

SANFORD HALL ABATEMENT

UNIVERSITY OF NORTH CAROLINA CHARLOTTE
CHARLOTTE, NORTH CAROLINA



UNC CHARLOTTE

BID SET
November 6, 2015

Architects Project # 531233

ARCHITECT

MOSELEY ARCHITECTS
11430 NORTH COMMUNITY HOUSE ROAD, GIBSON BLDG,
SUITE 225
CHARLOTTE, NORTH CAROLINA 28277
(704) 540-3755

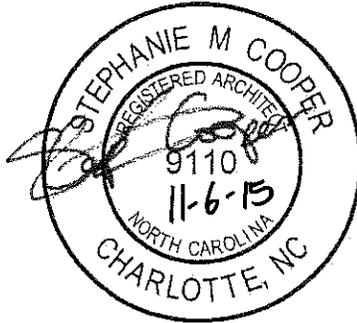
HAZARDOUS MATERIALS CONSULTANT

S&ME
9751 SOUTHERN PINE BLVD
CHARLOTTE, NORTH CAROLINA 28273
(704) 523-4726

SET NO.

MOSELEYARCHITECTS

SANFORD HALL ABATEMENT
UNIVERSITY OF NORTH CAROLINA CHARLOTTE
Charlotte, North Carolina
Architect's Project No. 531233



NOTICE TO BIDDERS

Sealed proposals will be received by The University of North Carolina at Charlotte in Charlotte NC, in the office of Joyce Clay, UNC Charlotte, Facilities Management – Capital Projects, 9201 University City Blvd, Charlotte, NC 28233 up to 1:00 pm on December 10th, 2015. Proposals will be publicly opened that day at 2:00 pm and read for the furnishing of labor, material and equipment entering into the abatement of Sanford Hall Abatement.

Please note that any bids delivered to the UNC Charlotte Facilities Management, Capital Projects must be received by 1:00 pm on bid day. Any bids submitted between 1:00pm and 2:00 pm are to be delivered to the Cone Center Room 111.

Abatement of the ground floor and floors two through eleven of AMC floorings and textured ceiling finishes. Bids will be received for Contract type –Single Prime. All proposals shall be lump sum.

Pre-Bid Meeting

A **mandatory** pre-bid meeting will be held for all interested bidders on December 1, 2015 at 11:00 AM in the UNC Charlotte, Cone Center room 208 The meeting will address project specific questions, issues, bidding procedures and bid forms.

Complete plans, specifications and contract documents will be open for inspection at:

1. Moseley Architects – 11430 North Community House Road, Charlotte NC 28277
2. Owner – UNC Charlotte, Facilities Management/Police Building, 2nd floor – Capital Projects, 9151 Cameron Blvd, Charlotte, NC 28223, Phone: 704-687-0615
3. Metrolina Minority Contractors Association (MMCA), 2848 Queen City Drive, Suite B, Charlotte, NC 28208, Phone: 877-526-6205, mmca@mmcaofcharlotte.org.

Digital copies of the plans, specifications and contract documents are available at the following;

1. Associated General Contractors (AGC) Carolinas Branch and the Hispanic Contractors Association of the Carolinas (HCAC) – 800-364-2059; sales@isqft.com
2. North Carolina Offices of McGraw-Hill Dodge Corporation – <http://construction.com/dodge>
877-784-9556 or 800-393-6343
3. Construction Market Data – john.kasper@cmdgroup.com or vicki.van@cmdgroup.com
770-209-3429

Also, visit www.moseleyarchitects.com, “Bidding” (UNCC Sanford Hall Abatement) click on “Bid Documents”, and follow the instructions located at the top of the page to “Request a key”. Once complete, access to the electronic Bidding Document files can be obtained, saved, and or examined as needed. Addenda for the project will be posted to the above listed website.

If a contractor is bidding under the dual system both as a single prime contractor and as a separate prime contractor, he must submit the bids on separate forms and in separate envelopes. Bidders should clearly indicate on the outside of the bid envelope which contract(s) they are bidding.

NOTE: The bidder shall include with the bid proposal the form *Identification of Minority Business Participation* identifying the minority business participation it will use on the project and shall include either *Affidavit A* or *Affidavit B* as applicable. Forms and instructions are included within the Proposal Form in the bid documents. Failure to complete these forms is grounds for rejection of the bid. (GS143-128.2c Effective 1/1/2002.)

All contractors are hereby notified that they must have proper license as required under the state laws governing their respective trades.

General contractors are notified that Chapter 87, Article 1, General Statutes of North Carolina, will be observed in receiving and awarding general contracts. General contractors submitting bids on this project must have license classification for: General Contractor

NOTE--SINGLE PRIME CONTRACTS: Under GS 87-1, a contractor that superintends or manages construction of any building, highway, public utility, grading, structure or improvement shall be deemed a "general contractor" and shall be so licensed. Therefore a single prime project that involves other trades will require the single prime contractor to hold a proper General Contractors license. **EXCEPT:** On public buildings being bid single prime, where the total value of the general construction does not exceed 25% of the total construction value, contractors under GS87- Arts 2 and 4 (Plumbing, Mechanical & Electrical) may bid and contract directly with the Owner as the SINGLE PRIME CONTRACTOR and may subcontract to other properly licensed trades. [GS87-1.1- Rules .0210](#)

Each proposal shall be accompanied by a cash deposit or a certified check drawn on some bank or trust company, insured by the Federal Deposit Insurance Corporation, of an amount equal to not less than five percent (5%) of the proposal, or in lieu thereof a bidder may offer a bid bond of five percent (5%) of the bid executed by a surety company licensed under the laws of North Carolina to execute the contract in accordance with the bid bond. Said deposit shall be retained by the owner as liquidated damages in event of failure of the successful bidder to execute the contract within ten days after the award or to give satisfactory surety as required by law.

A performance bond and a payment bond will be required for one hundred percent (100%) of the contract price.

Payment will be made based on ninety-five percent (95%) of monthly estimates and final payment made upon completion and acceptance of work.

No bid may be withdrawn after the scheduled closing time for the receipt of bids for a period of 30 days.

The owner reserves the right to reject any or all bids and to waive informalities.

Designer:

Moseley Architects
11430 N. Community House Road
Gibson Building, Suite 225
Charlotte, NC 28777
704-540-3755

Owner:

Ms. Joyce Clay
The University of North Carolina at Charlotte

Mailing:

FM-Capital Projects
UNC Charlotte
9201 University City Blvd.
Charlotte, NC 28233

Hand Delivery

FM / Police Building (building #55a)
2nd Floor – Capital Projects
9151 Cameron Blvd
Charlotte, NC 28233

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INSTRUCTIONS TO BIDDER

- 1.1 Bidding Documents consist of the Instructions To Bidder, the Bid Form, the Pre-Bid Question Form, the General Conditions of the Contract for Construction, the Supplemental General Conditions (if any), the Special Conditions (if any), the Forms to be used, and the Scope of Work as described by the Plans and Specifications, other documents listed in the Specifications, and any addenda which may be issued.
- 1.2 The Bidder by making his bid represents that:
 - A. The Bidder has read and understands the Bidding Documents, and the Bid is being made in compliance with the Bidding Documents.
 - B. The Bidder has familiarized himself with all applicable laws and regulations that may affect the Work, and is licensed to perform the Work.
 - C. The failure of the Bidder to examine any portion of the Bidding Documents shall in no way relieve the Bidder from any obligations with respect to his Bid or to the Contract.
- 1.3 Before preparing Bid, the Bidder is encouraged to visit the site of the project to familiarize himself with all conditions involved and under which the Work is to be performed. The Owner will not be responsible to the Contractor for payments other than as set out in the contract price should conditions be different from those assumed by the Contractor.
- 1.4 The Bidder is required to satisfy himself prior to bidding as to the correctness of the site topography indicated in the plans.
- 1.5 The Owner shall not be responsible for any conclusions, assumptions or interpretations made by the Bidder that are contrary to the Bidding Documents and their clear intent. Discrepancies, conflicts, errors, omissions or doubts as to the meaning of drawings and specifications shall be communicated in writing to the Architect for interpretation. Bidder must use the "Prebid Question Form" indicated in the bid documents. Bidder must so act to assure that questions reach the Architect at least six (6) days prior to the time set for the receipt of bids to allow a sufficient time for an addendum to be issued. Any interpretation made will be in the form of an addendum to the documents, and its receipt shall be acknowledged by the Bidder on the Bid Form. If such discrepancies, conflicts, errors, omissions or doubts are reasonably apparent or should have been reasonably apparent to the Bidder, and the Bidder failed to submit questions to the Architect in the time and manner required herein, then any claims shall be deemed waived and the Bidder shall not be entitled to additional compensation or time, or entitled to sue the Owner based on such discrepancies, conflicts, errors, omissions, or doubts.
- 1.6 No substitution will be considered prior to receipt of Bid unless received in writing from the General Contractor ten (10) calendar days prior to bid. Requests for substitutions received after that date and any and all requests from sub-contractors will not be considered.
- 1.7 The Contractor assumes all risks associated with using a price or bid proposal for products or work that is not as indicated in the Bid Documents. If that product or work is rejected, the Bidder shall provide the product or work indicated in the Bid Documents at his cost. The

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- Owner will not be responsible to the Contractor for additional payments to provide the work as required by the Contract Documents.
- 1.8 Addenda will be issued no later than four (4) days prior to bid date except for any Addendum postponing the bid date.
- 1.9 The Owner has the right to accept alternates to the Bid in any order or combination unless indicated otherwise in the Bidding Documents.
- 1.10 The Bidder shall furnish to the Owner through the Architect in writing the following:
- A. A designation of the Work to be performed with the Bidder's own forces; and
 - B. Names of the manufacturers, products, and suppliers of principal items or systems of materials and equipment proposed for the Work.
- 1.11 The Bidder is required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the persons and entities proposed to furnish and perform the Work.
- 1.12 Prior to execution of the Contract, the Architect will notify the Bidder in writing if either the Owner or Architect has reasonable objection to a person or entity proposed by the Bidder. In such cases, the Bidder shall submit an acceptable substitute person or entity with a reasonable adjustment to the Bid price to cover any difference in cost.
- 1.13 Persons and entities proposed by the Bidder and not substituted for due to Owner or Architect objection must be used in the Work for which they were proposed and shall not be changed except with the written consent of the Architect and Owner.
- 1.14 A bid bond **will** be required.
- 1.15 A performance and payment bond will be required, AIA Form A312.
- 1.16 The General Contractor must possess a current license to do work in North Carolina, plus any other applicable licenses. All firms bidding on subcontracting portions of the general contract must possess applicable licenses for work in North Carolina.
- 1.17 The Contractor shall provide the required Builder's Risk Insurance for the project.

**INSTRUCTIONS TO BIDDERS
AND
GENERAL CONDITIONS OF THE CONTRACT**

STANDARD FORM FOR CONSTRUCTION PROJECTS

**UNIVERSITY OF NORTH CAROLINA
GENERAL ADMINISTRATION**

Fifth Edition – January 2015

INSTRUCTIONS TO BIDDERS

For a proposal to be considered it must be in accordance with the following instructions:

1. PROPOSALS

Proposals must be made in strict accordance with the Form of Proposal provided therefor, and all blank spaces for bids, alternates and unit prices applicable to bidders work shall be properly filled in. When requested alternates are not bid, the proposer shall so indicate by the words "No Bid". Any blanks shall also be interpreted as "No Bid". The bidder agrees that bid on Form of Proposal detached from specifications will be considered and will have the same force and effect as if attached thereto. Photocopied or faxed proposals will not be considered. Numbers shall be stated both in writing and in figures for the base bids and alternates. If figures and writing differ, the written number will supersede the figures.

Any modifications to the Form of Proposal (including alternates and/or unit prices) will disqualify the bid and may cause the bid to be rejected.

The bidder shall fill in the Form of Proposal as follows:

- a. If the documents are executed by a sole owner, that fact shall be evidenced by the word "Owner" appearing after the name of the person executing them.
- b. If the documents are executed by a partnership, that fact shall be evidenced by the word "Co-Partner" appearing after the name of the partner executing them.
- c. If the documents are executed on the part of a corporation, they shall be executed by either the president or the vice president and attested by the secretary or assistant secretary in either case, and the title of the office of such persons shall appear after their signatures. The seal of the corporation shall be impressed on each signature page of the documents.
- d. If the proposal is made by a joint venture, it shall be executed by each member of the joint venture in the above form for sole owner, partnership or corporation, whichever form is applicable.
- e. All signatures shall be properly witnessed.
- f. If the contractor's license of a bidder is held by a person other than an owner, partner or officer of a firm, then the licensee shall also sign and be a party to the proposal. The title "Licensee" shall appear under his/her signature.

Proposals should be addressed as indicated in the Advertisement for Bids and be delivered enclosed in an opaque sealed envelope, marked "Proposal" and bearing the title of the work, name of the bidder, and the contractor's license number of the bidder. Bidders should clearly mark on the outside of the bid envelope which contract(s) they are bidding.

Bidder shall identify with appropriate attachments to the bid, the minority businesses that will be utilized on the project with corresponding total dollar value of the bid and affidavit listing good faith efforts or an affidavit indicating work under contract will be self-performed, as required by G.S. 143-128.2 (c) and G.S. 143-128.2 (f). Failure to comply with these requirements is grounds for rejection of the bid.

For projects bid in the single-prime alternative, the names and license numbers of major subcontractors shall be listed on the proposal form.

It shall be the specific responsibility of the bidder to deliver his bid to the proper official at the selected place and prior to the announced time for the opening of bids. Later delivery of a bid for any reason, including delivery by any delivery service, shall disqualify the bid.

Unit prices quoted in the proposal shall include overhead and profit and shall be the full compensation for the contractor's cost involved in the work. See General Conditions, Article 19c-1.

2. EXAMINATION OF CONDITIONS

It is understood and mutually agreed that by submitting a bid the bidder acknowledges that he has carefully examined all documents pertaining to the work, the location, accessibility and general character of the site of the work and all existing buildings and structures within and adjacent to the site, and has satisfied himself as to the nature of the work, the condition of existing buildings and structures, the conformation of the ground, the character, quality and quantity of the material to be encountered, the character of the equipment, machinery, plant and any other facilities needed preliminary to and during prosecution of the work, the general and local conditions, the construction hazards, and all other matters, including, but not limited to, the labor situation which can in any way affect the work under the contract, and including all safety measures required by the Occupational Safety and Health Act of 1970 and all rules and regulations issued pursuant thereto. It is further mutually agreed that by submitting a proposal the bidder acknowledges that he has satisfied himself as to the feasibility and meaning of the plans, drawings, specifications and other contract documents for the construction of the work and that he accepts all the terms, conditions and stipulations contained therein; and that he is prepared to work in cooperation with other contractors performing work on the site.

Reference is made to contract documents for the identification of those surveys and investigation reports of subsurface or latent physical conditions at the site or otherwise affecting performance of the work which have been relied upon by the designer in preparing the documents. The owner will make copies of all such surveys and reports available to the bidder upon request.

Each bidder may, at his own expense, make such additional surveys and investigations as he may deem necessary to determine his bid price for the performance of the work. Any on-site investigation shall be done at the convenience of the owner. Any reasonable request for access to the site will be honored by the owner.

3. BULLETINS AND ADDENDA

Any addenda to specifications issued during the time of bidding are to be considered covered in the proposal and in closing a contract they will become a part thereof. It shall be the bidder's responsibility to ascertain prior to bid time the addenda issued and to see that his bid includes any changes thereby required.

Should the bidder find discrepancies in, or omission from, the drawings or documents or should he be in doubt as to their meaning, he shall at once notify the designer who will send written instructions in the form of addenda to all bidders. Notification should be no later than seven (7) days prior to the date set for receipt of bids. Neither the owner nor the designer will be responsible for any oral instructions.

All addenda should be acknowledged by the bidder(s) on the Form of Proposal. However, even if not acknowledged, by submitting a bid, the bidder has certified that he has reviewed all issued addenda and has included all costs associated within the bid.

4. BID SECURITY

Each proposal shall be accompanied by a cash deposit or a certified check drawn on some bank or trust company insured by the Federal Deposit Insurance Corporation, or a bid bond in an amount equal to not less than five percent (5%) of the proposal, said deposit to be retained by the owner as liquidated damages in event of failure of the successful bidder to execute the contract within ten (10) days after the award or to give satisfactory surety as required by law (G.S. 143-129).

Bid bond shall be conditioned that the surety will, upon demand, forthwith make payment to the obligee upon said bond if the bidder fails to execute the contract. The owner may retain bid securities of any bidder(s) who may have a reasonable chance of award of contract for the full duration of time stated in the Notice to Bidders. Other bid securities may be released sooner, at the discretion of the owner. All bid securities (cash or certified checks) shall be returned to the bidders promptly after award of contracts, and no later than seven (7) days after expiration of the holding period stated in the Notice to Bidders. Standard Form of Bid Bond is included in these specifications and shall be used.

5. RECEIPT OF BIDS

Bids shall be received in strict accordance with requirements of the General Statutes of North Carolina. Bid security shall be required as prescribed by statute. Prior to the closing of the bid, the bidder will be permitted to change or withdraw his bid. Guidelines for opening of public construction bids are available from the owner.

6. OPENING OF BIDS

Upon opening, all bids shall be read aloud. Once bidding is closed, there shall not be any withdrawal of bids by any bidder and no bids may be returned by the designer to any bidder. After the opening of bids, no bid may be withdrawn, except under the provisions of General Statute 143-129.1, for a period of thirty days unless otherwise specified. Should the successful bidder default and fail to execute a contract, the contract may be awarded to the next lowest and responsible bidder. The owner reserves the unqualified right to reject any and all bids. Reasons for rejection may include, but shall not be limited to, the following:

- a. If the Form of Proposal furnished to the bidder is not used or is altered.
- b. If the bidder fails to insert a price for all bid items, alternate and unit prices requested.
- c. If the bidder adds any provisions reserving the right to accept or reject any award.
- d. If there are unauthorized additions or conditional bids, or irregularities of any kind which tend to make the proposal incomplete, indefinite or ambiguous as to its meaning.
- e. If the bidder fails to complete the proposal form where information is requested so the bid may be properly evaluated by the owner.
- f. If the unit prices contained in the bid schedule are unacceptable to the owner.
- g. If the bidder fails to comply with other instructions stated herein.

7. BID EVALUATION

The award of the contract will be made to the lowest responsible bidder as soon as practical. The owner may award on the basis of the base bid and any alternates the owner chooses.

Before awarding a contract, the owner may require the apparent low bidder to qualify himself to be a responsible bidder by furnishing any or all of the following data:

- a. The latest financial statement showing assets and liabilities of the company or other information satisfactory to the owner.
- b. A listing of completed projects of similar size.
- c. Permanent name and address of place of business.
- d. The number of regular employees of the organization and length of time the organization has been in business under present name.
- e. The name and home office address of the surety proposed and the name and address of the responsible local claim agent.
- f. The names of members of the firms who hold appropriate trade licenses, together with license numbers.
- g. If prequalified, contractor information may be reviewed and evaluated comparatively to submitted prequalification package.

Failure or refusal to furnish any of the above information, if requested, shall constitute a basis for disqualification of any bidder.

In determining the lowest responsible, responsive bidder, the owner shall take into consideration the bidder's compliance with the requirements of G.S. 143-128.2(c), the past performance of the bidder on construction contracts for the State with particular concern given to completion times, quality of work, cooperation with other contractors, and cooperation with the designer and owner. Failure of the low bidder to furnish affidavit and/or documentation as required by G.S. 143-128.2(c) shall constitute a basis for disqualification of the bid.

Should the owner adjudge that the apparent low bidder is not the lowest responsible, responsive bidder by virtue of the above information, said apparent low bidder will be so notified and his bid security shall be returned to him.

8. PERFORMANCE BOND

The successful bidder, upon award of contract, shall furnish a performance bond in an amount equal to 100 percent of the contract price. See Article 35, General Conditions.

9. PAYMENT BOND

The successful bidder, upon award of contract, shall furnish a payment bond in an amount equal to 100 percent of the contract price. See Article 35, General Conditions.

10. PAYMENTS

Payments to the successful bidders (contractors) will be made on the basis of monthly estimates of completed work. See Article 31, General Conditions.

11. PRE-BID CONFERENCE

Prior to the date set for receiving bids, the Designer may arrange and conduct a Pre-Bid Conference for all prospective bidders. The purpose of this conference is to review project requirements and to respond to questions from prospective bidders and their subcontractors or material suppliers related to the intent of bid documents. Attendance by prospective bidders shall be as required by the "Notice to Bidders".

12. SUBSTITUTIONS

In accordance with the provisions of G.S. 133-3, material, product, or equipment substitutions proposed by the bidders to those specified herein can only be considered during the bidding phase until ten (10) days prior to the receipt of bids when submitted to the Designer with sufficient data to confirm material, product, or equipment equality. Proposed substitutions submitted after this time will be considered only as potential change order.

Submittals for proposed substitutions shall include the following information:

- a. Name, address and telephone number of manufacturer and supplier as appropriate.
- b. Trade name, model or catalog designation.
- c. Product data including performance and test data, reference standards, and technical descriptions of material, product, or equipment. Include color samples and samples of available finishes as appropriate.
- d. Detailed comparison with specified products including performance capabilities, warranties, and test results.
- e. Other pertinent data including data requested by the Designer to confirm product equality.

If a proposed material, product, or equipment substitution is deemed equal by the Designer to those specified, all bidders of record will be notified by Addendum.

GENERAL CONDITIONS OF THE CONTRACT

The use or reproduction of this document or any part thereof is authorized for and limited to use on projects of the University of North Carolina, and is distributed by, through and at the discretion of UNC - General Administration, Chapel Hill, North Carolina, for that distinct and sole purpose.

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ARTICLE 1 - DEFINITIONS

- a. The **contract documents** consist of the Notice to Bidders; Instructions to Bidders; General Conditions of the Contract; special conditions if applicable; Supplementary General Conditions; the drawings and specifications, including all bulletins, addenda or other modifications of the drawings and specifications incorporated into the documents prior to their execution; the proposal; the contract; the performance bond; the payment bond; insurance certificates; the approval of the university attorney; and the certificate of the Office of State Budget and Management. All of these items together form the contract.
- b. The **owner** is the State of North Carolina through the agency named in the contract.
- c. The **designer(s)** are those referred to within this contract, or their authorized representatives. The designer(s), as referred to herein, shall mean architect and/or engineer. They will be referred to hereinafter as if each were of the singular number, masculine gender.
- d. The **contractor**, as referred to hereinafter, shall be deemed to be either of the several contracting parties called the "Party of the First Part" in either of the several contracts in connection with the total project. Where, in special instances hereinafter, a particular contractor is intended, an adjective precedes the word "contractor," as "general," "heating," etc. For the purposes of a single prime contract, the term Contractor shall be deemed to be the single contracting entity identified as the "Party of the First Part" in the single Construction Contract. Any references or adjectives that name or infer multiple prime contractors shall be interpreted to mean the single prime Contractor.
- e. A **subcontractor**, as the term is used herein, shall be understood to be one who has entered into a direct contract with a contractor, and includes one who furnishes materials worked to a special design in accordance with plans and specifications covered by the contract, but does not include one who only sells or furnishes materials not requiring work so described or detailed.
- f. **Written notice** shall be defined as notice in writing delivered in person to the contractor, or to a partner of the firm in the case of a partnership, or to a member of the contracting organization, or to an officer of the organization in the case of a corporation, or sent to the last known business address of the contracting organization by registered mail.
- g. **Work**, as used herein as a noun, is intended to include materials, labor and workmanship of the appropriate contractor.
- h. The **project** is the total construction work to be performed under the contract documents by the several contractors.

- i. **Project expediter**, as used herein, is an entity stated in the contract documents, designated to effectively facilitate scheduling and coordination of work activities. See Article 14(f) for responsibilities of a Project Expediter. **For the purposes of a single prime contract, the single prime contractor shall be designated as the Project Expediter.**
- j. **Change order**, as used herein, shall mean a written order to the contractor subsequent to the signing of the contract authorizing a change in the contract. The change order shall be signed by the contractor and designer and approved by the owner in that order (Article 19).
- k. **Field Order**, as used herein, shall mean a written approval for the contractor to proceed with the work requested by owner prior to issuance of a formal Change Order. The field order shall be signed by the contractor, designer, and owner .
- l. **Time of completion**, as stated in the contract documents, is to be interpreted as consecutive calendar days measured from the date established in the written Notice to Proceed, or such other date as may be established herein (Article 23).
- m. **Liquidated damages**, as stated in the contract documents, is an amount reasonably estimated in advance to cover the consequential damages associated with the Owner's economic loss in not being able to use the Project for its intended purposes at the end of the contract's completion date as amended by change order, if any, by reason of failure of the contractor(s) to complete the work within the time specified. Liquidated damages does not include the Owner's extended contract administration costs (including but not limited to additional fees for architectural and engineering services, testing services, inspection services, commissioning services, etc.), such other damages directly resulting from delays caused solely by the contractor, or consequential damages that the Owner identified in the bid documents that may be impacted by any delay caused solely by the Contractor (e.g., if a multi-phased project-subsequent phases, delays in start of other projects that are dependent on the completion of this Project, extension of leases and/or maintenance agreements for other facilities).
- n. **Surety**, as used herein, shall mean the bonding company or corporate body which is bound with and for the contractor, and which engages to be responsible for the contractor and his acceptable performance of the work.
- o. **Routine written communications between the Designer and the Contractor**, are any communication other than a "request for information" provided in letter, memo, or transmittal format, sent by mail, courier, electronic mail, or facsimile. Such communications can not be identified as "request for information."
- p. **Clarification or Request for information (RFI)**, is a request from the Contractor seeking an interpretation or clarification by the Designer relative to the contract documents. The RFI, which shall be labeled (RFI), shall clearly and concisely set forth the issue or item requiring clarification or interpretation and why the response is needed. The RFI must set forth the Contractor's interpretation or understanding of the contract documents requirements in question, along with reasons for such an understanding.
- q. **Approval**, means written or imprinted acknowledgement that materials, equipment or methods of construction are acceptable for use in the work.
- r. **Inspection**, shall mean examination or observation of work completed or in progress to determine its compliance with contract documents.

- s. **“Equal to” or “approved equal”**, shall mean materials, products, equipment, assemblies, or installation methods considered equal by the bidder in all characteristics (physical, functional, and aesthetic) to those specified in the contract documents. Acceptance of equal is subject to the approval of the Designer and Owner.
- t. **“Substitution” or “substitute”**, shall mean materials, products, equipment, assemblies, or installation methods deviating in at least one characteristic (physical, functional, or aesthetic) from those specified, but which in the opinion of the bidder would improve competition and/or enhance the finished installation. Acceptance of substitution is subject to the approval of the Designer and Owner.
- u. **Provide** shall mean furnish and install complete in place, new, clean, operational, and ready for use.
- v. **Indicated and shown** shall mean provide as detailed, or called for, and reasonably implied in the contract documents.
- w. **Special inspector** is one who inspects materials, installation, fabrication, erection or placement of components and connections requiring special expertise to ensure compliance with the approved construction documents and referenced standards.
- x. **Commissioning** is a quality assurance process that verifies and documents that building components and systems operate in accordance with the project design documents.
- y. **Designer Final Inspection** is the inspection performed by the design team to determine the completeness of the project in accordance with approved plans and specifications. This inspection occurs prior to SCO final inspection.
- z. **SCO Final Inspection** is the inspection performed by the State Construction Office to determine the completeness of the project in accordance with North Carolina Building Codes.
- aa. **Beneficial Occupancy** is requested by the owner and is occupancy or partial occupancy of the building or project after all life safety items have been completed as determined by the State Construction Office. Life safety items include but are not limited to fire alarm, sprinkler, egress and exit lighting, fire rated walls, egress paths and security.
- bb. **Final Acceptance** is the date on which the State Construction Office approves the project as complying with the North Carolina Building Codes and the owner accepts the construction as totally complete. This includes certification by the Designer that all punch list items are completed.

ARTICLE 2 - INTENT AND EXECUTION OF DOCUMENTS

- a. The drawings and specifications are complementary, one to the other. That which is shown on the drawings or called for in the specifications shall be as binding as if it were both called for and shown. The intent of the drawings and specifications is to establish the scope of all labor, materials, transportation, equipment, and any and all other things necessary to provide a bid for a complete job. In case of discrepancy or disagreement in

the contract documents, the order of precedence shall be: Form of Contract, specifications, large-scale detail drawings, small-scale drawings.

- b. The wording of the specifications shall be interpreted in accordance with common usage of the language except that words having a commonly used technical or trade meaning shall be so interpreted in preference to other meanings.
- c. The contractor shall execute each copy of the proposal, contract, performance bond and payment bond as follows:
 1. If the documents are executed by a sole owner, that fact shall be evidenced by the word "Owner" appearing after the name of the person executing them.
 2. If the documents are executed by a partnership, that fact shall be evidenced by the word "Co-Partner" appearing after the name of the partner executing them.
 3. If the documents are executed on the part of a corporation, they shall be executed by either the president or the vice president and attested by the secretary or assistant secretary in either case, and the title of the office of such persons shall appear after their signatures. The seal of the corporation shall be impressed on each signature page of the documents.
 4. If the documents are made by a joint venture, they shall be executed by each member of the joint venture in the above form for sole owner, partnership or corporation, whichever form is applicable to each particular member.
 5. All signatures shall be properly witnessed.
 6. If the contractor's license is held by a person other than an owner, partner or officer of a firm, then the licensee shall also sign and be a party to the contract. The title "Licensee" shall appear under his/her signature.
 7. The bonds shall be executed by an attorney-in-fact. There shall be attached to each copy of the bond a certified copy of power of attorney properly executed and dated.
 8. Each copy of the bonds shall be countersigned by an authorized individual agent of the bonding company licensed to do business in North Carolina. The title "Licensed Resident Agent" shall appear after the signature.
 9. The seal of the bonding company shall be impressed on each signature page of the bonds.
 10. The contractor's signature on the performance bond and the payment bond shall correspond with that on the contract. The date of the performance and payment bond shall not be prior to the date of the contract.

ARTICLE 3 - CLARIFICATIONS AND DETAIL DRAWINGS

- a. In such cases where the nature of the work requires clarification by the designer, such clarification shall be furnished by the designer with reasonable promptness by means of written instructions or detail drawings, or both. Clarifications and drawings shall be consistent with the intent of contract documents, and shall become a part thereof.

- b. The contractor(s) and the designer shall prepare, if deemed necessary, a schedule fixing dates upon which foreseeable clarifications will be required. The schedule will be subject to addition or change in accordance with progress of the work. The designer shall furnish drawings or clarifications in accordance with that schedule. The contractor shall not proceed with the work without such detail drawings and/or written clarifications.

ARTICLE 4 - COPIES OF DRAWINGS AND SPECIFICATIONS

The designer or owner shall furnish free of charge to the contractors electronic copies of plans and specifications. If requested by the contractor, paper copies of plans and specifications shall be furnished free of charge as follows:

- a. General contractor - Up to twelve (12) sets of general contractor drawings and specifications, up to six (6) sets of which shall include drawings and specifications of all other contracts, plus a clean set of black line prints on white paper of all appropriate drawings, upon which the contractor shall clearly and legibly record all work-in-place that is at variance with the contract documents.
- b. Each other contractor - Up to six (6) sets of the appropriate drawings and specifications, up to three (3) sets of which shall include drawings and specifications of all other contracts, plus a clean set of black line prints on white paper of all appropriate drawings, upon which the contractor shall clearly and legibly record all work-in-place that is at variance with the contract documents.
- c. Additional sets shall be furnished at cost, including mailing, to the contractor upon request by the contractor. This cost shall be stated in the bidding documents.
- d. For the purposes of a single-prime contract, the contractor shall receive up to 30 sets of drawings and specifications, plus a clean set of black line prints on white paper of all appropriate drawings, upon which the contractor shall clearly and legibly record all work-in-place that is at variance with the contract documents.

ARTICLE 5 - SHOP DRAWINGS, SUBMITTALS, SAMPLES, DATA

- a. Within 15 consecutive calendar days after the notice to proceed, each prime contractor shall submit a schedule for submission of all shop drawings, product data, samples, and similar submittals through the Project Expediter to the Designer. This schedule shall indicate the items, relevant specification sections, other related submittal data, and the date when these items will be furnished to the designer.
- b. The Contractor(s) shall review, approve and submit to the Designer all Shop Drawings, Coordination Drawings, Product Data, Samples, Color Charts, and similar submittal data required or reasonably implied by the Contract Documents. Required Submittals shall bear the Contractor's stamp of approval, any exceptions to the Contract Documents shall be noted on the submittals, and copies of all submittals shall be of sufficient quantity for the Designer to retain up to three (3) copies of each submittal for his own use plus additional copies as may be required by the Contractor. Submittals shall be presented to the Designer in accordance with the schedule submitted in paragraph (a) so as to cause no delay in the activities of the Owner or of separate Contractors.
- c. The Designer shall review required submittals promptly, noting desired corrections if any, and retaining two (2) copies (one for the Designer, one for the owner) for his use. The remaining copies of each submittal shall be returned to the Contractor not later than

twenty (20) days from the date of receipt by the Designer, for the Contractor's use or for corrections and resubmittal as noted by the Designer. When resubmittals are required, the submittal procedure shall be the same as for the original submittals.

- d. Approval of shop drawings/submittals by the Designer shall not be construed as relieving the Contractor from responsibility for compliance with the design or terms of the contract documents nor from responsibility of errors of any sort in the shop drawings, unless such lack of compliance or errors first have been called in writing to the attention of the Designer by the Contractor.

ARTICLE 6 - WORKING DRAWINGS AND SPECIFICATIONS AT THE JOB SITE

- a. The contractor shall maintain, in readable condition at his job office, one complete set of working drawings and specifications for his work including all shop drawings. Such drawings and specifications shall be available for use by the designer, his authorized representative, the owner or State Construction Office..
- b. The contractor shall maintain at the job office, a day-to-day record of work-in-place that is at variance with the contract documents. Such variations shall be fully noted on project drawings by the contractor and submitted to the designer upon project completion and no later than 30 days after final acceptance of the project.
- c. The contractor shall maintain at the job office a record of all required tests that have been performed, clearly indicating the scope of work inspected and the date of approval or rejection.

ARTICLE 7 - OWNERSHIP OF DRAWINGS AND SPECIFICATIONS

All drawings and specifications are instruments of service and remain the property of the State of North Carolina. The use of these instruments on work other than this contract without permission of the owner is prohibited. All copies of drawings and specifications other than contract copies shall be returned to the owner upon request after completion of the work.

ARTICLE 8 - MATERIALS, EQUIPMENT, EMPLOYEES

- a. The contractor shall, unless otherwise specified, supply and pay for all labor, transportation, materials, tools, apparatus, lights, power, heat, sanitary facilities, water, scaffolding and incidentals necessary for the completion of his work, and shall install, maintain and remove all equipment of the construction, other utensils or things, and be responsible for the safe, proper and lawful construction, maintenance and use of same, and shall construct in the best and most workmanlike manner, a complete job and everything incidental thereto, as shown on the plans, stated in the specifications, or reasonably implied therefrom, all in accordance with the contract documents.
- b. All materials shall be new and of quality specified, except where reclaimed material is authorized herein and approved for use. Workmanship shall at all times be of a grade accepted as the best practice of the particular trade involved, and as stipulated in written standards of recognized organizations or institutes of the respective trades except as exceeded or qualified by the specifications.
- c. Upon notice, the contractor shall furnish evidence as to quality of materials.

- d. Products are generally specified by ASTM or other reference standard and/or by manufacturer's name and model number or trade name. When specified only by reference standard, the Contractor may select any product meeting this standard, by any manufacturer. When several products or manufacturers are specified as being equally acceptable, the Contractor has the option of using any product and manufacturer combination listed. However, the contractor shall be aware that the cited examples are used only to denote the quality standard of product desired and that they do not restrict bidders to a specific brand, make, manufacturer or specific name; that they are used only to set forth and convey to bidders the general style, type, character and quality of product desired; and that equivalent products will be acceptable. Request for substitution of materials, items or equipment shall be submitted to the designer for approval or disapproval; such approval or disapproval shall be made by the designer prior to the opening of bids. Alternate materials may be requested after the award if it can clearly be demonstrated that it is an added benefit to the owner and the designer and owner approve.
- e. The designer is the judge of equality for proposed substitution of products, materials or equipment.
- f. If at any time during the construction and completion of the work covered by these contract documents, the language, conduct, or attire of any workman of the various crafts be adjudged a nuisance by the owner or designer, or if any workman be considered detrimental to the work, the contractor shall order such parties removed immediately from grounds.

ARTICLE 9 - ROYALTIES, LICENSES AND PATENTS

It is the intention of the contract documents that the work covered herein will not constitute in any way infringement of any patent whatsoever unless the fact of such patent is clearly evidenced herein. The contractor shall protect and save harmless the owner against suit on account of alleged or actual infringement. The contractor shall pay all royalties and/or license fees required on account of patented articles or processes, whether the patent rights are evidenced hereinafter.

ARTICLE 10 - PERMITS, INSPECTIONS, FEES, REGULATIONS

- a. The contractor shall give all notices and comply with all laws, ordinances, codes, rules and regulations bearing on the conduct of the work under this contract. If the contractor observes that the drawings and specifications are at variance therewith, he shall promptly notify the designer in writing. See Instructions to Bidders, Paragraph 3, Bulletins and Addenda. Any necessary changes required after contract award shall be made by change order in accordance with Article 19. If the contractor performs any work knowing it to be contrary to such laws, ordinances, codes, rules and regulations, and without such notice to the designer, he shall bear all cost arising therefrom. Additional requirements implemented after bidding will be subject to equitable negotiations.
- b. All work under this contract shall conform to the North Carolina State Building Code and other state, local and national codes as are applicable. The cost of all required inspections and permits shall be the responsibility of the contractor and included within the bid proposal. All water taps, meter barrels, vaults and impact fees shall be paid by the contractor unless otherwise noted.
- c. Projects constructed by the State of North Carolina or by any agency or institution of the state are not subject to inspection by any county or municipal authorities and are not

subject to county or municipal building codes. The contractor shall, however, cooperate with the county or municipal authorities by obtaining building permits. Permits shall be obtained at no cost.

- d. Projects involving local funding may be subject also to county and municipal building codes and inspection by local authorities. The Contractor shall pay the cost of these permits and inspections as noted in the specifications.

ARTICLE 11 - PROTECTION OF WORK, PROPERTY AND THE PUBLIC

- a. The contractors shall be jointly responsible for the entire site and the building or construction of the same and provide all the necessary protections, as required by the owner or designer, and by laws or ordinances governing such conditions. They shall be responsible for any damage to the owner's property, or of that of others on the job, by them, their personnel, or their subcontractors, and shall make good such damages. They shall be responsible for and pay for any damages caused to the owner. All contractors shall have access to the project at all times.
- b. The contractor shall provide cover and protect all portions of the structure when the work is not in progress, provide and set all temporary roofs, covers for doorways, sash and windows, and all other materials necessary to protect all the work on the building, whether set by him, or any of the subcontractors. Any work damaged through the lack of proper protection or from any other cause, shall be repaired or replaced without extra cost to the owner.
- c. No fires of any kind will be allowed inside or around the operations during the course of construction without special permission from the designer and owner.
- d. The contractor shall protect all trees and shrubs designated to remain in the vicinity of the operations by building substantial boxes around same. He shall barricade all walks, roads, etc., as directed by the designer to keep the public away from the construction. All trenches, excavations or other hazards in the vicinity of the work shall be well barricaded and properly lighted at night.
- e. The contractor shall provide all necessary safety measures for the protection of all persons on the job, including the requirements of the A.G.C. *Accident Prevention Manual in Construction*, as amended, and shall fully comply with all state laws or regulations and North Carolina State Building Code requirements to prevent accident or injury to persons on or about the location of the work. He shall clearly mark or post signs warning of hazards existing, and shall barricade excavations, elevator shafts, stairwells and similar hazards. He shall protect against damage or injury resulting from falling materials and he shall maintain all protective devices and signs throughout the progress of the work.
- f. The contractor shall adhere to the rules, regulations and interpretations of the North Carolina Department of Labor relating to Occupational Safety and Health Standards for the Construction Industry (Title 29, Code of Federal Regulations, Part 1926, published in Volume 39, Number 122, Part II, June 24, 1974, *Federal Register*), and revisions thereto as adopted by General Statutes of North Carolina 95-126 through 155.
- g. The contractor shall designate a responsible member of his organization as safety officer/inspector, to inspect the project site for unsafe health and safety hazards, to report these hazards to the contractor for correction, and whose duties also include accident prevention on the project, and to provide other safety and health measures on the project

site as required by the terms and conditions of the contract. The name of the safety inspector shall be made known to the designer and owner at the time of the preconstruction conference and in all cases prior to any work starting on the project.

- h. In the event of emergency affecting the safety of life, the protection of work, or the safety of adjoining properties, the contractor is hereby authorized to act at his own discretion, without further authorization from anyone, to prevent such threatened injury or damage. Any compensation claimed by the contractor on account of such action shall be determined as provided for under Article 19(b).
- i. Any and all costs associated with correction of damage caused to adjacent properties of the construction site or staging area shall be borne by the contractor. These costs shall include but not be limited to correction of damage caused by flooding, mud, sand, stone, debris, and discharging of waste products.

ARTICLE 12 - SEDIMENTATION POLLUTION CONTROL ACT OF 1973

- a. Any land-disturbing activity performed by the contractor(s) in connection with the project shall comply with all erosion control measures set forth in the contract documents and any additional measures which may be required in order to ensure that the project is in full compliance with the Sedimentation Pollution Control Act of 1973, as implemented by Title 15, North Carolina Administrative Code, Chapter 4, Sedimentation Control, Subchapters 4A, 4B and 4C, as amended (15 N.C.A.C. 4A, 4B and 4C).
- b. Upon receipt of notice that a land-disturbing activity is in violation of said act, the contractor(s) shall be responsible for ensuring that all steps or actions necessary to bring the project in compliance with said act are promptly taken.
- c. The contractor(s) shall be responsible for defending any legal actions instituted pursuant to N.C.G.S. 113A-64 against any party or persons described in this article.
- d. To the fullest extent permitted by law, the contractor(s) shall indemnify and hold harmless the owner, the designer and the agents, consultants and employees of the owner and designer, from and against all claims, damages, civil penalties, losses and expenses, including, but not limited to, attorneys' fees, arising out of or resulting from the performance of work or failure of performance of work, provided that any such claim, damage, civil penalty, loss or expense is attributable to a violation of the Sedimentation Pollution Control Act. Such obligation shall not be construed to negate, abridge or otherwise reduced any other right or obligation of indemnity which would otherwise exist as to any party or persons described in this article.

ARTICLE 13 - INSPECTION OF THE WORK

- a. It is a condition of this contract that the work shall be subject to inspection during normal working hours and during any time work is in preparation and progress by the designer, designated official representatives of the owner, State Construction Office, and those persons required by state law to test special work for official approval. The contractor shall therefore provide safe access to the work at all times for such inspections.
- b. All instructions to the contractor will be made only by or through the designer or his designated project representative. Observations made by official representatives of the

owner shall be conveyed to the designer for review and coordination prior to issuance to the contractor.

