insulation (commonly referred to as TSI), and miscellaneous materials. SCDHEC Regulation 61-86.1, Section VI contains sampling procedures specific to each category of material.

Surfacing material includes, but is not limited to, joint compound, plaster, and painted, troweled on, or spray-applied textured material. To remain in compliance with SCDHEC Regulation 61-86.1, surfacing materials on exterior and interior portions of a facility shall be sampled according to procedures outlined in SCDHEC Regulation 61-86.1, Section VI.D.1. (a)-(c):

- A licensed asbestos inspector shall collect, in a statistically random manner, a minimum of three bulk samples from each homogeneous area of any surfacing that is not assumed to be ACM, and shall collect the samples as follows:
 - At least three bulk samples shall be collected from each homogeneous area that is 1,000 or fewer square feet (sf) or linear feet (Lf) in size.
 - At least five bulk samples shall be collected from each homogeneous area that is greater than 1,000 but fewer than or equal to 5,000 sf or Lf.
 - At least seven bulk samples shall be collected from each homogeneous area that is greater than 5,000 sf or Lf.

Thermal system insulation (TSI) is any material that is applied to pipes, fittings, boilers, breeching, tanks, ducts, or other facility components for the purpose of preventing heat loss or gain, water condensation, or for other purposes. **Miscellaneous Material** is any material that is not considered a surfacing material or thermal system insulation and includes, but is not limited to, flooring, roofing, mastics, gaskets, cementitious materials, caulking, ceiling tiles, fire doors, wall boards, and flexible duct connections. To remain in compliance with SCDHEC Regulation 61-86.1, TSI and miscellaneous materials on exterior and interior portions of a facility shall be sampled in accordance with procedures outlined in SCDHEC Regulation 61-86.1, Section VI.D.2:

- A licensed asbestos inspector shall collect, in a statistically random manner, at least three bulk samples from each homogeneous area of TSI and any miscellaneous material that is not assumed to be ACM.
- In accordance with ASTM E2356, and any subsequent amendments and editions, negative results for non-friable organically bound materials (NOB) shall be verified with at least one TEM analysis.
- NOBs include flooring, roofing, mastics, adhesives, caulks, and glazing.
- If an accredited inspector has determined the thermal system insulation to be fiberglass, foam glass, rubber, or other non-suspect material, then bulk samples are not required.

SCDHEC Regulation 61-86.1, Section VI.C requires that a building inspector and/or management planner prepare a written asbestos building inspection report to include the following:

- A title page denoting: (1) The client's name, company, address, and telephone number, and the name and exact location of the facility inspected; (2) the date the inspection was performed; (3) the date the inspection report was written; and (4) the printed name and telephone number of the inspector(s), and his or her affiliated company name, address, and telephone number.
- A cover letter to the building owner or owner's representative that describes the purpose of the inspection; a general synopsis of the inspection and results; and the name, title, and signature of the inspector(s) and report writer, if different.
- A detailed narrative of the physical description of the building or part of the building affected by the renovation or demolition operation that includes: (1) The square footage of the building or part of the building affected by the renovation or demolition operation; (2) The building materials used in the construction of the exterior, roof, interior, and basement or crawlspace of the building affected by the demolition or affected by the renovation materials operation; (3) An estimated or exact quantity (square or linear feet) for all suspect materials whether sampled for or assumed to be asbestos that may be affected by the renovation or demolition operation; (4) Also include a description of non-suspect materials excluding: glass, metals, kiln brick, cement, fiberglass, concrete, pressed wood, cinder block, and rubber.
- An executive summary that details: (1) The type of suspect ACM (e.g., TSI, floor tile, mastic), total square or linear footage, and the total number of samples collected for each separate homogenous area affected by the renovation or demolition operation; (2) The date of the inspection, type, condition, quantity, sample results, and exact location of ACM positively identified or assumed to be ACM in the part of the building affected by the renovation or demolition operation; (3) A list of the homogeneous areas identified; (4) Whether the material is accessible for the building or part of the building affected by the renovation or demolition operation; and (5) The material's potential for disturbance for the building or part of the building affected by the renovation or demolition operation.
- For renovation and demolition operations, the inspector's determination that ACM is friable or non-friable.
- Except when suspect ACM materials are assumed to be asbestos, include a complete, clear, legible copy of all laboratory bulk sample results.