- c. All work shall be inspected by the designer, special inspector and/or State Construction Office prior to being covered by the contractor. Contractor shall give a minimum notice of two weeks unless otherwise agreed to by all parties. If inspection fails, after the first re-inspection all costs associated with additional inspections shall be borne by the contractor.
- d. Where special inspection or testing is required by virtue of any state laws, instructions of the designer, specifications or codes, the contractor shall give adequate notice to the designer of the time set for such inspection or test, if the inspection or test will be conducted by a party other than the designer. Such special tests or inspections will be made in the presence of the designer, or his authorized representative, and it shall be the contractor's responsibility to serve ample notice of such tests.
- e. All laboratory tests shall be paid by the owner unless provided otherwise in the contract documents except the general contractor shall pay for laboratory tests to establish design mix for concrete, and for additional tests to prove compliance with contract documents where materials have tested deficient except when the testing laboratory did not follow the appropriate ASTM testing procedures.
- f. Should any work be covered up or concealed prior to inspection and approval by the designer, special inspector, and/or State Construction Office such work shall be uncovered or exposed for inspection, if so requested by the designer in writing. Inspection of the work will be made upon notice from the contractor. All cost involved in uncovering, repairing, replacing, recovering and restoring to design condition, the work that has been covered or concealed will be paid by the contractor involved.

ARTICLE 14 - CONSTRUCTION SUPERVISION AND SCHEDULE

- a. Throughout the progress of the work, each contractor shall keep at the job site a competent superintendent and supervisory staff satisfactory to the designer and the owner. The superintendent and supervisory staff shall not be changed without the consent of the designer and owner unless said superintendent ceases to be employed by the contractor or ceases to be competent as determined by the contractor, designer and owner. The superintendent and other staff designated by the contractor in writing shall have authority to act on behalf of the contractor, and instructions, directions or notices given to him shall be as binding as if given to the contractor. However, directions, instructions and notices shall be confirmed in writing.
- b. The contractor shall examine and study the drawings and specifications and fully understand the project design, and shall provide constant and efficient supervision to the work. Should he discover any discrepancies of any sort in the drawings or specifications, he shall report them to the designer without delay. He will not be held responsible for discrepancies in the drawings and/or specifications, but shall be held responsible to report them should they become known to him.
- c. All contractors shall be required to cooperate and consult with each other during the construction of this project. Prior to installation of work, all contractors shall jointly prepare coordination drawings, showing locations of various ductworks, piping, motors, pumps, and other mechanical or electrical equipment, in relation to the structure, walls and ceilings. These drawings shall be submitted to the designer through the Project

Expediter for information only. Each contractor shall lay out and execute his work to cause the least delay to other contractors. Each contractor shall be financially responsible for any damage to other contractor's work and for undue delay caused to other contractors on the project.

- d. The contractor is required to attend job site progress conferences as called by the designer. The contractor shall be represented at these job progress conferences by both home office and project personnel. These representatives shall have authority to act on behalf of the contractor. These meetings shall be open to subcontractors, material suppliers and any others who can contribute toward maintaining required job progress. It shall be the principal purpose of these meetings, or conferences, to effect coordination, cooperation and assistance in every practical way toward the end of maintaining progress of the project on schedule and to complete the project within the specified contract time. Each contractor shall be prepared to assess progress of the work as required in his particular contract and to recommend remedial measures for correction of progress as may be appropriate. The designer or his authorized representative shall be the coordinator of the conferences and shall preside as chairman. The contractor shall turn over a copy of his daily reports to the designer and owner at the job site project conference. The owner will determine the daily report format.
- e. The contractor(s) shall employ an engineer or a land surveyor licensed in the State of North Carolina to lay out the work and to establish a bench mark in a location where same will not be disturbed and where direct instruments sights may be taken.
- f. The designer shall designate a project expediter on projects involving two or more prime contracts. The project expediter shall be designated in the Supplementary General Conditions. The Project Expediter shall have at a minimum the following responsibilities:
 - 1. Prepare the project construction schedule and shall allow all prime contractors (multi-prime contract) and subcontractors (single-prime contract) performing general, plumbing, HVAC, and electrical work equal input into the preparation of the initial construction schedule.
 - 2. Maintain a project progress schedule for all contractors.
 - 3. Give adequate notice to all contractors to ensure efficient continuity of all phases of the work.
 - 4. Notify the designer of any changes in the project schedule.
 - 5. Recommend to the owner whether payment to a contractor shall be approved.
- g. It shall be the responsibility of the Project Expediter to cooperate with and obtain from several prime contractors and subcontractors on the job, their respective work activities and integrate these activities into a project construction schedule in form of a detailed bar chart or Critical Path Method (CPM) schedule. Each prime contractor shall provide work activities within fourteen (14) days of request by the Project Expediter. A "work activity", for scheduling purposes, shall be any component or contractual requirement of the project requiring at least one (1) day, but not more than fourteen (14) days, to complete or fulfill. The project construction schedule shall graphically show all salient features of the work required to construct the project from start to finish and within the allotted time established in the contract. The time (in days) between the contractor's early completion and contractual completion dates is part of the project total float time;

and shall be used as such, unless amended by a change order. On a multi-prime project, each prime contractor shall review the proposed construction schedule and approve same in writing. The Project Expediter shall submit the proposed construction schedule to the designer for comments. The complete Project construction schedule shall be of the type set forth in the Supplementary General Condition or subparagraph (1) or (2) below, as appropriate:

1. For a project with total contracts of \$500,000 or less, a bar chart schedule will satisfy the above requirement. The schedule shall indicate the estimated starting and completion dates for each major element of the work.
2. For a project with total contracts over \$500,000, a Critical Path Method (CPM) schedule shall be utilized to control the planning and scheduling of the Work. The CPM schedule shall be the responsibility of the Project Expediter and shall be paid for by the Project Expediter.

Bar Chart Schedule, Where a bar chart schedule is required, it shall be time-scaled in weekly increments, shall indicate the estimated starting and completion dates for each major element of the work by trade and by area, level, or zone, and shall schedule dates for all salient features, including but not limited to the placing of orders for materials, submission of shop drawings and other Submittals for approval, approval of shop drawings by designers, the manufacture and delivery of material, the testing and the installation of materials, supplies and equipment, and all Work activities to be performed by the Contractor. The Contractor shall allow sufficient time in his schedule for all commissioning, required inspections and completion of final punch list(s). Each Work activity will be assigned a time estimate by the Contractor. One day shall be the smallest time unit used.

CPM Schedule, Where a CPM schedule is required, it shall be in time-scaled precedence format using the Project Expediter's logic and time estimates. The CPM schedule shall be drawn or plotted with activities grouped or zoned by Work area or subcontract as opposed to a random (or scattered) format. The CPM schedule shall be time-scaled on a weekly basis and shall be drawn or plotted at a level of detail and logic which will schedule all salient features of the work to be performed by the Contractor. The Contractor shall allow sufficient time in his schedule for all commissioning, required inspections and completion of final punch list(s). Each Work activity will be assigned a time estimate by the Contractor. One day shall be the smallest time unit used.

The CPM schedule will identify and describe each activity, state the duration of each activity, the calendar dates for the early and late start and the early and late finish of each activity, and clearly highlight all activities on the critical path. "Total float" and "free float" shall be indicated for all activities. Float time shall not be considered for the exclusive use or benefit of either the Owner or the Contractor, but must be allocated in the best interest of completing the Work within the Contract time. Extensions to the Contract time, when granted by Change Order, will be granted only when equitable time adjustment exceeds the Total Float in the activity or path of activities affected by the change.

Early Completion of Project, The Contractor may attempt to complete the project prior to the Contract Completion Date. However, such planned early completion shall be for the Contractor's convenience only and shall not create any additional rights of the Contractor or obligations of the Owner under this Contract, nor shall it change the Time for Completion or the Contract Completion Date. The Contractor shall not be required to pay liquidated damages to the Owner because of its failure to complete by its planned

earlier date. Likewise, the Owner shall not pay the Contractor any additional compensation for early completion nor will the Owner owe the Contractor any compensation should the Owner, its officers, employees, or agents cause the Contractor not to complete earlier than the date required by the Contract Documents.

- h. The proposed project construction schedule shall be presented to the designer no later than fifteen (15) days after written notice to proceed. No application for payment will be processed until this schedule is accepted by the designer and owner.
- i. The approved project construction schedule shall be distributed to all contractors and displayed at the job site by the Project Expediter.
- j. The several contractors shall be responsible for their work activities and shall notify the project expediter of any necessary changes or adjustments to their work. The project Expediter shall maintain the project construction schedule, making biweekly adjustments, updates, corrections, etc., that are necessary to finish the project within the Contract time, keeping all contractors and the designer fully informed. Copy of a bar chart schedule annotated to show the current progress shall be submitted by the Contractor(s) to the designer, along with monthly request for payment. For project requiring CPM schedule, the Contractor shall submit a biweekly report of the status of all activities. The bar chart schedule or biweekly status report shall show the actual Work completed to date in comparison with the original Work scheduled for all activities. If any activities of the work of several contractors are behind schedule, the contractor must indicate in writing, what measures will be taken to bring each such activity back on schedule and to ensure that the Contract Completion Date is not exceeded. A plan of action and recovery schedule shall be developed and submitted to the designer by the Project Expediter, when (1) the contractor's report indicates delays, that are in the opinion of the designer or the owner, of sufficient magnitude that the contractor's ability to complete the work by the scheduled completion is brought into question; (2) the updated construction schedule is thirty (30) days behind the planned or baseline schedule and no legitimate time extensions, as determined by the designer, are in process; and (3) the contractor desires to make changes in the logic (sequencing of work) or the planned duration of future activities of the CPM schedule which, in the opinion of the designer or the owner, are of a major nature. The plan of action, when required shall be submitted to the Owner for review within two (2) business days of the Contractor receiving the Owner's written demand. The recovery schedule, when required, shall be submitted to the Owner within five (5) calendar days of the Contractor's receiving the Owner's written demand. Failure to provide an updated construction schedule or a recovery schedule may be grounds for rejection of payment applications or withholding of funds as set forth in Article 33.
- k. The project expediter shall notify each contractor of such events or time frames that are critical to the progress of the job. Such notice shall be timely and reasonable. Should the progress be delayed due to the work of any of the several contractors, it shall be the duty of the project expediter to immediately notify the contractor(s) responsible for such delay, the designer, the owner and other prime contractors. The designer shall determine the contractor(s) who caused the delays notify the bonding company of the responsible contractor(s) of the delays and shall make a recommendation to the owner regarding further action.
- l. Designation as project expediter entails an additional project control responsibility and does not alter in any way the responsibility of the contractor so designated, nor the responsibility of the other contractors involved in the project. The project expediter's superintendent(s) shall be in attendance at the project site at all times when work is in progress unless conditions are beyond the control of the contractor or until termination of

the contract in accordance with the contract documents. It is understood that such superintendent shall be acceptable to the owner and designer and shall be the one who will be continued in that capacity for the duration of the project unless he ceases to be on the contractor's payroll or the owner otherwise agrees. The time commitment of the project superintendent to the project shall be such as to insure satisfactory construction progress & coordination as determined by the project designer and owner and may be as stipulated in the Supplementary General Conditions.

ARTICLE 15 - SEPARATE CONTRACTS AND CONTRACTOR RELATIONSHIPS

- a. Public contracts may be delivered by the following construction delivery methods: single-prime, dual (single-prime and separate-prime), construction manager at risk, and alternative contracting method as approved by the State Building Commission. The owner reserves the right to prepare separate specifications, receive separate bids, and award separate contracts for such other major items of work as may be in the best interest of the State. For the purposes of a single prime contract, refer to Article 1 – Definitions.
- b. All contractors shall cooperate with each other in the execution of their work, and shall plan their work in such manner as to avoid conflicting schedules or delay of the work. See Article 14, Construction Supervision.
- c. If any part of contractor's work depends upon the work of another contractor, defects which may affect that work shall be reported to the designer in order that prompt inspection may be made and the defects corrected. Commencement of work by a contractor where such condition exists will constitute acceptance of the other contractor's work as being satisfactory in all respects to receive the work commenced, except as to defects which may later develop. The designer shall be the judge as to the quality of work and shall settle all disputes on the matter between contractors.
- d. Any mechanical or electrical work such as sleeves, inserts, chases, openings, penetrations, etc., which is located in the work of the general contractor shall be built in by the general contractor. The respective mechanical and electrical contractors shall set all sleeves, inserts and other devices that are to be incorporated into the structure in cooperation and under the supervision of the general contractor. The responsibility for the exact location of such items shall be that of the mechanical and/or electrical contractor.
- e. The designer and the owner shall have access to the work whenever it is in preparation and progress during normal working hours. The contractor shall provide facilities for such access so the designer may perform his functions under the contract documents.
- f. Should a contractor cause damage to the work or property of another contractor, he shall be directly responsible, and upon notice, shall promptly settle the claim or otherwise resolve the dispute.

ARTICLE 16 - SUBCONTRACTS AND SUBCONTRACTORS

- a. Within thirty (30) days after award of the contract, the contractor shall submit to the designer and to the owner a list giving the names and addresses of subcontractors and equipment and material suppliers he proposes to use, together with the scope of their respective parts of the work. Should any subcontractor be disapproved by the designer, the designer shall submit his reasons for disapproval in writing to the owner for the owner's consideration with a copy to the contractor. If the owner concurs with the

designer's recommendation, the contractor shall submit a substitute for approval. The designer shall act promptly in the approval of subcontractors, and when approval of the list is given, no changes of subcontractors will be permitted except for cause or reason considered justifiable by the designer.

- b. The designer will furnish to any subcontractor, upon request, evidence regarding amounts of money paid to the contractor on account of the subcontractor's work.
- c. The contractor is and remains fully responsible for his own acts or omissions as well as those of any subcontractor or of any employee of either. The contractor agrees that no contractual relationship exists between the subcontractor and the owner in regard to the contract, and that the subcontractor acts on this work as an agent or employee of the contractor.
- d. The owner reserves the right to limit the amount of portions of work to be subcontracted as hereinafter specified.

ARTICLE 17 - CONTRACTOR AND SUBCONTRACTOR RELATIONSHIPS

The contractor agrees that the terms of these contract documents shall apply equally to each subcontractor as to the contractor, and the contractor agrees to take such action as may be necessary to bind each subcontractor to these terms. The contractor further agrees to conform to the Code of Ethical Conduct as adopted by the Associated General Contractors of America, Inc., with respect to contractor-subcontractor relationships, and that payments to subcontractors shall be made in accordance with the provisions of G.S. 143-134.1 titled "Interest on final payments due to prime contractors: payments to subcontractors."

- a. On all public construction contracts which are let by a board or governing body of the state government or any political subdivision thereof, except contracts let by the Department of Transportation pursuant to G.S. 136-28.1, the balance due prime contractors shall be paid in full within 45 days after respective prime contracts of the project have been accepted by the owner, certified by the architect, engineer or designer to be completed in accordance with terms of the plans and specifications, or occupied by the owner and used for the purpose for which the project was constructed, whichever occurs first. Provided, however, that whenever the architect or consulting engineer in charge of the project determines that delay in completion of the project in accordance with terms of the plans and specifications is the fault of the contractor, the project may be occupied and used for the purposes for which it was constructed without payment of any interest on amounts withheld past the 45 day limit. No payment shall be delayed because of the failure of another prime contractor on such project to complete his contract. Should final payment to any prime contractor beyond the date such contracts have been certified to be completed by the designer or architect, accepted by the owner, or occupied by the owner and used for the purposes for which the project was constructed, be delayed by more than 45 days, said prime contractor shall be paid interest, beginning on the 46th day, at the rate of one percent (1%) per month or fraction thereof unless a lower rate is agreed upon on such unpaid balance as may be due. In addition to the above final payment provisions, periodic payments due a prime contractor during construction shall be paid in accordance with the payment provisions of the contract documents or said prime contractor shall be paid interest on any such unpaid amount at the rate stipulated above for delayed final payments. Such interest shall begin on the date the payment is due and continue until the date on which payment is made. Such due date may be established by the terms of the contract. Funds for payment of such interest on state-owned projects shall be obtained from the current budget of the owning department, institution or agency. Where a conditional acceptance

of a contract exists, and where the owner is retaining a reasonable sum pending correction of such conditions, interest on such reasonable sum shall not apply.

- b. Within seven days of receipt by the prime contractor of each periodic or final payment, the prime contractor shall pay the subcontractor based on work completed or service provided under the subcontract. Should any periodic or final payment to the subcontractor be delayed by more than seven days after receipt of periodic or final payment by the prime contractor, the prime contractor shall pay the subcontractor interest, beginning on the eighth day, at the rate of one percent (1%) per month or fraction thereof on such unpaid balance as may be due.
- c. The percentage of retainage on payments made by the prime contractor to the subcontractor shall not exceed the percentage of retainage on payments made by the owner to the prime contractor. Any percentage of retainage on payments made by the prime contractor to the subcontractor that exceeds the percentage of retainage on payments made by the owner to the prime contractor shall be subject to interest to be paid by the prime contractor to the subcontractor at the rate of one percent (1%) per month or fraction thereof.
- d. Nothing in this section shall prevent the prime contractor at the time of application and certification to the owner from withholding application and certification to the owner for payment to the subcontractor for unsatisfactory job progress; defective construction not remedied; disputed work; third-party claims filed or reasonable evidence that claim will be filed; failure of subcontractor to make timely payments for labor, equipment and materials; damage to prime contractor or another subcontractor; reasonable evidence that subcontract cannot be completed for the unpaid balance of the subcontract sum; or a reasonable amount for retainage not to exceed the initial percentage retained by owner.

ARTICLE 18 - DESIGNER'S STATUS

- a. The designer shall provide general administration of the performance of construction contracts, including liaison and necessary inspection of the work to ensure compliance with plans and specifications. He is the agent of the owner only for the purpose of constructing this work and to the extent stipulated in the contract documents. He has authority to direct work to be performed, to stop work, to order work removed, or to order corrections of faulty work where any such action by the designer may be necessary to assure successful completion of the work.
- b. The designer is the impartial interpreter of the contract documents, and, as such, he shall exercise his powers under the contract to enforce faithful performance by both the owner and the contractor, taking sides with neither.
- c. Should the designer cease to be employed on the work for any reason whatsoever, then the owner shall employ a competent replacement who shall assume the status of the former designer.
- d. The designer and his consultants will make inspections of the project. They will inspect the progress, the quality and the quantity of the work.
- e. The designer and the owner shall have access to the work whenever it is in preparation and progress during normal working hours. The contractor shall provide facilities for such access so the designer and owner may perform their functions under the contract documents.

- f. Based on the designer's inspections and evaluations of the project, the designer shall issue interpretations, directives and decisions as may be necessary to administer the project. His decisions relating to artistic effect and technical matters shall be final, provided such decisions are within the limitations of the contract.

ARTICLE 19 - CHANGES IN THE WORK

- a. The owner may have changes made in the work covered by the contract. These changes will not invalidate and will not relieve or release the contractor from any guarantee given by him pertinent to the contract provisions. These changes will not affect the validity of the guarantee bond and will not relieve the surety or sureties of said bond. All extra work shall be executed under conditions of the original contract.
- b. Except in an emergency endangering life or property, no change shall be made by the contractor except upon receipt of an approved change order or written field order from the designer, countersigned by the owner. No claim for adjustments of the contract price shall be valid unless this procedure is followed.

A field order, transmitted by fax or hand-delivered, may be used where the change involved impacts the critical path of the work. A formal change order shall be issued as expeditiously as possible.

In the event of emergency endangering life or property, the contractor may be directed to proceed on a time and material basis whereupon the contractor shall proceed and keep accurately on such form as specified by the designer or owner, a correct account of costs together with all proper invoices, payrolls and supporting data. Upon completion of the work the change order will be prepared as outlined below under either c.1 or c.2 or both.

- c. In determining the values of changes, either additive or deductive, contractors are restricted to the use of the following methods:
 - 1. Where the extra work involved is covered by unit prices quoted in the proposal, or subsequently agreed to by the contractor, designer and owner, the value of the change shall be computed by application of unit prices based on quantities, estimated or actual as agreed on the items involved, except in such cases where a quantity exceeds the estimated quantity allowance in the contract by one hundred percent (100%) or more. In such cases, either party may elect to proceed under subparagraph c2 herein. If neither party elects to proceed under c2, then unit prices shall apply.
 - 2. The contracting parties shall negotiate and agree upon the equitable value of the change prior to issuance of the change order, and the change order shall stipulate the corresponding lump sum adjustment to the contract price.
- d. Under Paragraph b and c.2. above, the allowances for overhead and profit combined shall be as follows: all contractors (the single contracting entity (prime), his subcontractors (first tier), or their subcontractors (second tier, third tier, etc.) shall be allowed a maximum of ten percent (10%) on work they each self-perform; the prime contractor shall be allowed a maximum of five percent (5%) on contracted work of his first tier subcontractor; first tier, second tier, third tier, etc. subcontractors shall be allowed a maximum of two and one-half percent (2.5%) on the contracted work of their subcontractors. Under c.1. no additional allowances shall be made for overhead and profit. In the case of deductible change orders, under c.2. and b. above, the contractor shall include no less than five percent (5%) profit, but no allowances for overhead.

- e. The term "net cost" as used herein shall mean the difference between all proper cost additions and deductions. The "cost" as used herein shall be limited to the following:
1. The actual costs of materials and supplies incorporated or consumed as part of the work.
 2. The actual costs of labor expended on the project site. Labor expended in coordination, change order negotiation, record document maintenance, shop drawing revision or other tasks necessary to the administration of the project are considered overhead whether they take place in an office or on the project site.
 3. The actual costs of labor burden, limited to the costs of social security (FICA) and Medicare/Medicaid taxes; unemployment insurance costs; health/dental/vision insurance premiums; paid employee leave for holidays, vacation, sick leave, and/or petty leave, not to exceed a total of 30 days per year; retirement contributions; worker's compensation insurance premiums; and the costs of general liability insurance when premiums are computed based on payroll amounts; the total of which shall not exceed thirty percent (30%) of the actual costs of labor.
 4. The actual costs of rental for tools, excluding hand tools; equipment; machinery; vehicles; and temporary facilities required for the work.
 5. The actual costs of premiums for bonds, insurance, permit fees, and sales or use taxes related to the work.

Overtime and extra pay for holidays and weekends may be a cost item only to the extent approved by the owner.

- f. Should concealed conditions be encountered in the performance of the work below grade, or should concealed or unknown conditions in an existing structure be at variance with the conditions indicated by the contract documents, the contract sum and time for completion may be equitably adjusted by change order upon claim by either party made within thirty (30) days after the condition has been identified. The cost of such change shall be arrived at by one of the foregoing methods. All change orders shall be supported by a unit cost breakdown showing method of arriving at net cost as defined above.
- g. In all change orders, the procedure will be for the designer to request proposals for the change order work in writing. The contractor will provide such proposal and supporting data in suitable format. The designer shall verify correctness. Delay in the processing of the change order due to a lack of proper submittal by the contractor of all required supporting data shall not constitute grounds for a time extension or basis for a claim. Within fourteen (14) days after receipt of the contractor's accepted proposal including all supporting documentation required by the designer, the designer shall prepare the change order and forward to the contractor for his signature or otherwise respond, in writing, to the contractor's proposal. Within seven (7) days after receipt of the change order executed by the contractor, the designer shall certify the change order by his signature, and forward the change order and all supporting data to the owner for the owner's approval. The owner shall approve and execute the change order within seven (7) days of receipt. In case of emergency or extenuating circumstances, approval of changes may be obtained verbally by telephone or field orders approved by all parties, then shall be substantiated in writing as outlined under normal procedure.

- h. At the time of signing a change order, the contractor shall be required to certify as follows:

"I certify that my bonding company will be notified forthwith that my contract has been changed by the amount of this change order, and that a copy of the approved change order will be mailed upon receipt by me to my surety."

- i. A change order, when issued, shall be full compensation, or credit, for the extra work included, omitted or substituted. It shall show on its face the adjustment in time for completion of the project as a result of the change in the work.
- j. If, during the progress of the work, the owner requests a change order and the contractor's terms are unacceptable, the owner may require the contractor to perform such work on a time and material basis whereupon the contractor shall proceed and keep accurately on such form as specified by the designer or owner a correct account of the cost together with all proper invoices, payrolls and supporting data. Upon completion of the work a change order will be prepared with allowances for overhead and profit per paragraph d. above and "net cost" and "cost" per paragraph c. above. Without prejudice, nothing in this paragraph shall preclude the owner from performing or having performed that portion of the work requested in the change order.

ARTICLE 20 - CLAIMS FOR EXTRA COST

- a. Should the contractor consider that as a result of instructions given by the designer, he is entitled to extra cost above that stated in the contract, he shall give written notice thereof to the designer within seven (7) days. The written notice shall clearly state that a claim for extra cost is being made and shall provide a detailed justification for the extra cost. The contractor shall not proceed with the work affected until further advised, except in emergency involving the safety of life or property, which condition is covered in Article 19(b) and Article 11(h). No claims for extra compensation shall be considered unless the claim is so made. The designer shall render a written decision within seven (7) days of receipt of claim.
- b. The contractor shall not act on instructions received by him from persons other than the designer, and any claims for extra compensation or extension of time on account of such instruction will not be honored. The designer shall not be responsible for misunderstandings claimed by the contractor of verbal instructions which have not been confirmed in writing, and in no case shall instructions be interpreted as permitting a departure from the contract documents unless such instruction is confirmed in writing and supported by a properly authorized change order.
- c. Should a claim for extra compensation by the contractor that complies with the requirements of (a) above be denied by the designer or owner, and cannot be resolved by a representative of The University of North Carolina General Administration, the contractor may request a mediation in connection with G.S. 143-128(f1) in the dispute resolution rules adopted by the State Building Commission (1 N.C.A.C. 30H .0101 through .1001). If the contractor is unable to resolve its claims as a result of mediation, the contractor may pursue his claim in accordance with the provisions of G.S. 143-135.3 and the following:
 - 1. A contractor who has not completed a contract with an institution of The University of North Carolina and who has not received the amount he claims is due under the contract may submit a verified written claim to the Associate Vice President for

Finance & University Property Officer of The University of North Carolina General Administration for the amount the contractor claims is due. If the claim remains unresolved after review by the Associate Vice President for Finance, the contractor may submit the verified written claim to the Director of the State Construction Office of the Department of Administration for the amount the contractor claims is due. The Director may deny, allow or compromise the claim, in whole or in part. A claim under this subsection is not a contested case under Chapter 150B of the General Statutes.

2. (a) A contractor who has completed a contract with an institution of University of North Carolina for construction or repair work and who has not received the amount he claims is due under the contract may submit a verified written claim to the Associate Vice President for Finance & University Property Officer of The University of North Carolina General Administration for the amount the contractor claims is due. If the claim remains unresolved after review by the Associate Vice President for Finance, the contractor may submit the verified written claim to the Director of the State Construction Office of the Department of Administration for the amount the contractor claims is due. The claim shall be submitted within sixty (60) days after the contractor receives a final statement of the Associate Vice President's disposition of his claim and shall state the factual basis for the claim.
- (b) The Director shall investigate a submitted claim within ninety (90) days of receiving the claim, or within any longer time period upon which the Director and the contractor agree. The contractor may appear before the Director, either in person or through counsel, to present facts and arguments in support of his claim. The Director may allow, deny or compromise the claim, in whole or in part. The Director shall give the contractor a written statement of the Director's decision on the contractor's claim.
- (c) A contractor who is dissatisfied with the Director's decision on a claim submitted under this subsection may commence a contested case on the claim under Chapter 150B of the General Statutes. The contested case shall be commenced within sixty (60) days of receiving the director's written statement of the decision.
- (d) As to any portion of a claim that is denied by the director, the contractor may, in lieu of the procedures set forth in the preceding subsection of this section, within six (6) months of receipt of the director's final decision, institute a civil action for the sum he claims to be entitled to under the contract by filing a verified complaint and the issuance of a summons in the Superior Court of Wake County or in the superior court of any county where the work under the contract was performed. The procedure shall be the same as in all civil actions except that all issues shall be tried by the judge, without a jury.

ARTICLE 21 - MINOR CHANGES IN THE WORK

The designer will have the authority to order minor changes in the work not involving an adjustment in the contract sum or time for completion, and not inconsistent with the intent of the contract documents. Such changes shall be effected by written order, copied to the owner, and shall be binding on the owner and the contractor.

ARTICLE 22 - UNCORRECTED FAULTY WORK

Should the correction of faulty or damaged work be considered inadvisable or inexpedient by the owner and the designer, the owner shall be reimbursed by the contractor. A change order will be issued to reflect a reduction in the contract sum.

ARTICLE 23 - TIME OF COMPLETION, DELAYS, EXTENSION OF TIME

- a. The time of completion is stated in the Supplementary General Conditions and in the Form of Construction Contract. The Project Expediter, upon notice of award of contract, shall prepare a construction schedule to complete the project within the time of completion as required by Article 14.
- b. The contractors shall commence work to be performed under this agreement on a date to be specified in a written Notice to Proceed from the designer and shall fully complete all work hereunder within the time of completion stated. Time is of the essence and the contractor acknowledges the owner will likely suffer financial damage for failure to complete the work within the time of completion. For each day in excess of the above number of days, the contractor(s) shall pay the owner the sum stated as liquidated damages reasonably estimated in advance to cover the losses to be incurred by the owner by reason of failure of said contractor(s) to complete the work within the time specified, such time being in the essence of this contract and a material consideration thereof.
- c. In the event of multiple prime contractors, the designer shall be the judge as to the division of responsibility between the contractor(s), based on the construction schedule, weekly reports and job records, and shall apportion the amount of liquidated damages to be paid by each of them, according to delay caused by any or all of them.
- d. If the contractor is delayed at any time in the progress of his work solely by any act or negligence of the owner, the designer, or by any employee of either; by any separate contractor employed by the owner; by changes ordered in the work; by labor disputes at the project site; by abnormal weather conditions not reasonably anticipated for the locality where the work is performed; by unavoidable casualties; by any causes beyond the contractor's control; or by any other causes which the designer and owner determine may justify the delay, then the contract time may be extended by change order only for the time which the designer and owner may determine is reasonable.

Time extensions will not be granted for rain, wind, snow or other natural phenomena of normal intensity for the locality where work is performed. For purpose of determining extent of delay attributable to unusual weather phenomena, a determination shall be made by comparing the weather for the contract period involved with the average of the preceding five (5) year climatic range during the same time interval based on the National Oceanic and Atmospheric Administration National Weather Service statistics for the locality where work is performed and on daily weather logs kept on the job site by the contractor reflecting the effect of the weather on progress of the work and initialed by the designer's representative. No weather delays shall be considered after the building is dried in unless work claimed to be delayed is on the critical path of the baseline schedule or approved updated schedule. Time extensions for weather delays, acts of God, labor disputes, fires, delays in transportation, unavoidable casualties or other delays which are beyond the control of the owner do not entitle the contractor to compensable damages for delay. Any contractor claim for compensable damages for delays is limited to delays caused solely by the owner or its agents. Contractor caused

delays shall be accounted for before owner or designer caused delays in the case of concurrent delays.

- e. Request for extension of time shall be made in writing to the designer with copies to the owner within twenty (20) days following cause of delay. In case of continuing cause for delay, the contractor shall notify the designer in writing with copies to the owner of the delay within twenty (20) days of the beginning of the delay and only one claim is necessary.
- f. The contractor shall notify his surety in writing of extension of time granted.
- g. No claim for time extension shall be allowed on account of failure of the designer to furnish drawings or instructions until twenty (20) days after demand for such drawings and/or instructions. See Article 5c. Demand must be in written form clearly stating the potential for delay unless the drawings or instructions are provided. Any delay granted will begin after the twenty (20) day demand period is concluded.

ARTICLE 24 - PARTIAL UTILIZATION BENEFICIAL OCCUPANCY

- a. The owner may desire to occupy or utilize all or a portion of the project prior to completion of the project.
- b. Should the owner request a utilization of the building or portion thereof, the designer shall perform a designer final inspection of the area after being notified by the contractor that the area is ready for such. After the contractor has completed designer final inspection punch list and the designer has verified, the designer shall schedule a beneficial occupancy inspection at a time and date acceptable to the owner, contractor(s) and State Construction Office. If beneficial occupancy is granted by the owner and State Construction Office, in such areas the following will be established:
 - 1. The beginning of guarantees and warranties period for the equipment necessary to provide support in the area.
 - 2. The owner assumes all responsibilities for utility costs for the entire building
 - 3. Contractor will obtain consent of surety.
 - 4. Contractor will obtain endorsement from insurance company permitting beneficial occupancy.
- c. The owner shall have the right to exclude the contractor from any part of the project which the designer has so certified to be substantially complete, but the owner will allow the contractor reasonable access to complete or correct work to bring it into compliance with the contract.
- d. Occupancy by the owner under this article will in no way relieve the contractor from his contractual requirement to complete the project within the specified time. The contractor will not be relieved of liquidated damages because of beneficial occupancy. The designer may prorate liquidated damages based on the percentage of project occupied.

ARTICLE 25 - FINAL INSPECTION, ACCEPTANCE AND PROJECT CLOSEOUT

- a. Upon notification from the contractor(s) that the project is complete and ready for inspection, the designer shall make a designer final inspection to verify that the project is

complete and ready for owner and SCO final inspection. Prior to owner & SCO final inspection, the contractor(s) shall complete all items requiring corrective measures noted at the designer final inspection. The designer shall schedule a SCO final inspection at a time and date acceptable to the owner, contractor(s) and State Construction Office.

b. At the SCO final inspection, the designer and his consultants shall, if job conditions warrant, record a list of items that are found to be incomplete or not in accordance with the contract documents. At the conclusion of the SCO final inspection, the designer, the owner and State Construction Office representatives shall make one of the following determinations:

1. That the project is completed and accepted.
 2. That the project will be accepted subject to correction of the list of discrepancies (punch list). All punch list items must be completed within thirty (30) days of SCO final inspection or the owner may invoke Article 28, Owner's Right to Do Work.
 3. That the project is not complete and another date for a SCO final inspection will be established.
- c. Within fourteen (14) days of final acceptance per Paragraph b1 or within fourteen (14) days after completion of punch list per Paragraph b2 above, the designer shall certify the work and issue applicable certificate(s) of compliance.
- d. Any discrepancies listed or discovered after the date of SCO final inspection and acceptance under Paragraphs b1 or b2 above, shall be handled in accordance with Article 42, Guarantee.
- e. The final acceptance date will establish the following:
1. The beginning of guarantees and warranties period.
 2. The date on which the contractor's insurance coverage for public liability, property damage and builder's risk may be terminated.
 3. That no liquidated damages (if applicable) shall be assessed after this date.
 4. The termination date of utility cost to the contractor.
- f. Prior to issuance of final acceptance date, the contractor shall have his authorized representatives visit the project and give full instructions to the owner's designated personnel regarding operating, maintenance, care, and adjustment of all equipment and special construction elements. In addition, the contractor shall provide the owner a complete instructional video (media format acceptable to the owner) on the operation, maintenance, care, and adjustment of all equipment and special construction elements.

ARTICLE 26 - CORRECTION OF WORK BEFORE FINAL PAYMENT

- a. Any work, materials, fabricated items or other parts of the work which have been condemned or declared not in accordance with the contract by the designer shall be promptly removed from the work site by the contractor, and shall be immediately replaced by new work in accordance with the contract at no additional cost to the owner. Work or property of other contractors or the owner, damaged or destroyed by virtue of

such faulty work, shall be made good at the expense of the contractor whose work is faulty.

- b. Correction of condemned work described above shall commence within twenty-four (24) hours after receipt of notice from the designer, and shall make satisfactory progress, as determined by the designer, until completed.
- c. Should the contractor fail to proceed with the required corrections, then the owner may complete the work in accordance with the provisions of Article 28.

ARTICLE 27 - CORRECTION OF WORK AFTER FINAL PAYMENT

See Article 35, Performance Bond and Payment Bond, and Article 42, Guarantee. Neither the final certificate, final payment, occupancy of the premises by the owner, nor any provision of the contract, nor any other act or instrument of the owner, nor the designer, shall relieve the contractor from responsibility for negligence, or faulty material or workmanship, or failure to comply with the drawings and specifications. The contractor shall correct or make good any defects due thereto and repair any damage resulting therefrom which may appear during the guarantee period following final acceptance of the work except as stated otherwise under Article 42, Guarantee. The owner will report any defects as they may appear to the contractor and establish a time limit for completion of corrections by the contractor. The owner will be the judge as to the responsibility for correction of defects.

ARTICLE 28 - OWNER'S RIGHT TO DO WORK

If, during the progress of the work or during the period of guarantee, the contractor fails to prosecute the work properly or to perform any provision of the contract, the owner, after seven (7) days' written notice sent by certified mail, return receipt requested, to the contractor from the designer, may perform or have performed that portion of the work. The cost of the work may be deducted from any amounts due or to become due to the contractor, such action and cost of same having been first approved by the designer. Should the cost of such action of the owner exceed the amount due or to become due the contractor, then the contractor or his surety, or both, shall be liable for and shall pay to the owner the amount of said excess.

ARTICLE 29 - ANNULMENT OF CONTRACT

If the contractor fails to begin the work under the contract within the time specified, or the progress of the work is not maintained on schedule, or the work is not completed within the time above specified, or fails to perform the work with sufficient workmen and equipment or with sufficient materials to ensure the prompt completion of said work, or shall perform the work unsuitably or shall discontinue the prosecution of the work, or if the contractor shall become insolvent or be declared bankrupt or commit any act of bankruptcy or insolvency, or allow any final judgment to stand against him unsatisfied for a period of forty-eight (48) hours, or shall make an assignment for the benefit of creditors, or for any other cause whatsoever shall not carry on the work in an acceptable manner, the owner may give notice in writing, sent by certified mail, return receipt requested, to the contractor and his surety of such delay, neglect or default, specifying the same, and if the contractor within a period of seven (7) days after such notice shall not proceed in accordance therewith, then the owner shall, declare this contract in default, and, thereupon, the surety shall promptly take over the work and complete the performance of this contract in the manner and within the time frame specified. In the event the surety shall fail to take over the work to be done under this contract within seven (7) days after being so notified and notify the owner in writing, sent by certified mail, return receipt requested, that he is taking the same over and stating that he will diligently pursue and complete the same, the owner shall have full power and authority,

without violating the contract, to take the prosecution of the work out of the hands of said contractor, to appropriate or use any or all contract materials and equipment on the grounds as may be suitable and acceptable and may enter into an agreement, either by public letting or negotiation, for the completion of said contract according to the terms and provisions thereof or use such other methods as in his opinion shall be required for the completion of said contract in an acceptable manner. All costs and charges incurred by the owner, together with the costs of completing the work under contract, shall be deducted from any monies due or which may become due said contractor and surety. In case the expense so incurred by the owner shall be less than the sum which would have been payable under the contract, if it had been completed by said contractor, then the said contractor and surety shall be entitled to receive the difference, but in case such expense shall exceed the sum which would have been payable under the contract, then the contractor and the surety shall be liable and shall pay to the owner the amount of said excess.

ARTICLE 30 - CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE THE CONTRACT

- a. Should the work be stopped by order of a court having jurisdiction, or by order of any other public authority for a period of three months, due to cause beyond the fault or control of the contractor, or if the owner should fail or refuse to make payment on account of a certificate issued by the designer within forty-five (45) days after receipt of same, then the contractor, after fifteen (15) days' written notice sent by certified mail, return receipt requested, to the owner and the designer, may suspend operations on the work or terminate the contract.
- b. The owner shall be liable to the contractor for the cost of all materials delivered and work performed on this contract plus ten (10) percent overhead and profit and shall make such payment. The designer shall be the judge as to the correctness of such payment.

ARTICLE 31 - REQUEST FOR PAYMENT

- a. Not later than the fifth day of the month, the contractor shall submit to the designer a request for payment for work done during the previous month. The request shall be in the form agreed upon between the contractor and the designer, but shall show substantially the value of work done and materials delivered to the site during the period since the last payment, and shall sum up the financial status of the contract with the following information:
 1. Total of contract including change orders.
 2. Value of work completed to date.
 3. Less five percent (5%) retainage, provided however, that after fifty percent (50%) of the contractor's work has been satisfactorily completed on schedule, with approval of the owner and written consent of the surety, further requirements for retainage will be waived only so long as work continues to be completed satisfactorily and on schedule.
 4. Less previous payments.
 5. Current amount due.

- b. The contractor, upon request of the designer, shall substantiate the request with invoices of vouchers or payrolls or other evidence.
- c. Prior to submitting the first request, the contractor shall prepare for the designer a schedule showing a breakdown of the contract price into values of the various parts of the work, so arranged as to facilitate payments to subcontractors in accordance with Article 17, Contractor and Subcontractor Relationships. The contractor(s) shall list the value of each subcontractor and supplier, identifying each minority business subcontractor and supplier as listed in Affidavit C, if applicable.
- d. When payment is made on account of stored materials and equipment, such materials must be stored on the owner's property, and the requests for payments shall be accompanied by invoices or bills of sale or other evidence to establish the owner's title to such materials and equipment. Such payments will be made only for materials that have been customized or fabricated specifically for this project. Raw materials or commodity products including but not limited to piping, conduit, CMU, metal studs and gypsum board may not be submitted. Responsibility for such stored materials and equipment shall remain with the contractor regardless of ownership title. Such stored materials and equipment shall not be removed from the owner's property. Should the space for storage on-site be limited, the contractor, at his option, shall be permitted to store such materials and/or equipment in a suitable space off-site. Should the contractor desire to include any such materials or equipment in his application for payment, they must be stored in the name of the owner in an independent, licensed, bonded warehouse approved by the designer and the owner and located as close to the site as possible. The warehouse selected must be approved by the contractor's bonding and insurance companies; the material to be paid for shall be assigned to the owner and shall be inspected by the designer. Upon approval by the designer and owner of the storage facilities and materials and equipment, payment therefore will be certified. Responsibility for such stored materials and equipment shall remain with the contractor. Such stored materials and equipment shall not be moved except for transportation to the project site. Under certain conditions, the designer may approve storage of materials at the point of manufacture, which conditions shall be approved by the designer and the owner prior to approval for the storage and shall include an agreement by the storing party which unconditionally gives the State absolute right to possession of the materials at anytime. Bond, security and insurance protection shall continue to be the responsibility of the contractor(s).
- e. On projects requiring a Critical Path Method (CPM) construction schedule, the project expeditor will submit with each monthly pay application to the designer a current CPM schedule in a computerized precedence network format on a compact disc. The schedule will include all construction activities to be accomplished during the project to be properly sequenced and coordinated with elements of the work. The schedule shall be assembled from input presented and mutually coordinated by all the contractors (and/or subcontractors) and integrated into a single, overall schedule. The project expeditor will show all the scheduled work activities, including their subcontractors, and the sequence and interdependence (predecessors and successors) of the activities. The schedule shall show the total project duration including milestone dates. The critical path shall be clearly indicated. The schedule shall be in such a format that it can be read (imported) in Microsoft Project or Primavera P6. Failure to submit the construction schedule on compact disc media in an acceptable format will result in the pay application being denied.
- f. In the event of beneficial occupancy, retainage of funds due the contractor(s) may be reduced with the approval of the owner to an equitable amount to cover the list of items

to be completed or corrected. Retainage may not be reduced to less than two and one-half (2 1/2) times the estimated value of the work to be completed or corrected. Reduction of retainage must be with the consent and approval of the contractor's bonding company.

ARTICLE 32 - CERTIFICATES OF PAYMENT AND FINAL PAYMENT

- a. Within five (5) days from receipt of request for payment from the contractor, the designer shall issue and forward to the owner a certificate for payment. This certificate shall indicate the amount requested or as approved by the designer. If the certificate is not approved by the designer, he shall state in writing to the contractor and the owner his reasons for withholding payment.
- b. No certificate issued or payment made shall constitute an acceptance of the work or any part thereof. The making and acceptance of final payment shall constitute a waiver of all claims by the owner except:
 1. Claims arising from unsettled liens or claims against the contractor.
 2. Faulty work or materials appearing after final payment.
 3. Failure of the contractor to perform the work in accordance with drawings and specifications, such failure appearing after payment.
 4. As conditioned in the performance bond and payment bond.
- c. The making and acceptance of final payment shall constitute a waiver of all claims by the contractor except those claims previously made and remaining unsettled (Article 20(c)).
- d. Prior to submitting request for final payment to the designer for approval, the contractor shall fully comply with all requirements specified in the "project closeout" section of the specifications. These requirements include but are not limited to the following:
 1. Submittal of Product and Operating Manuals, Warranties and Bonds, Guarantees, Maintenance Agreements, As-Built Drawings, Certificates of Inspection or Approval from agencies having jurisdiction. (The designer must approve the Manuals prior to delivery to the owner).
 2. Transfer of Required attic stock material and all keys in an organized manner.
 3. Record of Owner's training.
 4. Resolution of any final inspection discrepancies.
 5. Granting access to contractor's records, if owner's internal auditors have made a request for such access pursuant to Article 52.
- e. The contractor shall forward to the designer, the final application for payment along with the following documents:
 1. List of minority business subcontractors and material suppliers showing breakdown of contract amounts and total actual payments to subcontractors and material suppliers.

2. Affidavit of Release of Liens.
 3. Affidavit of contractors of payment to material suppliers and subcontractors. (See Article 36).
 4. Consent of Surety to Final Payment.
 5. Certificates of state agencies required by state law.
- f. The designer will not authorize final payment until the work under contract has been certified by designer, certificates of compliance issued, and the contractor has complied with the closeout requirements. The designer shall forward the contractor's final application for payment to the owner along with respective certificate(s) of compliance required by law.

ARTICLE 33 - PAYMENTS WITHHELD

- a. The designer with the approval of the owner may withhold payment for the following reasons:
 1. Faulty work not corrected.
 2. The unpaid balance on the contract is insufficient to complete the work in the judgment of the designer.
 3. To provide for sufficient contract balance to cover liquidated damages that will be assessed.
- b. The owner may authorize the withholding of payment for the following reasons:
 1. Claims filed against the contractor or evidence that a claim will be filed.
 2. Evidence that subcontractors have not been paid.
- c. The owner may withhold all or a portion of the contractor's general conditions costs set forth in the approved schedule of values if the contractor has failed to comply with:
 - (1) a request to access its records by the owner's internal auditors pursuant to Article 52;
 - (2) a request for a plan of action and/or recovery schedule under Article 14j;
 - (3) a request to provide electronic copies of contractor's baseline schedule and/or updates with all logic used to create schedules in the original format of the scheduling software; and
 - (4) contractor's failure to have its superintendent on the project as provided in Article 14.1 and/or as stipulated in the Supplementary General Conditions.
- d. When grounds for withholding payments have been removed, payment will be released. Delay of payment due the contractor without cause will make owner liable for payment of interest to the contractor in accordance with G.S. 143-134.1. As provided in G.S. 143-134.1(e) the owner shall not be liable for interest on payments withheld by the owner for unsatisfactory job progress, defective construction not remedied, disputed work, or third party-claims filed against the owner or reasonable evidence that a third-party claim will be filed.

ARTICLE 34 - MINIMUM INSURANCE REQUIREMENTS

The work under this contract shall not commence until the contractor has obtained all required insurance and verifying certificates of insurance have been approved in writing by the owner. These certificates shall document that coverage afforded under the policies will not be cancelled, reduced in amount or coverages eliminated until at least thirty (30) days after mailing written notice, by certified mail, return receipt requested, to the insured and the owner of such alteration or cancellation. If endorsements are needed to comply with the notification or other requirements of this article copies of the endorsements shall be submitted with the certificates.

a. **Worker's Compensation and Employer's Liability**

The contractor shall provide and maintain, until final acceptance, workmen's compensation insurance, as required by law, as well as employer's liability coverage with minimum limits of \$100,000.

b. **Public Liability and Property Damage**

The contractor shall provide and maintain, until final acceptance, comprehensive general liability insurance, including coverage for premises operations, independent contractors, completed operations, products and contractual exposures, as shall protect such contractors from claims arising out of any bodily injury, including accidental death, as well as from claims for property damages which may arise from operations under this contract, whether such operations be by the contractor or by any subcontractor, or by anyone directly or indirectly employed by either of them and the minimum limits of such insurance shall be as follows:

Bodily Injury:	\$500,000 per occurrence
Property Damage:	\$100,000 per occurrence / \$300,000 aggregate

In lieu of limits listed above, a \$500,000 combined single limit shall satisfy both conditions.

Such coverage for completed operations must be maintained for at least two (2) years following final acceptance of the work performed under the contract.

c. **Property Insurance (Builder's Risk/ Installation Floater)**

The contractor shall purchase and maintain property insurance until final acceptance, upon the entire work at the site to the full insurable value thereof. This insurance shall include the interests of the owner, the contractor, the subcontractors and subcontractors in the work and shall insure against the perils of fire, wind, rain, flood, extended coverage, and vandalism and malicious mischief. If the owner is damaged by failure of the contractor to purchase or maintain such insurance, then the contractor shall bear all reasonable costs properly attributable thereto; the contractor shall effect and maintain similar property insurance on portions of the work stored off the site when request for payment per articles so includes such portions.

d. **Deductible**

Any deductible, if applicable to loss covered by insurance provided, is to be borne by the contractor

e. **Other Insurance**

The contractor shall obtain such additional insurance as may be required by the owner or by the General Statutes of North Carolina including motor vehicle insurance, in amounts not less than the statutory limits.

f. Proof of Carriage

The contractor shall furnish the owner with satisfactory proof of carriage of the insurance required before written approval is granted by the owner.

ARTICLE 35 - PERFORMANCE BOND AND PAYMENT BOND

- a. Each contractor shall furnish a performance bond and payment bond executed by a surety company authorized to do business in North Carolina. The bonds shall be in the full contract amount. Bonds shall be executed in the form bound with these specifications.
- b. All bonds shall be countersigned by an authorized agent of the bonding company who is licensed to do business in North Carolina.

ARTICLE 36 - CONTRACTOR'S AFFIDAVIT

The final payment of retained amount due the contractor on account of the contract shall not become due until the contractor has furnished to the owner through the designer an affidavit signed, sworn and notarized to the effect that all payments for materials, services or subcontracted work in connection with his contract have been satisfied, and that no claims or liens exist against the contractor in connection with this contract. In the event that the contractor cannot obtain similar affidavits from subcontractors to protect the contractor and the owner from possible liens or claims against the subcontractor, the contractor shall state in his affidavit that no claims or liens exist against any subcontractor to the best of his (the contractor's) knowledge, and if any appear afterward, the contractor shall save the owner harmless.

ARTICLE 37 - ASSIGNMENTS

The contractor shall not assign any portion of this contract nor subcontract in its entirety. Except as may be required under terms of the performance bond or payment bond, no funds or sums of money due or become due the contractor under the contract may be assigned.

ARTICLE 38 - USE OF PREMISES

- a. The contractor(s) shall confine his apparatus, the storage of materials and the operations of his workmen to limits indicated by law, ordinances, permits or directions of the designer and owner and shall not exceed those established limits in his operations.
- b. The contractor(s) shall not load or permit any part of the structure to be loaded with a weight that will endanger its safety.
- c. The contractor(s) shall enforce the designer's and owner's instructions regarding signs, advertisements, fires and smoking.
- d. No firearms, any type of alcoholic beverages, or drugs (other than those prescribed by a physician) will be permitted at the job site.

ARTICLE 39 - CUTTING, PATCHING AND DIGGING

- a. The contractor shall do all cutting, fitting or patching of his work that may be required to make its several parts come together properly and fit it to receive or be received by work of other contractors shown upon or reasonably implied by the drawings and specifications for the completed structure, as the designer may direct.
- b. Any cost brought about by defective or ill-timed work shall be borne by the party responsible therefor.
- c. No contractor shall endanger any work of another contractor by cutting, digging or other means. No contractor shall cut or alter the work of any other contractor without the consent of the designer and the affected contractor(s).

ARTICLE 40 - UTILITIES, STRUCTURES, SIGNS

- a. The contractor shall provide necessary and adequate facilities for water, electricity, gas, oil, sewer and other utility services which may be necessary and required for completion of the project including all utilities required for testing, cleaning, balancing and sterilization of designated plumbing, mechanical and electrical systems. Any permanent meters installed shall be listed in the contractor's name until work has a final acceptance. The contractor will be solely responsible for all utility costs prior to final acceptance unless stipulated otherwise in the project specifications. The contractor shall contact all affected utility companies prior to bid to determine their requirements to provide temporary and permanent service and include all costs associated with providing those services in their bid unless otherwise stipulated. Coordination of the work of the utility companies during construction is the sole responsibility of the contractor.
- b. Meters shall be relisted in the owner's name on the day following final acceptance of the work, and the owner shall pay for services used after that date.
- c. The owner shall be reimbursed for all metered utility charges after the meter is relisted in the owner's name and prior to completion and acceptance of the work of **all** contractors. Reimbursement shall be made by the contractor whose work has not been completed and accepted. If the work of two or more contractors has not been completed and accepted, reimbursement to the owner shall be paid by the contractors involved on the basis of assessments by the designer.
- d. Prior to the operation of permanent systems, the General Contractor will provide temporary power, lighting, water, and heat to maintain space temperature above freezing, as required for construction operations.
- e. All contractors shall have the permanent building systems in sufficient readiness for furnishing temporary climatic control at the time a building is enclosed and secured. The HVAC systems shall maintain climatic control throughout the enclosed portion of the building sufficient to allow completion of the interior finishes of the building. A building shall be considered enclosed and secured when windows, doorways (exterior, mechanical, and electrical equipment rooms), and hardware are installed; and other openings have protection which will provide reasonable climatic control. The appropriate time to start the mechanical systems and climatic condition shall be jointly determined by the contractor(s), the designer and the owner. Use of the equipment in this manner shall be subject to the approval of the designer and owner and shall in no way affect the warranty requirements of the contractor(s).

- f. The electrical contractor shall have the building's permanent power wiring distribution system in sufficient readiness to provide power as required by the HVAC contractor for temporary climatic control.
- g. The electrical contractor shall have the building's permanent lighting system ready at the time the general contractor begins interior painting and shall provide adequate lighting in those areas where interior painting and finishing is being performed.
- h. Each prime contractor shall be responsible for his permanently fixed service facilities and systems in use during progress of the work. The following procedures shall be strictly adhered to:
 - 1. Prior to acceptance of work by the State Construction Office and owner, each contractor shall remove and replace any parts of the permanent building systems damaged through use during construction.
 - 2. Temporary filters as recommended by the equipment manufacturer in order to keep the equipment and ductwork clean and free of dust and debris shall be installed in each of the heating and air conditioning units and at each return grille during construction. New filters shall be installed in each unit prior to the owner's acceptance of the work.
 - 3. Extra effort shall be maintained to keep the building and the site adjacent to the building clean and under no circumstances shall air systems be operated if finishing operations are creating dust in excess of what would be considered normal if the building were occupied.
 - 4. It shall be understood that any warranty on equipment presented to the owner shall extend from the day of final acceptance by the owner. The cost of warranting the equipment during operation in the finishing stages of construction shall be borne by the contractor whose system is utilized.
 - 5. The electrical contractor shall have all lamps in proper working condition at the time of final project acceptance.
- i. The General Contractor shall provide, if required and where directed, a shed for toilet facilities and shall furnish and install in this shed all water closets required for a complete and adequate sanitary arrangement. These facilities will be available to other contractors on the job and shall be kept in a neat and sanitary condition at all times. Chemical toilets are acceptable.
- j. The General Contractor shall, if required by the Supplementary General Conditions and where directed, erect a temporary field office, complete with lights, telephone, heat and air conditioning. A portion of this office shall be partitioned off, of sufficient size, for the use of a resident inspector, should the designer so direct.
- k. On multi-story construction projects, the General Contractor shall provide temporary elevators, lifts, or other special equipment for the general use of all contractors. The cost for such elevators, lifts or other special equipment and the operation thereof shall be included in the General Contractor's bid.
- l. The General Contractor will erect one sign on the project if required. The sign shall be of sound construction, and shall be neatly lettered with black letters on white background.

The sign shall bear the name of the project, and the names of prime contractors on the project, and the name of the designer and consultants. Directional signs may be erected on the owner's property subject to approval of the owner with respect to size, style and location of such directional signs. Such signs may bear the name of the contractor and a directional symbol. No other signs will be permitted except by permission of the owner.

ARTICLE 41 - CLEANING UP

- a. The contractors shall keep the building and surrounding area reasonably free from rubbish at all times, and shall remove debris from the site on a timely basis or when directed to do so by the designer or General Contractor. The General Contractor shall provide an on site refuse container(s) for the use of all contractors. Each contractor shall remove their rubbish and debris from the building on a daily basis. The General Contractor shall broom clean the building as required to minimize dust and dirt accumulation.
- b. The General Contractor shall provide and maintain suitable all-weather access to the building.
- c. Before final inspection and acceptance of the building, each contractor shall clean his portion of the work, including glass, hardware, fixtures, masonry, tile and marble (using no acid), clean and wax all floors as specified, and completely prepare the building for use by the owner, with no cleaning required by the owner.

ARTICLE 42 - GUARANTEE

- a. The contractor shall unconditionally guarantee materials and workmanship against patent defects arising from faulty materials, faulty workmanship or negligence for a period of twelve (12) months following the date of final acceptance of the work or beneficial occupancy; and shall replace such defective materials or workmanship without cost to the owner.
- b. Where items of equipment or material carry a manufacturer's warranty for any period in excess of twelve (12) months, then the manufacturer's warranty shall apply for that particular piece of equipment or material. The contractor shall replace such defective equipment or materials, without cost to the owner, within the manufacturer's warranty period.
- c. Additionally, the owner may bring an action for latent defects caused by the negligence of the contractor which is hidden or not readily apparent to the owner at the time of beneficial occupancy or final acceptance, whichever occurred first, in accordance with applicable law.
- d. Guarantees for roof, equipment, materials, and supplies shall be stipulated in the specifications sections governing such roof, equipment, materials, or supplies.

ARTICLE 43 - CODES AND STANDARDS

Wherever reference is given to codes, standard specifications or other data published by regulating agencies including, but not limited to, national electrical codes, North Carolina state building codes, federal specifications, ASTM specifications, various institute specifications, etc., it shall be understood that such reference is to the latest edition including addenda published prior to the date of the contract documents.

ARTICLE 44 - INDEMNIFICATION

To the fullest extent permitted by law, the contractor shall indemnify and hold harmless the owner, the designer and the agents, consultants and employees of the owner and designer, from and against all claims, damages, losses and expenses, including, but not limited to, attorneys' fees, arising out of or resulting from the performance or failure of performance of the work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom, and (2) is caused in whole or in part by any negligent act or omission of the contractor, the contractor's subcontractor, or the agents of either the contractor or the contractor's subcontractor. Such obligation shall not be construed to negate, abridge or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this article.

ARTICLE 45 - TAXES

- a. Federal excise taxes do not apply to materials entering into state work (Internal Revenue Code, Section 3442(3)).
- b. Federal transportation taxes do not apply to materials entering into state work (Internal Revenue Code, Section 3475(b) as amended).
- c. North Carolina sales tax and use tax, as required by law, do apply to materials entering into state work, and such costs shall be included in the bid proposal and contract sum.
- d. Local option sales and use taxes, as required by law, do apply to materials entering into state work as applicable, and such costs shall be included in the bid proposal and contract sum.
- e. **Accounting Procedures for Refund of County Sales & Use Tax**

Amount of county sales and use tax paid per contractor's statements:

Contractors performing contracts for state agencies shall give the state agency for whose project the property was purchased a signed statement containing the information listed in G.S. 105-164.14(e).

The Department of Revenue has agreed that in lieu of obtaining copies of sales receipts from contractors, an agency may obtain a certified statement from the contractor setting forth the date, the type of property and the cost of the property purchased from each vendor, the county in which the vendor made the sale and the amount of local sales and use taxes paid thereon. If the property was purchased out-of-state, the county in which the property was delivered should be listed. The contractor should also be notified that the certified statement may be subject to audit.

In the event the contractors make several purchases from the same vendor, such certified statement must indicate the invoice numbers, the inclusive dates of the invoices, the total amount of the invoices, the counties, and the county sales and use taxes paid thereon.

Name of taxing county: The position of a sale is the retailer's place of business located within a taxing county where the vendor becomes contractually obligated to make the sale. Therefore, it is important that the county tax be reported for the county of sale rather than the county of use.

When property is purchased from out-of-state vendors and the county tax is charged, the county should be identified where delivery is made when reporting the county tax.

Such statement must also include the cost of any tangible personal property withdrawn from the contractor's warehouse stock and the amount of county sales or use tax paid thereon by the contractor.

Similar certified statements by his subcontractors must be obtained by the general contractor and furnished to the claimant.

Contractors are not to include any tax paid on supplies, tools and equipment which they use to perform their contracts and should include only those building materials, supplies, fixtures and equipment which actually become a part of or annexed to the building or structure.

ARTICLE 46 - EQUAL OPPORTUNITY CLAUSE

The non-discrimination clause contained in Section 202 (Federal) Executive Order 11246, as amended by Executive Order 11375, relative to equal employment opportunity for all persons without regard to race, color, religion, sex or national origin, and the implementing rules and regulations prescribed by the secretary of Labor, are incorporated herein.

ARTICLE 47 - EMPLOYMENT OF INDIVIDUALS WITH DISABILITIES

The contractors agree not to discriminate against any employee or applicant for employment because of physical or mental disabilities in regard to any position for which the employee or applicant is qualified. The contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified individuals with such disabilities without discrimination based upon their physical or mental disability in all employment practices.

ARTICLE 48 - ASBESTOS-CONTAINING MATERIALS (ACM)

The State of North Carolina has attempted to address all asbestos-containing materials that are to be disturbed in the project. However, there may be other asbestos-containing materials in the work areas that are not to be disturbed and do not create an exposure hazard. Contractors are reminded of the requirements of instructions under Instructions to Bidders and General Conditions of the Contract, titled Examination of Conditions. Statute 130A, Article 19, amended August 3, 1989, established the Asbestos Hazard Management Program that controls asbestos abatement in North Carolina. The latest edition of *Guideline Criteria for Asbestos Abatement* from the State Construction Office is to be incorporated in all asbestos abatement projects for the Capital Improvement Program.

ARTICLE 49 - MINORITY BUSINESS PARTICIPATION

GS 143-128.2 establishes a ten percent (10%) goal for participation by minority business in total value of work for each State building project. The document *Guidelines for Recruitment and Selection of Minority Businesses for Participation in State Construction*

Contracts including Affidavits and Appendix E are hereby incorporated and made a part of this contract.

ARTICLE 50 – CONTRACTOR EVALUATION

The Contractor's overall work performance on the project shall be fairly evaluated in accordance with the State Building Commission policy and procedures, for determining qualifications to bid on future State capital improvement projects. In addition to final evaluation, interim evaluation may be prepared during the progress of project. The document, Contractor Evaluation Procedures, is hereby incorporated and made a part of this contract. The owner may request the contractor's comments to evaluate the designer.

ARTICLE 51- GIFTS

Pursuant to General Statute 133-32, it is unlawful for any vendor or contractor (i.e. architect, bidder, contractor, construction manager, design professional, engineer, subcontractor, supplier, etc.) to make gifts or give favors to any State employee. This prohibition covers those vendors and contractors who: (1) have a contract with a government agency; or (2) have performed under such a contract during the past year; or (3) anticipate bidding on such a contract in the future. For additional information regarding the specific requirements and exemptions, vendors and contractors are encouraged to review General Statute 133-32.

The contractor is prohibited from making gifts to any of the owner's employees, owner's project representatives (architect, engineers, construction manager and their employees), employees of the State Construction Office and/or any other state employees that may have any involvement, influence, responsibilities, oversight, management and/or duties that pertain to and/or relate to the construction administration, financial administration and/or disposition of claims arising from and/or relating to the contract and/or the project.

ARTICLE 52 – AUDITING – ACCESS TO PERSONS AND RECORDS

In accordance with General Statute.147-64.7, the State Auditor shall have access to the contractor's officers, employees, agents and/or other persons in control of and/or responsible for the contractor's records that relate to this contract for purposes of conducting audits under the referenced statute. The owner's internal auditors shall also have the right to access and copy the contractor's records relating to the contract and project during the term of the contract and within two years following the completion of the project/close out of the contract to verify accounts, accuracy, information, calculations and/or data affecting and/ or relating to contractor's requests for payment, requests for change orders, change orders, claims for extra work, requests for time extensions and related claims for delay/extended general conditions costs, claims for lost productivity, claims for lost efficiency, claims for idle equipment or labor, claims for price/cost escalation, pass-through claims of subcontractors and/or suppliers, and/or any other type of claim for payment or damages from the owner and/or the owner's project representatives.

ARTICLE 53 – NORTH CAROLINA FALSE CLAIMS ACT

The North Carolina False Claims Act (NCFCA), General Statute 1-605 through 1-618, applies to this contract. The contractor should familiarize itself with the entire NCFCA and its applicability to any requests, demands and/or claims for payment submitted to the State through the contracting university or affiliate.

The purpose of the NCFCA “is to deter persons from knowingly causing or assisting in causing the state to pay claims that are false or fraudulent and to provide remedies in the form of treble damages and civil penalties when money is obtained from the state by reason of a false or fraudulent claim” (Section 1-605[b]). A contractor’s liability under NCFCA may arise from, but not be limited to: requests for payment, invoices, billing, claims for extra work, requests for change orders, requests for time extensions, claims for delay damages/extended general conditions costs, claims for lost productivity, claims for lost efficiency, claims for idle equipment or labor, claims for price/cost escalation, pass through claims of subcontractors and/or suppliers, documentation used to support any of the foregoing requests for claims, and/or any other request for payment from the state through the contracting state agency, institution or university. The parts of the NCFCA that are most likely to be enforced with respect to this type of contract are as follows:

- A “claim” is “[a]ny request or demand, whether under a contract or otherwise, for money or property and whether or not the State has title to the money or property that (i) is presented to an officer, employee, or agent of the State or (ii) is made by a contractor...if the money or property is to be spent or used on the State’s behalf or to advance a State program or interest and if the State government: (a) provides or has provided any portion of the money or property that is requested or demanded; or (b) will reimburse such contractor... for any portion of the money or property which is requested or demanded.” (Section 1-606(2).)
- “Knowing” and “knowingly” – whenever a person, with respect to information, does any of the following: (a) Has actual knowledge of the information; (b) Acts in deliberate ignorance of the truth or falsity of the information; and/or (c) Acts in reckless disregard of the truth or falsity of the information. (Section 1-606 (4).) Proof of specific intent to defraud is not required. (Section 1-606 (4).)
- “Material” means having a natural tendency to influence, or be capable of influencing, the payment or receipt of money or property. (Section 1-606(4).)
- Liability – “Any person who commits any of the following acts shall be liable to the State for three times the amount of damages that the State sustains because of the act of that person[:] ... (1) Knowingly presents or causes to be presented a false or fraudulent claim for payment or approval. (2) Knowingly makes, uses, or causes to be made or used, a false record or statement material to a false or fraudulent claim. (3) Conspires to commit a violation of subdivision (1), (2) ...” (Section 1-607(a)(1), (2).)
- The NCFCA shall be interpreted and construed so as to be consistent with the federal False Claims Act, 31 U.S.C. 3729, et seq., and any subsequent amendments to that act. (Section 1-616©.)

Finally, the contracting university or affiliate may refer any suspected violation of the NCFCA by the contractor to the Attorney General's Office for investigation. Under Section 1-608(a), the Attorney General is responsible for investigating any violation of NCFCA, and may bring a civil action against the contractor under the NCFCA. The Attorney General's investigation and any civil action relating thereto are independent and not subject to any dispute resolution provision set forth in this contract. (See Section 1-608(a).)

ARTICLE 54 – TERMINATION FOR CONVENIENCE

- a. The owner may, at any time and for any reason terminate the contractor's services and work at the owner's convenience. Upon receipt of such notice, the contractor shall, unless the notice directs otherwise, immediately discontinue the work and placing orders for materials, facilities and supplies in connection with the performance of this agreement.
- b. Upon such termination, the contractor shall be entitled to payment only as follows: (1) the actual cost of the work completed in conformity with this agreement; plus, (2) such other costs actually incurred by the contractor as are permitted by the prime contract and approved by the owner; (3) plus ten percent (10%) of the cost of the work referred to in subparagraph (1) above for overhead and profit. There shall be deducted from such sums as provided in this subparagraph the amount of any payments made to the contractor prior to the date of the termination of this agreement. The contractor shall not be entitled to any claim or claim of lien against the owner for any additional compensation or damages in the event of such termination and payment.

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CAPITAL PROJECTS SUPPLEMENTAL GENERAL
CONDITIONS

SUPPLEMENTAL GENERAL CONDITIONS

The following modify the January 2013, 24rd Edition of the GENERAL CONDITIONS OF THE CONTRACT, STATE OF NORTH CAROLINA FORM OC-15 and supersedes them only whenever they are in conflict. Unaltered provisions of the General Conditions shall remain in effect. These modifications shall be incorporated into all Contract Forms.

1.1 ARTICLE 1 - DEFINITIONS

- A. Add to the end of the paragraph "The Geotechnical Technical Report does not constitute a part of the Contract Documents, but is included for reference."
- B. The "Owner" is the State of North Carolina through the University of North Carolina at Charlotte.
- C. The "Designer" referred to herein, shall mean (designer to insert design firm name and address).
- S. "Equal To" or "Approved Equal" Add: "substitute products by manufacturers other than those specified in the Project Manual, Addenda, and on the drawings and which may be incorporated in the Work after review and concurrence by the Architect and acceptance by the Owner. This review shall be in accordance with the General Requirements".
- U. "Provide." Shall mean furnish and install complete in place, and ready for use.
- V. "Indicated" and "Shown." Shall mean as detailed, scheduled, or called for in the Contract Documents.
- CC. "Latest Edition." Shall mean the current printed document issued up to 30 calendar days prior to date of receipt of bids, unless specified otherwise.
- DD. "Quality." Shall mean the meticulous attention to the detail of installation and workmanship necessary to the assemblage of products in the highest grade of excellence by skilled craftsmen of the trade.
- EE. "Drawings" or "Plans" mean the drawings enumerated in the Contract (including all information in the Detail Manual).
- FF. "Specifications" mean this Project Manual and Addenda thereto, and this term shall include such pages as are enumerated in the Contract as applicable to the work involved.
- GG. "Supplementary Conditions", as referred to in other parts of the Project Manual, shall be the same as "Supplementary General Conditions."
- HH. Project Identification: All correspondence, reports, schedules, applications for payment, fax items, etc., shall contain formal title of project, code and item numbers, and SCO ID numbers.

1.2 ARTICLE 2 - INTENT AND EXECUTION OF DOCUMENTS

- A. ADD to paragraph a:

All work shall be in accordance with the Contract Documents. No change therefrom shall be made without a review by the Designer. Where more detailed information is needed, or when an interpretation of the Contract Documents is needed, the Contractor, before proceeding with the work, shall refer the matter to the Designer who will furnish information or interpretation in the form of a Field Order or other written forms or drawings. If any errors, inconsistencies, or

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omissions in the Contract Documents are recognized by the Contractor or any member of his organization, the Contractor shall notify the Designer in writing of such error, inconsistency, or omission before proceeding with the work.

Where compliance with two or more requirements, material or equipment, are specified and the requirements, materials or equipment, establish conflicting specifications or quality levels, the contractor is to comply with the most stringent or higher quality specification. The Designer shall be the authority for determining the highest quality specification.

Should the specifications and drawings fail to particularly describe the material or kind of goods to be used in any place, then it shall be the duty of the Contractor to make inquiry of the Designer for what is best suited. The material that would normally be used in this place to produce first quality finished work shall be considered a part of the Contract.

Shop drawings shall be legible and suitable for producing legible reproductions.

1.3 ARTICLE 3 - CLARIFICATION AND DETAIL DRAWINGS

A. ADD to paragraph a:

If, in the opinion of the Contractor work is indicated or is specified in such manner as will make it impossible to produce a first-class piece of work, or should discrepancies appear within the Contract Documents, he shall refer same to the Designer for interpretation before proceeding with work. If the Contractor fails to make such reference, no excuse will thereafter be entertained for failure to carry out work in satisfactory manner. Where only part of the work is indicated, similar parts shall be considered repetition. Where any detail is shown and the components therefore are fully described, similar details shall be construed to require equal materials and construction.

1.4 ARTICLE 4 - COPIES OF DRAWINGS AND SPECIFICATIONS

A. ADD to paragraph:

e. Cost of additional drawings and specification shall be as follows:

Drawings: The Designer shall offer printing of additional copies of documents at direct material cost plus 10% for handling.

1.5 ARTICLE 5 - SHOP DRAWINGS, SUBMITTALS, SAMPLES, DATA

A. ADD to paragraph a:

This schedule shall be an excerpt from the CPM schedule described by the Supplementary General Conditions. This Schedule shall indicate the items, relevant specification sections, other related submittals, the date when such item will be furnished to the Architect, and the date by which Architect's review is necessary to maintain Construction Schedule. This schedule shall take into consideration the resubmission of shop drawings required to achieve acceptance of the Designer and Owner.

B. ADD to paragraph c:

The following shop drawings will take longer than 20 calendar days for review and return to the Contractor:

1. Structural Steel
2. Mechanical Systems

C. ADD to paragraph d:

All shop drawings, submittals, samples, and data shall be submitted to the Designer for review according to accepted CPM schedule from Article 5 (a). After these items have been reviewed by the Designer they will be returned to the Contractor or Project Expediter. Samples and shop

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drawings required for evaluation of a substitution shall be submitted with the request for substitution. Shop drawings, submittals, samples, and data will not be considered by the Designer unless the submission clearly indicates that they have been checked, coordinated between Prime Subcontractors, and stamped approved by the Contractor and Fabricator or Contractor, Subcontractor, and Fabricator as the case may be. All shop drawings and catalog cuts submitted shall each receive the following stamp completed and dated by the Contractor or submitting Prime Contractor. Samples shall have the stamp affixed to a tag attached to each sample.

**Submitted in accordance with Section
No.**

**and paragraph
No.**

of the specification

FOR SINGLE CONTRACT, AS FOLLOWS

We have checked and approved this submittal. We find it to be in accordance with the Contract Documents.

Subcontractor	Signature	Date
---------------	-----------	------

We have reviewed this submittal and find it is coordinated with the other parts of the Project.

Subcontractor	Signature	Date
---------------	-----------	------

D. ADD paragraph e:

No extension of construction time will be allowed for delay in checking shop drawings, submittals, samples or data because of the Contractor's, Subcontractor's, or Fabricator's failure to check shop drawings before submitting them to the Designer. All shop drawings shall be prepared to show how the material relates specifically to the conditions of the Project. Standard manufacturer's drawings that do not show how and where the material is to be used will not be considered. Shop drawings shall not be reproductions or portions of reproductions of the Contract documents. Coordinated shop drawings at the same scale indicating all mechanical, electrical, and plumbing shall be required between all trades. The Prime Subcontractor in a given area, as determined by the Contractor, shall submit their drawings to the other involved Subcontractors through the Prime Contractor.

E. ADD paragraph f:

The Contractor will furnish and deliver to the Owner 1 copy of each shop drawing, submittal, sample, and data which has been reviewed by the Designer and which has received a "NO EXCEPTIONS TAKEN" or a "TO BE CORRECTED AS NOTED" evaluation. The Contractor or each Prime Contractor shall deliver these to the Owner within 14 calendar days of receiving each reviewed item from the Contractor following review by the Designer, or in the case where 1 copy of a sample was submitted, within 14 calendar days of receiving advice that the sample is "NO EXCEPTIONS TAKEN" or "TO BE CORRECTED AS NOTED." Coordinate delivery with the owner's project manager. The owner shall have the option of accepting submittal copies during construction or at closeout in which case the project expeditor shall neatly store all items by division in "banker type" storage boxes or a separate file cabinet in the contractor's office facility. All stored submittals and samples shall be accessible to owner at any time during normal working hours.

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F. ADD paragraph g:

After the Plumbing, HVAC, and Electrical shop drawing submittals have received a favorable review, the Contractor shall submit to the Designer for the Owner, complete operating and maintenance manuals as called for in Divisions 22, 23, and 26. These manuals shall be submitted not later than 14 calendar days before occupancy.

1. Only Contract Documents, approved Change Orders, approved Contractor submittals to the extent they are in accordance with the Contract Documents, Designer bulletin drawings, and references specifically incorporated into Contract Documents constitute authoritative description of the Work. No other documents, including Contractor generated drawings, shall be considered authoritative.

1.6

1.7 ARTICLE 8 - MATERIALS, EQUIPMENT, EMPLOYEES

A. ADD

Also see - GENERAL REQUIREMENTS.

B. ADD to paragraph d:

These substitutions shall be made only by the Contractor and not by subcontractors or material suppliers. Necessary or required substitutions can be made after contract award per usual procedure, but only under unusual or extenuating circumstances.

1.8 ARTICLE 10 - PERMITS, INSPECTIONS, FEES, REGULATIONS

A. ADD paragraph f:

The Contractor shall perform the Work in accordance with The University of North Carolina at Charlotte regulations and the Preconstruction Conference Checklist (if such checklist is furnished).

1.9 ARTICLE 11 - PROTECTION OF WORK, PROPERTY AND THE PUBLIC

A. ADD:

Also see - GENERAL REQUIREMENTS.

1.10 ARTICLE 13 - INSPECTION OF THE WORK

A. ADD to paragraph c:

The Contractor shall also serve the same notice to the Owner for all such inspections or testing.

1.11 ARTICLE 14 - CONSTRUCTION SUPERVISION AND SCHEDULE

A. ADD to paragraph a:

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The Contractor and each of his Prime Subcontractors shall keep a Superintendent on the Project during the progress of the Work, for purposes of coordination with other Prime Subcontractors, and if required by the Owner, regardless of whether said Contractor or Prime Subcontractor has work currently in progress. Contractors are allowed to work any day of the year, except at times when the Owner may have special events which would be disrupted by Contractor's activities.

B. ADD to paragraph f:

"Unless designated otherwise, The General Contractor shall be the 'Project Expeditor'."

The Project Expeditor shall prepare daily and have available for inspection by the Designer, State, and Owner daily project reports. Project daily reports shall be prepared for every day of the project beginning with the date of the notice to proceed and terminating with project completion. Daily reports must also be completed for all weekends and holidays. The daily reports are to include the following items (at a minimum): Superintendents name and signature; day and date; morning and afternoon temperature; weather (clear, cloudy, rain and duration of rain); site conditions; other applicable weather conditions; crew sizes for all contractors and subcontractors on site; and major work accomplished for that day.

C. ADD to paragraph g:

Provide CPM CONSTRUCTION SCHEDULE as stated below:

1. The Construction Schedule shall show the date when the work of each Specification Section is to begin and is to be completed, its total dollar value percent to be completed each month, and total dollar value to be completed each month. The initial schedule and subsequent updates shall be signed by the general contractor.
2. The Construction Schedule shall be a schedule in time scaled logic network in the Critical Path Method and shall depict sequence of operations mutually agreeable to the Owner, designer, and each of the Prime Sub-Contractors.
3. The dates of commencement and completion of each of the various stages of the work (including lead time activities, drawing and sample submissions, bidding, awarding subcontracts, manufacturing and shipping); delivery dates for material and equipment by separate contract in detail satisfactory to the Designer. Such Schedule shall show a complete itemized breakdown of the work, and shall include networks for all phases of the work including networks for all work to be performed by the Contractor or all Prime Sub- Contractors.
4. The schedule and all other constructions schedules shall include 1 and only 1 critical path and this critical path shall be clearly identified. The Construction Schedule shall include the early and late start dates and early and late finish dates of all activities.
5. The Contractor shall also submit a separate progress schedule listing all submittals required under the contract and when it is anticipated that each submittal will be submitted allowing 20 days for the designer's review. The separate progress schedule shall be an excerpt from the above described construction schedule.
6. The schedule shall not indicate any on-site construction activity longer than 21 consecutive calendar days or any other activity longer than 28 consecutive calendar days. Any activity with an anticipated longer duration must therefore be broken into component activities, each of which has duration of no longer than 28 calendar days. The initial schedule and subsequent updates shall be submitted in 24" X 36" color plots using a font size acceptable to the owner. Additionally, one 11" X 17" copy shall be submitted with each color plot.
7. The Construction Schedule shall anticipate all weather delays which may be predicted from analysis of weather reports for the last 5 years and allowances for rock and unsuitable soil removal. The schedule shall also include all major milestones and all anticipated inspection, shutdowns/outages for electrical, water, natural gas, and steam tie-ins if applicable.

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As a separate document, the Contractor shall submit progress report, with each Application for Payment, which shall consist of a checklist showing the date of commencement of each activity on the Construction Schedule then commenced the date of completion of those activities completed, and the approximate percentage of completion of each activity.

The Contractor shall receive the permission of the Owner to make changes to the schedule. Notwithstanding any other provisions here of to the contrary, the time of completion may be extended only by a written change order.

Whenever the Schedule of Work changes, the Construction Schedule, which is a different document from the progress report, shall be revised by the Contractor to include the Schedule revisions of all the Prime Sub-Contractors and other sub-contractors and submitted with the next Application for Payment. This revised schedule shall include all information required of the schedule prior to revisions and shall provide for completion on the Contract Completion Date.

The Contractor shall advise in advance, at least 24 hours on a weekday and at least 48 hours on weekends and legal holidays, of all schedule changes, so that any Owner inspections can be arranged. If no revised Construction Schedule is included with an Application for Payment, this lack of inclusion shall constitute a certification by each and all the Contractors that no changes in the Construction Schedule have occurred.

Ownership of float and purpose of Schedule

1. All schedule float, slacktime, or contingency within the schedule jointly belongs to the Owner and Contractor. The Owner shall be entitled to require early completion and clean-up of certain portions of the Work. (i.e. the difference in time between the projects early completion and the required completion date and total float within the overall schedule, is not the exclusive use of either the owner or the Contractor, but is jointly owned by each and is a resource available to and shared by each of the parties as needed to meet contract milestones and the contract completion dates with the owner receiving initial benefit. The Contractor shall not sequester shared float through such strategies as extending activity duration estimates to consume available float, using preferential logic or using extensive crew/resource sequencing etc. since float time within the schedule is jointly owned, no time extensions will be granted until a delay occurs which extends the work beyond the contract completion date. Since float time within the construction schedule is jointly owned, it is acknowledged that owner caused delays on the project may be offset by Owner caused time savings (i.e., critical path submittals returned in less time than allowed by the contract, approval of substitution requests which result in a savings of time to the Contractor. In such an event, the Contractor shall not be entitled to receive a time extension until all owner caused time savings are exceeded and the contract completion date is also exceeded.

The submittal of a fully revised and acceptable construction schedule shall be a condition precedent to the processing of the second monthly payment application. As such, each of the prime Sub-Contractors have a specific obligation to each of the other Prime-Sub Contractors and to the owner to provide all necessary information and to fully cooperate with the Contractor in the development of this and all other construction schedules, including monthly updated construction schedules. All updated construction schedules shall include an updated submittal process schedule excerpted from the construction schedule.

Regardless of which submittal method the Contractor elects to use in formulating the construction schedule, an updated schedule shall be submitted to the owner 5 days prior to submittal of any monthly payment request. The submittal of the updated construction schedule, which satisfies the requirement of this article accurately reflects the status of the work, and incorporates all changes into the schedule, shall be a condition precedent to the processing of the monthly payment application. Updated schedules shall also be submitted at such other times as the Owner may direct. Upon approval of a change order or issuance of a directive to

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proceed with a change the approved change order shall be reflected in the next schedule update submitted by the Contractor or other update submittal approved by the Owner.

If completion of any part of the work, the delivery of equipment or materials, or submittal of any of the submittals is behind the updated construction schedule and will impact the end date of the work past the contract completion date, the Contractor, shall submit in writing, a plan acceptable to the owner for completing the work on or before the current completion date.

No extensions of time shall be granted unless the delay can be clearly demonstrated by the Contractor, on the basis of the updated construction schedule current as of the month the change is issued on the delay occurred and which delay cannot be mitigated, offset, or eliminated through such actions as revising the intended sequence of work or other means. It is recognized that any such delay which is the direct result of, and only the direct result of an owner directed change may entitle the Contractor to added compensation for efforts to maintain the schedule or for costs related to extending the schedule as a result of the owner directed change which cannot be accommodated by owner caused time savings.

As a precedent to the release of retained funds, the Contractor shall, after completion of the work has been achieved, submit a final construction schedule which accurately reflects the manner in which the project was constructed and includes actual start and completion dates for all work activities on the construction schedule.

Should the Contractor fail or refuse to complete any portion of the work in accordance with the Construction Schedule, the Owner may perform or cause to be performed the work necessary to cause such completion, and all costs incurred by Owner and Designer shall be deducted from any monies which otherwise may become due the Contractor. Should such costs exceed monies due, the Contractor shall reimburse the Owner within 30 days of the Owner documenting the costs to the Contractor. Schedule shall be prepared by a third party scheduling consultant.

The Contractor shall anticipate that the Owner may require various changes to the work. Only those changes which also change the duration of the critical path shall entitle the Contractor to present a claim for schedule impact, acceleration, or deceleration, only to the extent of the change in the duration of the critical path. Beyond compensation given in resolution of such a claim for acceleration or deceleration.

The purpose of the Construction Schedule, and monthly updates as hereinbefore described, or as may be otherwise submitted and approved, shall be to furnish the Owner and Designer with information to indicate that the Contractor has planned the Project in sufficient detail for the Contractor to insure that its construction can be accomplished in an orderly manner and on the Contract completion date. The dollar value estimates to be included on the schedule are to assist the Owner in cash flow planning so that funds will be readily available to pay the Applications for Payment. Monthly progress reports and updates are to furnish the Owner with current status of any changes required in the original schedule which will assist the Owner in scheduling delivery and installation of any products, furnishings, etc., necessary for the operation of the facility for its intended purpose. The responsibility for construction planning and the effective efficient implementation of such, or the converse, to meet the Contract completion date, or authorized appropriate extensions therefore, are the total responsibility of the Contractor, and such responsibility shall not transfer to the Owner/Designer. Preview of the original Construction Schedule, and subsequent modifications thereto, by the Owner and/or the Designer shall be limited to the general purposes set out above. Such approval shall not operate to imply the agreement of the Owner/Designer to the Contractor's planned procedures, coordination, critical path scheduling, etc., as being appropriate or reasonable.

Contractor shall assign manpower loading for each activity of the schedule by applying the total man-hours required to complete each activity to a resource identified as "man-hours" on each activity."

If the Contractor submits an early completion baseline schedule that shows contract completion

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in less than 85 percent of the working days specified in these special provisions, the baseline schedule shall be supplemented with resource allocations for every task activity and include time-scaled resource histograms. The resource allocations shall be shown to a level of detail that facilitates report generation based on labor crafts and equipment classes for the Contractor and subcontractors. The Contractor shall use average composite crews to display the labor loading of on-site construction activities. The Contractor shall optimize and level labor to reflect a reasonable plan for accomplishing the work of the contract and to assure that resources are not duplicated in concurrent activities. The time-scaled resource histograms shall show labor crafts and equipment classes to be utilized on the contract. The Engineer may review the baseline schedule activity resource allocations using Means Productivity Standards or equivalent to determine if the schedule is practicable."