- Clear, legible drawings and/or photographs to clarify the scope of the renovation or demolition operation. Illustrate the exact location of each sample collected. For facilities that involve a trade secret or confidential component or an affected area process, a request for a variance may be submitted.
- The printed name and signature of each accredited inspector who collected the samples, and a clear legible copy of his or her Department issued asbestos building inspector or management planner license



ASBESTOS ABATEMENT PROJECT LICENSE APPLICATION
 BUREAU OF AIR QUALITY • ASBESTOS SECTION • 2600 BULL STREET • COLUMBIA • SC • 29201

TYPE OF OPERATION: Standard Removal Emergency Removal Enclosure Encapsulation Cleanup Disposal

FOR OFFICE USE Postmark/Received: _____	Original/Revised/Cancellation (circle one)	Project License I.D. (For Revisions/Cancellations): _____
--	--	---

I. FACILITY OWNER: _____
 MAILING ADDRESS: _____
 CITY: _____ STATE: _____ ZIP: _____
 CONTACT PERSON: _____ PHONE: (____) _____

II. REMOVAL CONTRACTOR: _____
 MAILING ADDRESS: _____
 CITY: _____ STATE: _____ ZIP: _____
 CONTACT PERSON: _____ PHONE: (____) _____
 DHEC CONTRACTOR LICENSE NO. (If applicable): _____ EXPIRATION DATE: _____

III. FACILITY NAME: _____
 STREET ADDRESS: _____
 CITY: _____ STATE: _____ COUNTY: _____
 SITE (ROOM, FLOOR, WING, UNIT, MACHINE, ETC.): _____
 BUILDING SIZE: _____ NO. OF FLOORS: _____ AGE IN YEARS: _____
 PRESENT USE: _____ PRIOR USE: _____ FUTURE USE: _____

IV. PROCEDURES, INCLUDING ANALYTICAL METHOD IF APPROPRIATE, USED TO DETECT THE PRESENCE OF ASBESTOS MATERIAL:
 FACILITY OR FACILITY COMPONENT SURVEYED BY (INSPECTOR NAME): _____
 COMPANY: _____ PHONE: (____) _____
 DHEC LICENSE NUMBER: _____ EXPIRATION DATE: _____

V. PROJECT DESIGN PERFORMED BY (IF APPLICABLE): _____
 COMPANY: _____ PHONE: (____) _____
 DHEC LICENSE NUMBER: _____ EXPIRATION DATE: _____

VI. ASBESTOS-CONTAINING MATERIALS (ACM) **TO BE REMOVED ONLY:**

TYPE (TSI, SURFACING, FLOORING, ROOFING, ETC.)	AMOUNT (SQUARE FEET, LINEAR FEET, CUBIC FEET)	CONDITION (CIRCLE ONE)
		<input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable
		<input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable
		<input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable
		<input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable

VII. SCHEDULED DATES OF REMOVAL: START DATE: _____ COMPLETION DATE: _____
 WORK DAYS: _____ WORK HOURS: _____

<p>APPLICATIONS MUST BE SUBMITTED WITH FEES PRIOR TO THE SCHEDULED START DATE AS FOLLOWS:</p> <p>NESHAP PROJECTS: 10 WORKING DAYS SMALL PROJECTS: 5 CALENDAR DAYS MINOR PROJECTS: PRIOR TO ABATEMENT Non-Friable (NESHAP-sized) Projects: 4 working days. No fee for non-friable ACM.</p>	<p>FEE SCHEDULE FOR FRIABLE ASBESTOS-CONTAINING MATERIALS:</p> <p>10 CENTS PER SQUARE FOOT OR LINEAR FOOT MINIMUM FEE OF \$25.00 MAXIMUM FEE OF \$1000.00</p>
---	--