D. ADD paragraph m:

Prior to and during the execution of the Work, the Contractor shall immediately report any error, discrepancies, conflicts, and omissions found therein to the Designer in writing and shall have the same explained or corrected by the Designer before proceeding with the Work. Any necessary changes shall be adjusted as required thereafter by Article 19 - Changes in the Work. Any work done by the Contractor or after these Conditions have been discovered, and before the Designer has either explained or made corrections, shall be corrected at the Contractor's expense. The Contractor shall coordinate all work of his Contract to produce the required finished Project in accordance with the Contract Documents. Special attention shall be given to the submission of shop drawings, samples, color charts, and requests for substitution within the specified time; furnishing the proper shop drawings to Subcontractors, and material suppliers, whose work and equipment is affected by and related thereto; and the furnishing of all information concerning location, type, and size of built-in equipment and materials and equipment utilities. This coordination is in addition to all other coordination requirements called for in the technical sections of the Project Manual.

E. ADD paragraph n:

The Contractor shall post a sign indicating firearms are prohibited on the job site.

1.12 ARTICLE 15 - SEPARATE CONTRACTS AND CONTRACTOR RELATIONSHIPS

A. ADD:

Also see DIVISION 1 - GENERAL REQUIREMENTS

B. ADD paragraph g:

The Contractor shall provide all required Site Utilities Work, including but not limited to: Site Storm Sewer, Site Sanitary Sewer, Water and Steam Lines, Natural Gas, and Electrical. Final connection from building to site utilities shall be by the Contractor.

1.13 ARTICLE 17 - CONTRACTORS AND SUBCONTRACTOR RELATIONSHIPS

A. ADD:

The Contractor has the responsibility to insure that all product suppliers, and Prime Subcontractors, their agents and employees, adhere to the Contract Documents and that they provide all products on time.

1.14 ARTICLE 19 - CHANGE IN THE WORK

A. ADD to paragraph c.1:

Unit prices include all time, costs, and overhead of each unit.

B. ADD to paragraph d:

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Overhead shall include all Conditions of the Contract and all general requirements such as Project management, scheduling, home office expense, layout, reproduction of Drawings and Specifications, testing and inspection, shop drawings and sample coordination, shop drawing preparation, proposal request estimating, supervision (including general and nonworking foremen) small tools and expendable items, taxes, temporary facilities and services, including access and safety provisions, "as-built" drawings, estimating general and administrative overhead, and profit. Pricing of proposal requests need to be accomplished within 20 calendar days minimum following receipt by the contractor. Upon request, the contractor shall provide the designer with documentation to substantiate labor rates.

In the event of additions and deletions of items of direct labor and/or material, the item quantities shall be algebraically summed prior to the incorporation of applicable prices, Unit Prices, and/or the overhead and profit percentage applicable.

1.15 ARTICLE 21 - MINOR CHANGES IN THE WORK.

- A. Revise the first sentence by adding after "The Designer..."
"with consultation with the Owner."

1.16 ARTICLE 23 - TIME OF COMPLETION, DELAYS, EXTENSIONS OF TIME

- A. ADD to paragraph c:

After the contract completion date, the Designer shall deduct from all contractor pay applications, the liquidated damages in the amount of the daily liquidated damage rate times the number of calendar days after the contract completion date minus any previously assessed liquidated damages.

- B. Add to paragraph d:

The "5-year average of precipitation" shall be determined only by applying daily amounts greater than one-tenth (0.10) of an inch. Only amounts exceeding 0.10 inch shall be applied in determining the actual number of "rain days" for a given month.

The Contractor shall maintain, on site, a hard bound log book to record daily precipitation data from the UNC Charlotte Weather Center alongside daily NOAA readings from the Fire Station #27 – Ken Hoffman Drive, Charlotte. The Log shall also record any corresponding impacts to activities on the critical path. The Log shall be maintained on a daily basis and made available for inspection by the Designer or Owner at any time. If for some reason the UNC Charlotte Weather Center is out of service, Fire Station #27 data shall be applied for that time period, but only if the UNC Charlotte Weather data is not available.

Saturdays, Sundays, and holidays are available to recover lost time due to weather. Time extensions for weather related delays which affect the critical path and exceed the NOAA 5-year average for a particular month, will only be granted provided the contractor makes an effort to make-up work on weekends or holidays following the rain event. Exceptions to this requirement may be granted in cases where rain occurs on a make-up day.

The effect of "rain days" may impact Critical Path work activities for a period more than the average rain days for any period, such as dewatering, cleanup, etc. which would follow a rain event. The Contractor shall include in the Project Schedule, sufficient days to accommodate weather related delays which will result from the 5-year average precipitation for each month. It is the responsibility of the Contractor to maintain such a log and to obtain the verification and initials of the Designer's representative on a monthly routine basis. The Contractor shall transmit logs and 5 year weather data averages to the Designer monthly. The Designer shall make weather delay determinations by comparing verified Contractor's logs with the 5 year averages over the duration of the Project. All approved weather delays shall be reported to the Contractor or Project Expediter and to the Owner and shall be accumulated and granted in 1 or

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more Change Orders. Contract time shall not be shortened by weather conditions which are more advantageous than had been predicted.

C. ADD paragraph h:

Time:

1. The Contractor shall commence work to be performed under this agreement on a date to be specified in a written order from the designer and shall fully complete all work within 124 consecutive calendar days from, and including said date. For each day in excess of the above number of days, the Contractor shall pay to the Owner the sum of \$100 per day beginning on May 15, 2016, and increasing to \$250 per day starting on June 1, 2016. as liquidated damages reasonably estimated in advance to cover the losses to be incurred by the Owner by reason of failure of said Contractor to complete the work within the time specified, such time being in the essence of this contract and a material consideration thereof.
2. The Contractor agrees that said work shall be prosecuted regularly, diligently, and uninterruptedly at such rate or progress as will insure full completion thereof within the time specified.

1.17 ARTICLE 24 - PARTIAL UTILIZATION: BENEFICIAL OCCUPANCY.

A. ADD paragraph e:

Unless training requirements are included in the specifications, prior to issuance of Date of Acceptance, the Contractor shall have his/her authorized representatives visit the Project and give full instructions to the Owner's designated operating and maintenance, care, and adjustment of all equipment and special construction elements."

1.18 ARTICLE 31 - REQUEST FOR PAYMENT

A. ADD:

After the award of the Contract, the contractor shall promptly submit to the Designer for review and Owner approval a complete schedule of values of the various parts of the work listed in the numerical order of the specifications. The schedule shall be dated and signed by the Contractor and shall include a description of the work, quantities, labor, materials, and total Contract amount for each item. Upon Owner approval of this schedule of values, the schedule shall be used as the basis for determining monthly payments and, therefore, is needed in advance of the Contractor submitting the first application and certification for payment. Plumbing, Electrical, and HVAC Prime Sub-Contracts shall be broken down in accordance with the Table of Contents for each such work. Values shall generally be of the same order of magnitude and generally shall be between \$10,000.00 and \$100,000.00. Should the schedule of values include any value for mobilization, the schedule of values shall include an equal value for demobilization.

The Request for Payment shall be on forms described by North Carolina State Construction Manual Section 323 and similar to AIA Document G703, latest edition. The Request for Payment shall list materials and labor separately for each Section of the Project Manual. When Request for Payment includes (1) materials stored other than on the Owner's property, or, (2) if allowed by the Owner, other than within the boundaries of the State of North Carolina, request for Payment will not be considered and another Request for Payment shall be made.

Contractor or each Prime Contractor shall also attach to the application all receipts and vouchers required to verify the requested payments for stored materials. No payment made to the Contractor by the Owner shall constitute acceptance of any work or materials not in accordance with the true intent of the Contract.

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The Contractor shall additionally include on each monthly Application for Payment the following statement: "We certify that the Surety for this Project has been duly notified of the amount of this request." Unless exception to pay is made by the Surety to the Designer within 4 calendar days following the date of request, it will be assumed that the Surety concurs in the payment of this application.

American Institute of Architects Document G703, if used, may generally be obtained at office supply firms or directly from the American Institute of Architects, 1735 New York Avenue, Washington, D. C. 20036.

1.19 ARTICLE 32 – CERTIFICATES OF PAYMENT AND FINAL PAYMENT

- A. ADD to paragraph f:
- B. THE FINAL PAYMENT of retained amount due to the Contractor on account of the Contract shall not become due until the Contractor has furnished to the Owner, through the Designer, Guarantees as set forth in the General and Supplementary General Conditions including other Guarantees required by specific Sections of the Project Manual. In addition to the above, all other submissions required by other Articles and Sections of the Project Manual must be in the hands of the Designer before approval of final payment.

1.20 ARTICLE 34 - MINIMUM INSURANCE REQUIREMENTS

- A. ADD to opening paragraph:

The Designer shall be named as additional insured party on all insurance policies supplied by the Contractor. Final payment will not be made until these "As-Built Drawings" are turned over to the Designer of record and reviewed and deemed complete in writing by the Designer.

1.21 ARTICLE 38 - USE OF PREMISES.

- A. Add paragraph e:

Should the Owner allow material storage outside the construction limits, the following conditions shall apply:

1. Staging of the Contractors: Site office trailer, equipment, materials, etc. shall be inside the construction fence or where there is no fence, inside the construction limits. No open trailers or flat beds are permitted, unless otherwise authorized. All material shall be stored in an enclosed and securable vehicle. Put name of project, company name, and company phone number on all storage vehicles stored off construction site.
2. As space is available, the Owner may allow parking of construction workers' vehicles on its property at no cost to the contractor. Vehicles found parked outside the designated area will be towed away at the contractor's expense.
3. Contractor personnel must wear ID badges at all times when they are working at UNC Charlotte. The ID badge can either be the Contractor's ID badge or clothing indicating which contractor or subcontractor they are directly employed by.

1.22 ARTICLE 39 - CUTTING, PATCHING, AND DIGGING

- A. ADD:

Also see DIVISION 1 - GENERAL REQUIREMENTS

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1.23 ARTICLE 40 - UTILITIES, STRUCTURES, SIGNS

A. ADD to paragraph j:

The University will provide the Contractor with access to electrical power for operating small tools, for construction lighting, for elevator testing, and for field office operations. The University will not charge the Contractor for power so consumed. The Contractor will bear all costs related to connecting to, transforming, and distributing power from the connection point. The Contractor will bear all costs related to connecting to, transforming, distributing and maintaining temporary power from the connection point.

The Contractor shall allocate power equitably. Welding equipment and other high power users must have self-contained power sources. Power outages shall be coordinated by the Contractor with the University 30 days in advance.

At the start of construction, the contractor shall enter into a Service Agreement with Piedmont Natural Gas and pay all gas utility costs until owner occupancy at which time said Service Agreement will be transferred to the owner.

:

B. ADD to item l:

A shop drawing of the project identification sign must be approved by the University prior to fabrication. No directional signs will be permitted without the University's permission. Contractors are not permitted to install any sign, anywhere on the site, off the site on University property, or on any equipment on the site, without explicit written approval of the Owner. See enclosed University project sign detail.

Location of any sign shall be approved by the Owner. Should any sign be moved from its initial location, the new location shall be approved by the Owner. All signs shall be maintained by the project expeditor in first class condition throughout the Contract by repainting, repairing, and re-erecting as necessary and as required. Sign shall be fabricated as indicated on the Drawings.

1.24 ARTICLE 41 - CLEANING UP

A. ADD:

Also see DIVISION 1 - GENERAL REQUIREMENTS

1.25 ARTICLE 42 - GUARANTEE

A. ADD paragraph e:

ALL GUARANTEES SHALL INCLUDE LABOR AND PRODUCTS AND SHALL BE SIGNED BY THE MANUFACTURER OR SUBCONTRACTOR, AS THE CASE MAY BE, AND COUNTERSIGNED BY THE CONTRACTOR. ALL GUARANTEES SHALL BE IN ADDITION TO, AND NOT IN LIEU OF, ALL LEGISLATED GUARANTEES. ALL GUARANTEES SHALL BE ADDRESSED TO THE OWNER AND DELIVERED TO THE DESIGNER UPON COMPLETION OF THE PROJECT AND BEFORE OR WITH THE SUBMISSION OF REQUEST FOR FINAL PAYMENT.

B. ADD to paragraph f:

In the event that the Owner considers it impractical, because of unsuitable test conditions, or some other factors, to execute simultaneous final acceptance of all equipment, portions of the installation may be certified by the Designer for the Owner's final acceptance when that portion of the system is complete and ready for operation. The decision to accept only portions of the Project rests entirely with the Owner and may only be executed by the Owner.

C. ADD to paragraph g:

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The Contractor shall also guarantee for a period of 24 months, unless a longer guarantee time is specifically called for in the Specification Sections, that the work covered by this Contract will be watertight and leak-proof at every point and in every area affected by this Contract, except where leaks can be attributed to damage by forces beyond his control. He shall, immediately upon notification by the Owner of water penetration, determine the source of water penetration and, at his own expense, do any work necessary to make the work covered by this Contract watertight. He shall also, at his own expense, repair or replace any other damaged material, finishes, equipment, and furnishings, damaged as a result of this water penetration to return the building to its original accepted condition.

D. ADD paragraph h:

The Contractor signing a Contract with the Owner, shall obtain and forward to the Owner any and all guarantees issued by the manufacturers specifically for certain products and systems covered under his Contract. In the event the manufacturer does not have a suitable "preprinted" warranty form" to fully cover the guarantee requirements as set forth in the Specification Section, he shall produce a warranty form patterned after those contained hereinafter which shall fully document the guarantee as set forth in the Specification Section.

E. ADD paragraph i:

In addition to the foregoing stipulations, the Contractor shall comply with all other guarantees referred to in any portion of the Contract Documents, the more stringent requirements governing.

F. ADD paragraph j:

If for any reason the Contractor cannot guarantee any part of his work using materials or construction methods which have been specified or indicated he shall notify the Designer in typewritten form before Contracts are signed, giving reasons together with the names of products and data or substitution he can guarantee. Should the Contractor fail to so notify the Designer prior to the Signing of Contract, he will be held to have agreed to guarantee all work specified or indicated.

1.26 ARTICLE 45 - TAXES.

A. ADD to paragraph e:

Contractors shall submit monthly with their request for payment, a signed statement containing the amount of sales and use tax paid by the Contractor for that particular billing period."

1.27 ARTICLE 48 – ASBESTOS CONTAINING MATERIALS (ACM).

A. ADD the following:

No asbestos containing material may be installed in this facility, including but not limited to, sprayed-on insulation, pipe insulation, floor tile, mastic adhesive, patch materials, wiring insulation, or acoustical treatment.

END OF SECTION 01 – 02 SUPPLEMENTAL GENERAL CONDITIONS

GUIDELINES FOR RECRUITMENT AND SELECTION OF MINORITY BUSINESSES FOR PARTICIPATION IN STATE CONSTRUCTION CONTRACTS

In accordance with G.S. 143-128.2 (effective January 1, 2002) these guidelines establish goals for minority participation in single-prime bidding, separate-prime bidding, construction manager at risk, and alternative contracting methods, on State construction projects in the amount of \$300,000 or more. The legislation provides that the State shall have a verifiable ten percent (10%) goal for participation by minority businesses in the total value of work for each project for which a contract or contracts are awarded. These requirements are published to accomplish that end.

SECTION A: INTENT

It is the intent of these guidelines that the State of North Carolina, as awarding authority for construction projects, and the contractors and subcontractors performing the construction contracts awarded shall cooperate and in good faith do all things legal, proper and reasonable to achieve the statutory goal of ten percent (10%) for participation by minority businesses in each construction project as mandated by GS 143-128.2. Nothing in these guidelines shall be construed to require contractors or awarding authorities to award contracts or subcontracts to or to make purchases of materials or equipment from minority-business contractors or minority-business subcontractors who do not submit the lowest responsible, responsive bid or bids.

SECTION B: DEFINITIONS

1. Minority - a person who is a citizen or lawful permanent resident of the United States and who is:
 - a. Black, that is, a person having origins in any of the black racial groups in Africa;
 - b. Hispanic, that is, a person of Spanish or Portuguese culture with origins in Mexico, South or Central America, or the Caribbean Islands, regardless of race;
 - c. Asian American, that is, a person having origins in any of the original peoples of the Far East, Southeast Asia and Asia, the Indian subcontinent, the Pacific Islands;
 - d. American Indian, that is, a person having origins in any of the original peoples of North America; or
 - e. Female
2. Minority Business - means a business:
 - a. In which at least fifty-one percent (51%) is owned by one or more minority persons, or in the case of a corporation, in which at least fifty-one percent (51%) of the stock is owned by one or more minority persons or socially and economically disadvantaged individuals; and
 - b. Of which the management and daily business operations are controlled by one or more of the minority persons or socially and economically disadvantaged individuals who own it.
3. Socially and economically disadvantaged individual - means the same as defined in 15 U.S.C. 637. "Socially disadvantaged individuals are those who have been subjected to racial or ethnic prejudice or cultural bias because of their identity as a member of a group without regard to their individual qualities". "Economically disadvantaged individuals are those socially disadvantaged individuals whose ability to compete in the free enterprise system has been impaired due to diminished capital and credit opportunities as compared to others in the same business area who are not socially disadvantaged".
4. Public Entity - means State and all public subdivisions and local governmental units.
5. Owner - The State of North Carolina, through the Agency/Institution named in the contract.
6. Designer – Any person, firm, partnership, or corporation, which has contracted with the State of North Carolina to perform architectural or engineering, work.
7. Bidder - Any person, firm, partnership, corporation, association, or joint venture seeking to be awarded a public contract or subcontract.

8. Contract - A mutually binding legal relationship or any modification thereof obligating the seller to furnish equipment, materials or services, including construction, and obligating the buyer to pay for them.
9. Contractor - Any person, firm, partnership, corporation, association, or joint venture which has contracted with the State of North Carolina to perform construction work or repair.
10. Subcontractor - A firm under contract with the prime contractor or construction manager at risk for supplying materials or labor and materials and/or installation. The subcontractor may or may not provide materials in his subcontract.

SECTION C: RESPONSIBILITIES

1. Office for Historically Underutilized Businesses, Department of Administration (hereinafter referred to as HUB Office).

The HUB Office has established a program, which allows interested persons or businesses qualifying as a minority business under G.S. 143-128.2, to obtain certification in the State of North Carolina procurement system. The information provided by the minority businesses will be used by the HUB Office to:

- a. Identify those areas of work for which there are minority businesses, as requested.
- b. Make available to interested parties a list of prospective minority business contractors and subcontractors.
- c. Assist in the determination of technical assistance needed by minority business contractors.

In addition to being responsible for the certification/verification of minority businesses that want to participate in the State construction program, the HUB Office will:

- (1) Maintain a current list of minority businesses. The list shall include the areas of work in which each minority business is interested.
- (2) Inform minority businesses on how to identify and obtain contracting and subcontracting opportunities through the State Construction Office and other public entities.
- (3) Inform minority businesses of the contracting and subcontracting process for public construction building projects.
- (4) Work with the North Carolina trade and professional organizations to improve the ability of minority businesses to compete in the State construction projects.
- (5) The HUB Office also oversees the minority business program by:
 - a. Monitoring compliance with the program requirements.
 - b. Assisting in the implementation of training and technical assistance programs.
 - c. Identifying and implementing outreach efforts to increase the utilization of minority businesses.
 - d. Reporting the results of minority business utilization to the Secretary of the Department of Administration, the Governor, and the General Assembly.

2. State Construction Office

The State Construction Office will be responsible for the following:

- a. Furnish to the HUB Office a minimum of twenty-one days prior to the bid opening the following:
 - (1) Project description and location;
 - (2) Locations where bidding documents may be reviewed;
 - (3) Name of a representative of the owner who can be contacted during the advertising period to advise who the prospective bidders are;
 - (4) Date, time and location of the bid opening.
 - (5) Date, time and location of prebid conference, if scheduled.
- b. Attending scheduled prebid conference, if necessary, to clarify requirements of the general statutes regarding minority-business participation, including the bidders' responsibilities.

- c. Reviewing the apparent low bidders' statutory compliance with the requirements listed in the proposal, that must be complied with, if the bid is to be considered as responsive, prior to award of contracts. The State reserves the right to reject any or all bids and to waive informalities.
- d. Reviewing of minority business requirements at Preconstruction conference.
- e. Monitoring of contractors' compliance with minority business requirements in the contract documents during construction.
- f. Provide statistical data and required reports to the HUB Office.
- g. Resolve any protest and disputes arising after implementation of the plan, in conjunction with the HUB Office.

3. Owner

Before awarding a contract, owner shall do the following:

- a. Develop and implement a minority business participation outreach plan to identify minority businesses that can perform public building projects and to implement outreach efforts to encourage minority business participation in these projects to include education, recruitment, and interaction between minority businesses and non-minority businesses.
- b. Attend the scheduled prebid conference.
- c. At least 10 days prior to the scheduled day of bid opening, notify minority businesses that have requested notices from the public entity for public construction or repair work and minority businesses that otherwise indicated to the Office for Historically Underutilized Businesses an interest in the type of work being bid or the potential contracting opportunities listed in the proposal. The notification shall include the following:
 - 1. A description of the work for which the bid is being solicited.
 - 2. The date, time, and location where bids are to be submitted.
 - 3. The name of the individual within the owner's organization who will be available to answer questions about the project.
 - 4. Where bid documents may be reviewed.
 - 5. Any special requirements that may exist.
- d. Utilize other media, as appropriate, likely to inform potential minority businesses of the bid being sought.
- e. Maintain documentation of any contacts, correspondence, or conversation with minority business firms made in an attempt to meet the goals.
- f. Review, jointly with the designer, all requirements of G.S. 143-128.2(c) and G.S. 143-128.2(f) – (i.e. bidders' proposals for identification of the minority businesses that will be utilized with corresponding total dollar value of the bid and affidavit listing good faith efforts, or affidavit of self-performance of work, if the contractor will perform work under contract by its own workforce) - prior to recommendation of award to the State Construction Office.
- g. Evaluate documentation to determine good faith effort has been achieved for minority business utilization prior to recommendation of award to State Construction Office.
- h. Review prime contractors' pay applications for compliance with minority business utilization commitments prior to payment.
- i. Make documentation showing evidence of implementation of Owner's responsibilities available for review by State Construction Office and HUB Office, upon request

4. Designer

Under the single-prime bidding, separate prime bidding, construction manager at risk, or alternative contracting method, the designer will:

- a. Attend the scheduled prebid conference to explain minority business requirements to the prospective bidders.
- b. Assist the owner to identify and notify prospective minority business prime and subcontractors of potential contracting opportunities.
- c. Maintain documentation of any contacts, correspondence, or conversation with minority business firms made in an attempt to meet the goals.
- d. Review jointly with the owner, all requirements of G.S. 143-128.2(c) and G.S.143-128.2(f) – (i.e. bidders' proposals for identification of the minority businesses that will be utilized with

corresponding total dollar value of the bid and affidavit listing Good Faith Efforts, or affidavit of self-performance of work, if the contractor will perform work under contract by its own workforce) - prior to recommendation of award.

- e. During construction phase of the project, review “MBE Documentation for Contract Payment” – (Appendix E) for compliance with minority business utilization commitments. Submit Appendix E form with monthly pay applications to the owner and forward copies to the State Construction Office.
- f. Make documentation showing evidence of implementation of Designer’s responsibilities available for review by State Construction Office and HUB Office, upon request.

5. Prime Contractor(s), CM at Risk, and Its First-Tier Subcontractors

Under the single-prime bidding, the separate-prime bidding, construction manager at risk and alternative contracting methods, contractor(s) will:

- a. Attend the scheduled prebid conference.
- b. Identify or determine those work areas of a subcontract where minority businesses may have an interest in performing subcontract work.
- c. At least ten (10) days prior to the scheduled day of bid opening, notify minority businesses of potential subcontracting opportunities listed in the proposal. The notification will include the following:
 - (1) A description of the work for which the subbid is being solicited.
 - (2) The date, time and location where subbids are to be submitted.
 - (3) The name of the individual within the company who will be available to answer questions about the project.
 - (4) Where bid documents may be reviewed.
 - (5) Any special requirements that may exist, such as insurance, licenses, bonds and financial arrangements.

If there are more than three (3) minority businesses in the general locality of the project who offer similar contracting or subcontracting services in the specific trade, the contractor(s) shall notify three (3), but may contact more, if the contractor(s) so desires.

- d. During the bidding process, comply with the contractor(s) requirements listed in the proposal for minority participation.
- e. Identify on the bid, the minority businesses that will be utilized on the project with corresponding total dollar value of the bid and affidavit listing good faith efforts as required by G.S. 143-128.2(c) and G.S. 143-128.2(f).
- f. Make documentation showing evidence of implementation of PM, CM-at-Risk and First-Tier Subcontractor responsibilities available for review by State Construction Office and HUB Office, upon request.
- g. Upon being named the apparent low bidder, the Bidder shall provide one of the following: (1) an affidavit (Affidavit C) that includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, which is equal to or more than the applicable goal; (2) if the percentage is not equal to the applicable goal, then documentation of all good faith efforts taken to meet the goal. Failure to comply with these requirements is grounds for rejection of the bid and award to the next lowest responsible and responsive bidder.
- h. The contractor(s) shall identify the name(s) of minority business subcontractor(s) and corresponding dollar amount of work on the schedule of values. The schedule of values shall be provided as required in Article 31 of the General Conditions of the Contract to facilitate payments to the subcontractors.
- i. The contractor(s) shall submit with each monthly pay request(s) and final payment(s), “MBE Documentation for Contract Payment” – (Appendix E), for designer’s review.
- j. During the construction of a project, at any time, if it becomes necessary to replace a minority business subcontractor, immediately advise the owner, State Construction Office, and the Director of the HUB Office in writing, of the circumstances involved. The prime contractor shall make a good faith effort to replace a minority business subcontractor with another minority business subcontractor.

- k. If during the construction of a project additional subcontracting opportunities become available, make a good faith effort to solicit subbids from minority businesses.
- l. It is the intent of these requirements apply to all contractors performing as prime contractor and first tier subcontractor under construction manager at risk on state projects.

6. Minority Business Responsibilities

While minority businesses are not required to become certified in order to participate in the State construction projects, it is recommended that they become certified and should take advantage of the appropriate technical assistance that is made available. In addition, minority businesses who are contacted by owners or bidders must respond promptly whether or not they wish to submit a bid.

SECTION 4: DISPUTE PROCEDURES

It is the policy of this state that disputes that involves a person's rights, duties or privileges, should be settled through informal procedures. To that end, minority business disputes arising under these guidelines should be resolved as governed under G.S. 143-128(g).

SECTION 5: These guidelines shall apply upon promulgation on state construction projects. Copies of these guidelines may be obtained from the Department of Administration, State Construction Office, (physical address) 301 North Wilmington Street, Suite 450, NC Education Building, Raleigh, North Carolina, 27601-2827, (mail address) 1307 Mail Service Center, Raleigh, North Carolina, 27699-1307, phone (919) 807-4100, Website: www.nc-sco.com

SECTION 6: In addition to these guidelines, there will be issued with each construction bid package provisions for contractual compliance providing minority business participation in the state construction program.

MINORITY BUSINESS CONTRACT PROVISIONS (CONSTRUCTION)

APPLICATION:

The **Guidelines for Recruitment and Selection of Minority Businesses for Participation in State Construction Contracts** are hereby made a part of these contract documents. These guidelines shall apply to all contractors regardless of ownership. Copies of these guidelines may be obtained from the Department of Administration, State Construction Office, (physical address) 301 North Wilmington Street, Suite 450, NC Education Building, Raleigh, North Carolina, 27601-2827, (mail address) 1307 Mail Service Center, Raleigh, North Carolina, 27699-1307, phone (919) 807-4100, Website: <http://www.nc-sco.com>

MINORITY BUSINESS SUBCONTRACT GOALS:

The goals for participation by minority firms as subcontractors on this project have been set at 10%.

The bidder must identify on its bid, the minority businesses that will be utilized on the project with corresponding total dollar value of the bid and affidavit (Affidavit A) listing good faith efforts **or** affidavit (Affidavit B) of self-performance of work, if the bidder will perform work under contract by its own workforce, as required by G.S. 143-128.2(c) and G.S. 143-128.2(f).

The lowest responsible, responsive bidder must provide Affidavit C, that includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, which is equal to or more than the applicable goal.

OR

Provide Affidavit D, that includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, **with documentation of Good Faith Effort, if the percentage is not equal to the applicable goal.**

OR

Provide Affidavit B, which includes sufficient information for the State to determine that the bidder does not customarily subcontract work on this type project.

The above information must be provided as required. Failure to submit these documents is grounds for rejection of the bid.

MINIMUM COMPLIANCE REQUIREMENTS:

All written statements, affidavits or intentions made by the Bidder shall become a part of the agreement between the Contractor and the State for performance of this contract. Failure to comply with any of these statements, affidavits or intentions, or with the minority business Guidelines shall constitute a breach of the contract. A finding by the State that any information submitted either prior to award of the contract or during the performance of the contract is inaccurate, false or incomplete, shall also constitute a breach of the contract. Any such breach may result in termination of the contract in accordance with the termination provisions contained in the contract. It shall be solely at the option of the State whether to terminate the contract for breach.

In determining whether a contractor has made Good Faith Efforts, the State will evaluate all efforts made by the Contractor and will determine compliance in regard to quantity, intensity, and results of these efforts. Good Faith Efforts include:

- (1) Contacting minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor or available on State or local government maintained lists at least 10 days before the bid or proposal date and notifying them of the nature and scope of the work to be performed.
- (2) Making the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bid or proposals are due.
- (3) Breaking down or combining elements of work into economically feasible units to facilitate minority participation.
- (4) Working with minority trade, community, or contractor organizations identified by the Office for Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- (5) Attending any prebid meetings scheduled by the public owner.
- (6) Providing assistance in getting required bonding or insurance or providing alternatives to bonding or insurance for subcontractors.
- (7) Negotiating in good faith with interested minority businesses and not rejecting them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- (8) Providing assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisting minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- (9) Negotiating joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- (10) Providing quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

APPENDIX E

MBE DOCUMENTATION FOR CONTRACT PAYMENTS

Prime Contractor/Architect: _____

Address & Phone: _____

Project Name: _____

Pay Application #: _____ Period: _____

The following is a list of payments made to Minority Business Enterprises on this project for the above-mentioned period.

MBE FIRM NAME	* INDICATE TYPE OF MBE	AMOUNT PAID THIS MONTH	TOTAL PAYMENTS TO DATE	TOTAL AMOUNT COMMITTED

*Minority categories: Black, African American (B), Hispanic (H), Asian American (A), American Indian (I), Female (F), Social and Economically Disadvantage (D)

Date: _____ Approved/Certified By: _____

Name

Title

Signature

SUBMIT WITH EACH PAY REQUEST & FINAL PAYMENT

FORM OF PROPOSAL

Sanford Hall Abatement

Contract: _____

University of North Carolina, Charlotte

Bidder: _____

Date: _____

The undersigned, as bidder, hereby declares that the only person or persons interested in this proposal as principal or principals is or are named herein and that no other person than herein mentioned has any interest in this proposal or in the contract to be entered into; that this proposal is made without connection with any other person, company or parties making a bid or proposal; and that it is in all respects fair and in good faith without collusion or fraud. The bidder further declares that he has examined the site of the work and the contract documents relative thereto, and has read all special provisions furnished prior to the opening of bids; that he has satisfied himself relative to the work to be performed. The bidder further declares that he and his subcontractors have fully complied with NCGS 64, Article 2 in regards to E-Verification as required by Section 2.(c) of Session Law 2013-418, codified as N.C. Gen. Stat. § 143-129(j).

The Bidder proposes and agrees if this proposal is accepted to contract with the

(State of North Carolina through the (University of North Carolina, Charlotte)

in the form of contract specified below, to furnish all necessary materials, equipment, machinery, tools, apparatus, means of transportation and labor necessary to complete the abatement of

Sanford Hall

in full in complete accordance with the plans, specifications and contract documents, to the full and entire satisfaction of the State of North Carolina, and the

University of North Carolina, Charlotte

with a definite understanding that no money will be allowed for extra work except as set forth in the General Conditions and the contract documents, for the sum of:

SINGLE PRIME CONTRACT:

Base Bid:

_____ Dollars(\$)

General Subcontractor:

_____ Lic _____

GS143-128(d) requires all single prime bidders to identify their subcontractors for the above subdivisions of work. A contractor whose bid is accepted shall not substitute any person as subcontractor in the place of the subcontractor listed in the original bid, except (i) if the listed subcontractor's bid is later determined by the contractor to be non-responsible or non-responsive or the listed subcontractor refuses to enter into a contract for the complete performance of the bid work, or (ii) with the approval of the awarding authority for good cause shown by the contractor.

ALTERNATES:

Should any of the alternates as described in the contract documents be accepted, the amount written below shall be the amount to be "added to" or "deducted from" the base bid. (Strike out "Add" or "Deduct" as appropriate.)

GENERAL CONTRACT:

Alternate No. G-1 Include the abatement of overhead surfaces containing ACM materials in the areas indicated on Sheets A1.0.3 and A1.0.4. Provide and install spray texture ceiling finish in the areas indicated on Sheets A1.0.3 and A1.04 and as specified.

(Add) _____ Dollars(\$)

Alternate No. G-2 Contingent on acceptance of Alternate #1, in lieu of spray texture ceiling finish material, provide and install plaster skim coat and paint on ceilings in the areas indicated on Sheets A1.0.3 and A1.0.4 and as specified.

(Add) _____ Dollars(\$)

MINORITY BUSINESS PARTICIPATION REQUIREMENTS

Provide with the bid - Under GS 143-128.2(c) the undersigned bidder shall identify **on its bid** (Identification of Minority Business Participation Form) the minority businesses that it will use on the project with the total dollar value of the bids that will be performed by the minority businesses. **Also** list the good faith efforts (Affidavit **A**) made to solicit minority participation in the bid effort.

NOTE: A contractor that performs all of the work with its own workforce may submit an Affidavit (**B**) to that effect in lieu of Affidavit (**A**) required above. The MB Participation Form must still be submitted even if there is zero participation.

After the bid opening - The Owner will consider all bids and alternates and determine the lowest responsible, responsive bidder. Upon notification of being the apparent low bidder, the bidder shall then file within 72 hours of the notification of being the apparent lowest bidder, the following:

An Affidavit (**C**) that includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, which is equal to or more than the 10% goal established. This affidavit shall give rise to the presumption that the bidder has made the required good faith effort and Affidavit **D** is not necessary;

* **OR** *

If less than the 10% goal, Affidavit (**D**) of its good faith effort to meet the goal shall be provided. The document must include evidence of all good faith efforts that were implemented, including any advertisements, solicitations and other specific actions demonstrating recruitment and selection of minority businesses for participation in the contract.

Note: Bidders must always submit **with their bid** the Identification of Minority Business Participation Form listing all MB contractors, vendors and suppliers that will be used. If there is no MB participation, then enter none or zero on the form. Affidavit A **or** Affidavit B, as applicable, also must be submitted with the bid. Failure to file a required affidavit or documentation with the bid or after being notified apparent low bidder is grounds for rejection of the bid.

Proposal Signature Page

The undersigned further agrees that in the case of failure on his part to execute the said contract and the bonds within ten (10) consecutive calendar days after being given written notice of the award of contract, the certified check, cash or bid bond accompanying this bid shall be paid into the funds of the owner's account set aside for the project, as liquidated damages for such failure; otherwise the certified check, cash or bid bond accompanying this proposal shall be returned to the undersigned.

Respectfully submitted this day of _____

(Name of firm or corporation making bid)

WITNESS:

(Proprietorship or Partnership)

By: _____
Signature

Name: _____
Print or type

Title _____
(Owner/Partner/Pres./V.Pres)

Address _____

ATTEST:

By: _____

Title: _____
(Corp. Sec. or Asst. Sec. only)

License No. _____

Federal I.D. No. _____

Email Address: _____

(CORPORATE SEAL)

Addendum received and used in computing bid:

Addendum No. 1 _____ Addendum No. 3 _____ Addendum No. 5 _____ Addendum No. 6 _____

Addendum No. 2 _____ Addendum No. 4 _____ Addendum No. 6 _____ Addendum No. 7 _____

State of North Carolina AFFIDAVIT A – Listing of Good Faith Efforts

County of _____

(Name of Bidder)

Affidavit of _____

I have made a good faith effort to comply under the following areas checked:

Bidders must earn at least 50 points from the good faith efforts listed for their bid to be considered responsive. (1 NC Administrative Code 30 I.0101)

- 1 – (10 pts)** Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
- 2 --(10 pts)** Made the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bids are due.
- 3 – (15 pts)** Broken down or combined elements of work into economically feasible units to facilitate minority participation.
- 4 – (10 pts)** Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- 5 – (10 pts)** Attended prebid meetings scheduled by the public owner.
- 6 – (20 pts)** Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
- 7 – (15 pts)** Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- 8 – (25 pts)** Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- 9 – (20 pts)** Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- 10 - (20 pts)** Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

The undersigned, if apparent low bidder, will enter into a formal agreement with the firms listed in the Identification of Minority Business Participation schedule conditional upon scope of contract to be executed with the Owner. Substitution of contractors must be in accordance with GS143-128.2(d) Failure to abide by this statutory provision will constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of the minority business commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

State of North Carolina --AFFIDAVIT B-- Intent to Perform Contract with Own Workforce.

County of _____

Affidavit of _____
(Name of Bidder)

I hereby certify that it is our intent to perform 100% of the work required for the _____ contract.
(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform all elements of the work on this project with his/her own current work forces; and

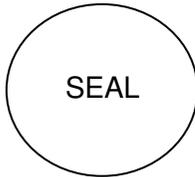
The Bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement. The Bidder agrees to make a Good Faith Effort to utilize minority suppliers where possible.

The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20__

Notary Public _____

My commission expires _____

State of North Carolina - AFFIDAVIT C - Portion of the Work to be Performed by HUB Certified/Minority Businesses

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the portion of the work to be executed by HUB certified/minority businesses as defined in GS143-128.2(g) and 128.4(a),(b),(e) is equal to or greater than 10% of the bidders total contract price, then the bidder must complete this affidavit.
This affidavit shall be provided by the apparent lowest responsible, responsive bidder within **72 hours** after notification of being low bidder.

Affidavit of _____ I do hereby certify that on the _____
(Name of Bidder)

_____ (Project Name)
Project ID# _____ Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. Attach additional sheets if required

Name and Phone Number	*Minority Category	**HUB Certified Y/N	Work Description	Dollar Value

*Minority categories: Black, African American (B), Hispanic (H), Asian American (A) American Indian (I), Female (F) Socially and Economically Disadvantaged (D)

** HUB Certification with the state HUB Office required to be counted toward state participation goals.

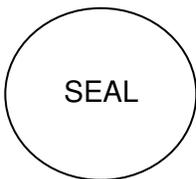
Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

State of North Carolina AFFIDAVIT D – Good Faith Efforts

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the goal of 10% participation by HUB Certified/ minority business **is not** achieved, the Bidder shall provide the following documentation to the Owner of his good faith efforts:

Affidavit of _____ I do hereby certify that on the _____
 (Name of Bidder)

Project ID# _____ (Project Name) Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with HUB certified/ minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. (Attach additional sheets if required)

Name and Phone Number	*Minority Category	**HUB Certified Y/N	Work Description	Dollar Value

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

**** HUB Certification with the state HUB Office required to be counted toward state participation goals.**

Examples of documentation that may be required to demonstrate the Bidder's good faith efforts to meet the goals set forth in these provisions include, but are not necessarily limited to, the following:

- A. Copies of solicitations for quotes to at least three (3) minority business firms from the source list provided by the State for each subcontract to be let under this contract (if 3 or more firms are shown on the source list). Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date and time when quotes must be received.
- B. Copies of quotes or responses received from each firm responding to the solicitation.
- C. A telephone log of follow-up calls to each firm sent a solicitation.
- D. For subcontracts where a minority business firm is not considered the lowest responsible sub-bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.
- E. Documentation of any contacts or correspondence to minority business, community, or contractor organizations in an attempt to meet the goal.
- F. Copy of pre-bid roster
- G. Letter documenting efforts to provide assistance in obtaining required bonding or insurance for minority business.
- H. Letter detailing reasons for rejection of minority business due to lack of qualification.
- I. Letter documenting proposed assistance offered to minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letter of credit, including waiving credit that is ordinarily required.

Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive bidder.

Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

FORM OF BID BOND

KNOW ALL MEN BY THESE PRESENTS THAT _____

_____ as principal, and _____, as surety, who is duly licensed to act as surety in North Carolina, are held and firmly bound unto the State of North Carolina* through _____ as obligee, in the penal sum of _____ DOLLARS, lawful money of the United States of America, for the payment of which, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Signed, sealed and dated this ____ day of ____ 20__

WHEREAS, the said principal is herewith submitting proposal for and the principal desires to file this bid bond in lieu of making the cash deposit as required by G.S. 143-129.

NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION is such, that if the principal shall be awarded the contract for which the bid is submitted and shall execute the contract and give bond for the faithful performance thereof within ten days after the award of same to the principal, then this obligation shall be null and void; but if the principal fails to so execute such contract and give performance bond as required by G.S. 143-129, the surety shall, upon demand, forthwith pay to the obligee the amount set forth in the first paragraph hereof. Provided further, that the bid may be withdrawn as provided by G.S. 143-129.1

_____(SEAL)

_____(SEAL)

_____(SEAL)

_____(SEAL)

_____(SEAL)

FORM OF CONSTRUCTION CONTRACT

(ALL PRIME CONTRACTS)

THIS AGREEMENT, made the _____ day of _____ in the year of 20__ by _____ and _____ between _____

hereinafter called the Party of the First Part and the *State of North Carolina, through the _____

_____ hereinafter called the Party of the Second Part.

WITNESSETH:

That the Party of the First Part and the Party of the Second Part for the consideration herein named agree as follows:

1. Scope of Work: The Party of the First Part shall furnish and deliver all of the materials, and perform all of the work in the manner and form as provided by the following enumerated plans, specifications and documents, which are attached hereto and made a part thereof as if fully contained herein: advertisement; Instructions to Bidders; General Conditions; Supplementary General Conditions; specifications; accepted proposal; contract; performance bond; payment bond; power of attorney; workmen's compensation; public liability; property damage and builder's risk insurance certificates; approval of attorney general; certificate by the Office of State Budget and Management, and drawings, titled:

Consisting of the following sheets:

Dated: _____ and the following addenda:

Addendum No _____ Dated: _____ Addendum No. _____ Dated: _____

Addendum No _____ Dated: _____ Addendum No. _____ Dated: _____

Addendum No _____ Dated: _____ Addendum No. _____ Dated: _____

Addendum No _____ Dated: _____ Addendum No. _____ Dated: _____

2. That the Party of the First Part shall commence work to be performed under this agreement on a date to be specified in a written order of the Party of the Second Part and shall fully complete all work hereunder within _____ consecutive calendar days

from said date. For each day in excess thereof, liquidated damages shall be as stated in Supplementary General Conditions. The Party of the First Part, as one of the considerations for the awarding of this contract, shall furnish to the Party of the Second Part a construction schedule setting forth planned progress of the project broken down by the various divisions or part of the work and by calendar days as outlined in Article 14 of the General Conditions of the Contract.

3. The Party of the Second Part hereby agrees to pay to the Party of the First Part for the faithful performance of this agreement, subject to additions and deductions as provided in the specifications or proposal, in lawful money of the United States as follows:

(\$ _____).

Summary of Contract Award:

4. In accordance with Article 31 and Article 32 of the General Conditions of the Contract, the Party of the Second Part shall review, and if approved, process the Party of the First Party's pay request within 30 days upon receipt from the Designer. The Party of the Second Part, after reviewing and approving said pay request, shall make payments to the Party of the First Part on the basis of a duly certified and approved estimate of work performed during the preceding calendar month by the First Party, less five percent (5%) of the amount of such estimate which is to be retained by the Second Party until all work has been performed strictly in accordance with this agreement and until such work has been accepted by the Second Party. The Second Party may elect to waive retainage requirements after 50 percent of the work has been satisfactorily completed on schedule as referred to in Article 31 of the General Conditions.

5. Upon submission by the First Party of evidence satisfactory to the Second Party that all payrolls, material bills and other costs incurred by the First Party in connection with the construction of the work have been paid in full, final payment on account of this agreement shall be made within thirty (30) days after the completion by the First Party of all work covered by this agreement and the acceptance of such work by the Second Party.

6. It is further mutually agreed between the parties hereto that if at any time after the execution of this agreement and the surety bonds hereto attached for its faithful performance, the Second Party shall deem the surety or sureties upon such bonds to be unsatisfactory, or if, for any reason, such bonds cease to be adequate to cover the performance of the work, the First Party shall, at its expense, within five (5) days after the receipt of notice from the Second Party so to do, furnish an additional bond or bonds in such form and amount, and with such surety or sureties as shall be satisfactory to the Second Party. In such event no further payment to the First Party shall be deemed to be due under this agreement until such new or additional security for the faithful performance of the work shall be furnished in manner and form satisfactory to the Second Party.

7. The Party of the First Part attest that it and all of its subcontractors have fully complied with all requirements of NCGS 64 Article 2 in regards to E-Verification as required by Section 2.(c) of Session Law 2013-418, codified as N.C. Gen. Stat. § 143-129(j).

IN WITNESS WHEREOF, the Parties hereto have executed this agreement on the day and date first above written in _____ counterparts, each of which shall without proof or accounting for other counterparts, be deemed an original contract.

Witness:

Contractor: (Trade or Corporate Name)

(Proprietorship or Partnership)

By: _____

Title: _____
(Owner, Partner, or Corp. Pres. or Vice Pres. only)

Attest: (Corporation)

By: _____

Title: _____
(Corp. Sec. or Asst. Sec. only)

The State of North Carolina through*

(CORPORATE SEAL)

(Agency, Department or Institution)

Witness:

By: _____

Title: _____

FORM OF PERFORMANCE BOND

Date of Contract: _____

Date of Execution: _____

Name of Principal
(Contractor) _____

Name of Surety: _____

Name of Contracting
Body: _____

Amount of Bond: _____

Project

KNOW ALL MEN BY THESE PRESENTS, that we, the principal and surety above named, are held and firmly bound unto the above named contracting body, hereinafter called the contracting body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind, ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain contract with the contracting body, identified as shown above and hereto attached:

NOW, THEREFORE, if the principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the contracting body, with or without notice to the surety, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the surety being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Executed in _____ counterparts.

Witness:

(Proprietorship or Partnership)

Attest: (Corporation)

By: _____

Title: _____
(Corp. Sec. or Asst. Sec. only)

(Corporate Seal)

Contractor: (Trade or Corporate Name)

By: _____

Title: _____
(Owner, Partner, or Corp. Pres. or Vice Pres. only)

(Surety Company)

By: _____

Title: _____
(Attorney in Fact)

Witness:

Countersigned:

(N.C. Licensed Resident Agent)

Name and Address-Surety Agency

Surety Company Name and N.C.
Regional or Branch Office Address

(Surety Corporate Seal)

FORM OF PAYMENT BOND

Date of Contract: _____
Date of Execution: _____
Name of Principal
(Contractor) _____
Name of Surety: _____
Name of Contracting
Body: _____
Amount of Bond: _____
Project _____

KNOW ALL MEN BY THESE PRESENTS, that we, the principal and surety above named, are held and firmly bound unto the above named contracting body, hereinafter called the contracting body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain contract with the contracting body identified as shown above and hereto attached:

NOW, THEREFORE, if the principal shall promptly make payment to all persons supplying labor/material in the prosecution of the work provided for in said contract, and any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the surety being hereby waived, then this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Executed in _____ counterparts.

Witness:

(Proprietorship or Partnership)

Attest: (Corporation)

By: _____

Title: _____
(Corp. Sec. or Asst. Sec.. only)

(Corporate Seal)

Witness:

Countersigned:

(N.C. Licensed Resident Agent)

Name and Address-Surety Agency

Surety Company Name and N.C.
Regional or Branch Office Address

Contractor: (Trade or Corporate Name)

By: _____

Title _____
(Owner, Partner, or Corp. Pres. or Vice
Pres. only)

(Surety Company)

By: _____

Title: _____
(Attorney in Fact)

(Surety Corporate Seal)

Sheet for Attaching Power of Attorney

Sheet for Attaching Insurance Certificates

APPROVAL OF THE ATTORNEY GENERAL

**CERTIFICATION BY THE OFFICE OF STATE
BUDGET AND MANAGEMENT**

Provision for the payment of money to fall due and payable by the

under this agreement has been provided for by allocation made and is available for the purpose of carrying out this agreement.

This _____ day of _____ 20____.

Signed _____
Budget Officer

PREBID QUESTION FORM

Only questions requiring a modification or interpretation to the Bidding Documents by an addition, deletion, clarification, or correction, will be made by written Addendum, and transmitted to Planholders of Record. Questions that do not require a modification or interpretation to the Bidding Documents will not be responded to and will not be included in an Addendum.

The Architect and Owner shall not be responsible for oral modifications and interpretations. Bidders and Sub-bidders requesting a modification or interpretation by addition, deletion, clarification, or correction of the Bidding Documents shall complete and submit this form which shall reach the Architect no later than seven (7) calendar days prior to the date scheduled for receipt of bids. Use a separate form for each question submitted.

DATE: _____

The following question concerns Drawing (number) _____:

The following question concerns Specifications Section (number) _____, page _____, paragraph _____:

Questions submitted by: _____

Name	Organization
Telephone No. (____) _____	e-mail Address: _____

**Mail Form to: Attention: Matthew McNeely
Moseley Architects
11430 North Community House Road, Gibson Bldg, Suite 225
Charlotte, NC 28277**

or fax Form to: (704) 540-3754

or email PDF version of Form to: mmcneely@moseleyarchitects.com

This form is available on <http://www.moseleyarchitects.com/bidding/> Click on "Submit Question."



**ABATEMENT SPECIFICATION FOR REMOVAL
OF ASBESTOS-CONTAINING MATERIAL
SANFORD HALL**

S&ME Project Number 1354-13-149

Prepared For:
Moseley Architects
11430 N Community House Road #225
Charlotte, North Carolina 28277
And
The University of North Carolina at Charlotte
9201 University City Boulevard
Charlotte, North Carolina 28223

Prepared By:
S&ME, Inc.
9751 Southern Pine Boulevard
Charlotte, North Carolina 28273

C. Mike Cashio, Jr., CIH
NC Designer 40020

Jena R. Abney, MPH
Project Industrial Hygienist / Reviewer

October 27, 2015

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SECTION 01043, PROJECT COORDINATION

1. General

- 1.1. All asbestos abatement contractors will be licensed general contractors in either the specialty interior, building, unclassified, or asbestos categories by the North Carolina Licensing Board of General Contractors and limited for the bid amount.
- 1.2. The contractor shall be responsible for inspecting the site prior to bidding to confirm the scope of the work. Any quantities listed by the designer in the plans, specifications, or survey are done so as approximations. The actual quantities of asbestos-containing material to be encountered are the responsibility of the contractor. The only exception is for those quantities preceded by the notation "allowance" in section 02080.
- 1.3. The contractor shall furnish and is responsible for all costs including but not limited to: permit fees, containment preparation, labor, materials, services, insurance, bonding, equipment necessary to carry out the abatement operations, and disposal of all asbestos material in accordance with the plans and specifications, EPA and OSHA regulations, and any applicable state and local government regulations.
- 1.4. The contractor/employer has and assumes the responsibility of proceeding in such a manner that he offers his employees a workplace free of recognized hazards causing or likely to cause death or serious injury. The contractor shall be responsible for performing this abatement and disposal so that airborne asbestos fiber levels do not exceed established levels.
- 1.5. The contractor will be responsible for all costs associated with employee monitoring to meet the OSHA requirements.
- 1.6. The contractor is responsible for all costs, including additional visits, should the designer and/or the industrial hygiene firm determine that the contractor failed a final inspection or clearance air monitoring. Notification and scheduling of the final inspection during the project is the responsibility of the contractor. The contractor will allow a minimum notice of 48 hours unless a different time frame is agreed upon by the designer and the contractor.
- 1.7. Unit rates used for change orders shall be the same rate for additions and deductions.

2. Personnel

2.1. Supervisor

- 2.1.1. All supervisors shall be accredited by the Health Hazards Control Branch (HHCB).
- 2.1.2. All supervisors on the project shall have two years of experience in the administration and supervision of asbestos abatement projects including work practices, protective measures for building and personnel, disposal procedures, etc.
- 2.1.3. One supervisor shall be provided for every 10 workers inside the containment. A minimum of one supervisor shall be provided per project.
- 2.1.4. The contractor shall have at least one employee on the job site in either a foreman or supervisor's position, who is bilingual in the

appropriate languages when employing workers who do not speak fluent English.

- 2.1.5. A minimum of one supervisor per company shall have attended a 24 hour respiratory protection course.

2.2. Worker

- 2.2.1. All workers shall be accredited by the North Carolina Health Hazards Control Branch (HHCB).

2.3. Competent Person

- 2.3.1. A competent person, as defined in the OSHA asbestos standard 29 CFR 1926.1101, employed by the contractor, must be outside the work area at all times to monitor activity, ensure containment security, provide information to visitors, and control access to the work area.

2.4. Employees

- 2.4.1. The contractor is responsible for the behavior of workers within his employment. If at any time during the contracted work any of his employees are judged to exhibit behavior unfitting for the area or judged to be a nuisance by the owner or designer, the contractor shall remove them immediately from the project.
- 2.4.2. The contractor shall be responsible for compliance with the following concerning employee behavior:
 - 2.4.2.1. Under no circumstances are alcohol, drugs, or any other type of controlled substances permitted on state property.
 - 2.4.2.2. All workers are restricted to the construction project site only.
 - 2.4.2.3. All vehicles must be parked in areas prearranged with the owner.
 - 2.4.2.4. All workers must conform to the following basic dress code when in public areas of the project confines: long pants, shirts, no tank tops, no shorts, no bare backs.
 - 2.4.2.5. The contractor is responsible for disposal of all trash brought on state property by his employees, including drink cans, bottles or other food containers, and wrappers.
 - 2.4.2.6. Failure to adhere to these rules could result in criminal prosecution and/or removal from the State property.

3. Meetings

3.1. Pre-bid

- 3.1.1. A pre-bid conference will be held by the designer. All contractors submitting a bid are encouraged to attend, visit the site, and ask questions concerning the plans and specifications.
- 3.1.2. The designer will review the plans and specifications, present required techniques and safeguards for the removal of the asbestos, and identify locations of water, electrical sources, etc.
- 3.1.3. Any minutes, new points, or clarifications raised during the meeting will be issued by the designer in an addendum seven days prior to bids.

4. Submittals

4.1. Pre-Job Submittals

- 4.1.1. Submit an electronic copy in .pdf format of complete pre-job submittals to the designer at least 10 days prior to start of work. If submittals are incomplete or must be modified, the contractor shall resubmit the entire pre-job submittal package. Partial submittals are not acceptable. Work is prohibited until submittal package has been reviewed and approved by designer. A copy of the approved submittals shall be kept in a three-ring binder (project log) by the contractor at the project site in the clean room or in the on-site office of the contractor. If requested, the contractor shall provide up to three bound hard copies of the submittals.
 - 4.1.1.1. Notifications: Provide copies of Asbestos Permit Application and Notification for Demolition/Renovation (DEHNR 3768), which provide written notice to all required agencies, including North Carolina HHCBC. Provide notification letters to local EMS, fire, and police departments.
 - 4.1.1.2. Employee List: Provide copies of lists of supervisors and workers, along with their accreditation numbers, to be utilized on the project.
 - 4.1.1.3. Permits: Provide copies of approval of a waste disposal site in compliance with 40 CFR 61.154.
 - 4.1.1.4. Medical: Provide individually signed and notarized forms by each worker to be utilized on the project documenting that each is actively involved in a company employee medical surveillance program.
 - 4.1.1.5. Respirator Training: Copies of most recent fit testing records, individually signed for each worker to be utilized on the project.
 - 4.1.1.6. Project Schedule: Time schedule for the project, outlining the proposed start, setup, clearances, etc. for the various phases of the project.
 - 4.1.1.7. Initial Exposure Assessment: As required by the OSHA construction asbestos standard 29 CFR 1926.1101.8.
 - 4.1.1.8. Contingency plan as required under Section 01043.6.
 - 4.1.1.9. Any other programs or training as outlined by the OSHA and EPA standards.

4.2. Post-Job Submittals

- 4.2.1. Submit an electronic copy in .pdf format of complete post-job submittals to the Designer, S&ME. If submittals are incomplete or must be modified, the contractor shall resubmit the entire post-job submittal package. Partial submittals are not acceptable. Requests for final payment will not be approved until the submittal package has been reviewed and approved by the designer. If requested, the contractor shall provide up to three bound hard copies of the submittals.

- 4.2.1.1. Affidavits: Contractor's affidavit of payment of debts and claims, affidavit of release of liens, and consent of surety company to final payment.
- 4.2.1.2. Manifest: North Carolina Asbestos Waste Shipment Record (DEHNR 3787) receipt from landfill operator which acknowledges the contractor's delivery(s) of waste material. Include date, quantity of material delivered, and signature of authorized representative of landfill. Also, include name of waste transporter.
- 4.2.1.3. Daily Log: A notarized copy of all daily logs showing the following: name, date, entering and leaving time, company or agency represented, reason for entry for all persons entering the work area, employee's daily air monitoring data as required by the OSHA standard, and written comments by inspectors, industrial hygienists, designers and visitors.
- 4.2.1.4. Medical: worker release forms, asbestos training certification forms, and respirator training documentation of all new employees hired during the project.
- 4.2.1.5. Special Reports: All documents generated under Section 01043.5.

5. Special Reports

- 5.1. General: Except as otherwise indicated, submit special reports to designer within one day of occurrence requiring special report, with copies to others affected by occurrence. Also keep a copy in the project log book.
- 5.2. Reporting Unusual Events: When an event of unusual and significant nature occurs at site (examples: failure of negative pressure system that was not corrected immediately, rupture of temporary enclosures that were not corrected immediately or that may have caused asbestos contamination outside the controlled area, or any incident that may have caused asbestos exposure to unprotected personnel), prepare and submit a special report to the designer immediately, listing chain of events, persons participating, response by contractor's personnel, evaluation of results or effects, and similar pertinent information. When such events are known or predictable in advance, advise designer in advance at earliest possible date.
- 5.3. Reporting Accidents: Prepare and submit reports of significant accidents at the site and anywhere else work is in progress. Record and document date and actions; comply with industry standards for reporting accidents. For this purpose, a significant accident is defined to include events where personal injury is sustained, or property loss of substance is sustained, or where the event posed a significant threat of loss or personal injury.

6. Contingency Plan

- 6.1. Contingency Plan: Prepare a contingency plan for emergencies including fire, accident, power failure, negative pressure system failure, supplied air system failure (if applicable), evacuation of injured persons for both life threatening and non-life threatening, or any other event that may require modification or

abridgment of decontamination or work area isolation procedures. Include in plan specific procedures for decontamination or work area isolation. Note that nothing in this specification should impede safe exiting or providing of adequate medical attention in the event of an emergency. Keep these plans in the on-site office.

6.2. Post outside/in clean room of Personnel Decontamination Unit:

- 6.2.1. Telephone numbers and locations of emergency services including but not limited to, fire, ambulance, doctor, hospital, police, power company, telephone company, and the North Carolina HHCB.
- 6.2.2. A copy of Material Safety Data Sheets (MSDS) for any chemicals used during the asbestos project, including asbestos.
- 6.2.3. The contractor shall post asbestos signs in each appropriate language as per the OSHA 29 CFR 1926.1101 standard.

END OF SECTION 01043

SECTION 01092, CODES AND REGULATIONS

1. Reference Specifications

The contractor shall assume full responsibility and liability for compliance with all applicable federal, state, and local regulations pertaining to work practices, hauling, disposal, and protection of workers, visitors to the site, and persons occupying areas adjacent to the site.

Unless modified by these project specifications, all specifications for stripping, removal, repair, and disposal work shall conform to the following specifications and standards, as applicable, as if completely reproduced herein.

1.1. The following regulations published by the Environmental Protection Agency (EPA):

- 1.1.1. "National Emissions Standards for Hazardous Air Pollutants Asbestos," 40 CFR Part 61, Subpart M.
- 1.1.2. "General Provisions," 40 CFR Part 61, Subpart A.
- 1.1.3. "Guidance for Controlling Asbestos-Containing Materials in Buildings" June 1985. (EPA # 560/5-85-024).
- 1.1.4. "Asbestos-Containing Materials in Schools," 40 CFR Part 763, Subpart E including appendices.

1.2. The following regulations published by the U.S. Department of Labor, OSHA:

- 1.2.1. "Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite; Final Rules," Title 29, Part 1910, Section 1001 and Part 1926, Section 1101 of the Code of Federal Regulations.
- 1.2.2. "Respiratory Protection," Title 29, Part 1910, Section 134 of the Code of Federal Regulations.
- 1.2.3. Construction Industry, Title 29, Part 1926, of the Code of Federal Regulations.
- 1.2.4. "Access to Employee Exposure and Medical Records," Title 29, Part 1910, Section 20 of the Code of Federal Regulations.
- 1.2.5. "Hazard Communication," Title 29, Part 1926, Section 59 of the Code of Federal Regulations.
- 1.2.6. "Specifications for Accident Prevention Signs and Tags," Title 29, Part 1910, Section 145 of the Code of Federal Regulations.

1.3. The following regulations published by North Carolina state agencies:

- 1.3.1. North Carolina Asbestos Hazard Management Program Rules as adopted by 15A NCAC 19C .0600.
- 1.3.2. "North Carolina Occupational Safety and Health Standards for the Construction Industry," 29 CFR Part 1926 as adopted by T13 NCAC 07F .0201, and shipyard T13:07F.0500.
- 1.3.3. North Carolina General Statutes, Chapter 95, 97, 130.

1.4. The following documents published by the American National Standards Institute:

- 1.4.1. "Fundamentals Governing the Design and Operation of Local Exhaust Systems," Z9.2-1979.

- 1.4.2. "Standard for Respiratory Protection Respiratory Use - Physical Qualifications for Personnel," ANSI/AIHA/ASSE Z88.6-2006.
- 1.4.3. "Respirator Fit Testing Methods," ANSI/AIHA/ASSE Z88.10-2010

2. Notices

2.1. State Agencies

The contractor shall notify the following office in writing within two weeks or ten work days, whichever is longer, prior to beginning any asbestos removal operations. Work may not start until an asbestos abatement permit is received from the Health Hazards Control Branch Occupational & Environmental Epidemiology

Health Hazards Control Branch
Occupational & Environmental Epidemiology
Section N.C. DEHNR

(Regular Mail)

P.O. Box 27687
Raleigh, N.C. 27611-7687
Telephone: (919) 733-0820
Fax: (919) 733-8493

(UPS, Fed Ex, etc.)

2728 Capital Blvd
Parker Lincoln Bldg.
Second Floor / 2A210
Raleigh, N.C. 2760

2.2. Local Programs

- 2.2.1. Mecklenburg County Department of Environmental Protection maintains jurisdiction over enforcement of the NESHAP. Apply for an asbestos abatement permit two weeks or eleven working days before starting work. You may not start work without this permit.

Mecklenburg County Department of Environmental Protection
700 North Tryon Street
Charlotte, NC 28231

- 2.2.2. Notify the local emergency medical services, police, and fire departments in writing of the type and scope of work being performed and request these departments make an inspection prior to beginning the work.

2.3. Licenses

Maintain current licenses for contractor and accreditation for workers and supervisors as required by applicable State or local jurisdictions for the removal, transporting, disposal, or other regulated activity relative to the work of this contract.

END OF SECTION 01092

SECTION 01410, AIR MONITORING - INDUSTRIAL HYGIENE FIRM

1. General

- 1.1. The designer shall be responsible for the coordination and contracting of an industrial hygiene firm. Services of the industrial hygiene firm will be paid by the owner.
- 1.2. Air monitoring shall be done under the direct supervision of a North Carolina accredited supervising air monitor (SAM), except for sampling performed by the contractor to satisfy OSHA requirements.
- 1.3. The SAM shall be accredited per the Asbestos Hazard Management Program rules.
- 1.4. The Air monitor shall be accredited as per the Asbestos Hazard Management Program rules and work under the direct supervision of the SAM.
- 1.5. The SAM representing each firm shall have taken a 24-hour respiratory protection course that is NIOSH, AIHA, or HHCB recognized.
- 1.6. The industrial hygiene firm shall submit copies of their North Carolina accreditations and documentation on respiratory protection training to the designer prior to the award of the contract.
- 1.7. If specific project activities are assigned to an air monitor, the SAM is expected to be in direct control and responsible for industrial hygiene work completed on the project. The SAM shall approve and sign all air monitoring results performed by the air monitor. The SAM signature must be an original. No rubber stamp signature shall be accepted.
- 1.8. Employees of the HHCB shall have right of entry into the project. The HHCB's SAM shall have final authority over the industrial hygiene firm on the project.

2. Description of Work

- 2.1. The industrial hygiene firm shall offer expertise to the designer and contractor, but is not directly responsible for the performance of the job.
- 2.2. At the job site, the industrial hygiene firm is expected to observe, be aware, and comment on general work site conditions and activities as they relate to the specifications and profession of industrial hygiene, and make recommendations in writing to the designer and contractor.

- 2.3. The industrial hygiene firm is responsible for overseeing the protection of the environment from contamination, protection of persons in adjacent areas, and assurance that the areas are acceptable for occupancy.
- 2.4. The industrial hygiene firm has the authority to direct the contractor relative to safety and environmental concerns. This includes stopping the work if necessary. All directions and comments made by the industrial hygiene firm to the contractor shall be written with a copy to the designer.
- 2.5. The industrial hygiene firm shall furnish the contractor a copy of his field report within 24 hours of the visit. Copies of field notes and reports of observations shall be kept in project log book.
- 2.6. The SAM shall review and make comments to the designer on the submittals listed in Section 01043.
- 2.7. The SAM shall approve any change in contractor's respiratory protection. This includes a review of the historical data.
- 2.8. The industrial hygiene firm is to conform to the contractor's schedule and shall respond to necessary changes, provided an advance notice is given as outlined in Section 01043.
- 2.9. The industrial hygiene firm's project monitor shall furnish designer and contractor with a pager or mobile phone number where he can be reached quickly at all times.
- 2.10. *The air monitoring firm shall submit to the designer, copies of all field notes and a summary of activities for the week in electronic (.pdf) format at least weekly.*
- 2.11. The industrial hygiene firm shall notify the Owner, designer and contractor, in writing, of any failed clearance visits.
- 2.12. At the completion of the project, the industrial hygiene firm shall prepare a report describing the assessment of the project, all air monitoring data, acceptance letters, calibration records, and a description of the project as it proceeded to completion and submit four copies of the report to the Owner and designer (S&ME).

3. Air Monitoring

- 3.1. Ambient Air Monitoring: The purpose of ambient air monitoring by the industrial hygiene firm will be to detect discrepancies in the work area isolation such as:
 - 3.1.1. Contamination of the building outside of the work area with airborne asbestos fibers.

- 3.1.2. Failure of filtration or rupture in the negative pressure system.
- 3.1.3. Confirm the work practices established by the contractor and respiratory protection provided for employees are adequate.
- 3.2. Work Area Airborne Fiber Levels: The owner will contract Air Monitoring services to monitor airborne fiber levels in the work area. The purpose of this air monitoring will be to detect airborne fiber levels which may challenge the ability of the work area isolation procedures to protect the balance of the building or outside of the building from contamination by airborne fibers. Air monitoring services will be outside of the designer's contract.
- 3.3. Work Area Clearance: To determine if the elevated airborne fiber levels encountered during abatement operations have been reduced to an acceptable level, the industrial hygiene firm will sample and analyze air per Section 01714.
- 3.4. In accordance with AHMB Program Rules, the SAM shall develop an Abatement Project Monitoring Plan which complies with EPA and OSHA analytical criteria and will provide a valid representation of airborne fiber concentrations both inside and outside the work area. This program is not intended to satisfy the contractor's requirement for sampling under the OSHA regulation. All personnel and area sampling conducted by the industrial hygiene firm shall be personally observed. Air sampling pumps shall not be left unattended for extended periods of time.
- 3.5. The SAM shall submit a written project monitoring plan to the designer with a copy to the contractor. The following information shall be required for the submittal: the name, address and telephone number of the industrial hygiene firm.
 - 3.5.1. The name, address, telephone number and NIOSH's PAT designation and proficiency data for the laboratory analyzing the air samples. Analysis of all samples collected shall be by a laboratory currently proficient in NIOSH's "Proficiency Analytical Testing Program for Laboratory Quality Control" for asbestos. The acceptable sampling and analysis method is NIOSH 7400, latest revision.
 - 3.5.2. Persons performing phase contrast microscopy analysis at the asbestos removal location shall be proficient in the American Industrial Hygiene Association's Asbestos Analyst Registry Program [AAR].
 - 3.5.3. A proposed air sampling strategy which shall include: a projected number of air samples, locations, the types of air samples to be collected (personal, area, ambient), how the air samples are to be collected (TWA, ceiling, other), the equipment to be used (pumps, calibration equipment, filters, other), and how the samples will be transported to the laboratory.
 - 3.5.4. All personal air samples will be collected in such a manner as to comply with OSHA collection and analytical regulations and to provide a valid representation of airborne fiber levels. The samples collected by the industrial hygiene firm on personnel do not satisfy the contractor's responsibility under OSHA.
 - 3.5.5. All final area air sampling will comply with all State and Federal requirements in measuring airborne asbestos following an abatement action.

- 3.5.6. Air samples will be analyzed and results made available as per the AHMB Program Rules. Copies of all air sampling results shall be signed by the SAM and a copy posted at the job site. These copies shall include the following: sample number, sample location, activity represented by sample, flow rate, sample time, comments and sample results. A statement will be included on each submission that the requirements of this contract have been met as they apply to the activities of the SAM.
- 3.5.6.1. If TWA samples are being collected by the contractor for the purpose of reducing respiratory protection requirements, the industrial hygiene firm shall directly observe the conditions and work practices represented by each sample and make appropriate notes in the bound book on site. The SAM shall review all TWA air sampling results which are used for reducing respiratory protection requirements before accepting the results.
- 3.6. The Air Monitoring Firm shall document the negative air pressure by recording the manometer readings at the beginning of each shift and at least once every four hours.
- 3.7. Supplemental air monitoring may be conducted inside and outside the work area by the HHCB. This supplemental sampling does not fulfill air monitoring responsibilities required by OSHA, EPA or this contract.

END OF SECTION 01410

SECTION 01503, TEMPORARY FACILITIES

1. General

- 1.1. Provide temporary connection to existing building utilities or provide temporary facilities as required herein or as necessary to carry out the work.
- 1.2. Use qualified tradesmen for installation of temporary services and facilities. Locate, modify, and extend temporary services and facilities where they will serve the project adequately and result in minimum interference with the performance of the work.
- 1.3. The owner's maintenance personnel shall lock and tag out all electrical and HVAC equipment in the asbestos abatement area. The contractor shall verify that the power and HVAC have been locked and tagged out prior to beginning work.
- 1.4. The contractor is responsible for moving all furniture and any books, computers, records, and equipment that remain on site when he arrives.

2. Water Service

- 2.1. The Owner shall supply a source of water. The Contractor will bear all expense of heating and getting water to the work and decontamination areas.
- 2.2. Supply hot and cold water to the decontamination unit in accordance with Section 01563. Hot water shall be supplied at a minimum temperature of 100 degrees Fahrenheit.
- 2.3. After completion of use, connections and fittings shall be removed without damage or alteration to existing water piping and equipment.

3. Electrical Service

- 3.1. General: Comply with applicable NEMA, NEC, and UL standards and governing state and local regulations for materials and layout of temporary electric service.
- 3.2. Ground Fault Protection: Provide receptacle outlets equipped with ground fault circuit interrupters, reset button, and pilot light, for plug-in connection of power tools and equipment.
- 3.3. Provide services of an electrician, on a standby basis, to service electrical needs during the abatement process.

4. First Aid

- 4.1. A minimum of one first aid kit shall be located in the clean room. Additional first aid kits as the contractor feels is adequate or is required by law shall be located throughout the work area.

5. Fire extinguishers

- 5.1. Comply with the applicable recommendations of NFPA Standard 10 - "Standard for Portable Fire Extinguishers." Locate fire extinguishers where they are most convenient and effective for their intended purpose, but provide not less than one extinguisher in each work area equipment room and one in the clean room of the personnel decontamination unit.

6. Toilet Facilities

- 6.1. Use of the owner's existing toilet facilities will be allowed provided they are maintained in good condition. These privileges may be revoked at any time.

7. Parking

- 7.1. Park only in areas designated by the owner.

8. Building Security

- 8.1. Maintain personnel on-site at all times any portion of the work area is open or not properly secured. Secure work areas completely at the end of each day.

9. Storage

- 9.1. Supply temporary storage required for storage of equipment and materials for duration of the project. Trailer and storage dumpsters will be maintained in areas designated by the owner. Asbestos waste containers shall be covered and locked.

END OF SECTION 01503

SECTION 01513, NEGATIVE PRESSURE SYSTEM

1. General

- 1.1. High efficiency particulate air (HEPA) filter exhaust systems equipped with new HEPA filters for each project shall be used. Exhaust equipment and systems shall comply with ANSI Z9.2-79 and used according to manufacturer's recommendations.
- 1.2. A system of HEPA-equipped air filtration devices shall be configured so that a pressure differential is established between the work area and the surrounding area (-0.02 to -0.04" water column). A continuous chart-recorded manometer shall be used to confirm this condition.
- 1.3. There shall be a minimum of four air changes per hour in any containment.
- 1.4. Additional air filtration devices shall be provided inside the work area for emergency standby as well as for circulation of dead air spaces.
- 1.5. The pressure differential shall be maintained at all times after work area preparation is complete and until the final visual inspection and air tests confirm the area is clean and acceptable for occupancy and the designer confirms verbally with written follow-up to discontinue the use of the negative pressure system.
- 1.6. Air shall be exhausted outside the building away from occupied or traveled areas. Any variations must be approved by the HHCB.
- 1.7. The contractor shall check daily for leaks and log his checks in the bound log book.
 - 1.7.1. These checks shall include running the elevator past the work area floor and monitoring for pressure fluctuations. Any fluctuations noted shall be immediately reported to the designer and the air monitor.
 - 1.7.2. This includes checks of internal to air-moving devices.

END OF SECTION 01513

SECTION 01526, WORK AREA PREPARATION

1. General

- 1.1. Before work begins in an area, a decontamination unit must be in operation as outlined in Section 01563.
- 1.2. Completely isolate the work area from other parts of the building so as to prevent contamination beyond the isolated area.
- 1.3. Temporary facilities shall be addressed as outlined in Section 01503.
- 1.4. The contractor shall set up a work area, load out, and decontamination area as shown in the plans and specifications. Any variations must be approved by the designer. The decontamination facility outside of the work area shall consist of a change room, shower room, and equipment room as described in Section 01563.
- 1.5. The contractor shall wet clean and/or HEPA vacuum all items and equipment in the work area suspected of being contaminated with asbestos but not in direct contact with the asbestos material and either secure these items in place with polyethylene sheeting or have them removed from the work area.
- 1.6. Critical Barriers: The contractor shall thoroughly seal the work area for the duration of the work by completely sealing off all individual openings and fixtures in the work area, including but not limited to, heating and ventilation ducts, doorways, corridors, windows, skylights, and lighting with polyethylene sheeting taped securely in place. If the contractor is using sealant materials to fill in small holes or cracks, the material shall have appropriate fire ratings.
- 1.7. Floors (if required): Apply one or more layers of 6 mil (minimum) polyethylene plastic sheeting with joints overlapped 24 inches and taped securely. Plastic shall be carried up walls a minimum of 12 inches and secured.
- 1.8. Walls (if required): Apply one or more layers of 4 mil (minimum) polyethylene plastic sheeting with joints lapped 24 inches and taped securely. Plastic shall be lapped over floor coverings and taped securely.
- 1.9. Floors and walls shall be installed in such a manner that they may be removed independently of the critical barriers.
- 1.10. Entrances and exits from the work area will have triple barriers of polyethylene plastic sheeting so that the work area is always closed off by one barrier when workers enter or exit.
- 1.11. No water may be left standing on the floor at the end of the work day.
- 1.12. Floor surfaces, walls, finishes or coverings, etc., that in the contractor's opinion will likely be damaged by water or that may become contaminated with asbestos, shall have additional protective preparation as the contractor sees appropriate, at his cost, to protect the original condition of the surfaces.
- 1.13. Any costs associated with physical damage caused by water or securing polyethylene sheeting to areas inside or outside the abatement area shall be the contractor's responsibility.
- 1.14. The contractor shall establish and mark emergency and fire exits from the work area. Emergency procedures shall have priority over established decontamination entry and exit procedures. Audible and visible fire and

emergency evacuation alarms shall be installed so as to be heard and seen throughout the entire work area.

- 1.15. Integrity of these seals shall be regularly checked and maintained by the contractor.
- 1.16. Elevators shall not be allowed to open inside the work area. If they are to be used for transport of material to or from the work area, there shall be a pressurized containment constructed around the entrance which shall lead directly to a loadout and/or a decontamination unit. Personnel may not pass from the work area to the elevator except through a personnel decontamination unit after properly decontaminating and showering out.
- 1.17. After work area preparation, the contractor shall notify the designer verbally with written follow-up that he is ready for a pre-work inspection.

END OF SECTION 01526

SECTION 01560, WORKER PROTECTION

1. General

- 1.1. Provide worker protection as required by OSHA, state, and local standards applicable to the work. Contractor is solely responsible for enforcing worker protection requirements at least equal to those specified in this Section.
- 1.2. Each time the work area is entered, the contractor shall require all persons to remove all street clothes in the changing room of the personnel decontamination unit and put on new disposable coverall, new head cover, and a clean respirator. Proceed through the shower room to equipment room and put on work boots.
- 1.3. Workers shall not eat, drink, smoke, chew gum, or chew tobacco in the work area, the equipment room, the load out area, or the clean room.

2. Worker Training

- 2.1. Train all workers in accordance with 29 CFR 1926 and North Carolina regulations regarding the dangers inherent in handling asbestos, breathing asbestos dust, proper work procedures, and personal and area protective measures.

3. Medical Examinations

- 3.1. Provide medical examinations for all workers. Examinations shall as a minimum meet OSHA requirements as set forth in 29 CFR 1926.

4. Protective Clothing

- 4.1. Provide disposable full-body coveralls and disposable head covers, and require that they be worn by all workers in the work area. Provide a sufficient number for all required changes, for all workers in the work area.
- 4.2. Boots: Provide work boots with non-skid soles and, where required by OSHA, foot protection for all workers.
- 4.3. Gloves: Provide work gloves to all workers and require that they be worn at the appropriate times. Do not remove gloves from the work area. Dispose of work gloves as asbestos-contaminated waste at the completion of the project.

5. Additional Protective Equipment

- 5.1. Type C respirators (if required), disposable coveralls, head covers, and footwear covers shall be provided by the contractor for the owner, the designer, industrial hygiene firm, and other authorized representatives who may inspect the job site

6. Decontamination Procedures

- 6.1. Require that all workers use the following decontamination procedure as a minimum requirement whenever leaving the work area:
 - 6.1.1. Remove disposable coveralls, disposable head covers, and disposable footwear covers or boots in the equipment room.
 - 6.1.2. Still wearing respirators, proceed to showers. Showering is mandatory. Care must be taken to follow reasonable procedures in removing the

respirator to avoid asbestos fibers while showering. The following procedure is required as a minimum:

- 6.1.2.1. Thoroughly wet body including hair and face.
- 6.1.2.2. With respirator still in place, thoroughly wash body, hair, respirator face piece, and all exterior parts of the respirator.
- 6.1.2.3. Take a deep breath, hold it and/or exhale slowly, and completely wet hair, face, and respirator. While still holding breath, remove the respirator and hold it away from face before starting to breathe.
- 6.1.2.4. Carefully wash face piece of respirator inside and out.
- 6.1.2.5. Shower completely with soap and water; rinse thoroughly.
- 6.1.2.6. Rinse shower room walls and floor prior to exit.
- 6.1.2.7. Proceed from shower to changing (clean) room and change into street clothes or new disposable work items.
- 6.1.3. After showering, each employee shall inspect, clean, and repair his respirator as needed. The respirator shall be dried, placed in a suitable storage bag and properly stored.

END OF SECTION 01560

SECTION 01562, RESPIRATORY PROTECTION

1. Description of Work

- 1.1. Instruct and train each worker involved in asbestos abatement in proper respirator use and require that each worker always wear a respirator, properly fitted on the face, in the work area from the start of any operation which may cause airborne asbestos fibers until the work area is completely decontaminated. Use respiratory protection appropriate for the fiber level encountered in the workplace or as required for other toxic or oxygen-deficient situations encountered.

2. General

- 2.1. Provide workers with personally issued and marked respiratory equipment approved by NIOSH and suitable for the asbestos exposure level in the work areas according to OSHA Standard 29 CFR 1926.1101 and other possible contaminants employees might be exposed to during the project.
- 2.2. Provide respiratory protection from the time the first operation involved in the project requires contact with asbestos-containing materials (including construction of decontamination units, construction of airtight barriers/barricades, and placing of plastic sheeting on walls) until acceptance of final air clearance test results by the industrial hygiene firm.
- 2.3. The minimum respiratory protection for the project during gross removal shall be powered air purifying respirators (PAPR).
- 2.4. The designer may, under certain circumstances, allow the contractor to use a half-face respirator with replaceable HEPA filters during the final cleaning phase; however, the eight-hour TWA air sampling data must document the exposure level, and the SAM must write a letter to the designer allowing the contractor to reduce respiratory protection.
- 2.5. Respirator fit testing shall be performed as a minimum at the beginning of the project, at any change in respiratory protection equipment, and at any time during the project if requested by the employee or SAM. Fit testing is to be performed by one of the methods listed in the 29 CFR 1926.1101, Appendix C.
- 2.6. If supplied air respirators are used, the contractor shall provide a minimum of Grade "D" breathing air as set forth in the Compressed Gas Association's "Commodity Specifications for Air," G-7.1. The contractor shall test for Grade "D" breathing air initially and daily thereafter. Daily testing is not needed if the contractor has an air purification system which has CO and organic purging capabilities as well as a continuous CO monitor and alarm calibrated at 10 ppm. The system must be calibrated at least once a week or when it is moved.
- 2.7. Provide emergency backup air supply, egress SCBA, or egress HEPA filters for each worker in work area at all times when Type-C (supplied air) respirators are required. The breathing air system shall provide one hour of reserve air, calculated for maximum crew size for emergency evacuation.
- 2.8. Where Type C respirators are utilized, the contractor is required to have an employee in the vicinity of the source of air. The contractor shall take into

account the location of the fresh air intake to ensure no pollutant source is in the vicinity. The audible alarm shall be located where the employees inside and outside containment can hear the alarm.

- 2.9. Do not allow the use of single-use, disposable, or quarter-face respirators for any purpose.
- 2.10. The contractor may submit a new exposure assessment (as per 29 CFR 1926.1101) to the SAM with a request to downgrade to less protective respirators. The SAM will make a recommendation to the designer, who will issue a decision in writing to the contractor approving or denying his request. If the contractor disagrees with the decision, then the representative air sampling data may be reviewed by the HHCB for a final decision.

END OF SECTION 01562

SECTION 01563, DECONTAMINATION UNITS

1. Description of Work

- 1.1. Provide separate personnel and equipment/loadout decontamination facilities.
- 1.2. Require that the personnel decontamination unit be the only means of ingress and egress for the work area. Require that all materials exit the work area through the equipment/loadout decontamination unit. Contractor shall comply with 29 CFR 1926.1101, specifically paragraph (j) Hygiene facilities and practices for employees.

2. GENERAL

Provide separate personnel decontamination units and equipment/loadout decontamination units when practical.

2.1. Personnel Decontamination Unit

- 2.1.1. Provide a Personnel Decontamination Unit consisting of a serial arrangement of connected rooms or spaces, including a clean room (changing room), shower room, and equipment room. Each shall be separated by a minimum of three curtain doorways. Require all persons without exception to pass through this decontamination unit for entry into and exiting from the work area for any purpose. Do not allow parallel routes for entry or exit. Do not remove equipment or materials through Personnel Decontamination Unit.
- 2.1.2. Provide temporary lighting within decontamination units as necessary to reach an adequate lighting level.
- 2.1.3. Maintain floor of clean room dry and clean at all times. Do not allow the overflow water from the shower to escape the shower room.
- 2.1.4. Damp wipe all surfaces twice after each shift change with a disinfectant solution.
- 2.1.5. Provide hot and cold water, drainage, and standard fixtures including an elevated shower head as necessary for a complete and operable shower. A water hose and bucket is not an acceptable shower.
- 2.1.6. Arrange water shut off and drain pump operation controls so that a single individual can shower without assistance from either inside or outside of the work area.
- 2.1.7. Pump shower waste water to a drain. Provide 20 micron and 5 micron waste water filters in line to drain. Change filters daily or more often if necessary.
- 2.1.8. If the decontamination area is located within an area containing friable asbestos on overhead ceilings, ducts, piping, etc., provide the area with a minimum 3/8 inch plywood "ceiling" with two layers of polyethylene sheeting covering the top of the "ceiling."
- 2.1.9. Visual Barrier: Where the decontamination area is immediately adjacent to and within view of occupied areas, provide a visual barrier of opaque plastic sheeting so that worker privacy is maintained and work procedures

are not visible to building occupants. Where the area adjacent to the decontamination area is accessible to the public, construct a solid barrier on the public side of the sheeting to protect the sheeting. Construct barrier with wood or metal studs, max. 16 inches on center, covered with a minimum of 3/8 inch plywood.

2.2. Equipment Decontamination Units

- 2.2.1. Provide an equipment decontamination unit consisting of a serial arrangement of rooms, clean room, holding area, and washroom, each room separated by a minimum of three curtain doorways, for removal of equipment and material from work area. Do not allow personnel to enter or exit work area through equipment decontamination unit.
- 2.2.2. Washroom: Provide a washroom for cleaning of bagged or drummed asbestos-containing waste materials passed from the work area.
- 2.2.3. Holding Area: Provide a holding area as a drop location for sealed drums and bagged asbestos-containing materials passed from the washroom.
- 2.2.4. Clean Room: Provide a clean room to isolate the holding area from the building exterior or occupied areas.
- 2.2.5. Equipment or Material: Obtain all equipment or material from the work area through the equipment decontamination unit according to the following procedure:
 - 2.2.5.1. When passing contaminated equipment, sealed plastic bags, drums or containers into the washroom, close all doorways of the equipment decontamination unit, other than the doorway between the work area and the washroom. Keep all outside personnel clear of the equipment decontamination unit.
 - 2.2.5.2. Once inside the washroom, wet-clean the bags and/or equipment.
 - 2.2.5.3. When cleaning is complete, insert bagged material into a clean bag/drum during the pass between the washroom and holding area. Close all doorways except the doorway between the washroom and holding area.
 - 2.2.5.4. Workers from the building exterior shall enter the clean room then the holding area to remove decontaminated equipment and/or containers for disposal. Require these workers to wear full protective clothing and respiratory protection as described in Section 01562.