VIII. DESCRIPTION OF PLANNED ABATEMENT WORK & METHOD(S) TO BE USED:

IX. DESCRIPTION OF WORK PRACTICES & ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS OF ASBESTOS AT THE RENOVATION:

X. WASTE TRANSPORTER #1: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (_____) _____

WASTE TRANSPORTER #2: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (_____) _____

XI. WASTE DISPOSAL SITE: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (_____) _____

TEMPORARY ASBESTOS STORAGE CONTAINMENT AREA LICENSE NUMBER (IF APPLICABLE): _____

XII. DESCRIPTION OF EMERGENCY REMOVAL (PLEASE ATTACH A LETTER FROM THE FACILITY OWNER EXPLAINING THE NATURE OF THE EMERGENCY)

DATE & HOUR OF EMERGENCY (MM/DD/YY): _____

DESCRIPTION OF SUDDEN, UNEXPECTED EVENT:

EXPLANATION OF HOW THE EVENT CAUSED UNSAFE CONDITIONS AND/OR WOULD CAUSE EQUIPMENT DAMAGE AND/OR AN UNREASONABLE FINANCIAL BURDEN:

XIII. DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NON-FRIABLE ASBESTOS MATERIAL BECOMES CRUMBLED, PULVERIZED OR REDUCED TO POWDER:

XIV. I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS OF REGULATION (40 CFR PART 61, SUBPART M) WILL BE ON-SITE DURING THE RENOVATION AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE FOR INSPECTION DURING NORMAL BUSINESS HOURS.

(SIGNATURE OF OWNER/OPERATOR)

(DATE)

XIV. I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT.

(SIGNATURE OF OWNER/OPERATOR)

(DATE)



DEMOLITION LICENSE APPLICATION

BUREAU OF AIR QUALITY • ASBESTOS SECTION • 2600 BULL STREET • COLUMBIA • SC • 29201

TYPE OF OPERATION: Total Demolition Partial Demolition Ordered Demolition

FOR OFFICE USE

Postmark/Received:

Original/Revised/Cancellation (circle one)

Project License I.D. (For Revisions/Cancellations):

I. FACILITY OWNER: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (____) _____

II. IS ASBESTOS PRESENT IN THE FACILITY?: YES / NO (check one)

III. DEMOLITION CONTRACTOR: _____ FEDERAL ID NO.: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (____) _____

ASBESTOS REMOVAL CONTRACTOR (If applicable): _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (____) _____

IV. FACILITY NAME: _____

STREET ADDRESS: _____

CITY: _____ STATE: _____ COUNTY: _____

SITE (ROOM, FLOOR, WING, UNIT, MACHINE, ETC.): _____

BUILDING SIZE: _____ NO. OF FLOORS: _____ AGE IN YEARS: _____

PRESENT USE: _____ PRIOR USE: _____ FUTURE USE: _____

V. PROCEDURES, INCLUDING ANALYTICAL METHOD IF APPROPRIATE, USED TO DETECT THE PRESENCE OF ASBESTOS MATERIAL:

FACILITY OR FACILITY COMPONENT SURVEYED BY (INSPECTOR NAME): _____

COMPANY: _____ PHONE: (____) _____

DHEC LICENSE NUMBER: _____ EXPIRATION DATE: _____

VI. NON-FRIABLE MASTIC, GLUE, AND ADHESIVE ASBESTOS-CONTAINING MATERIALS **REMAINING IN PLACE DURING DEMOLITION** (IF APPLICABLE):

TYPE (MASTIC, GLUE, AND ADHESIVE)	AMOUNT (SQUARE FEET)

VII. SCHEDULED DATES OF DEMOLITION (YOU MUST SPECIFY DATES):

START DATE: _____ COMPLETION DATE: _____

WORK DAYS: _____ WORK HOURS: _____

- APPLICATIONS MUST BE MAILED ALONG WITH A \$50.00 FEE (PAYABLE TO SCDHEC) AT LEAST 10 WORKING DAYS PRIOR TO THE SCHEDULED START DATE. FAXES WILL NOT BE ACCEPTED.
- A COPY OF AN ASBESTOS SURVEY REPORT (NO OLDER THAN 3 YEARS) MUST ACCOMPANY THE APPLICATION.

VIII. DESCRIPTION OF PLANNED DEMOLITION METHOD(S) TO BE USED:

BULLDOZER LOADER WRECKING BALL MANUAL BURNING IMPLOSION/EXPLOSION

IF OTHER PLEASE DESCRIBE:

IX. DESCRIPTION OF WORK PRACTICES & ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS OF ASBESTOS AT THE DEMOLITION SITE:

X. WASTE TRANSPORTER #1: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (____) _____

WASTE TRANSPORTER #2: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (____) _____

XI. WASTE DISPOSAL SITE: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (____) _____

XII. IF DEMOLITION ORDERED BY GOVERNMENT AGENCY, PLEASE IDENTIFY THE AGENCY BELOW: (PLEASE ATTACH A COPY OF THE ORDER)

NAME: _____ TITLE: _____

AUTHORITY: _____

DATE OF ORDER (MM/DD/YY): _____ DATE ORDERED TO BEGIN(MM/DD/YY): _____

XIII. DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NONFRIABLE ASBESTOS MATERIAL BECOMES CRUMBLED, PULVERIZED, OR REDUCED TO POWDER:

XIV. I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS OF REGULATION (40 CFR PART 61, SUBPART M) WILL BE ON-SITE DURING THE DEMOLITION INVOLVING RACM AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE FOR INSPECTION DURING NORMAL BUSINESS HOURS.

(SIGNATURE OF OWNER/OPERATOR)

(DATE)

XV. I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT.

(SIGNATURE OF OWNER/OPERATOR)

(DATE)

● **APPLICATIONS MUST BE MAILED ALONG WITH A \$50.00 FEE PAYABLE TO SCDHEC AT LEAST 10 WORKING DAYS PRIOR TO THE SCHEDULED START DATE. FAXES WILL NOT BE ACCEPTED.**

● **A COPY OF AN ASBESTOS SURVEY REPORT (NO OLDER THAN 3 YEARS) MUST ACCOMPANY THE APPLICATION.**



Asbestos Waste Shipment Record

1. SCDHEC ASBESTOS ABATEMENT PROJECT LICENSE:

Generator Information

2. Waste Generator/Owner Name & Address:	Work Site Name & Physical Address:	Waste Generator/Owner Telephone Number ()
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3. Abatement Contractor Name & Address:	Abatement Contractor Telephone Number ()
---	---

4. Name of waste disposal site (WDS), mailing address, and physical site location:	WDS Telephone Number: ()
--	---------------------------------

5. Description of Waste Materials (please circle): Friable (Regulated) / Nonfriable (Nonregulated)	6. Bags of Containers: No. Type _____ Drums _____ Bags _____ Bulk Load	7. Total Quantity: m3 (yd3)
---	---	---

8. Special handling instructions & additional information:

9. Generator's/Contractor's Certification: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled. The contents are in all respects in proper condition for transport by highway according to applicable international and government regulations.

Print Name:	Signature:	Date:
-------------	------------	-------

Transporter Information (Acknowledgment of Receipt of Materials):