2.3. Use of Elevator

- 2.3.1. If the elevator is used for transport of material, it shall be prepared with two layers of 6 mil polyethylene plastic sheeting that meets the approval of the designer. The elevator shall be cleaned daily after each use.

2.4. Decontamination Unit Contamination

- 2.4.1. If the air quality in the decontamination unit exceeds 0.01 fibers per cc analyzed by PCM or 70 structures per mm squared analyzed by TEM or its integrity is diminished through use as determined by the designer or industrial hygiene firm, no employee shall use the unit until corrective steps are taken and approved by the designer and industrial hygiene firm.

2.4.2.

END OF SECTION 01563

SECTION 01711, PROJECT DECONTAMINATION

1. General

- 1.1. Carry out a first cleaning of all surfaces of the work area including plastic sheeting, tools, scaffolding and/or staging by use of damp-cleaning and mopping and/or a high efficiency particulate air (HEPA) filter vacuum until there is no visible debris from removed materials or residue on plastic sheeting or other surfaces. Do not perform dry-dusting or dry-sweeping.
- 1.2. Equipment shall be cleaned and all contaminated materials removed before removing polyethylene from the walls and floors.
- 1.3. The contractor shall replace all pre-filters and clean the inside and outside of the HEPA exhaust units.
- 1.4. After polyethylene sheets have been removed from walls and floors but are still remaining on all windows, doors, and critical components, the contractor shall clean all surfaces in the work area, including ducts, electrical conduits, steel beams, roof deck, etc., with amended water and/or HEPA-filtered vacuum.
- 1.5. After cleaning the work area, the contractor shall allow the area to thoroughly dry and then wet-clean and/or HEPA vacuum all surfaces in work area again.
- 1.6. At the completion of the cleaning operation, the contractor's supervisor shall perform a complete visual inspection of the work area to ensure that the work area is dust- and fiber-free. If the supervisor believes he is ready for a final project decontamination inspection, he shall notify the designer.
- 1.7. The designer shall contact the industrial hygiene firm and advise the firm of the final project decontamination inspection requested by the contractor.
- 1.8. Final project decontamination inspection includes the visual inspection and air monitoring clearance.
- 1.9. Visual inspection for acceptance shall be performed after all areas are dry.
- 1.10. The industrial hygiene firm shall perform the final visual inspection and conduct the final air clearance. Any discrepancies found shall be documented in the form of a punch list.
- 1.11. Final air sampling shall not commence until the visual inspection is completed and passed.
- 1.12. If the industrial hygiene firm finds that the work area has not been adequately decontaminated, cleaning, inspection, and/or air monitoring shall be repeated at the contractor's expense, including additional industrial hygiene fees, until the work area is in compliance.
- 1.13. After the work area is found to be in compliance, all entrances and exits shall be unsealed, and the plastic sheeting, tape and any other trash and debris shall be placed in sealable plastic bags (6 mil minimum) and disposed of as outlined in Section 02084.
- 1.14. All HEPA unit intakes and exhausts shall be wrapped with six mil polyethylene before leaving the work area.
- 1.15. After the industrial hygiene firm has approved the final project decontamination and the contractor has completed the tear down for occupancy by others, the designer shall perform the project final inspection as outlined in the general conditions.
- 1.16. Any residual asbestos that may be present after removing critical barriers, that in the designer's judgment should have been cleaned during the pre-cleaning

phase prior to installing critical barriers, shall be cleaned and cleared at the contractor's expense.

- 1.17. There shall be appropriate seals totally enclosing the inspection area to keep it separate from clean areas or other areas where abatement is or will be in progress. Once an area has been accepted and passed air tests, loss of the critical barrier integrity or escape of asbestos into an already clean area shall void previous acceptance and tests. Additional visual and final air clearance sampling shall be required at the contractor's expense.

END OF SECTION 01711

SECTION 01714, WORK AREA CLEARANCE

1. General

- 1.1. Notification and scheduling of the final inspection during the project is the responsibility of the contractor.

2. Final Clearance Testing

- 2.1. After the second cleaning operation and after the area is completely dry, the following procedure test shall be performed:
A final visual inspection shall be conducted by the industrial hygiene firm. The inspection shall be conducted following the guidelines set forth in the American Society for Testing and Materials, Standard Practices for Visual Inspection of Asbestos Abatement Projects, Designation: E1368.90. If the work area is found visibly clean, air samples will be collected by the industrial hygiene firm.
 - 2.1.1. During the air testing, the accredited air monitor shall cause disruptive air currents as described in the EPA-AHERA regulations (40 CFR Part 763, Subpart E, Appendix A).
 - 2.1.2. If samples are to be analyzed using PCM (minimum of five samples using NIOSH 7400 method), then the maximum flow rate is 12 liters per minute, with a minimum sample size of 2000 liters for each sample. Clearance criteria shall be less than 0.01 F/cc for all samples analyzed. This criteria applies to Areas I, L, Z, AB, AJ, AK, and AL as described in Section 02080.2 unless the material becomes friable during removal.
 - 2.1.3. If samples are to be analyzed using TEM, the Mandatory Transmission Electron Microscopy Method described in 40 CFR Part 763, Subpart E, Appendix F shall be used. Clearance criteria shall be an arithmetic mean less than or equal to 70 structures per square millimeter. This section applies to Areas U, Y, and UC as described in Section 02080.2. It also applies to Area M as described in Section 02080.2, if it becomes friable during removal.
 - 2.1.4. Area IW may be cleared by visual inspection only.
- 2.2. Final clearance criteria shall be in accordance with AHMB Program Rules.
- 2.3. For area specified as M in Section 02080.2, clearance shall be via PCM sampling
- 2.4. The industrial hygiene firm shall immediately report the final air sampling clearance results to the designer.
- 2.5. The use of the negative pressure system may be discontinued after the industrial hygiene firm instructs the contractor that he has passed the final project decontamination inspection.

END OF SECTION 01714

SECTION 02080, ASBESTOS REMOVAL

1. GENERAL

- 1.1. Prior to starting asbestos removal, the contractor's equipment, work area, and decontamination units will be inspected and approved by the designer.
- 1.2. All loose asbestos material removed in the work area shall be adequately wet, bagged, sealed, and labeled properly before personnel breaks or end of shift.
- 1.3. All plastic sheeting, tape, cleaning material, clothing, and all other disposable material or items used in the work area shall be packed into sealable plastic bags (6-mil minimum) and treated as contaminated material.
- 1.4. All material shall be double-bagged.
- 1.5. All excess water (except shower water) shall be combined with removed material or other absorptive material and properly disposed of as per EPA regulations. Contractor shall not place water in storm drains, onto lawns, or into ditches, creeks, streams, rivers, or oceans.

2. SCOPE OF WORK

Remove the following ACM:

As Base Bid/Base Scope of Work

Area	Description	Location	Quantity	EPA Category	Asbestos Content
L	Multilayered Beige 12"x12" Floor Tiles with Brown Streaks & Yellow & Black Mastics – All Layers	In Basement Hall Outside Elevators	100 SF	I	Tile 1=None Detected, Yellow Mastic=None Detected, Tile 2=3% Chrysotile, Black Mastic=4% Chrysotile
Y	Off White 9"x9" Floor Tile with White Streaks & Black Mastic – All Layers	Under Carpet in Dorm Rooms, Dorm Room Corridors	40,000 SF	I	Tile=6% Chrysotile, Black Mastic=7% Chrysotile
UC	Floor Tile and Mastic	Under Carpeted Areas not otherwise specified as Area Y above or in plans	Allowance 12,250 SF		Assumed

As Add Alternate #1

Area	Description	Location	Quantity	EPA Category	Asbestos Content
U, 2B & 2C	Ceiling Surfacing Material - All Layers	-Ceilings of dorm rooms, -Dorm common areas, excluding bathrooms -Ceiling and walls of stairwells -Concrete columns throughout -Dorm room window casings	70,000 SF	F	2% to 3% Chrysotile

Unit 1010 is excluded from asbestos abatement.

See Sheets A1.0.1, A1.0.2, A1.0.3, and A1.0.4 for clarification.

In the event of a conflict between the specification and the Sheets, ACM from both the specification and the Sheets are to be removed. Where the estimated quantity is preceded by the notation "allowance" the actual quantity cannot be estimated until demolition begins or carpet is removed. When these areas are exposed, the contractor and the air monitor shall measure the quantity of ACM exposed and, if the actual quantity varies from the allowance, an adjustment to the fee, up or down, shall be made using the unit rates.

3. ACM PRODUCTS TO BE REMOVED

3.1. Asbestos Floor Tile and Mastic

- 3.1.1. When removing asbestos-containing mastic from the floor surface, the contractor shall use a product that meets the following criteria:
 - 3.1.1.1. The product shall not create a hazardous waste as a byproduct.
 - 3.1.1.2. The product shall be "low to no odor."
 - 3.1.1.3. The product shall not contain any carcinogenic or chlorinated hydrocarbons.
- 3.1.2. When the contractor is using a mastic remover, he shall protect the walls and any adjacent areas. He shall be responsible for any damage that occurs and for the complete repair of the damage.
- 3.1.3. When the contractor is collecting the spent mastic removal solution, the contractor shall add cat litter, oil-sorb, or equivalent so that no free standing liquid will be left in the asbestos bag.
- 3.1.4. After the contractor completes the asbestos mastic removal, the contractor shall use a cleaning solution to neutralize the mastic remover and mop and rinse the floor so that no residue of the product may be left on the floor surface. This cleanser shall be compatible with any new adhesive to be installed.
- 3.1.5. Potential health problems associated with the mastic remover in buildings that are occupied by the general public shall be addressed. A negative pressure enclosure with a specified number of air changes per hour or some other means may be needed because of vapor concentrations or odor considerations.

3.2. Ceiling Surfacing (Add Alternate #1)

- 3.2.1. The contractor shall conduct the removal under full containment with attached decontamination units.
- 3.2.2. Containments shall be ventilated in such manner that there shall be at least 4 air changes per hour with air distributed evenly throughout the containment.
- 3.2.3. The spaces shall be maintained under at least 0.02 inches H₂O negative pressure relative to the outside.
- 3.2.4. Ceiling surfacing material shall not be allowed to accumulate on surfaces.

END OF SECTION 02080

SECTION 02084, DISPOSAL OF ASBESTOS-CONTAINING WASTE MATERIAL

1. General

- 1.1. All asbestos materials and miscellaneous contaminated debris shall be properly sealed and protected, and the load-out vehicle/dumpster shall be locked while located on the facility site and then transported to a pre-designated disposal site in accordance with 40 CFR 61.150 and DOT 49 CFR Parts 100-399.
- 1.2. An enclosed vehicle will be used to haul waste material to the disposal site. No rental vehicles or trailers shall be used. Vehicle selection, vehicle covers, and work practices shall assure that no asbestos becomes airborne during the loading, transport, and unloading activities, and that material is placed in the waste site without breaking any seals.
- 1.3. Waste disposal polyethylene bags (6 mil) and containers, non-porous (steel/plastic) drums, or equivalent, with labels, appropriate for storing asbestos waste during transportation to the disposal site shall be used. In addition to the OSHA labeling requirements, all containers shall be labeled with the name of the waste generator and the location at which the waste was generated.
- 1.4. The contractor shall transport the containers and bags of waste material to the approved waste disposal site. The sealed plastic bags shall be placed into the burial site unless the bags have been broken or damaged. Upon the landfill's approval, damaged bags shall be left in the non-porous containers, and the entire contaminated package shall be buried. Uncontaminated containers may be reused.
- 1.5. Workers loading and unloading the asbestos will wear respirators and disposable clothing when handling material. Asbestos warning signs shall be posted during loading and unloading of asbestos waste.
- 1.6. The contractor shall use the HHCB's Waste Shipment Record for disposal records as per 40 CFR 61.150 and distribute a copy of all waste shipment records to the designer after the completion of the project.

END OF SECTION 02084

APPENDIX A, PREWORK ASBESTOS INSPECTION CHECKLIST

PRE-WORK ASBESTOS INSPECTION CHECKLIST

Name of State Facility: _____

Project Name: _____

Project ID Number: _____

Date of Inspection: _____ Pass: _____ Fail: _____

DOCUMENTS	YES	NO
Asbestos Removal Permit/NESHAP Notification		
Accreditation Documents for Workers & Supervisors		
Asbestos Plans and Specifications		
Air Monitoring Data		
Waste Shipment Records		
Sign-in Sheets and Bound Book for Comments		
Calibration Record for Grade "D" Air		
Items listed in Section 01043 of Specification		
PPE SUPPLIES	YES	NO
Tyvek Clothing		
Rubber Boots		
Respirators with HEPA Filters		
CLEAN ROOM	YES	NO
Entry Curtains		
Emergency Phone Numbers Posted		
First Aid Kit		
Asbestos Signs		
Decontamination Procedures Posted		
Fire Extinguisher		
SHOWER ROOM	YES	NO
Polyethylene Curtains		
Hot/Cold Water & Operational		
Soap & Towels		
Waste Water Filter Pump Operational		
Extra Five Micron Size Filters		
Filtered Waste Water to Sanitary Sewer		
Polyethylene Curtains		
Hot/Cold Water & Operational		
Soap & Towels		
Waste Water Filter Pump Operational		
Extra Five Micron Size Filters		
Filtered Waste Water to Sanitary Sewer		

PRE-WORK ASBESTOS INSPECTION CHECKLIST (Continued)

WORK AREA	YES	NO
Removable Items Out of Area		
Non-removable Items Protected		
Critical Barriers Installed		
Polyethylene Curtains		
Polyethylene on Walls/Floors as Specified		
HVAC off		
Air Filtration Devices in Place and Operational		
Air Exhausted to Outside		
Electricity Locked and Tagged Out		
Temporary Power Installed with GFCI		
Fire Extinguishers		
Emergency and Fire Exits Marked		
Audible Alarms Operational		
Toilet Available		
EQUIPMENT	YES	NO
Safety Equipment		
HEPA Vacuums		
Waste Disposal Bags		
Airless Sprayer with Water Source		
Cleaning Equipment		
Glove Bags		
Emergency Power Generator (if required)		
Temporary Lighting		
OTHER	YES	NO

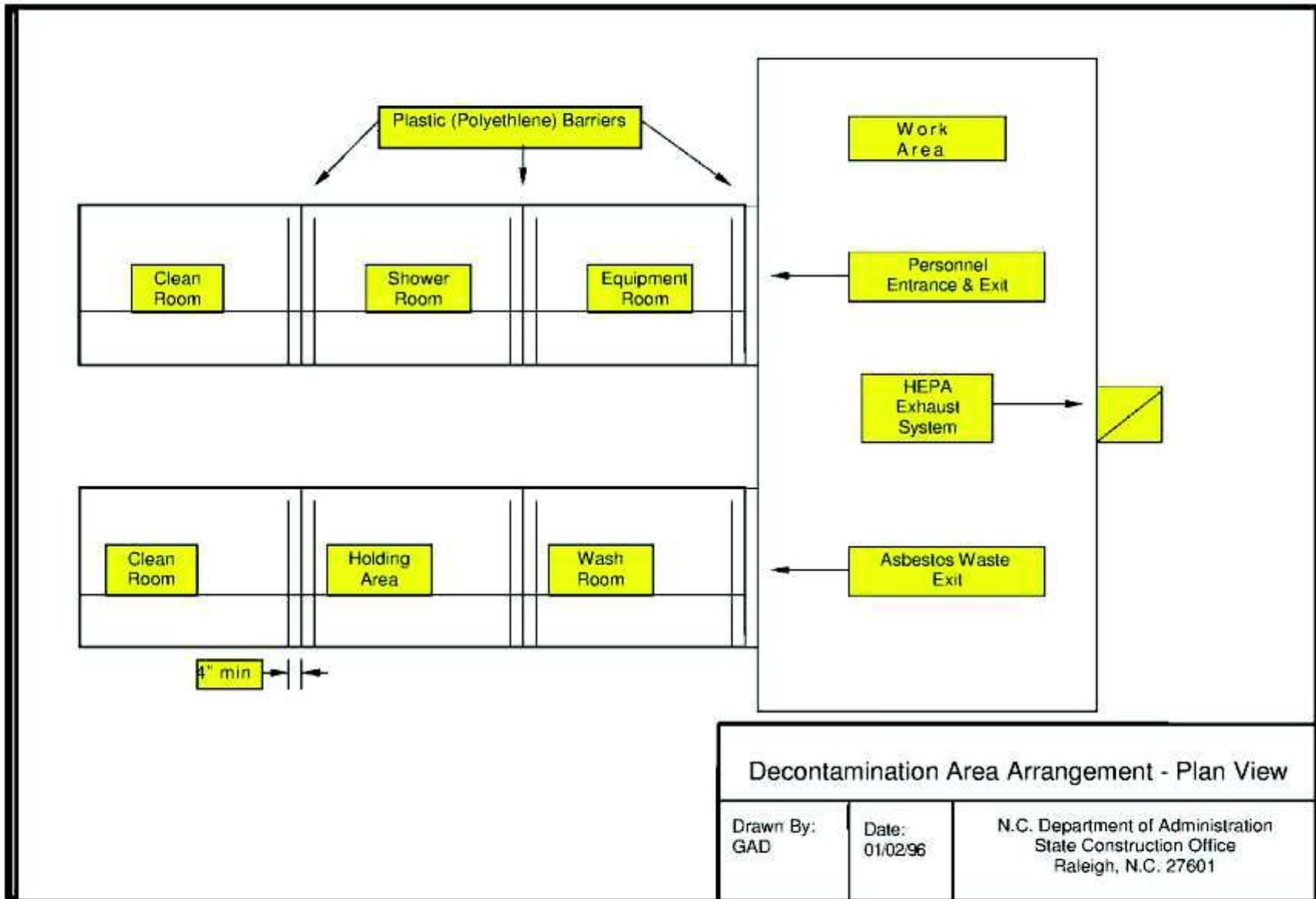
Asbestos Design Consultant

Date

Asbestos Contractor's Representative

Date

APPENDIX B, DECONTAMINATION AREA ARRANGEMENT



SECTION 011000 - SUMMARY

1.1 PROJECT INFORMATION

- A. Project Identification: Sanford Hall Abatement
 - 1. Project Location: Charlotte, North Carolina
- B. Owner: The State of North Carolina through the University of North Carolina Charlotte
 - 1. Owner's Representative: Brian Kugler
- C. Architect: Moseley Architects

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project: The project consists of the removal of asbestos containing materials (ACM) from the existing 12-story Sanford Hall student residence hall. Interior renovations will consist of refinishing ceiling areas disturbed during the ACM removal. No exterior improvements will be performed.
- B. Owner-Furnished Products:
 - 1. Floor finishes
- C. Work Restrictions: See Supplementary General Conditions, drawings and other Division 1 Specifications.

1.3 CONTRACT DURATION

- A. Project duration shall not exceed 125 calendar days from the start of the contract to the owner fully occupying the building

END OF SECTION 011000

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SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

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PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Alternate No. 1: **Ceiling Abatement.**

1. **Base Bid:** Abatement of the flooring materials in the areas indicated on Sheets A1.0.1 and A1.0.2 and as specified.
2. **Alternate:** In addition to the work included in the Base Bid, include the abatement of overhead surfaces containing ACM materials to the substrate in the areas indicated on Sheets A1.0.3 and A1.0.4. Provide and install Spray Texture ceiling finish in the areas indicated on Sheets A1.0.3 and A1.04 and as specified.

B. Alternate No. 2: **Ceiling Finish Material.**

1. **Base Bid:** Contingent on acceptance of Alternate #1, Provide and install Spray Texture ceiling finish in the areas indicated on Sheets A1.0.3 and A1.04 and as specified.
2. **Alternate:** In lieu of Spray Texture Finish ceiling material, provide and install plaster skim coat and paint on ceilings in the areas indicated on Sheets A1.0.3 and A1.0.4 and as specified.

END OF SECTION 01230

SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and Contract Documents apply to this Section.

1.2 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.3 SUBMITTALS

- A. Substitution Requests: Contractor shall request and submit a "Substitution Request Form – After Receipt of Bids" for all substitutions to be considered after receipt of bids.
1. Substitution Request Form: Use the Architect's form, which can be obtained from the Architect at the time of the request.
 - a. The form is an electronic Word document requiring the Contractor to fill in "data fields."
 - b. A copy of the form is attached to the end of this Section for informational purposes only. Use the electronic Word document only.
 2. No substitutions will be considered unless submitted using the referenced "Substitution Request Form – After Receipt of Bids."
 3. All substitutions must be submitted by the Contractor, and shall include the Contractor's certification and signature.
 - a. Substitution requests submitted directly from subcontractors, sub-subcontractors, manufacturers, vendors, installer, and suppliers will be rejected.
 4. Failure to submit the form, or a fully completed form, shall result in the rejection of the proposed substitution; and shall also include:
 - a. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, which will be necessary to accommodate proposed substitution.
 - b. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable specification section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.

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- c. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - d. Samples, where applicable or requested.
 - e. Certificates and qualification data, where applicable or requested.
 - f. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - h. Research reports evidencing compliance with building code in effect for Project.
 - i. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
 - j. Cost information, including a proposal of change, if any, in the Contract Sum.
 - k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
 - l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
5. If the proposed substitution is found to be acceptable to the Architect, the request will be forwarded to the Owner for their approval.
 6. If the Owner approves the substitution, it will then be included in a Change Order or Construction Change Directive.
 7. Only substitutions included in Change Orders or Construction Change Directives shall be allowed to be included in the Work
 8. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed.
 - a. Forms of Acceptance: Change Order or Field Work Order only.

1.4 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage qualified testing agency to perform compatibility tests recommended by manufacturers.

1.5 PROCEDURES

- A. Coordination: Modify or adjust affected work as necessary to integrate work of the approved substitutions.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately upon discovery of need for change, but not later than 21 days prior to time required for preparation and review of related submittals.
1. Conditions: Architect will consider Contractor's request for substitution when all of the following conditions are satisfied. If all of the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - b. Substitution request is fully documented and properly submitted.
 - c. Requested substitution will not adversely affect Contractor's construction schedule.
 - d. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - e. Requested substitution is compatible with other portions of the Work.
 - f. Requested substitution has been coordinated with other portions of the Work.
 - g. Requested substitution provides specified warranty.
 - h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- B. Substitutions for Convenience: Not allowed.

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

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SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Sections:
1. Division 01 Section "Allowances" for procedural requirements governing the handling and processing of allowances.
 2. Division 01 Section "Unit Prices" for administrative requirements governing the use of unit prices.
 3. Division 01 Section "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.
 4. Division 01 Section "Submittal Procedures" for administrative requirements governing the preparation and submittal of the submittal schedule.

1.3 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of contractor's construction schedule.
1. Correlate line items in the schedule of values with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with continuation sheets.
 - b. Submittal schedule.
 - c. Items required to be indicated as separate activities in Contractor's construction schedule.
 2. Submit the schedule of values to Architect at earliest possible date but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
- B. Format and Content: Use the Project Manual table of contents format (specification section numbers and names) to establish line items for the Schedule of Values. The Schedule of Values shall be submitted in the same format as Application for Payment. Provide at least one line item each for labor and materials for each Specification Section.
1. Identification: Include the following Project identification on the schedule of values:
 - a. Project name and location.
 - b. Name of Architect.
 - c. Architect's project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
 2. Arrange the schedule of values in tabular form with separate columns to indicate the following for each item listed:

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- a. Related Specification Section or Division.
- b. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
 - 1) Labor.
 - 2) Materials.
3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide multiple line items for principal subcontract amounts in excess of five percent of Contract Sum or as appropriate. Include separate line items for the following:
 - a. Delegated Design Engineering: Where individual Specification Sections require third party engineering, include the cost as a separate line item from labor and materials for that Section. Payment on these line items shall only be requested and approved upon submittal and release of the submittal by the Architect. No partial payment shall be requested or approved. Payment for submittals that are not defined as delegated design shall not be included in the schedule of values.
 - b. Coordination Drawings: Include a line item for production of coordination drawings as required under other Sections of the Project Manual. Payment for coordination drawings shall be made only upon receipt and approval of all coordination drawings by the Architect. No partial payments shall be requested or approved.
 - c. Punch list/Inspections
 - d. O&M/Warranty Manuals equal to $\frac{1}{4}$ of 1% of total construction contract.
 - e. As-built drawings.
 - f. Mobilization
 - g. Demobilization
4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
5. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site. If required, include evidence of insurance.
6. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
7. Each item in the schedule of values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor's's option.
8. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders result in a change in the Contract Sum.

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1.4 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
 - 1. Initial Application for Payment and final Application for Payment involve additional requirements.
- B. Payment Application Times: Contractor shall submit 'pencil' copy of application for payment in electronic format for review by the Architect at least one week prior to submittal of Application for Payment for final certification. Architect and Owner shall return comments on the draft application for correction by the Contractor and submittal of Application for certification. The Architect will not make hand corrections on any Application for Payment. The period covered by each Application for Payment shall be clarified at the Pre-Construction Conference.
- C. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
 - 1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
 - 2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
- E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
 - 1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.
 - 2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
 - 3. Provide summary documentation for stored materials indicating the following:
 - a. Materials previously stored and included in previous Applications for Payment.
 - b. Work completed for this Application utilizing previously stored materials.
 - c. Additional materials stored with this Application.
 - d. Total materials remaining stored, including materials with this Application.
- F. Transmittal: Submit the number of signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
 - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
 - 1. List of subcontractors.

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2. Schedule of values.
 3. Contractor's construction schedule (preliminary if not final).
 4. Products list (preliminary if not final).
 5. Schedule of unit prices.
 6. Submittal schedule (preliminary if not final).
 7. List of Contractor's staff assignments.
 8. List of Contractor's principal consultants.
 9. Copies of building permits.
 10. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 11. Initial progress report.
- H. Final Payment Application: The Final Payment of retained amount due the Contractor's on account of the Contract shall not become due until the Contractor's has furnished to the Owner, through the Designer, Guarantees as set forth in the General and Supplementary General Conditions including all Guarantees required by specific Sections of the Project Manual. In addition to the above, all other submissions required by other Articles and Sections of the Project Manual must be in the hands of the Designer before approval of final payment. Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. Contractor's Affidavit of Payment of Debts and Claims.
 5. Contractor's Affidavit of Release of Liens.
 6. Consent of Surety to Final Payment.
 7. Evidence that claims have been settled.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

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SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
1. Coordination Drawings.
 2. Administrative and supervisory personnel.
 3. Project meetings.
 4. Requests for Interpretation (RFIs).
- B. Related Sections include the following:
1. Division 1 Section "Construction Progress Documentation" for preparing and submitting CONTRACTOR's Construction Schedule.
 2. Division 1 Section "Closeout Procedures" for coordinating closeout of the Contract.

1.3 DEFINITIONS

- A. RFI: Request from Contractor seeking interpretation or clarification of the Contract Documents.

1.4 COORDINATION

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.
1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
 3. Make adequate provisions to accommodate items scheduled for later installation.
 4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

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- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
1. Contractor's Construction Schedule.
 2. Preparation of the Schedule of Values.
 3. Installation and removal of temporary facilities and controls.
 4. Delivery and processing of submittals.
 5. Progress meetings.
 6. Preinstallation conferences.
 7. Project closeout activities.
 8. Startup and adjustment of systems.
 9. Project closeout activities.

1.5 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
 1. Agenda: The Contractor will prepare the meeting agenda and distribute it to all invited attendees.
 2. Minutes: The Contractor will record significant discussions and agreements achieved. Within 7 days of the meeting the Contractor will distribute the meeting minutes to the Owner, the Architect, the Architect's Consultants, and to attending major subcontractors, manufacturers, suppliers and other concerned parties.
- B. Preconstruction Conference: The Contractor shall schedule a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement. Hold the conference at Project site or another convenient location. The Contractor shall conduct the meeting to review responsibilities and personnel assignments.
1. Agenda:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing and long-lead items.
 - d. Designation of key personnel and their duties.
 - e. Procedures for processing field decisions and Change Orders.
 - f. Procedures for RFIs.
 - g. Procedures for testing and inspecting.
 - h. Procedures for processing Applications for Payment.
 - i. Distribution of the Contract Documents.
 - j. Submittal procedures.
 - k. Coordination and submittal of color & finish related selections.
 - l. Preparation of Record Documents.
 - m. Use of the premises and existing building.
 - n. Work restrictions.

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- o. Owner's occupancy requirements.
 - p. Responsibility for temporary facilities and controls.
 - q. Construction waste management and recycling.
 - r. Parking availability.
 - s. Office, work, and storage areas.
 - t. Equipment deliveries and priorities.
 - u. First aid.
 - v. Security.
 - w. Progress cleaning.
 - x. Working hours.
2. Minutes: Contractor will record and distribute meeting minutes.
- C. Construction Waste Management (CWM) Plan Development Session: (Refer to Division 1 section "Construction Waste Management and Disposal.")
- 1. Schedule: Schedule a Construction Waste Management planning session at the Project site or other convenient location no later than fifteen (15) days after execution of the Agreement and prior to commencement of construction activities. Conduct the meeting to review responsibilities and personnel assignments.
 - 2. Attendees: The Owner, Architect, the CONTRACTOR and its superintendent, major subcontractors, manufacturers, suppliers and other concerned parties shall each be represented at the conference by persons familiar with and authorized to conclude matters relating to the Work.
 - 3. Agenda:
 - a. Discussion of waste to be generated during demolition
 - 1) Discussion of how waste can be reduced, recycled, reused, or donated
 - 2) Identify wastes that must be landfilled
 - 3) Quantify amounts of waste in each category
 - b. Discussion of waste to be generated during construction and renovations
 - 1) Discussion of how waste can be reduced, recycled, reused, or donated
 - 2) Identify wastes that must be landfilled
 - 3) Quantify amounts of waste in each category
 - c. Discussion of how and where waste is to be separated on site
 - d. Discussion of how recycling, material reuse, donation, and landfilling rates will be tracked and reported for each category
- D. Progress Meetings: The Contractor shall conduct progress meetings at intervals determined by the owner's PM. Coordinate dates of meetings with preparation of payment requests.
- 1. Agenda:
 - a. Minutes: The Contractor shall prepare and distribute to the Owner and Architect, minutes of the meetings. These minutes shall include a roster of all participants and all documentation of all items relating to project status and progress. In addition, minutes shall be distributed to all parties present or should have been present, no later than 7 days after each meeting.
 - b. Updating. Contractor shall revise Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule within 7 days of meeting.

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1.6 REQUESTS FOR INTERPRETATION (RFIs)

- A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form specified.
1. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
 3. RFIs that would be clearly answered by simply reading the Contract Documents and that are not open to reasonable misinterpretation there from may be deemed "frivolous" by the Architect. The cost in time and materials to respond to frivolous RFI's shall be the responsibility of the Contractor.
 4. RFI's shall be submitted electronically through the Architect's Newforma website.
- B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:
1. Project name.
 2. Date.
 3. Name of Contractor
 4. Name of Architect.
 5. RFI number, numbered sequentially.
 6. Specification Section number and title and related paragraphs, as appropriate.
 7. Drawing number and detail references, as appropriate.
 8. Field dimensions and conditions, as appropriate.
 9. Contractor 's suggested solution(s). If Contractor 's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 10. Contractor 's signature.
 11. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.
 - a. Supplementary drawings prepared by Contractor shall include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.
- C. Architect's Action: Architect will review each RFI, determine action required, and return it. Allow seven working days for Architect's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.
1. The following RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for coordination information already indicated in Contract Documents.
 - d. Requests for adjustments in the Contract Time or the Contract Sum.
 - e. Requests for interpretation of Architect's actions on submittals.
 - f. Incomplete RFIs or RFIs with numerous errors.
 2. Architect's action may include a request for additional information, in which case Architect's time for response will start again.

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3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to conditions of the Contract.
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.
 - D. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.
 - E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log at intervals as established, but no less frequently than at each monthly progress meeting.. Software log with not less than the following:
 1. Project name.
 2. Name and address of Contractor
 3. Name and address of Architect.
 4. RFI number.
 - a. RFI's that were answered by the Contractor or dropped shall not be included in the Project RFI log so that the Contractor and Architect can coordinate logs.
 5. RFI description.
 6. Date the RFI was submitted.
 7. Date Architect's response was received.
 8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
- 3.7 CONSTRUCTION DOCUMENTS
- A. The Contractor shall obtain electronic Drawings and Specifications from the Designer of Record for the purposes of bidding and construction as set forth in General Conditions of the Contract (OC-15).
 1. All work shall be in accordance with the Contract Documents. No change there from shall be made without a review by the Designer. Where more detailed information is needed, or when an interpretation of the Contract Documents is needed, the Contractor, before proceeding with the work, shall refer the matter to the Designer who will furnish information or interpretation in the form of a Field Order or other written forms or drawings. If any errors, inconsistencies or omissions in the Contract Documents are recognized by the Contractor or any member of his organization, the Contractor shall notify the Designer in writing of such error, inconsistency or omission before proceeding with the work.
 2. When compliance with two or more requirements, material or equipment are specified and the requirements, material or equipment establish conflicting specifications or quality levels, the Contractor shall comply with the most stringent of higher quality specification. The Designer shall be the sole authority for determining the highest quality specification.
 3. Should the specifications and drawings fail to particularly describe the material or kind of goods to be used in any place, then it shall be the duty of the Contractor to make inquiry

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of the designer for what is best suited. The material that would normally be used in this place to produce first quality finished work shall be considered as part of the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

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SECTION 01 32 00 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUBMITTALS (for information only; no action will be taken by the Architect)

- A. Submittal Schedule: Submit an electronic copy the of schedule. Arrange the following information in a tabular format:
1. Scheduled date for each submittal.
 2. Specification Section number and title.
 3. Submittal category (action or informational).
 4. Name of subcontractor.
 5. Description of the Work covered.
 6. Scheduled date for Architect's final release or approval.
- B. Contractor's Construction Schedule: Post hard copy of initial schedule, large enough to show entire schedule for entire construction period.
1. Submit an electronic copy of schedule. Include type of schedule (Initial or Updated) and date on label.
- C. Construction Reports: Present at monthly intervals.
- D. Field Condition Reports: Submit electronically at time of discovery of differing conditions.
- E. Special Reports: Submit two copies at time of unusual event.

1.3 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Contractor's Construction Schedule with the Submittals Schedule, and other required schedules and reports.
1. Secure time commitments for performing critical elements of the Work from parties involved.
 2. Coordinate each construction activity with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 SUBMITTAL SCHEDULE

- A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by Contractor's Construction Schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
1. Coordinate Submittals Schedule with Contractor's Construction Schedule.

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- a. At Contractor's option, show submittals on the Construction Schedule, instead of tabulating them separately.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal, Gantt-chart-type, Contractor's construction schedule within 10 days of date established for **the Notice of Award**. Base schedule on the startup construction schedule and additional information received since the start of Project.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
 1. For construction activities that require three months or longer to complete, indicate an estimated completion percentage in 10 percent increments within time bar. Failure to include any work item required for performance of this Contract shall not excuse Contractor from completing all Work within applicable completion dates.
 2. Use "one workday" as the unit of time. Include list of nonworking days and holidays incorporated into the schedule.
- C. Activities: Treat each story or separate area as a separate activity for each principal element of the Work. Comply with the following:
 1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Architect.
 2. Procurement Activities: Include procurement process activities for long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 3. Submittal Review Time: Include reasonable review periods and adequate time for resubmittals in the schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
 4. Startup and Testing Time: As a predecessor to Architect's Final Inspection include activities of reasonable duration for completion.
 5. Architect's Final Inspection: Indicate completion of work activities in advance of the date established for Project Acceptance, and include separate activities for Architect's administrative procedures necessary for certification of Final Acceptance..
- D. Schedule Preparation and Constraints: Prepare a list of all activities required to complete the Work. Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
 1. Phasing: Arrange list of activities on schedule by phase.
 2. Work by Others: Include a separate activity for each portion of the Work performed by Owner or other contractors necessary for the completion of the Work.
 3. Owner-Furnished Products: Include a separate activity for each product. Coordinate delivery dates established by Owner with the project schedule.

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4. Activities and Work Restrictions: Indicate estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames and show the effect of the following items on the schedule as applicable:
 - a. Coordination with existing construction.
 - b. Limitations of continued occupancies.
 - c. Utility interruptions.
 - d. Uninterruptible services.
 - e. Partial occupancy before Architect's Final Inspection.
 - f. Use of premises restrictions.
 - g. Provisions for future construction.
 - h. Seasonal variations.
 - i. Environmental control.
 - j. Preparation and processing of submittals.
 - k. Mobilization and demobilization.
 - l. Work by Owner that may affect or be affected by Contractor's activities.
 5. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates shall be consistent with Contract milestone dates.
- E. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed (Commencement of the Work), Architect's Final Inspection, and Final Acceptance.
- F. Submittal of the Final Construction Schedule by the Contractor certifies that the work will be prosecuted in accordance with the Schedule, subject to any change therein which is implemented in accordance with the Contract Documents
- G. Schedule Updating: Concurrent with making revisions to schedule, prepare reports showing the following:
 1. Identification of all activities and relationships that have changed.
 2. Changes in early and late start dates.
 3. Changes in early and late finish dates.
 4. Changes in activity durations in workdays.
 5. Changes in the critical path.
 6. Changes in total float or slack time.
 7. Changes in the Contract Time.
- H. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using fragnets to demonstrate the effect of the proposed change on the overall project schedule.

2.3 RECOVERY SCHEDULE

- A. Should the updated Construction Schedule show at any time during Contractor's performance, in the sole opinion of the Owner, that the Contractor is fourteen (14) or more days behind schedule for any Specific Date, or should Contractor be required to undertake actions under the General Conditions hereof, the Contractor shall prepare a Recovery Schedule at no additional cost to the Owner (unless the sole responsibility for the event or occurrence which has caused the schedule slippage is through no fault of the Contractor) explaining and displaying how

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Contractor intends to reschedule the Work in order to regain compliance with the Construction Schedule during the immediate subsequent pay period.

B. Recovery Schedule Requirements:

1. The Contractor shall prepare and submit to the Owner a one-month maximum duration Recovery Schedule, which demonstrates how the progress of the Work will return to the approved Construction Schedule at the earliest possible time. Prepare the Recovery Schedule to same level of detail as the Construction Schedule. This Recovery Schedule shall be prepared in coordination with other separate contractors on the Project.
2. Contractor shall advise the Owner of the effectiveness of the Recovery Schedule during the schedule recovery time period. At the conclusion of the one month schedule recovery period, the Owner will direct the Contractor as follows:
 - a. If Owner determines the Contractor is still behind schedule, Owner will direct the Contractor to prepare a Schedule Revision and comply with all of the requirements of a Schedule Revision as stated herein and the other requirements of the Contract Documents; provided, however, that nothing herein shall limit in any way the rights and remedies of the Owner as provided elsewhere in the Contract Documents.
 - b. If the Owner determines the Contractor has successfully complied with provisions of the Recovery Schedule, the Owner will direct the Contractor to return to the use of the approved Construction Schedule.

2.4 SCHEDULE REVISIONS

- A. Should Contractor desire to or be required under the Contract Documents to make modifications or changes in his method of operation, his sequence of Work or the durations of activities in the Construction Schedule, the Contractor shall do so in accordance with requirements of Contract Documents. Revisions to the approved Construction Schedule shall be identified by Contractor in writing and approved in writing by Owner prior to incorporation into the approved schedule.
- B. Logic modifications associated with change orders shall affect only those activities and performance dates directly concerned. Adjustments in scheduled intermediate Completion Dates or for the Contract as a whole will be considered only to the extent that there is insufficient remaining float to absorb these changes.
- C. Revisions to Contractor's Construction Schedule required under terms of this Section shall not modify the Contract Time or any Milestone Date and shall not modify or limit the Contractor's obligations under this Contract.
- D. If there are separate contractors on the Project, prior to the submission by the Contractor of proposed schedule revision, the Contractor shall meet with and gain written approval of the separate contractors to make the revisions which shall be evidenced by the signatures of said separate contractors on the proposed schedule revisions. If accepted by the Owner the revisions shall be binding upon Contractor and all separate contractors on the Project.
 1. Separate contractors include hazardous material remediation contractor. Schedule shall address testing and monitoring associated with remediation.
- E. Submittal of any proposed schedule revisions by the Contractor certifies that he will prosecute the Work in accordance with the schedule revision, subject to any change therein which is implemented in accordance with the Contract Documents.

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2.5 REPORTS

- A. Construction Reports: Prepare a construction report recording, at a minimum, the following information concerning events at Project site:
1. List of subcontractors at Project site.
 2. Approximate count of personnel at Project site.
 3. Equipment at Project site.
 4. Material deliveries.
 5. High and low temperatures and general weather conditions.
 6. Meetings and significant decisions.
 7. Unusual events (refer to special reports).
 8. Stoppages, delays, shortages, and losses.
 9. Meter readings and similar recordings.
 10. Orders and requests of authorities having jurisdiction.
 11. Change Orders received and implemented.
 12. Construction Change Directives received and implemented.
 13. Partial Completions and occupancies.
 14. Substantial Completions authorized.
- B. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report with a request for interpretation on CSI Form 13.2A or alternate form acceptable to Architect. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

2.6 SPECIAL REPORTS

- A. General: Submit special reports directly to Owner within one day of an occurrence. Distribute copies of report to parties affected by the occurrence.
- B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week in advance of the regularly scheduled monthly meeting designated for the review of the project schedule by the Architect.
1. Revise schedule after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.

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3. As the Work progresses, indicate Actual Start Dates, Actual Finish Dates and an accurate Completion Percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Architect, Owner, and additional parties determined by the Contractor.
1. Post copies in Project meeting rooms and temporary field offices.
 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 013200

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUMMARY

- A. Section includes requirements for submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, LEED data, and other submittals.
- B. Related Sections:
1. Division 01 Section "Payment Procedures" for submitting Applications for Payment and the schedule of values.
 2. Division 1 Section "Closeout Procedures" for submitting warranties, record documents, operation and maintenance manuals, and video recordings of demonstration of equipment and training of Owner's personnel.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."
- C. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.
- D. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.4 SUBMITTAL SCHEDULE

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or modifications to submittals noted by the Architect and additional time for handling and reviewing submittals required by those corrections.
1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.

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2. Initial Submittal: Submit concurrently with start-up construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
 - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.

1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Electronic (CADD) Files: The Contractor may request electronic (CADD) files utilizing the Architect's Request Form.
- B. Completeness: Submittals shall be complete in every respect and bound in sets. Each Submittal shall be clearly marked to show each item, component an optional feature proposed to be incorporated into the Project.
 1. Incomplete submittals may be returned without action. Incomplete submittal packages returned without action or for additional information are not subject to delay claims.
- C. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
 4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
 5. Color Selection: In individual specification sections, specific items are identified which require color/finish selections to be made by the Architect from color chart or sample submittals. The Submittal Schedule prepared by the Architect identifies these required color/finish submittals. The Architect will make coordinated selections of colors/finishes for the building interior, present the resulting color concepts to the Owner for approval, and prepare the actual Color Schedule for the Work.
 - a. Submittals requiring color selection must be submitted by Contractor and approved by Architect for conformance with Contract Documents prior to the start of the color selection process. When the submittals have been approved for conformance with Contract Documents, the process for color selection, presentation of color concepts, Owner approval, and Color Schedule preparation will begin.
 - b. After approval of all interior color related submittals for conformance with Contract Documents, the Contractor shall allow a minimum of thirty (30) days for the color selection, Owner's approval process, and preparation of the Color Schedule.