10. Name, title, address, telephone number:	Signature:	Date:
---	------------	-------

11. Name, title, address, telephone number:	Signature:	Date:
---	------------	-------

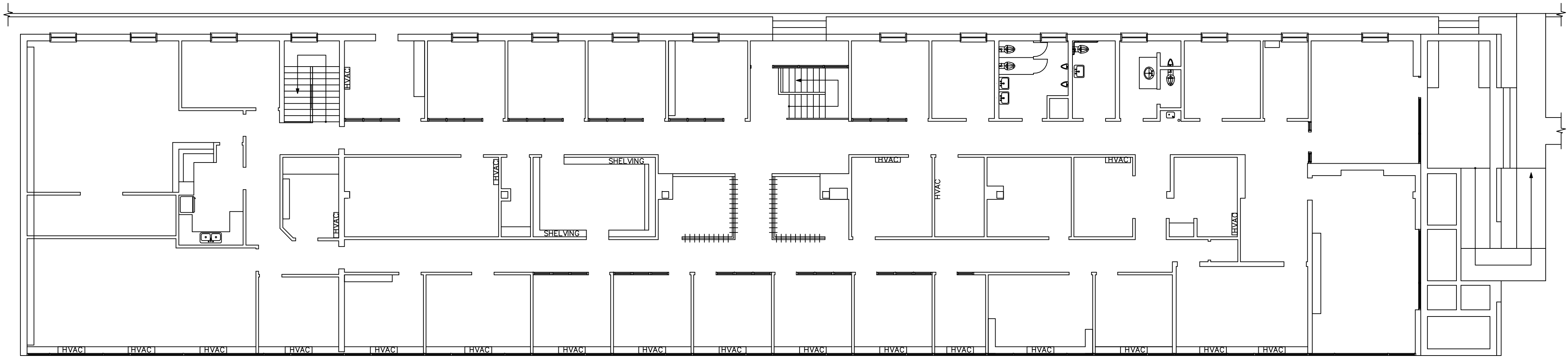
Disposal Site Operator

12. Discrepancy:	<u>Bags or Containers</u>	<u>Total Quantity</u>
------------------	---------------------------	-----------------------

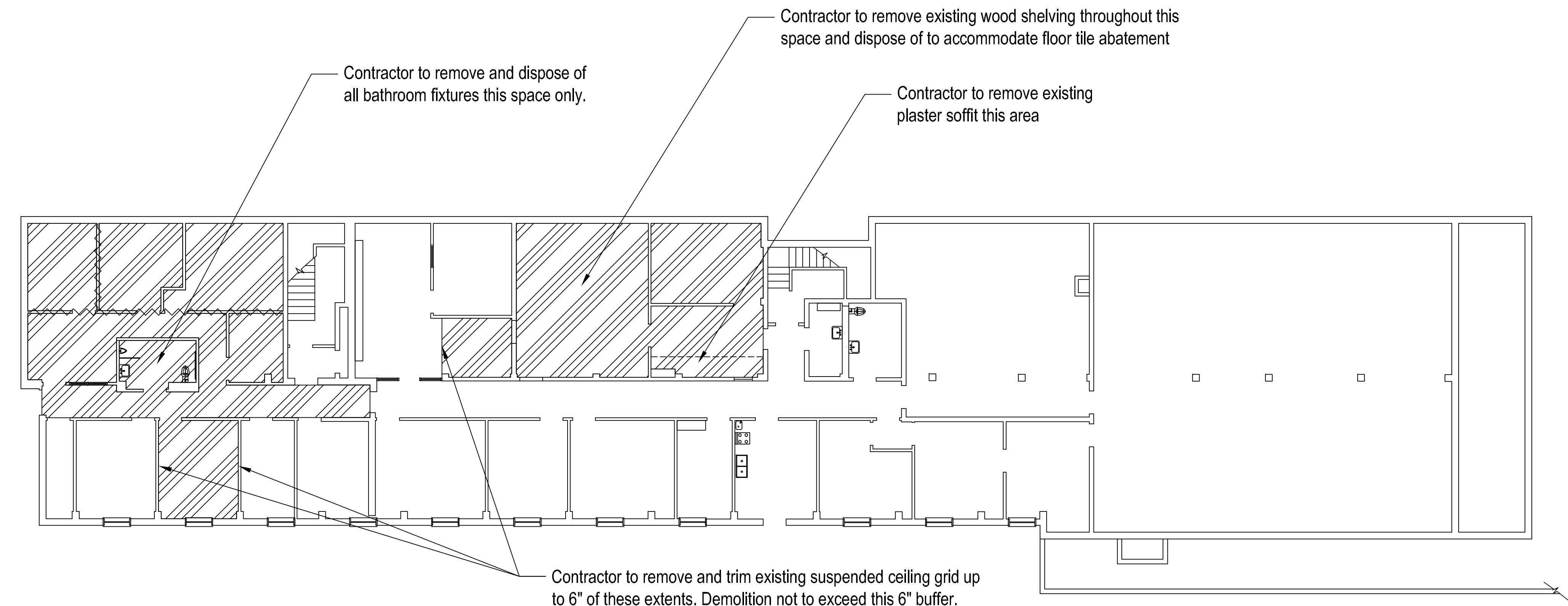
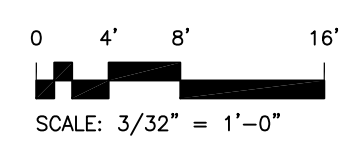
13. Waste Disposal Site Owner or Operator certification of receipt of asbestos materials covered by this manifest except as noted in item 11.

Print Name:	Signature:	Date:
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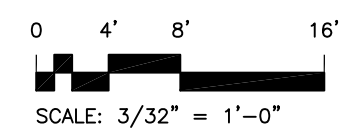
Please forward a completed copy of this record to: SCDHEC, Bureau of Air Quality, Asbestos Section, 2600 Bull Street, Columbia, SC 29201
(803) 898-4389 office. (803) 898-4281 fax.



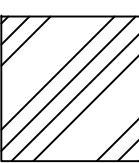
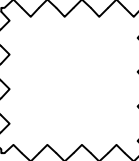
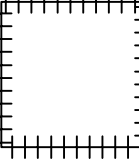
1 MAIN LEVEL PLAN
 MW101 SCALE: 3/32" = 1'-0"



1 BASEMENT LEVEL
 MW101 SCALE: 3/32" = 1'-0"



- All general non-ACM demolition activities may be performed prior to start up of abatement activities and establishment of containment areas, so long as these general demolition activities do not impact those material known to be ACM or assumed to be ACM. Should general demolition activities impact known or assumed ACM, Contractor will stop work and establish containment and begin friable abatement.
- Contractor to salvage all doors and associated hardware and stage in area designated by the owner.
- All carpeting and associated cove base throughout the main floor and basement level of the building is to be removed and disposed of. Contractor shall ensure that existing wall coverings will not be removed and/or damaged during removal of existing cove base.
- Contractor is to be aware that carpeting on the basement level is over asbestos containing floor tiles and mastic. Should carpet removal activities impact these tiles (i.e. delaminating, breakage) Contractor shall stop work and begin friable abatement activities. Carpet in these areas shall be removed, handled and disposed of as ACM.
- Contractor to remove existing wood wall partitions as shown on plan in their entirety. All existing electrical components are to be terminated at the next available junction box. Wire nuts shall be placed on all exposed loose wiring.
- Contractor shall remove existing suspended ceilings in areas as designated in their entirety, to include ceiling panels, grid, perimeter tracking and hangers.

-  SUSPENDED CEILINGS TO BE REMOVED
-  WOOD PARTIONS TO BE REMOVED
-  NON-ACM DRYWALL WALLS TO BE REMOVED

DRWN. BY: N/A
CHKD. BY: J.S.
APPR. BY: GME
NOTES:

ORIGINAL:
REVISIONS:
1
2
3
SCALE: 3/32" = 1'0"

F&ME
 CONSULTANTS

GEOTECHNICAL-ENVIRONMENTAL-MATERIALS
 COLUMBIA, SOUTH CAROLINA

SELECTIVE NON-ACM DEMOLITION PLAN

University of South Carolina

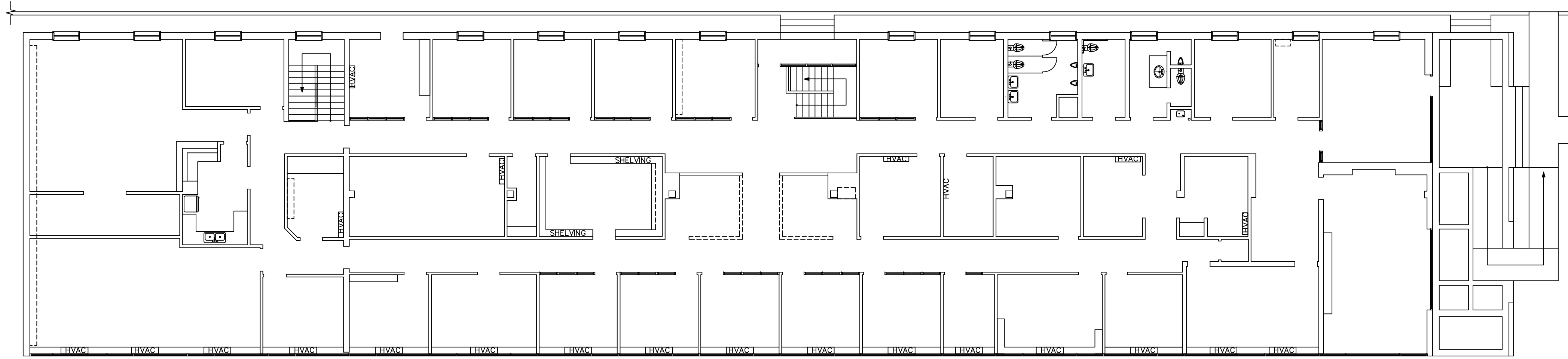
1800 Gervais Street Renovations-Demolition-Phase 1
 Columbia, South Carolina

Project Number: 1427-2018-A

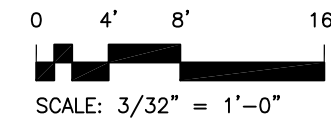
F&ME CONSULTANTS
 PROJECT NUMBER:
E5200.08

DRAWING NUMBER:
AB 1.1

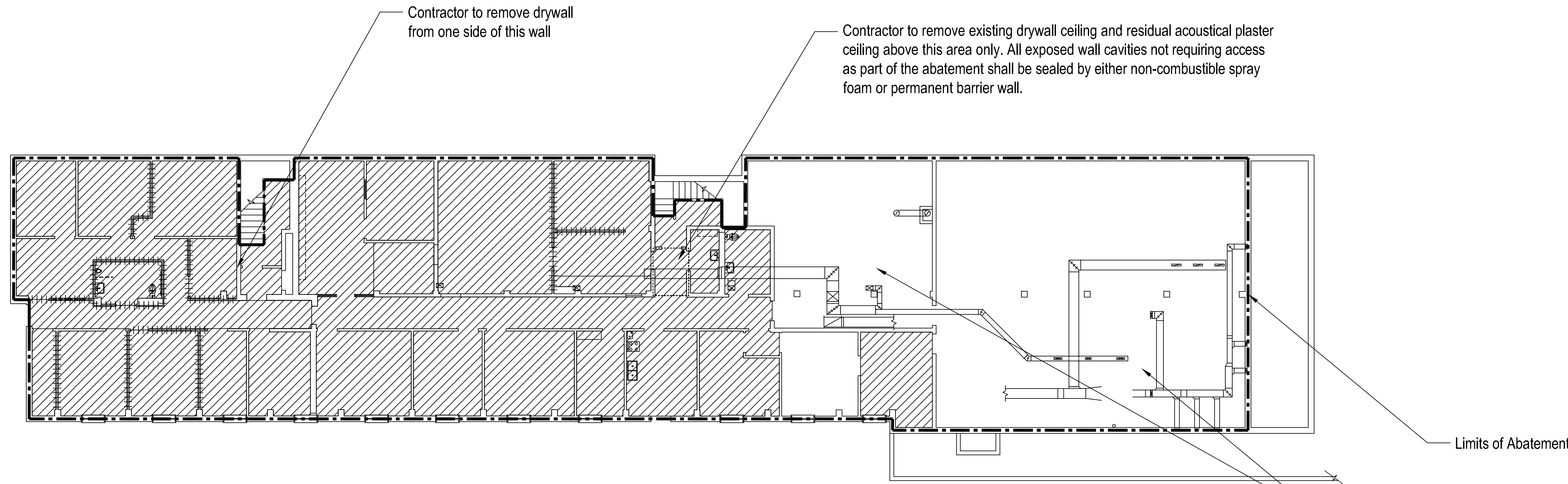
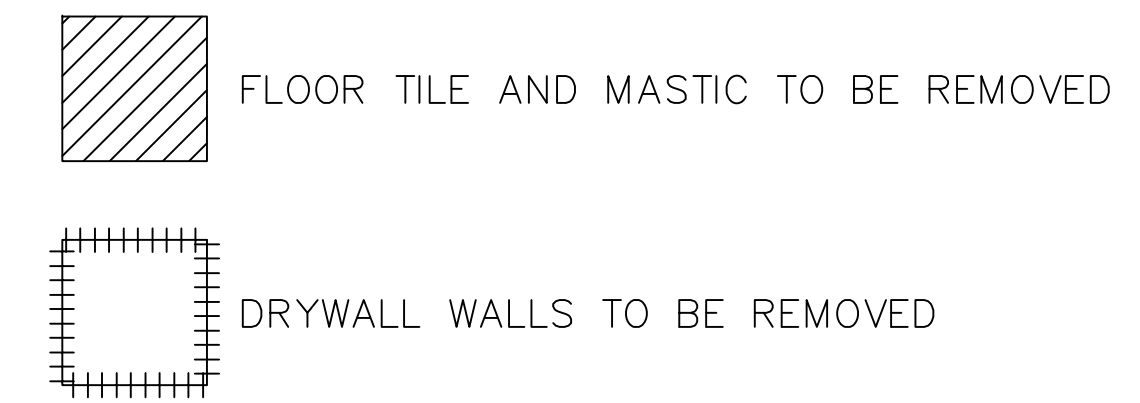
NO ABATEMENT TO OCCUR ON MAIN LEVEL



1 MAIN LEVEL PLAN
SCALE: 3/32" = 1'-0"

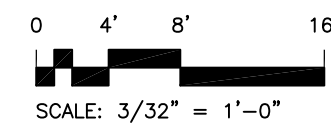


- Contractor is to be aware that carpeting on the basement level is over asbestos containing floor tiles and mastic. Should carpet removal activities impact these tiles (i.e. delaminating, breakage) Contractor shall stop work and begin friable abatement activities. Carpet in these areas shall be removed, handled and disposed of as ACM.
- Contractor to remove existing drywall walls as shown on plan in there entirety. All existing electrical components are to be terminated at the next available junction box. Wire nuts shall be placed on all exposed loose wiring.



Contractor to remove all black mastic and associated fiberglass wrap insulation on HVAC ductwork and piping in these spaces and dispose of as ACM.

1 BASEMENT LEVEL
SCALE: 3/32" = 1'-0"



DRWN. BY: N/A	CHKD. BY: J.S.	APPR. BY: GME	NOTES:
ORIGINAL:	REVISIONS:	SCALE:	3/32" = 1'0"
	1		
	2		
	3		

F&ME CONSULTANTS

GEOTECHNICAL - ENVIRONMENTAL - MATERIALS
COLUMBIA, SOUTH CAROLINA

ASBESTOS ABATEMENT PLAN

University of South Carolina

1800 Gervais Street Renovations - Demolition - Phase 1
Columbia, South Carolina
Project Number: H27-2008-A

F&ME CONSULTANTS
PROJECT NUMBER:
E5200.08

DRAWING NUMBER:
AB 1.2