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- D. Processing Time: Allow enough time for submittal review, including time for resubmittals, in accordance with General Conditions and as follows. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow 20 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow 20 days for review of each resubmittal.
 4. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing or to allow for a resubmittal, if necessary.
- E. Identification and Information: Identify and incorporate information in each electronic submittal file as follows:
1. Assemble complete submittal package into a single indexed file with links enabling navigation to each item.
 2. Name file with specification number and title with item description, number, and revision identifier for resubmittals
Submittal number shall use Specification Section number followed by a decimal point and then a sequential number for each required submittal identified in each specification section(e.g., 06 10 00.01 - Product Data; 06 10 00.02 - Shop Drawings etc.). Resubmittals shall be identified exactly as original submittal with added revision number: 06 10 00.02Rev01
 3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
 4. Include the following information on an inserted cover sheet:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name of Contractor.
 - e. Name of Contractor.
 - f. Name of firm or entity that prepared submittal.
 - g. Name of subcontractor.
 - h. Name of supplier.
 - i. Name of manufacturer.
 - j. Number and title of appropriate Specification Section.
 - k. Drawing number and detail references, as appropriate.
 - l. Location(s) where product is to be installed, as appropriate.
 - m. Related physical samples submitted directly.
 - n. Other necessary identification.
 5. Include the following information as keywords in the electronic file metadata:
 - a. Project name.
 - b. Number and title of appropriate Specification Section.
 - c. Manufacturer name.

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- d. Product name.
- F. Options: Identify options requiring selection by the Architect.
- G. Deviations: Identify deviations from the Contract Documents on submittals.
- H. Additional Paper Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
 - 1. Some submittals may require additional paper copies for consultant review.
- I. Transmittal: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return submittals, without review, received from sources other than Contractor.
 - 1. Transmittal Form: Use AIA Document G810, or other approved form.
 - 2. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.
- J. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
 - 1. Note date and content of previous submittal.
 - 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 - 3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.
- K. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- L. Use for Construction: Use only final submittals that are marked with approval notation from Architect's action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
 - 1. Electronic submittals are required on this project. Prior to construction, the Contractor and Architect shall discuss the method for exchanging files. Use of the Architect's Newforma InfoExchange website and procedures can be used at no charge. If the Contractor chooses to use a different platform and methodology:
 - a. The Architect may reject the methodology or platform proposed and.
 - 1) use the Architect's Newforma InfoExchange website, or
 - b. or the Contractor shall bear the cost of software, licensing, training etc for the project team to participate.

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2. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Division 01 Section "Closeout Procedures."
 3. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 - a. Provide a digital signature with digital certificate on electronically-submitted certificates and certifications where indicated.
 - b. Provide a notarized statement on original paper copy certificates and certifications where indicated.
 4. Test and Inspection Reports Submittals: Comply with requirements specified in Division 01 Section "Quality Requirements."
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
 - a. **DO NOT SUBMIT MSDS SHEETS WITH ANY SUBMITTAL FOR REVIEW. SUBMITTALS WITH MSDS SHEETS INCLUDED WILL BE RETURNED WITHOUT REVIEW.**
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Manufacturer's printed and published installation instructions.
 - d. Standard color charts.
 - e. Statement of compliance with specified referenced standards.
 - f. Testing by recognized testing agency.
 - g. Application of testing agency labels and seals.
 - h. Notation of coordination requirements.
 - i. Availability and delivery time information.
 4. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams showing factory-installed wiring.
 - b. Printed performance curves.
 - c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 5. Submit Product Data before or concurrent with Samples.
 6. Submit Product Data as PDF electronic file.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data].
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.

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- c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.
 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 30 by 42 inches (750 by 1067 mm).
 3. Submit Shop Drawings as PDF electronic file.

- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
 1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of applicable Specification Section.
 3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
 4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
 5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit three sets of Samples. Architect will retain two Sample sets; remainder will be returned.

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- 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- E. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation."
- F. Application for Payment: Comply with requirements specified in Division 01 Section "Payment Procedures."
- G. Schedule of Values: Comply with requirements specified in Division 01 Section "Payment Procedures."
- H. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
1. Name, address, and telephone number of entity performing subcontract or supplying products.
 2. Number and title of related Specification Section(s) covered by subcontract.
 3. Drawing number and detail references, as appropriate, covered by subcontract.
 4. Submit subcontract list as PDF electronic file.
- I. Coordination Drawings: Comply with requirements specified in Division 01 Section "Project Management and Coordination."
- J. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- K. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on American Welding Society (AWS) forms. Include names of firms and personnel certified.
- L. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- M. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- N. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- O. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- P. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

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- Q. Product Test Reports: Submit written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- R. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
 - 1. Name of evaluation organization.
 - 2. Date of evaluation.
 - 3. Time period when report is in effect.
 - 4. Product and manufacturers' names.
 - 5. Description of product.
 - 6. Test procedures and results.
 - 7. Limitations of use.
- S. Schedule of Tests and Inspections: Comply with requirements specified in Division 01 Section "Quality Requirements."
- T. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- U. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- V. Field Test Reports: Submit reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- W. Maintenance Data: Comply with requirements specified in Division 01 Section "Operation and Maintenance Data."
- X. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

2.2 DELEGATED-DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally-signed PDF electronic file of certificate, signed and sealed by the responsible design professional registered in the State of North Carolina, for each

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product and system specifically assigned to Contractor to be designed or certified by a design professional.

1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Project Closeout and Maintenance/Material Submittals: Refer to requirements in Division 01 Section "Closeout Procedures."
- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.
 1. The contractor's submittal approval stamp shall include the following statement: "I hereby certify that the material(s), equipment and/or products shown and marked in this submittal and proposed to be incorporated into the Work is (are) in strict conformance with the Contract Documents, can be installed in the allocated spaces and comprise(s) no variation thereto, unless specifically noted otherwise." Stamp shall include space for Contractor's signature and date of approval.

3.2 ARCHITECT'S ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections required, and return it. The Architect may attach a comment sheet that will indicate what "action" the Contractor shall take. "Actions" and review procedure will be clarified at the Preconstruction Conference.
- C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval as noted from Architect.
- E. Incomplete submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- F. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 013300

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Sections:
 - 1. Divisions 02 through 09 Sections for specific test and inspection requirements.
 - 2. Division 1, Specification Section 013200 - "Construction Progress Documentation" for preparing and submitting CONTRACTOR's Construction Schedule.

1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect or Contractor.
- C. Preconstruction Testing: Tests and inspections performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
- D. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.

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- E. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- F. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- G. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- H. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade or trades.
- I. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

- A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.5 INFORMATIONAL SUBMITTALS

- A. Contractor's Quality-Control Plan: For quality-assurance and quality-control activities and responsibilities.
- B. Contractor's Quality-Control Manager Qualifications: For supervisory personnel.
- C. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility sent to authorities having jurisdiction before starting work on the following systems.
 - 1. Seismic-force resisting system, designated seismic system, or component listed in the designated seismic system quality assurance plan prepared by the Architect.
 - 2. Main wind-force resisting system or a wind-resisting component listed in the wind-force-resisting system quality assurance plan prepared by the Architect.
- D. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

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- E. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
 - 1. Specification Section number and title.
 - 2. Entity responsible for performing tests and inspections.
 - 3. Description of test and inspection.
 - 4. Identification of applicable standards.
 - 5. Identification of test and inspection methods.
 - 6. Number of tests and inspections required.
 - 7. Time schedule or time span for tests and inspections.
 - 8. Requirements for obtaining samples.
 - 9. Unique characteristics of each quality-control service.

1.6 CONTRACTOR'S QUALITY-CONTROL PLAN

- A. Quality-Control Plan, General: Submit quality-control plan not less than five days prior to preconstruction conference. Submit in format acceptable to Architect. Identify personnel, procedures, controls, instructions, tests, records, and forms to be used to carry out Contractor's quality-assurance and quality-control responsibilities. Coordinate with Contractor's construction schedule.
- B. Quality-Control Personnel Qualifications: Engage qualified full-time personnel trained and experienced in managing and executing quality-assurance and quality-control procedures similar in nature and extent to those required for Project.
 - 1. Project quality-control manager may also serve as Project superintendent.
- C. Submittal Procedure: Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.
- D. Testing and Inspection: Include in quality-control plan a comprehensive schedule of Work requiring testing or inspection, including the following:
 - 1. Contractor-performed tests and inspections including subcontractor-performed tests and inspections. Include required tests and inspections and Contractor-elected tests and inspections.
 - 2. Owner-performed tests and inspections indicated in the Contract Documents
- E. Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types of corrective actions to be required to bring work into compliance with standards of workmanship established by Contract requirements and approved mockups.
- F. Monitoring and Documentation: Maintain testing and inspection reports including log of approved and rejected results. Include work Architect has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

1.7 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
 - 1. Date of issue.

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2. Project title and number.
 3. Name, address, and telephone number of testing agency.
 4. Dates and locations of samples and tests or inspections.
 5. Names of individuals making tests and inspections.
 6. Description of the Work and test and inspection method.
 7. Identification of product and Specification Section.
 8. Complete test or inspection data.
 9. Test and inspection results and an interpretation of test results.
 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 12. Name and signature of laboratory inspector.
 13. Recommendations on retesting and reinspecting.
- B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, and telephone number of technical representative making report.
 2. Statement on condition of substrates and their acceptability for installation of product.
 3. Statement that products at Project site comply with requirements.
 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 6. Statement whether conditions, products, and installation will affect warranty.
 7. Other required items indicated in individual Specification Sections.
- C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, and telephone number of factory-authorized service representative making report.
 2. Statement that equipment complies with requirements.
 3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 4. Statement whether conditions, products, and installation will affect warranty.
 5. Other required items indicated in individual Specification Sections.
- D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.
- 1.8 QUALITY ASSURANCE
- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

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- B. **Manufacturer Qualifications:** A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- C. **Fabricator Qualifications:** A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. **Installer Qualifications:** A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. **Professional Engineer Qualifications:** A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.
- F. **Specialists:** Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
 - 1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.
- G. **Testing Agency Qualifications:** An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
 - 1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 - 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- H. **Manufacturer's Technical Representative Qualifications:** An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. **Factory-Authorized Service Representative Qualifications:** An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- J. **Preconstruction Testing:** Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
 - 1. Contractor responsibilities include the following:
 - a. Provide test specimens representative of proposed products and construction.
 - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
 - 2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, through Contractor.

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Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

1.9 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
 - 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 - 2. Payment for these services will be made from testing and inspecting allowances, as authorized by Change Orders.
 - 3. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
 - 1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
 - 2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 - 3. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 - 4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 - 5. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 - 6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 Section "Submittal Procedures."
- D. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- E. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

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- F. Testing Agency Responsibilities: Cooperate with Architect, Contractor, and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect, Contractor, and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform any duties of Contractor.
- G. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.
- I. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents as a component of the Contractor's quality-control plan. Coordinate and submit concurrently with Contractor's construction schedule. Update as the Work progresses. .
1. Distribution: Distribute schedule to Owner, Architect, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Prepare a record of tests and inspections. Include the following:

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1. Date test or inspection was conducted.
 2. Description of the Work tested or inspected.
 3. Date test or inspection results were transmitted to Architect.
 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Division 01 Section "Execution."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Sections:
 - 1. Division 01 Section "Alternates" for products selected under an alternate.
 - 2. Division 01 Section "Substitution Procedures" for requests for substitutions.

1.3 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
 - 3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.

1.4 ACTION SUBMITTALS

- A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Include data to indicate compliance with the requirements specified in "Comparable Products" Article.
 - 2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product

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request. Architect will notify Contractor of approval or rejection of proposed comparable product request:

- a. Form of Approval: As specified in Division 01 Section "Submittal Procedures."
- b. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.

- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 01 Section "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.

- B. Delivery and Handling:

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.

- C. Storage:

1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
4. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
6. Protect stored products from damage and liquids from freezing.
7. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces, if any. Coordinate location with Owner.

1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
 - 1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 - 2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
 - 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 - 2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
 - 3. Refer to Divisions 02 through 9. Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Division 01 Section "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
 - 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 - 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 - 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 - 4. Where products are accompanied by the term "as selected," Architect will make selection.
 - 5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
- B. Product Selection Procedures:
 - 1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
 - 2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.

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3. Products:
 - a. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
 - b. Nonrestricted List: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product.
4. Manufacturers:
 - a. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
 - b. Nonrestricted List: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed manufacturer's product.
5. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.
- C. Visual Matching Specification: Where Specifications require "match Architect's sample", provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
 1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Division 01 Section "Substitution Procedures" for proposal of product.
- D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

- A. Conditions for Consideration: Architect will consider Contractor's request for comparable product when all of the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:
 1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.

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2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
3. Evidence that proposed product provides specified warranty.
4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

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SECTION 017300 – EXECUTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Field engineering and surveying.
 - 3. Installation of the Work.
 - 4. Cutting and patching.
 - 5. Coordination of Owner-installed products.
 - 6. Progress cleaning.
 - 7. Starting and adjusting.
 - 8. Protection of installed construction.
 - 9. Correction of the Work.

1.3 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other work.
- B. Patching: Fitting and repair work required to restore construction to original conditions after installation of other work.

1.4 INFORMATIONAL SUBMITTALS

- A. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

1.5 QUALITY ASSURANCE

- A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
 - 1. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from the Architect before proceeding. Shore, brace, and support structural element during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection
 - 2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operational elements include, but are not limited to, the following:
 - a. Primary operational systems and equipment.

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- b. Fire separation assemblies.
 - c. Air or smoke barriers.
 - d. Fire-suppression systems.
 - e. Mechanical systems piping and ducts.
 - f. Control systems.
 - g. Communication systems.
 - h. Conveying systems.
 - i. Electrical wiring systems.
 - j. Operating systems of special construction.
3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Other construction elements include, but are not limited to, the following:
- a. Water, moisture, or vapor barriers.
 - b. Membranes and flashings.
 - c. Exterior curtain-wall construction.
 - d. Equipment supports.
 - e. Piping, ductwork, vessels, and equipment.
 - f. Noise- and vibration-control elements and systems.
4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- a. Restrict cutting and patching of existing brick masonry indicated to remain to areas and methods approved by Architect.
- B. Manufacturer's Installation Instructions: Comply with manufacturer's current printed and published (written) instructions and recommendations for storing and installing products and equipment in applications indicated. Maintain copies on-site.

1.6 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to the Architect for the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations
 - 1. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - 2. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 - 3. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 - 4. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of the Contractor, submit a request for information to Architect through Construction Manager according to requirements in Division 01 Section "Project Management and Coordination."
- E. Coordinate setting drawings, diagrams, templates, instructions, and directions for installation of anchorages in the construction.
- F. Coordinate delivery of items to Project site.

3.3 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Make vertical work plumb and make horizontal work level.
 - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 - 3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
 - 4. Maintain minimum headroom clearance of 96 inches (2440 mm) in occupied spaces and 90 inches (2300 mm) in unoccupied spaces.

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- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- G. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 - 2. Allow for building movement, including thermal expansion and contraction.
 - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.4 CUTTING AND PATCHING

- A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching in accordance with requirements of Division 01 Section "Summary."
- C. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.
- D. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

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3.5 OWNER-INSTALLED PRODUCTS

- A. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction personnel.
1. Construction Schedule: Inform Owner of Construction Manager's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
 2. Preinstallation Conferences: Include Owner's construction personnel at preinstallation conferences covering portions of the Work that are to receive Owner's work. Attend preinstallation conferences conducted by Owner's construction personnel if portions of the Work depend on Owner's construction.

3.6 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F (27 deg C).
 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
 - a. Utilize containers intended for holding waste materials of type to be stored.
 4. Coordinate progress cleaning for joint-use areas where more than one installer has worked.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
1. Remove liquid spills promptly.
 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Division 01 Section "Construction Waste Management and Disposal."

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- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.7 STARTING AND ADJUSTING

- A. Coordinate startup and adjusting of equipment and operating components with requirements in Division 01 Section "General Commissioning Requirements."
- B. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- C. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- D. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- E. Manufacturer's Field Service: Comply with qualification requirements in Division 01 Section "Quality Requirements."

3.8 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.9 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 017300

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SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for the following:
1. Recycling non-hazardous [demolition and] construction waste.
 2. Disposing of non-hazardous [demolition and] construction waste.

1.3 DEFINITIONS

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

1.4 SUBMITTALS

- A. Waste Management Plan: Submit **3** copies of a fully complete plan within **30** days of date established for commencement of the Work.
- B. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit three copies of report. Include the following information:
1. Spreadsheet tabulating total waste material, quantities diverted and means by which each material is diverted, and statement that requirements for the credit have been met. Architect will assist with preparation of spreadsheet or upon request provide one to be used for project.
 2. All records substantiating the information reported on the spreadsheet, including manifests, weight tickets, receipts, and invoices. Records must be legible and must indicate the date issued, the waste material donated, the weight (in tons) or volume (in cubic yards) of material, and the name, address, and phone number of the receiving entity. The following records must be submitted:
 - a. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
 - b. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.

- c. Recycling and Processing Facility Records: Indicate receipt and acceptance of recycled waste by recycling and processing facilities licensed to accept them. Include manifests, weight, tickets, receipts, and invoices.
- d. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

1.5 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Waste Management Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination." Review methods and procedures related to waste management including, but not limited to, the following:
 - 1. Review and discuss waste management plan including responsibilities of Waste Management Coordinator.
 - 2. Review requirements for documenting quantities of each type of waste and its disposition.
 - 3. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
 - 4. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
 - 5. Review waste management requirements for each trade.

1.6 WASTE MANAGEMENT PLAN

- A. General: Develop a waste management plan. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.
 - 1. The Waste Management Plan shall contain the following information, as a minimum:
 - a. A spreadsheet, which lists:
 - 1) Each waste stream leaving the site (example: steel, concrete, cardboard, trash)
 - 2) The name and address of the receiving entity
 - 3) Contact name and phone number at the receiving entity
 - b. A narrative, which describes:
 - 1) Who is the primary person responsible for implementing the CWM plan
 - 2) What wastes must be separated for recycling
 - 3) How hazardous wastes are to be handled
 - 4) How the construction waste management plan, including updates, will be communicated to all involved parties (example: CWM will be on the agenda of all construction progress meetings)
 - 5) How the construction waste management plan will be enforced
 - 6) How data will be tracked and filed (important: receipts must be legible and must include the name of the hauler, the date hauled, the material hauled, the weight or volume of material hauled)

PART 2 - PRODUCTS

2.1 RESOURCES

- A. The Architect will provide a list of potential resources upon request at the Preconstruction Conference, for information purposes. The Architect does not recommend or approve any of the listed entities. See also U.S. General Services Administration (GSA) online Construction Waste Management Database <http://www.wbdg.org/tools/cwm.php>.

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

- A. General: Implement waste management plan as approved by Owner. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
 - 1. Comply with Division 1 Section "Temporary Facilities and Controls" for operation, termination, and removal requirements.
- B. Waste Management Coordinator: Designate a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan. Coordinator shall be present at Project site full time for duration of Project.
- C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.
 - 1. Distribute waste management plan to everyone concerned within three days of submittal return.
 - 2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.
- D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
 - 2. Comply with Division 1 Section "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.2 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

- A. General: Recycle paper and beverage containers used by on-site workers.
- B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to Contractor.
- C. Procedures:
 - 1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin. Inspect containers and bins for contamination and remove contaminated materials if found.

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2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water.
3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
4. Store components off the ground and protect from the weather.
5. Remove recyclable waste off Owner's property and transport to recycling receiver or processor.

3.3 RECYCLING CARPET

- A. Recycle any non-asbestos-contaminated carpet in accordance with selected carpet recycling facility guidelines. Carpet will need to be free of any metal (tacks, nails, stretcher strips, etc.), kept dry, shaken to remove loose debris, and carefully rolled, bound, and protected from further contamination and elements.
 1. Acceptable removal may require a carpet installer.
- B. Available recyclers include, but are not limited to, the following:
 1. InterFace Flor ReEntry 2.0 Program, (800) 733-6873
 2. Champion Polymer Recycling, Division of Infiltrator Systems, Inc. (800) 203-9158.
 3. RM Brokerage, (703) 370-3638.
 4. Ace Recycling (804) 318-3701.

3.4 RECYCLING CEILING TILES AND PANELS

- A. Verify that existing acoustical ceiling panels can be recycled. Following verification, remove and stack ceiling tiles on pallets and wrap or band the pallet loads for delivery per recycler guidelines.
 1. If following the Armstrong Ceiling Recycling Program or the USG Ceiling Recycling Program, contact them once there is a full trailer load, or 30,000 square feet of removed ceiling, and Armstrong or USG will arrange for a truck to pick up the material and transfer it to its nearest manufacturing facility at no cost.
 - a. Where quantities are less than 30,000 square feet of removed ceiling, contact Armstrong or USG for possible consolidation delivery points at Contractor's cost.

3.5 DISPOSAL OF WASTE

- A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
 1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Disposal: Transport waste materials off Owner's property and legally dispose of them.

END OF SECTION 017419

SECTION 01 77 00 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
1. Inspection procedures.
 2. Warranties.
 3. Final cleaning.

1.2 DESIGNER FINAL INSPECTION

- A. Preliminary Procedures: Before requesting inspection for determining date of Designer Final Inspection, complete the following. List items below that are incomplete in request.
1. General Contractor shall prepare a list of items to be completed and corrected (punch list). GC shall issue list to Architect, Owner and sub-contractors for correction of items. Upon completion and verification by GC that all items are corrected, GC shall submit signed off punch list to Owner and Architect along with a letter on GC's letterhead formally requesting Designer Final Inspection and certifying that the project is complete and ready for inspection. Any uncorrected items on the punch list shall be clearly documented with an explanation for why they are incomplete and a schedule for when they will be completed.
 2. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 3. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 4. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 5. Submit test/adjust/balance records.
 6. Complete final cleaning requirements, including touchup painting.
 7. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Inspection: Submit a written request for inspection for Designer Final Inspection. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before Final Acceptance inspection will be scheduled.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit one electronic copy of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1. Organize list of spaces in sequential order, proceeding from lowest floor to highest floor.
2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Page number.

1.5 WARRANTIES

- A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11 inch paper.
 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- C. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 1. Complete the following cleaning operations before requesting Designer Final Inspection

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for entire Project or for a portion of Project:

- a. Clean exposed interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances.
- b. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
- c. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
- d. Remove labels that are not permanent.
- e. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
- f. Replace parts subject to unusual operating conditions.
- g. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
- h. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
- i. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
- j. Leave Project clean and ready for occupancy.

END OF SECTION

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.
- B. Abatement Specification for Removal of Asbestos-Containing Materials (ACM)

1.2 SUMMARY

- A. Section Includes:
 - 1. Demolition and removal of selected finishes of building
 - 2. Relocation and protection of furniture

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.
- B. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For ACM contractors
- B. Pre-demolition Digital Photographs or Digital Video-recordings: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by selective demolition operations. Submit to Owner's representative as part of the submittal package required prior to release of the first request for payment.
 - 1. Prior to mobilization, Owner's representative and Contractor shall together review existing conditions in the construction and mobilization area. The Contractor in the presence of the Owner shall digitally photograph or video-record existing conditions in sufficient detail to record accurately the physical conditions at the start of construction.
 - 2. The Contractor shall provide and the Owner and Contractor shall retain identical digital copies of the documentation.
 - 3. At closeout the Owner's acceptance of the Work includes acceptance of the remaining existing conditions as undamaged by Construction Manager's forces.
- C. Warranties: Documentation indicated that existing warranties are still in effect after completion of selective demolition.

1.5 CLOSEOUT SUBMITTALS

- A. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

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1.6 QUALITY ASSURANCE

1.7 FIELD CONDITIONS

- A. Owner may occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
 - 1. Comply with requirements specified in Division 1 Section "Summary."
 - 2. The Owner and Contractor shall establish "staging areas" for temporary storage of furniture and furnishings removed from alteration areas during construction activities. Work areas should be free of furniture and furnishings during construction activities.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
 - 1. Before construction activities, Contractor shall move loose furniture, furnishings and equipment items to a suitable, protected storage location during selective demolition. Contractor may use a separate floor staging area.
 - 2. During all demolition or abatement activities, the Contractor shall protect furniture, furnishings and equipment from damage when moved from an area of construction activity.
 - 3. After demolition and abatement activities have been completed per floor, the contractor shall clean and reinstalled furniture, furnishings and equipment in their original locations.
 - 4. At no time shall relocated furniture, furnishings or equipment impede clear egress paths.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Coordination of Selective Demolition Activities: Coordinate the following with Owner:
 - 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
 - 2. Interruption of utility services. Indicate how long utility services will be interrupted.
 - 3. Coordination for shutoff, capping, and continuation of utility services.
 - 4. Use of elevator and stairs.
 - 5. Locations of proposed dust- and noise-control temporary partitions and means of egress.
 - 6. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
 - 7. Means of protection for items to remain and items in path of waste removal from building.
 - 8. Means of protection for items relocated and stored by the Contractor.
- E. Hazardous Materials: Hazardous materials are present in buildings to be selectively demolished. A report on the presence of hazardous materials is on file for review and use. Examine report to become aware of locations where hazardous materials are present.
 - 1. Hazardous material remediation is specified elsewhere in the Contract Documents.
- F. Storage or sale of removed items or materials on-site is not permitted.
- G. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 - 1. Maintain fire-protection facilities in service during selective demolition operations.

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PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Review record documents of existing construction provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in record documents.
- C. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict.
- E. Survey of Existing Conditions: Record existing conditions by use of preconstruction digital photographs or preconstruction digital video recordings.
 - 1. Inventory and record the condition of items to be removed and salvaged. Provide photographs or video of conditions that might be misconstrued as damage caused by salvage operations.
 - 2. Inventory and record the condition of furniture items to be temporarily relocated onsite. Provide photographs or video of conditions that might be misconstrued as damage caused by construction operations.
 - 3. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems which will remain and protect them against damage.
 - 1. Comply with requirements for existing services/systems interruptions specified in Division 1 Section "Summary."
 - 2. If utility services, indicated to remain, are required to be relocated before proceeding with the new Work, provide temporary connections to the utilities so that they can bypass the area of new Work and maintain continuity of service to other parts of building. Upon completion of the new Work, remove the temporary bypass connections and restore the utilities using like materials.

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3.3 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Comply with requirements for access and protection specified in Division 01 Section "Temporary Facilities and Controls."
- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
 - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
 - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
 - 4. Cover and protect furniture, furnishings, and equipment that have not been removed.
 - 5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Division 01 Section "Temporary Facilities and Controls."

3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Proceed with selective demolition systematically
 - 2. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 - 3. Dispose of demolished items and materials promptly.[Comply with requirements in Division 01 Section "Construction Waste Management and Disposal."
- B. Removed and Reinstalled Items:
 - 1. Clean and repair items to functional condition adequate for intended reuse.
 - 2. Pack or crate items after cleaning and repairing. Identify contents of containers.
 - 3. Protect items from damage during transport and storage.
 - 4. Reinstall items in locations as documented. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- C. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. Items shall be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after construction operations are complete.

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- 3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS – POST ACM REMEDIATION
- A. Floor Finishes: Remove existing floor finishes including backings, remove all residual adhesives and glue as indicated.
 - B. Resilient Floor Coverings: Remove floor coverings and adhesive according to recommendations in RFCI's "Recommended Work Practices for the Removal of Resilient Floor Coverings." [Do not use methods requiring solvent-based adhesive strippers.]
- 3.6 DISPOSAL OF DEMOLISHED NON-ACM MATERIALS
- A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
 - 1. Do not allow demolished materials to accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 - 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
 - 4. Comply with requirements specified in Division 01 Section "Construction Waste Management and Disposal."
 - 5. See additional specifications for proper handling and disposal of ACM materials.
 - B. Burning: Do not burn demolished materials.
 - C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.
- 3.7 CLEANING
- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

SECTION 092613 - GYPSUM VENEER PLASTERING (ALTERNATE #2)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Gypsum veneer plaster over masonry surfaces.
 - 2. Gypsum veneer plaster over monolithic concrete surfaces.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings:
 - 1. Show locations, fabrication, and installation of control joints, reveals, and trim; include plans and details of components, and attachments to other work.
- C. Samples: For the following products:
 - 1. Trim Accessories: Full-size Sample in 10-inch (250-mm) length for each trim accessory.
 - 2. Textured Finishes: Manufacturer's standard size for each textured finish and on rigid backing.

1.4 QUALITY ASSURANCE

- A. Mockups: Provide a in-place full-thickness finish mockup for each type and finish of gypsum veneer plaster and substrate to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Architect will select representative surfaces and conditions for application of each type of gypsum veneer plaster and substrate.
 - 2. Provide mockups of ceilings in size of at least 100 sq. ft. (9 sq. m).
 - 3. Apply gypsum veneer plaster, according to requirements for the completed Work, after permanent lighting and other environmental services have been activated.
 - 4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original packages, containers, and bundles bearing brand name and identification of manufacturer or supplier.
- B. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes.
- C. Stack panels flat on leveled supports off floor or slab to prevent sagging.

1.6 FIELD CONDITIONS

- A. Environmental Limitations: Comply with ASTM C 843 requirements or gypsum veneer plaster manufacturer's written recommendations, whichever are more stringent.
- B. Room Temperatures: Maintain not less than 55 deg F (13 deg C) or more than 80 deg F (27 deg C) for seven days before application of gypsum veneer plaster, continuously during application, and after application until veneer plaster is dry.
- C. Avoid conditions that result in gypsum veneer plaster drying too rapidly.
 - 1. Distribute heat evenly; prevent concentrated or uneven heat on veneer plaster.
 - 2. Maintain relative humidity levels, for prevailing ambient temperature, that produce normal drying conditions.
 - 3. Ventilate building spaces in a manner that prevents drafts of air from contacting surfaces during veneer plaster application until it is dry.
- D. Do not install panels that are wet, moisture damaged, or mold damaged.
 - 1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, and irregular shape.
 - 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations: Obtain gypsum veneer plaster products, reinforcing tape, and embedding material, from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

- A. Low-Emitting Materials: For ceiling and wall assemblies, provide materials and construction identical to those tested in assembly and complying with the testing and product requirements of

the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

2.3 GYPSUM VENEER PLASTER

- A. Gypsum Veneer Plaster: ASTM C 840, ready-mixed, base-coat plaster and smooth finish-coat veneer plaster containing mill-mixed, fine silica sand; with a compressive strength of 3000 psi (20 MPa) when tested according to ASTM C 472.
 - 1. Base Coat:
 - a. USG – Cover Coat Compound
 - b. National Gypsum – ProForm
 - c. Georgia Pacific

2.4 JOINT REINFORCING MATERIALS

- A. General: Comply with joint strength requirements in ASTM C 587 and with gypsum veneer plaster manufacturer's written recommendations for each application indicated.
- B. Embedding Material for Joint Tape:
 - 1. Gypsum Base for Veneer Plaster: As recommended by gypsum veneer plaster manufacturer for use with joint-tape material and gypsum veneer plaster applications indicated.

2.5 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that comply with referenced product standards and manufacturer's written recommendations.
- B. Bonding Agent: ASTM C 631, polyvinyl acetate.
- C. Laminating Adhesive: Adhesive or joint compound recommended by manufacturer for directly adhering gypsum-base, face-layer panels to backing-layer panels in multilayer construction.
 - 1. Adhesives shall have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
 - 2. Adhesives shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- D. Patching Mortar: Dry-pack patching mortar, consisting of 1 part portland cement to 2-1/2 parts fine aggregate passing a No. 16 (1.18-mm) sieve, using only enough water for handling and placing.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Existing Concrete Substrates:
 - 1. Identify existing conditions that require embedded tape application.
 - 2. Fill voids with manufacturer recommend joint compound.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Monolithic Concrete Substrates: Prepare according to gypsum veneer plaster manufacturer's written recommendations and as follows:
 - 1. Clean surfaces to remove dust, loose particles, grease, oil, incompatible curing compounds, form-release agents, and other foreign matter and deposits that could impair bond with gypsum veneer plaster.
 - 2. Remove ridges and protrusions greater than 1/8 inch (3 mm) and fill depressions greater than 1/4 inch (6.4 mm) with patching mortar. Allow to set and dry.
 - 3. Apply bonding agent on dry and cured concrete substrates.

3.3 INSTALLING JOINT REINFORCEMENT

- A. Gypsum Base: Reinforce interior angles and flat joints with joint tape and embedding material to comply with ASTM C 843 and with gypsum veneer plaster manufacturer's written recommendations.

3.4 GYPSUM VENEER PLASTERING

- A. Bonding Agent: Apply bonding agent on dry according to gypsum veneer plaster manufacturer's written recommendations.
- B. Gypsum Veneer Plaster Mixing: Mechanically mix gypsum veneer plaster materials to comply with ASTM C 843 and with gypsum veneer plaster manufacturer's written recommendations.
- C. Gypsum Veneer Plaster Application: Comply with ASTM C 843 and with veneer plaster manufacturer's written recommendations.
 - 1. One-Component Gypsum Veneer Plaster: Trowel apply base coat over substrate to uniform thickness. Fill all voids and imperfections. Immediately double back with same mixer batch of plaster to a uniform total thickness of 1/16 to 3/32 inch (1.6 to 2.4 mm).
 - 2. Two-Component Gypsum Veneer Plaster:

- a. Base Coat: Hand trowel or machine apply base coat over substrate to a uniform thickness of 1/16 to 3/32 inch (1.6 to 2.4 mm). Fill all voids and imperfections.
 - b. Finish Coat: Trowel apply finish-coat plaster over base-coat plaster to a uniform thickness of 1/16 to 3/32 inch (1.6 to 2.4 mm).
3. Where gypsum veneer plaster abuts only metal door frames, windows, and other units, groove finish coat to eliminate spalling.
- D. Gypsum Veneer Plaster Finish: Smooth-troweled finish.

3.5 PROTECTION

- A. Protect installed gypsum veneer plaster from damage from weather, condensation, construction, and other causes during remainder of the construction period.
- B. Remove and replace gypsum veneer plaster and gypsum base panels that are wet, moisture damaged, or mold damaged.
 1. Indications that gypsum base panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, and irregular shape.
 2. Indications that gypsum base panels are mold damaged include, but are not limited to, fuzzy or blotchy surface contamination and discoloration.

END OF SECTION 092900

SECTION 098000 – SPRAY TEXTURE CEILING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Spray applied textured ceiling finish with lightweight aggregate.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings:
 - 1. Show locations, fabrication, and installation of control joints and trim; include details of accessory components, and attachments to other work, where required
- C. Samples: For the following products:
 - 1. (4) 4"x 6" sample cards representing the acceptable range for a Medium Aggregated finish.

1.4 QUALITY ASSURANCE

- A. Mockups: Provide an in-place full-thickness finish mockup for each type of substrate to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Provide mockups of ceilings in size of at least 100 sq. ft. (9 sq. m).
 - 2. Apply according to requirements for the completed Work, after permanent lighting and other environmental services have been activated.
 - 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original packages, containers, and bundles bearing brand name and identification of manufacturer or supplier.

- B. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes.
- C. Stack panels flat on leveled supports off floor or slab to prevent sagging.

1.6 FIELD CONDITIONS

- A. Room Temperatures: Maintain not less than 55 deg F (13 deg C) or more than 80 deg F (27 deg C) for seven days before application of gypsum veneer plaster, continuously during application, and after application until veneer plaster is dry.
- B. Avoid conditions that result in rapid drying.
 - 1. Distribute heat evenly; prevent concentrated or uneven heat on veneer plaster.
 - 2. Maintain relative humidity levels, for prevailing ambient temperature, that produce normal drying conditions.
 - 3. Ventilate building spaces in a manner that prevents drafts of air from contacting surfaces during veneer plaster application until it is dry.
- C. Do not install product on surfaces that are wet, moisture damaged, or mold damaged.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations: Obtain products from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

- A. Low-Emitting Materials: For ceiling and wall assemblies, provide materials and construction identical to those tested in assembly and complying with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

2.3 CEILING SPRAY TEXTURE

- A. Decorative texture finish: ready-mixed finish containing lightweight aggregate over concrete substrate.
 - 1. Base Coat:
 - a. USG – QT Poly Ceiling Spray Texture
 - b. CertainTeed – Tex Spray Texture
 - c. National Gypsum – ProForm Perfect Spray HF

2. Finish Level: Medium
3. Color: White

2.4 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that comply with referenced product standards and manufacturer's written recommendations.
- B. Bonding Agent: Manufacturer's recommended surface primer for existing concrete substrates
- C. Patching Mortar: Dry-pack patching mortar, consisting of 1 part portland cement to 2-1/2 parts fine aggregate passing a No. 16 (1.18-mm) sieve, using only enough water for handling and placing.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Existing Concrete Substrates:
 1. Identify existing conditions that require embedded tape application.
 2. Fill voids with manufacturer recommend joint compound.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Monolithic Concrete Substrates:
 1. Clean surfaces to remove dust, loose particles, grease, oil, incompatible curing compounds, form-release agents, and other foreign matter and deposits that could impair bond with gypsum veneer plaster.
 2. Remove ridges and protrusions greater than 1/8 inch (3 mm) and fill depressions greater than 1/4 inch (6.4 mm) with patching mortar. Allow to set and dry.
 3. Apply bonding agent on dry and cured concrete substrates.
- B. Protect all adjacent surfaces from overspray.
- C. Bonding Agent: Apply bonding agent on dry according to manufacturer's written recommendations.

3.3 PROTECTION

- A. Protect installed gypsum veneer plaster from damage from weather, condensation, construction, and other causes during remainder of the construction period.
- B. Remove and replace gypsum veneer plaster and gypsum base panels that are wet, moisture damaged, or mold damaged.
 - 1. Indications that gypsum base panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, and irregular shape.
 - 2. Indications that gypsum base panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 098000

SECTION 099100 — PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 DESCRIPTION OF WORK:

- A. Extent of painting work is indicated on drawings and schedules, and as herein specified.
- B. Related Sections include the following:
 - 1. Division 9 – Gypsum Veneer Compound
- C. Work includes painting and finishing of interior ceiling surfaces throughout Project, except as otherwise indicated.
- D. “Paint” as used herein means all coating systems materials, including primers, emulsions, enamels, stains, sealers, fillers, & other applied materials whether used as prime, intermediate or finish coats.
- E. Do not paint over any code-required labels, such as Underwriters' Laboratories and Factory Mutual, or any equipment identification, performance rating, name, or nomenclature plates. Do not paint over fire alarm devices, sprinklers and similar fire safety devices.

1.3 QUALITY ASSURANCE:

- A. Single Source Responsibility: Provide primers, other undercoat paint, and finish coat products produced by same manufacturer for each paint system. Use only thinners approved by paint manufacturer, and use only within recommended limits.
- B. Coordination of Work: Review other sections of these specifications in which prime paints are to be provided to ensure compatibility of total coatings system for various substrates. Upon request from other trades, furnish information or characteristics of finish materials provided for use, to ensure compatible prime coats are used.
 - 1. Test primers, bonding primers and coating products for compatibility and adhesion to existing substrates.
- C. Finish System Mockups: On designated ceiling surface, duplicate finishes of prepared samples. Provide full-coat finish samples on at least 100 sq. ft. of surface until required sheen, color and texture are obtained; simulate finished lighting conditions for review of in-place work.
- D. Color Selection Sample Areas: Architect will designate required field sample area color.

1.4 SUBMITTALS:

- A. Product Data: Submit manufacturer's technical information including Paint label analysis and application instructions for each material proposed. Include paint system schedule in the format used in this specification section.
 - 1. For DTM enamel and water-borne epoxy enamel products, provide the following performance data.
 - a. Abrasion Resistance test data per ASTM D4060 with CS-17 wheel, 1000 gram load for 1000 cycles. (CS-10 wheel data not acceptable).
 - b. Direct Impact Resistance test data per ASTM D2794.

- c. Adhesion test data per ASTM D4541.
 - B. Color Chips: Submit color chips of manufacturer's *complete range of "white" colors* for each paint type for Architect's review of color and texture (sheen). These will be used for initial color selection if the submitted range is adequate.
 - 1. Provide 8-1/2 x 11 inch color samples ("drawdowns") for all paint colors and sheens for which the color in Architect's color schedule is not indicated by colors of the selected paint manufacturer for approval prior to application in the field. Provide paint drawdowns in finish sheens applicable to those in the field.
- 1.5 DELIVERY AND STORAGE:
- A. Deliver materials to job site in original, new and unopened packages and containers bearing manufacturer's name and label, and following information:
 - 1. Name or title of material.
 - 2. Manufacturer's stock number and date of manufacture.
 - 3. Manufacturer's name.
 - 4. Contents by volume, for major pigment and vehicle constituents.
 - 5. Thinning instructions.
 - 6. Application instructions.
 - 7. Color name and number.
 - B. Store materials not in actual use in tightly covered containers. Maintain containers used in storage of paint in a clean condition, free of foreign materials and residue.
 - C. Protect from freezing where necessary. Keep storage area neat and orderly. Remove oily rags and waste daily. Take precautions to ensure workmen and work areas are adequately protected from fire hazards and health hazards resulting from handling, mixing and application of paints.
- 1.6 JOB CONDITIONS:
- A. Apply paints only when temperature of surfaces to be painted and surrounding air are between 50°F and 90°F for water-base paints; and between 45°F and 95°F for solvent-thinned paints, unless otherwise permitted by paint manufacturer's printed instructions.
 - B. Do not paint in snow, rain, fog or mist, or when relative humidity exceeds 85%, or to damp or wet surfaces, unless otherwise permitted by paint manufacturer's printed instructions.
 - 1. Painting may be continued during inclement weather if areas and surfaces to be painted are enclosed and heated within temperature and humidity limits specified by paint manufacturer during application and drying periods.
 - C. Wind: Do not spray coatings if wind velocity exceeds manufacturer's recommended limit.
 - D. Ventilation: Provide ventilation during coating evaporation stage in confined or enclosed areas in accordance with manufacturer's instructions.
 - E. Dust and Contaminants:
 - 1. Schedule coating work to avoid excessive dust and airborne contaminants.
 - 2. Protect work areas from excessive dust and airborne contaminants during coating application and curing.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS:

- A. Paint Manufacturer: Subject to compliance with requirements, provide products of one of the following:
 - 1. Benjamin Moore and Co. (Ben Moore).
 - 2. Glidden Professional (Glidden)
 - 3. PPG Industries, Inc. (PPG)
 - 4. Sherwin-Williams Co. (S-W). (Duron, a regional division of S-W, is not acceptable)
- B. Color: (PT-1) TBD by the owner

2.2 MATERIALS:

- A. Material Quality: Provide best quality grade of various types of coatings as regularly manufactured by acceptable paint materials manufacturers. Materials not displaying manufacturer's identification as a standard, best-grade product will not be acceptable.
- B. Color Pigments: Pure, non-fading, applicable types to suit substrates and service indicated. Lead content in pigment, if any, is limited to contain not more than 0.06% lead, as lead metal based on the total non-volatile (dry-film) of paint by weight.

PART 3 - EXECUTION

3.1 INSPECTION:

- A. Applicator must examine areas and conditions under which painting work is to be applied and notify Contractor in writing of conditions detrimental to proper and timely completion of work. Do not proceed with work until unsatisfactory conditions have been correct in a manner acceptable to Applicator.
- B. Starting of painting work will be construed as Applicator's acceptance of surfaces and conditions within any particular area.
- C. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions otherwise detrimental to formation of a durable paint film.

3.2 SURFACE PREPARATION:

- A. General: Perform preparation and cleaning procedures in accordance with paint manufacturer's instructions and as herein specified, for each particular substrate condition.
- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
 - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
- C. Cleaning: Before applying paint or surface treatments, clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
 - 1. Remove oil and grease prior to mechanical cleaning.

2. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.
 3. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
- D. Cementitious Materials: Prepare cementitious surfaces of concrete, concrete block, to be painted by removing efflorescence, chalk, dust, dirt, grease, oils, and by roughening as required to remove glaze.
1. Determine alkalinity and moisture content of surfaces to be painted by performing appropriate tests. If surfaces are sufficiently alkaline to cause blistering and burning of finish paint, correct this condition before application of paint. Do not paint over surfaces where moisture content exceeds that permitted in manufacturer's printed directions.

3.3 MATERIALS PREPARATION:

- A. Mix and prepare painting materials in accordance with manufacturer's directions.
- B. Maintain paint mixing and application containers in a clean condition, free of foreign materials and residue.
- C. Stir materials before application to produce a mixture of uniform density, and stir as required during application. Do not stir surface film into material. Remove film and, if necessary, strain material before using.

3.4 APPLICATION:

- A. General: Apply paint in accordance with manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied.
 1. Provide access to representative of selected coating manufacturer for observation of material application only at all times during painting work. Unless specifically indicated by Architect, this representative shall have no authority to make decisions about the work.
 2. Provide finish coats that are compatible with prime paints used.
 3. Apply additional coats when undercoats, stains or other conditions show through final coat of paint, until paint film is of uniform finish, color and appearance. Ensure that surfaces, including edges, corners, crevices, welds, and exposed fasteners receive dry film thickness equivalent to that of flat surfaces.
 4. Paint surfaces behind movable and permanently fixed equipment and furniture.
 5. Paint back sides of access panels, and removable or hinged covers.
 6. Finish exterior and interior doors on tops, bottoms and side edges same as faces.
 7. Sand lightly between each succeeding enamel or varnish coat.
- B. Scheduling Painting: Apply first-coat material to surfaces that have been cleaned, pretreated or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
 1. Allow sufficient time between successive coatings to permit proper drying. Do not recoat until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.
- C. Minimum Coating Thickness: Apply materials at not less than manufacturer's recommended spreading rate, to establish total DFT indicated or as recommended by coating manufacturer.

- D. Mechanical and Electrical Work: Painting of mechanical and electrical work is limited to items exposed in equipment rooms and in occupied spaces. Do not paint prefinished equipment items unless directed otherwise.
- E. Prime Coats: Apply prime coat to material which is required to be painted or finished, and which has not been prime coated by others. Recoat primed and sealed surfaces where there is evidence of suction spots or unsealed areas in first coat, to assure a finish coat with no burn-through or other defects due to insufficient sealing.
- F. Finish Coats: Provide finish quality for new and repainted surfaces as follows:
 - 1. Pigmented (Opaque) Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness or other surface imperfections will not be acceptable.
 - 2. Transparent (Clear) Finish: Use multiple coats to produce glass-smooth surface film of even luster. Provide a finish free of laps, cloudiness, color irregularity, runs, brush marks, orange peel, nail holes, or other surface imperfections. Provide satin finish for final coats, unless otherwise noted.
- G. Completed Work: Match approved samples for color, texture and coverage. Remove, refinish or repaint work not in compliance with specified requirements.

3.5 CLEAN-UP AND PROTECTION:

- A. Clean-Up: During progress of work, remove from site discarded paint materials, rubbish, cans and rags at end of each work day. Upon completion of painting work, clean window glass and other paint spattered surfaces. Remove spattered paint by proper methods of washing and scraping, using care not to scratch or damage finished surfaces.
- B. Protection: Protect work of other trades, whether to be painted or not, against damage by painting and finishing work until date of Substantial Completion. Correct any damage by cleaning, repairing or replacing, and repainting, as acceptable to Architect.
 - 1. Provide "Wet Paint" signs to protect newly-painted finishes. Remove temporary protective wrappings provided by others for their work after completion of painting.
 - 2. At completion of work of other trades, touch-up & restore all damaged painted surfaces.

3.6 INTERIOR PAINT SCHEDULE:

- A. General: Provide the following paint systems for the various substrates, as indicated. Dry film thickness is noted as "DFT." Provide compatibility test areas on existing painted substrates.
- B. Concrete Walls and Ceilings: Semi-Gloss DTM Finish: 2 Coats over primed surface with DFT 3.5 mils min.
 - 1. Primer Coat: Acrylic masonry primer applied at rate to ensure complete coverage and secure bond to cured concrete. Brush, spray or roller apply and back roll.
 - Ben Moore: 206 Super Spec Masonry Int/Ext Hi. Build Block Filler
 - Glidden: 3030 Bond-Prep Pigmented Bonding Primer
 - PPG: 4-2 PPG PermaCrete 100% Acrylic Masonry Primer
 - S-W: B28 PrepRite 200 Masonry Primer.
 - 2. First and Second Finish Coats: DTM Acrylic Semi-Gloss Enamel.
 - Ben Moore: P29 DTM Acrylic Semi-Gloss (self priming)

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Glidden	4216HP Devflex High Performance WB Acrylic Semi-Gloss Enamel
PPG	90-1210 Pitt-Tech Int/Ext Semi-Gloss DTM Industrial Enamel
S-W:	B66 W200 DTM Acrylic Coating or B31W20 ProClassic Waterborne

C. Gypsum Board Systems with Latex Finish: Satin (egg-shell) finish at walls and flat finish on ceilings except as noted. Provide best commercial Low-VOC formulation with 0 VOC per EPA test method 24.

1. Filler Coat: 0 VOC (per EPS test method 24) Latex Primer

Ben Moore:	N534 Ultra Spec 500 Interior Latex Primer
Glidden	9116-1200 Lifemaster No VOC Interior Primer
PPG	6-4900 Speedhide Zero VOC Interior Latex Primer
S-W:	B28-2600 ProMar 200 Zero VOC Interior Latex Primer

2. First & Second Finish Coats: Interior Low-VOC Acrylic Flat Finish. Provide for ceiling applications unless noted or directed otherwise.

Ben Moore:	N536 Ultra Spec 500 Interior Flat Finish
Glidden	1209 Ultra-Hide No VOC Interior Flat
PPG	6-4100 Speedhide Zero VOC Interior Latex Flat
S-W:	B30-2600 ProMar 200 Zero VOC Interior Latex Flat

END OF SECTION 099100



September 15, 2015

Moseley Architects
11430 N Community House Rd #225
Charlotte, North Carolina 28277

Attention: Mathew McNeeley

Reference: Combined Report of Asbestos Inspection
Sanford Hall - UNCC
Charlotte, North Carolina
S&ME Project Number 1354-13-149

Dear Mr. McNeeley:

As you requested and in general accordance with S&ME Proposal Number 1354-26702A-13 dated July 17, 2013, we have completed the Asbestos Inspection of the referenced building, including the supplemental testing requested by Brian Kugler of UNC Charlotte. Asbestos containing materials were found among the building materials sampled.

BACKGROUND

Moseley Architects is the architect for the upcoming renovation of Sanford Hall at the University of North Carolina at Charlotte (UNCC). Prior to the renovation work, Moseley Architects requested that S&ME provide inspection services for asbestos containing materials (ACM) and lead containing paint (LCP) that may be present inside the building, as well as design specifications for the abatement of asbestos and LCP identified by S&ME prior to interior demolition work at the subject site. This report presents the results of the asbestos inspection of Sanford Hall. The report consist of the initial inspection conducted in 2013 combined with the updated inspection conducted in September of 2015.

PROCEDURE

On July 25, 26 and 29 through August 1, 2013, Jena Abney, Thomas Gardner, and Jimmy Gosnell of S&ME, Inc., conducted an asbestos inspection of the Sanford Hall Dormitory on the UNCC Campus in Charlotte, North Carolina. Ms. Abney, Mr. Gardner, and Mr. Gosnell are accredited by the State of North Carolina as Asbestos Inspectors (North Carolina accreditation numbers 12079, 12408, and 12808, respectively). On September 4, 2015, Tom Gardner and Josh Garrison (NC # 80831) returned to the site for additional testing. The inspection consisted of the following:

1. An initial visual inspection to identify building materials that are suspected to contain asbestos,
2. Collection of representative samples of these materials. The number of samples collected for each material are in accordance with the sampling schedule described in the EPA AHERA rule (40 CFR § 763 .86),
3. Determination of EPA Category as described in the EPA NESHAP rule (40 CFR § 61.141), approximate location, current condition and approximate quantity of the material, and
4. Submission of samples to our NVLAP accredited laboratory for analysis using polarized light microscopy with dispersion staining in accordance with the EPA 600/R-93/116 Method.

RESULTS

Asbestos Containing Materials

The following materials were tested and found to be Asbestos Containing Materials (ACM) as defined under the EPA NESHAP rules because they contain more than 1% asbestos. See the attached S&ME Asbestos Inspection Data Sheets for area descriptions and sample locations.

Table 1, ACM

Area	Description	Location	Quantity	EPA Category	Condition	Asbestos Content
I	Black Mastic	On foil faced duct in crawlspace at rear of basement mechanical room	600 SF	II	PD	3% Chrysotile
L	Multilayered Beige 12"x12" Floor Tiles with Brown Streaks & Yellow & Black Mastics	In basement hall outside elevators	100 SF	I	PD	Tile 1=None Detected, Yellow Mastic=None Detected, Tile 2=3% Chrysotile, Black Mastic=4% Chrysotile
U, 2B & 2C	Texture Material	-Ceilings of dorm rooms, -Dorm common areas, excluding bathrooms -Ceiling and walls of stairwells -Concrete columns throughout -Dorm room window casings	70,000 SF	F	PSD	2% to 3% Chrysotile

Table 1, ACM (Continued)

Area	Description	Location	Quantity	EPA Category	Condition	Asbestos Content
Y	Off White 9"x9" Floor Tile with White Streaks & Black Mastic	Under carpet in dorm rooms & dorm room corridors	25,000 SF	I	PD	Tile=6% Chrysotile, Black Mastic=7% Chrysotile
Z	Mud Joints on Chilled Water & Domestic Water Lines	Storage room in basement next to laundry room housekeeping closet	20 SF	F	PD	<1% to 25% Chrysotile, 1% to 2% Amosite
AB	White Block Insulation	Basement crawlspace on hot water line	60 LF	F	D	25% Chrysotile
AJ & 2D	Caulk	-Around back door entrance -rear window frames -Basement and first floor entrance door frames	900 LF	I	PD	5% Chrysotile
AK	Off White Window Glaze	Window around back & basement window	7000 SF	F	PD	2% Chrysotile
AL	Gray Caulk	Control joint caulking throughout	2 SF	II	PD	3% Chrysotile
2A	CMU block filler	CMU walls throughout building, including first floor behind sheet rock and other concrete surfaces in basement that are encased in sheetrock.	Not Determined	F	PD	2% Chrysotile
2H	White Window Caulk	Exterior of dorm windows	7000 LF	I	PD	2% Chrysotile
2I	Exterior Window Glaze	Dorm room windows throughout	7000 LF	I	PD	2% Chrysotile
2L	Gray Non-pliable Window Glaze	Metal store front windows at rear exit of basement/ground floor	25 LF	II	PD	2% Chrysotile
2M	Gray Window Caulk	First floor store front windows	100 LF	I	PD	5% Chrysotile
IW	Pipe Seam Sealant on Pipe Insulation	Behind walls and above ceilings	Allowance 1500 LF			Assumed
UC	Floor Tile and Mastic	Under Carpet Areas not otherwise specified	Allowance 12,250 LF			Assumed

Non-Asbestos Containing Materials

The following materials were tested and found not to be ACM either because they contained less than or equal to 1% asbestos or no asbestos. Sample results of less than or equal to 1% asbestos were verified by point count analysis.

Table 2, non-ACM

Area	Description	Location
A	Mudded ends/wrap on fiberglass TSI on chill water lines	Chill water lines in basement mechanical room
B	Mudded ends/wrap on fiberglass TSI on hot water return lines	Hot water return lines in basement mechanical room
C	Mudded ends/wrap on fiberglass TSI on hot water supply lines	Hot water supply lines in basement mechanical room
D	Black sticky wrap / cold water supply	In rear corner of basement mechanical room, 11 th floor mechanical room across from 1125
E	Mastic on foam rubber insulation	Various locations throughout basement mechanical room
F	White insulation/wrap Domestic hot water	On overhead line at entrance to basement mechanical room & off chill water return at left side of mechanical room
G	White penetration mastic	Basement mechanical room
H	Red penetration mastic	Basement mechanical room & mechanical rooms throughout
J	Gray mastic	On ductwork in crawlspace at rear of basement mechanical room & various mechanical rooms throughout
K	Black mastic	On floor in various locations throughout basement mechanical room
M	White 2'x2' & 2'x4' ceiling tiles with linear fissures & dense pinholes	In basement 11 th floor dorm halls
N	Carpet mastic yellow & black	Basement in mattress storage room
O	2'x4' white ceiling tiles with sparse pinholes & divots	In basement mattress storage room
P	Drywall and joint compound ¹	1 st floor, basement offices & common areas
Q	Blue cove base with tan adhesive	All areas throughout

¹ Current EPA interpretations allow that wall system components be considered as a single unit. Accordingly, the presence of >1% asbestos in the joint compound does not constitute a finding of asbestos containing material in the walls (under EPA rules) when the content of asbestos in the entire wall, including drywall, is less than 1%. That is the case with this wall system. Under EPA rules, it need not be removed prior to demolition or renovation. However, OSHA rules also apply and anyone who may be exposed to asbestos in the course of work involving this material must be notified and must comply with relevant OSHA rules.

Table 2, non-ACM (Continued)

Area	Description	Location
R	Multilayered white 12"x12" floor tiles with brown streaks & blue flecks & black mastic	In basement laundry room & adjoining hall
S	White 12"x12" floor tile with black specks	Stairwell landings
T	White duct mastic	11 th floor mechanical room
V	Ceiling texture material	Dorm bathrooms
W	Beige mastic /mud on chill water risers	In dorm floor mechanical room
X	Brown duct mastic	In rear left corner of mechanical room across from 515
AA	Black mastic on TSI wrapping & at wall penetrations	On TSI & wall penetrations in housekeeping storage room
AC	Yellow & green carpet mastic	Community room on 1 st floor in front of GA room in basement kitchen area
AD	Heat treated roof on top of bur	Roof
AE	Black mastic	On roof between elevator room & roof flashing
AF	Black caulk	On roof stickups
AG	Flashing	Flashing on roof
AH	White caulk	Around roof exterior
AI	2' x 2' sheetrock ceiling tile	Exterior canopy
2C	Black window caulk	Door windows throughout building
2E	Window caulk (black)	Door windows throughout building
2F	Stair tread	Stairs
2G	Window caulk (white)	Main floor rear exit door windows, front exit door windows, all dorm room windows
2J	Exterior wall paint	Exterior walls throughout
2K	Beige pliable caulk	Ground level/basement, elevator lobby entry/exterior side
Pilot A	Soffit Surfacing	Dorm Rooms

A more detailed description of the results of the inspection may be found in the attached Asbestos Survey Data Sheets.

DISCUSSION

In accordance with EPA definitions, a material found to contain greater than 1% asbestos is considered to be an asbestos containing material (ACM). Asbestos containing

materials may be further considered to be regulated (RACM) under the EPA NESHAP standard or not regulated.² The following materials are defined as RACM under the rule:

- Friable ACM,
- Category I non-friable ACM that has become friable,
- Category I non-friable ACM that has been subjected to sanding, grinding, cutting or abrading - including use of mechanical buffers and solvents to remove flooring mastic or;
- Category II non-friable ACM that has a high probability of becoming or has become pulverized or reduced to powder by the forces expected to at on the material in the course of demolition or renovation operations.

CONCLUSION

The following identified ACM are considered to be RACM:

Table 3, RACM

Area	Description	Location
I	Black Mastic	On Foil Faced Duct in Crawlspace at Rear of Basement Mechanical Room
U, 2B & 2C	Texture Material	-Ceilings of Dorm Rooms, -Dorm Common Areas, Excluding Bathrooms -Ceiling and Walls of Stairwells -Concrete Columns Throughout -Dorm room window casings
Z	Mud Joints on Chilled Water & Domestic Water Lines	Storage Room in Basement Next to Laundry Room Housekeeping Closet
AB	White Block Insulation	Basement Crawlspace on Hot Water Line
AK	Off White Window Glaze	-Window Around Back, -Basement Window,
AL	Gray Caulk	Control Joint Caulking Throughout
2A	CMU block filler	CMU walls throughout building, including first floor behind sheet rock and other concrete surfaces in basement that are encased in sheet rock.
2L	Gray non-pliable window glaze	Metal store front windows at rear exit of basement/ground floor
IW	Pipe Seam Sealant on Pipe Insulation	Behind walls and above ceilings, (presumed based upon findings from Holshouser Hall))
UC	Floor Tile and Mastic	Under Carpet Areas not otherwise specified, (presumed based upon findings from Holshouser Hall))

The following identified ACM are considered to be Non-RACM:

² This is an EPA designation and does not apply to issues concerning compliance with worker health and safety (OSHA) rules. Any disturbance of material that contains asbestos in any quantity must be conducted in compliance with OSHA regulations.

Table 4, Non-RACM

Area	Description	Location
AJ & 2D	Off White Caulk	-Around back door entrance -Rear window frames -Basement and first Floor entrance door frames
L	Multilayered Beige 12"x12" Floor Tiles with Brown Streaks & Yellow & Black Mastics	In Basement Hall Outside Elevators
Y	Off White 9"x9" Floor Tile with White Streaks & Black Mastic	On Carpet Squares in Dorm Rooms & Dorm Room Corridors
2H	White Window Caulk	Exterior of Dorm Windows
2I	Exterior Window Glaze	Dorm room windows throughout
2M	Gray Window Caulk	First floor store front windows

A non-RACM may become regulated if any of the conditions described in the previous Discussion section should occur.

RECOMMENDATIONS

All RACM in quantities equal to or greater than NESHAP reportable quantities³ must be removed in accordance with Federal, State and local regulations prior to any demolition or renovation where it may be disturbed. We recommend that the non-RACM asbestos be likewise removed.

Asbestos containing material that is damaged, or not intact, as identified in the "Asbestos Survey Data Sheets" should be repaired or rendered "intact" in order to reduce the risk of asbestos exposure to unprotected personnel.

All work involving asbestos should be conducted by properly trained and credentialed personnel in full compliance with applicable environmental, health and safety regulations.

LIMITATIONS

As is the case with any asbestos inspection, materials that were not readily apparent or were located in concealed locations may not have been identified. If any material that is suspected to contain asbestos, and was not included in this report as a material identified and tested, is discovered, it should be evaluated for asbestos content before it is disturbed.

Although Polarized Light Microscopy (PLM)/Dispersion Staining (Method EPA 600/R-93/116) is the specified method for analysis of bulk material samples for asbestos under the EPA Asbestos Hazard Emergency Response Act, there have been reports that this method may not identify asbestos when fiber sizes are extremely small or if they are bound in a resinous material. EPA recommends analyzing such materials (floor tiles,

³ Reportable quantities are 160 square feet, 260 linear feet or 35 cubic feet

mastics and Asphaltic roofing) using Transmission Electron Microscopy (TEM) when PLM analysis does not detect asbestos in quantities greater than 1%. Current EPA regulations do not require this additional analysis and the decision to do so is left to the client.

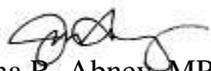
This report is not intended for use as an asbestos removal specification. It is not within the scope of this work to describe all appropriate precautions, safeguards and regulations relating to asbestos. Prior to removal of asbestos, we recommend that an appropriately qualified and credentialed asbestos designer develop a removal plan.

SOLE USE STATEMENT

This report is provided for the sole use of Moseley Architects. Reliance on this report by any third parties will be at such party's sole risk, and S&ME disclaims liability for any use of or reliance on this report by third parties. All portions of this report, including attachments and figures, are interrelated and integral to this report and should not be transmitted independent of each other.

If you have any questions, do not hesitate to call,

Sincerely,
S&ME, Inc.,


Jena R. Abney, MPH
Project Industrial Hygienist


C. Mike Cashio, Jr., CIH
Principal Industrial Hygienist

JRA/jra: CMC

Attachments: Asbestos Survey Data Sheets
Asbestos Analysis Summary



ASBESTOS INSPECTION DATA SHEET

Project Number: 1354-13-149

Date of Inspection: 7/25-7/26/13 &
7/29-8/1/13

Inspector: Jena Abney

Accreditation No: 12079

Project Name: Sanford Hall - UNCC

Assistant(s): Thomas Gardner

Description of Structure(s) Inspected: 13-Story Dormitory Building with Basement & Flat, Built-up Roofing System

HOMOGENEOUS AREA:

SAMPLE DATA:

Area ID	Area Description	Area Location	Approx Size (SF or LF)	Cat ¹ (F/I/II)	Condition ² (PD/PSD/D/SD)	Sample Number	Sample Location	Asbestos Content
A	Mudded Ends/Wrap on Fiberglass TSI on Chill Water Lines	Chill Water Lines in Basement Mechanical Room	280 LF	F	PD	A1	Basement Mechanical Room, Chill Water Return, Center of Room	None Detected
						A2	Basement Mechanical Room, Chill Water Supply, Center of Room	None Detected
						A3	Basement Mechanical Room, Chill Water Return, Behind Condenser	None Detected
B	Mudded Ends/Wrap on Fiberglass TSI on Hot Water Return Lines	Hot Water Return Lines in Basement Mechanical Room	110 LF	F	PD	B1	At Hot Water Tank	None Detected
						B2	Upper Boiler	None Detected
						B3	Lower Boiler	None Detected
C	Mudded Ends/Wrap on Fiberglass TSI on Hot Water Supply Lines	Hot Water Supply Lines in Basement Mechanical Room	110 LF	F	PD	C1	Near Hot Water Tank	None Detected
						C2	Near Boilers	None Detected
						C3	Near Boilers	None Detected

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²Condition: PD=Potential for Damage; PSD=Potential for Significant Damage; D=Damaged; SD=Significantly Damaged


 Inspector Signature



ASBESTOS INSPECTION DATA SHEET

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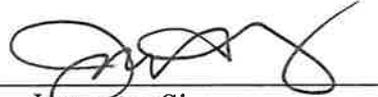
HOMOGENEOUS AREA:

SAMPLE DATA:

Area ID	Area Description	Area Location	Approx Size (SF or LF)	Cat ¹ (F/I/I I)	Condition ² (PD/PSD/D/SD)	Sample Number	Sample Location	Asbestos Content
D	Black Sticky Wrap on Cold Water Supply	In Rear Corner of Basement Mechanical Room, 11 th Floor Mechanical Room across from 1125	10 SF	II	PD	D1	Room 1045 on Chill Water Return Valve	None Detected
						D2	Basement Mechanical Room Chill Water Return	None Detected
E	Mastic on Foam Rubber Insulation	Various Locations throughout Basement Mechanical Room	150 SF	II	PD	E1	Basement Mechanical Room Chill Water Supply	None Detected
						E2	Basement Mechanical Room Hot Water Return	None Detected
F	White Insulation/Wrap Domestic Hot Water	On Overhead Line At Entrance to Basement Mechanical Room & Off Chill Water Return at Left Side of Mechanical Room	30 LF	F	PD	F1 F2 F3	Above Mechanical Room Entry Above Mechanical Room Entry Above Condenser	None Detected None Detected None Detected
G	White Penetration Mastic	Basement Mechanical Room	1 SF	II	PD	G1	Basement Mechanical Room at Entry to Crawlspace	None Detected
						G2	Basement Mechanical Room at Entry to Crawlspace	None Detected
H	Red Penetration Mastic	Basement Mechanical Room & Mechanical Rooms Throughout	20 SF	II	PD	H1	11 th Floor Mechanical Room 1140	None Detected
						H2	Basement Mechanical Room at Crawlspace Entry	None Detected

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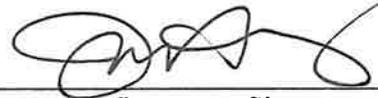
HOMOGENEOUS AREA:

SAMPLE DATA:

Area ID	Area Description	Area Location	Approx Size (SF or LF)	Cat ¹ (F/I/I I)	Condition ² (PD/PSD/D/SD)	Sample Number	Sample Location	Asbestos Content
I	Black Mastic	On Foil Faced Duct in Crawlspace at Rear of Basement Mechanical Room	600 SF	II	PD	I1	HVAC Wrap in Basement Crawlspace	3% Chrysotile
						I2	HVAC Wrap in Basement Crawlspace	3% Chrysotile
J	Gray Mastic	On Ductwork in Crawlspace at Rear of Basement Mechanical Room & Various Mechanical Rooms Throughout	50 SF	II	PD	J1	Basement Mechanical Room	None Detected
						J2	Mechanical Room 1145	None Detected
K	Black Mastic	On Floor in Various Locations throughout Basement Mechanical Room	10 SF	II	PD	K1	Basement Mechanical Room Near Center Column	None Detected
						K2	Basement Mechanical Room Near AHU-6	None Detected
L	Multilayered Beige 12"x12" Floor Tiles with Brown Streaks & Yellow & Black Mastics	In Basement Hall Outside Elevators	100 SF	I	PD	L1	Basement Level at House Keeping Closet	Tile 1=None Detected, Yellow Mastic=None Detected, Tile 2=3% Chrysotile, Black Mastic=4% Chrysotile
						L2	At Entry to Laundry Room	Tile 1=None Detected, Yellow Mastic=None Detected, Tile 2=3% Chrysotile, Black Mastic=4% Chrysotile

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Assistant(s): Thomas Gardner

Description of Structure(s) Inspected: 13-Story Dormitory Building with Basement & Flat, Built-up Roofing System

HOMOGENEOUS AREA:

SAMPLE DATA:

Area ID	Area Description	Area Location	Approx Size (SF or LF)	Cat ¹ (F/I/II)	Condition ² (PD/PSD/D/SD)	Sample Number	Sample Location	Asbestos Content
M	White 2'x2' & 2'x4' Ceiling Tiles with Linear Fissures & Dense Pinholes	In Basement 11 th Floor Dorm Halls	16,000 SF	F	PD	M1 M2	Basement Level in Lounge Area 10 th Floor Common Area At 1020-1025 Entry	None Detected None Detected
N	Carpet Mastic Yellow & Black	Basement in Mattress Storage Room	750 SF	I	PD	N1 N2	Basement in Mattress Storage Room Basement in Mattress Storage Room	None Detected None Detected
O	2'x4' White Ceiling Tiles with Sparse Pinholes & Divots	In Basement Mattress Storage Room	72 SF	F	PD	O1 O2	Basement Level Mattress Storage Area Basement Level Mattress Storage Area	None Detected None Detected

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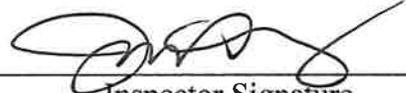
HOMOGENEOUS AREA:

SAMPLE DATA:

Area ID	Area Description	Area Location	Approx Size (SF or LF)	Cat ¹ (F/I/II)	Condition ² (PD/PSD/D/SD)	Sample Number	Sample Location	Asbestos Content
P	Drywall and Joint Compound	1 st Floor, Basement Offices & Common Areas	14,000 SF	F	PD	P1	Seam in Entrance on 1 st Floor	Drywall=None Detected, Joint Compound=2% Chrysotile, Composite=<1% Chrysotile
						P2	Seam in Security Room	Drywall=None Detected, Joint Compound=2% Chrysotile, Composite=<1% Chrysotile
						P3	Seam in 1 st Floor Common Area	Drywall=None Detected, Joint Compound=None Detected
						P4	Seam on 1 st Floor Next to Bathroom	Drywall=None Detected, Joint Compound=None Detected
						P5	Area on 1 st Floor Across GA Office	Drywall=None Detected, Joint Compound=None Detected

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HOMOGENEOUS AREA:

SAMPLE DATA:

Area ID	Area Description	Area Location	Approx Size (SF or LF)	Cat ¹ (F/I/II)	Condition ² (PD/PSD/D/SD)	Sample Number	Sample Location	Asbestos Content
P (continued)	Drywall and Joint Compound (continued)					P6	Seam in Basement at Entrance to Kitchen	Drywall=None Detected, Joint Compound=None Detected Drywall (only)=None Detected
						P7	Area in Laundry Room	
Q	Blue Cove Base with Tan Adhesive	All Areas Throughout	5,000 LF	I	PD	Q1 Q2	10 th Floor Meeting Room 2 nd Floor Near Room 208	None Detected None Detected
R	Multilayered White 12"x12" Floor Tiles with Brown Streaks & Blue Flecks & Black Mastic	In Basement Laundry Room & Adjoining Hall	640 SF	I	PD	R1	Laundry Room At Storage Room Entry	Tile 1=None Detected, Yellow Mastic=None Detected, Black Mastic=None Detected Tile 1=None Detected, Yellow Mastic=None Detected, Black Mastic=None Detected
						R2	Laundry Room Near Sink	

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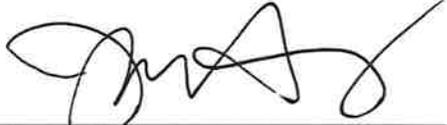
HOMOGENEOUS AREA:

SAMPLE DATA:

Area ID	Area Description	Area Location	Approx Size (SF or LF)	Cat ¹ (F/I/I I)	Condition ² (PD/PSD/D/SD)	Sample Number	Sample Location	Asbestos Content
S	White 12"x12" Floor Tile with Black Specks	Stairwell Landings	700 SF	I	PD	S1	7 th Floor Entrance	Tile=None Detected, Yellow Mastic=None Detected
						S2	Landing between 1 st & 2 nd Floors	
T	White Duct Mastic	11 th Floor Mechanical Room	1 SF	II	PD	T1	Mechanical Room 1145 Across from 1125	None Detected
						T2	Mechanical Room 1140	None Detected
U	Ceiling Texture Material	In Dorm Rooms & Dorm Common Areas Excluding Bathrooms	50,000 SF	F	PSD	U1 U2 U3 U4 U5 U6 U7	10 th Floor Common Area 9 th Floor Room 916 7 th Floor Common Area 2 nd Floor Common Area 3 rd Floor Common Area 2 nd Floor Seminar Room 6 th Floor Seminar Room	2% Chrysotile 2% Chrysotile 3% Chrysotile 3% Chrysotile 3% Chrysotile 3% Chrysotile 2% Chrysotile

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HOMOGENEOUS AREA:

SAMPLE DATA:

Area ID	Area Description	Area Location	Approx Size (SF or LF)	Cat ¹ (F/I/II)	Condition ² (PD/PSD/D/SD)	Sample Number	Sample Location	Asbestos Content
V	Ceiling Texture Material	Dorm Bathrooms	4,000 SF	F	PSD	V1	11 th Floor Restroom Room 1155	None Detected
						V2	9 th Floor Restroom Room 941	None Detected
						V3	7 th Floor Restroom Room 741	None Detected
						V4	5 th Floor Restroom Across from Room 504	None Detected
						V5	Restroom 3 rd Floor Access from Room 308	None Detected
						V6	Restroom 2 nd Floor Across from Room 208	None Detected
						V7	Restroom 3 rd Floor Across from Room 204	None Detected
W	Beige Mastic /Mud on Chill Water Risers	In Dorm Floor Mechanical Room	2 SF	F	PD	W1	Mechanical Room Across from 825	None Detected
						W2	Mechanical Room Across From 725	None Detected

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HOMOGENEOUS AREA:

SAMPLE DATA:

Area ID	Area Description	Area Location	Approx Size (SF or LF)	Cat ¹ (F/I/II)	Condition ² (PD/PSD/D/SD)	Sample Number	Sample Location	Asbestos Content
X	Brown Duct Mastic	In Rear Left Corner of Mechanical Room Across from 515	5 SF	II	PD	X1	Mechanical Room Across from Room 515	None Detected
						X2	Mechanical Room Across from Room 515	None Detected
Y	Off White 9"x9" Floor Tile with White Streaks & Black Mastic	On Carpet Squares in Dorm Rooms & Dorm Room Corridors	25,000 SF	I	PD	Y1	11 th Floor Room 1104	Tile=6% Chrysotile, Black Mastic=7% Chrysotile
						Y2	9 th Floor Room 916	Tile=6% Chrysotile, Black Mastic=7% Chrysotile
Z	Mud Joints on Chilled Water & Domestic Water Lines	Storage Room in Basement Next to Laundry Room Housekeeping Closet	20 SF	F	PD	Z1	3" Line At Door Entrance	2% Amosite, <1% Chrysotile
						Z2	6" Line At Chilled Water Return	2% Amosite
						Z3	6" Line in Crawlspace	25% Chrysotile, 1% Amosite
AA	Black Mastic on TSI Wrapping & at Wall Penetrations	On TSI & Wall Penetrations in House Keeping Storage Room	5 SF	II	PD	AA1 AA2	Chilled Water Return Wall At Chilled Water Return	None Detected None Detected
AB	White Block Insulation	Basement Crawlspace on Hot Water Line	60 LF	F	D	AB1 AB2 AB3	Basement Crawlspace Basement Crawlspace Basement Crawlspace	25% Chrysotile 25% Chrysotile 25% Chrysotile
AC	Yellow & Green Carpet Mastic	Community Room on 1 st Floor in Front of GA Room in Basement Kitchen Area	1,950 SF		PD	AC1	1 st Floor Community Room	None Detected
						AC2	1 st Floor in Front of office	None Detected

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HOMOGENEOUS AREA:

SAMPLE DATA:

Area ID	Area Description	Area Location	Approx Size (SF or LF)	Cat ¹ (F/I/I I)	Condition ² (PD/PSD/D/SD)	Sample Number	Sample Location	Asbestos Content
AD	Heat Treated Roof on Top of BUR	Roof	10,000 SF	F	PD	AD1 AD2	Left Side Right Side	None Detected None Detected
AE	Black Mastic	On Roof between Elevator Room & Roof Flashing	8 SF	F	PD	AE1 AE2	Around Elevator Room Around Elevator Room	None Detected None Detected
AF	Black Caulk	On Roof Stickups	8 SF	II	PD	AF1 AF2	Front of Building Stickup Back of Building Stickup	None Detected None Detected
AG	Flashing	Flashing on Roof	400 LF	II	PD	AG1 AG2	Left Side Right Side	None Detected None Detected
AH	White Caulk	Around Roof Exterior	<1 LF	II	PD	AH1 AH2	Left Side Right Side	None Detected None Detected
AI	2' x 2' Sheetrock Ceiling Tile	Exterior Canopy	900 SF	F	PD	AI1 AI2	On Left Side Front Entrance	None Detected None Detected
AJ	Off White Caulk	Around Back Door Entrance & Rear Window Frames Basement Door Frames	<1 LF	II	PD	AJ1 AJ2	Back Door Frame Back Door Frame	5% Chrysotile 5% Chrysotile
AK	Off White Window Glaze	Window Around Back & Basement Window	2 SF	F	PD	AK1 AK2	Back Entrance Windows Back Entrance Windows	2% Chrysotile 2% Chrysotile
AL	Gray Caulk	Control Joint Caulking Throughout	<2 LF	II	PD	AL1 AL2	Left Side of Walkway Front Entrance Walkway	3% Chrysotile 3% Chrysotile

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 Inspector Signature



ASBESTOS INSPECTION DATA SHEET

Project Number: 1354-13-149

Date of Inspection: 9/4/15

Inspector: T Gardner/J Garrison

Project Name: UNCC Sanford Hall

Accreditation No:

Assistant(s):

Description of Structure(s) Inspected: Sanford Hall, 11 Story dormitory with basement

HOMOGENEOUS AREA:

SAMPLE DATA:

Area ID	Area Description	Area Location	Approx Size (SF or LF)	Cat ¹ (F/I/II)	Condition ²	Sample Number	Sample Location	Asbestos Content
2A	CMU block filler	CMU walls throughout bldg., material also encased in sheet rock on ground floor level	Not Determined	F	PD	A-1	Ground level kitchen area	2% Chrysotile
						A-2	Ground level lobby/storage right of exit	2% Chrysotile
						A-3	Ground level near entry to elevator lobby	2% Chrysotile
						A-4	Room 216 right of entry	2% Chrysotile
						A-5	Room 405 right of entry	2% Chrysotile
						A-6	Room 619 right side wall	2% Chrysotile
						A-7	7 th floor stairwell	2% Chrysotile
						A-8	8 th floor center common area	2% Chrysotile
						A-9	Room 916 right of entry	2% Chrysotile
						A-10	Room 1004 right of entry	2% Chrysotile

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²Condition: PD=Good, with potential for damage

Inspector Signature



ASBESTOS INSPECTION DATA SHEET

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Project Name: UNCC Sanford Hall

Accreditation No:

Assistant(s):

Description of Structure(s) Inspected: Sanford Hall, 11 Story dormitory with basement

HOMOGENEOUS AREA:

SAMPLE DATA:

Area ID	Area Description	Area Location	Approx Size (SF or LF)	Cat ¹ (F/I/II)	Condition ²	Sample Number	Sample Location	Asbestos Content
2B	Textured paint	Ceiling and walls throughout stairwell	11,000 SF	F	PD	B-1	Ground level stairwell wall	2% Chrysotile
						B-2	2 nd floor stairwell bottom of upper stairs	None Detected
						B-3	4 th floor stairwell	2% Chrysotile
						B-4	5 th floor stairwell	None Detected
						B-5	7 th floor stairwell	<1% Chrysotile
						B-6	8 th floor stairwell	None Detected
						B-7	9 th floor stairwell	None Detected

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Inspector Signature



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SAMPLE DATA:

Area ID	Area Description	Area Location	Approx Size (SF or LF)	Cat ¹ (F/I/II)	Condition ²	Sample Number	Sample Location	Asbestos Content
2C	Textured paint	Concrete columns throughout building Dorm room window casings, material also encased in sheet rock on ground floor level	10,000 SF	F	PD	C-1	Ground/basement lobby center column	<1% Chrysotile
						C-2	Main level common activity area corner column	None Detected
						C-3	Room 216 right of entry	<1% Chrysotile
						C-4	Room 405 right of entry	2% Chrysotile
						C-5	Room 619 right of entry	2% Chrysotile
						C-6	8 th floor enter common area	2% Chrysotile
						C-7	Room 916 right of entry	2% Chrysotile
2D	Basement and first floor entrance door frames	Basement and first floor entrance door frames	800 LF	I	PD	D-1	Lobby entrance/exit door	5% Chrysotile
						D-2	Main entrance/exit door	5% Chrysotile
2E	Window caulk (black)	Door windows throughout building	300 LF	I	PD	E-1	Main entrance door/windows	None Detected
						E-2	2 nd floor stairwell door/windows	None Detected

¹Category: F=Friable; I=Category I, Non-Friable; II=Category II, Non-Friable

²Condition: PD=Good, with potential for damage

Inspector Signature



ASBESTOS INSPECTION DATA SHEET

Project Number: 1354-13-149

Date of Inspection: 9/4/15

Inspector: T Gardner/J Garrison

Project Name: UNCC Sanford Hall

Accreditation No:

Assistant(s):

Description of Structure(s) Inspected: Sanford Hall, 11 Story dormitory with basement

HOMOGENEOUS AREA:

SAMPLE DATA:

Area ID	Area Description	Area Location	Approx Size (SF or LF)	Cat ¹ (F/I/II)	Condition ²	Sample Number	Sample Location	Asbestos Content
2F	Stair tread	On stairs throughout building	1,100 SF	I	Fair Low	F-1	G-floor stairwell	Tread=None Detected Mastic= None Detected
						F-2	4 th floor stairwell	Tread=None Detected Mastic= None Detected
2G	Window caulk (white)	Main floor rear exit door/windows, front exit door/windows, all Dorm Room windows	7,000 LF	I	Fair	G-1	2 nd floor room 210 left window	None Detected
						G-2	Front entrance windows around door/main floor	None Detected
2H	Exterior window caulk (white)	Dorm windows throughout	7,000 LF	I	Fair	H-1	Room 510	2% Chrysotile
						H-2	Room 810	2% Chrysotile
2I	Exterior window glaze (white)	Dorm windows throughout	7,000 LF	I	Fair	I-1	Room 510	2% Chrysotile
						I-2	Room 810	2% Chrysotile

¹Category: F=Friable; I=Category I, Non-Friable; II=Category II, Non-Friable

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Inspector Signature



ASBESTOS INSPECTION DATA SHEET

Project Number: 1354-13-149

Date of Inspection: 9/4/15

Inspector: T Gardner/J Garrison

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Accreditation No:

Assistant(s):

Description of Structure(s) Inspected: Sanford Hall, 11 Story dormitory with basement

HOMOGENEOUS AREA:

SAMPLE DATA:

Area ID	Area Description	Area Location	Approx Size (SF or LF)	Cat ¹ (F/I/II)	Condition ²	Sample Number	Sample Location	Asbestos Content
2J	Beige paint	Exterior walls throughout	50,000 SF	F	PD	J-1	Rear exit	None Detected
						J-2	Mechanical Room entry	None Detected
						J-3	Left rear corner of bldg	None Detected
						J-4	Right rear corner of bldg	None Detected
						J-5	Right/center	None Detected
						J-6	Front corner at rec rm	None Detected
						J-7	Front corner at rec rm	None Detected
2K	Beige pliable caulk	Ground level/basement elevator lobby entry/exterior side	30 LF	I	PD	K-1	At elevator lobby entry ground level	None Detected
						K-2	At elevator lobby entry ground level	None Detected
2L	Gray non-pliable glaze	Metal storefront windows rear exits of ground floor	25 LF	II	PD	L-1	At lobby entry to ground lot	2% Chrysotile
						L-2	At lobby entry to ground lot	2% Chrysotile

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Inspector Signature



ASBESTOS INSPECTION DATA SHEET

Project Number: 1354-13-149

Date of Inspection: 9/4/15

Inspector: T Gardner/J Garrison

Project Name: UNCC Sanford Hall

Accreditation No:

Assistant(s):

Description of Structure(s) Inspected: Sanford Hall, 11 Story dormitory with basement

HOMOGENEOUS AREA:

SAMPLE DATA:

Area ID	Area Description	Area Location	Approx Size (SF or LF)	Cat ¹ (F/I/II)	Condition ²	Sample Number	Sample Location	Asbestos Content
2M	Gray pliable caulk	1 st floor store front windows	100 LF	I	PD	M-1	1 st floor common area/rec room	5% Chrysotile
						M-2	1 st floor near left front corner	5% Chrysotile

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²Condition: PD=Good, with potential for damage

Inspector Signature



ASBESTOS INSPECTION DATA SHEET

Project Number: 1354-13-149

Date of Inspection: 7/15/15

Inspector: J Garrison

Project Name: UNCC Sanford Hall

Accreditation No: 12922

Assistant(s):

Description of Structure(s) Inspected: Sanford Hall Room 1010

HOMOGENEOUS AREA:

SAMPLE DATA:

Area ID	Area Description	Area Location	Approx Size (SF or LF)	Cat ¹ (F/I/II)	Condition ²	Sample Number	Sample Location	Asbestos Content
Pilot A	Soffit Ceiling Surfacing in dormitory rooms	All dormitory rooms	Not determined	II	6	A1	Room 1010 Left	<1% Chrysotile
						A2	Room 1010 Center	<1% Chrysotile
						A3	Room 1010 Right	<1% Chrysotile

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²Condition: PD=Good, with potential for damage

Inspector Signature



9711 Southern Pine Boulevard
 Charlotte, NC 28273
 704-940-1830 Fax 704-565-4929
 NVLAP Lab Code 102075-0

POLARIZED LIGHT MICROSCOPY

Performed by EPA 600/R-93/116 Method

Asbestos Analysis Summary

Client Name Charlotte Branch
Client Job UNCC Sanford Hall

9751 Southern Pine Blvd.
 Charlotte NC 28273

Date Received 7/30/2013

Date Analyzed 8/1/2013

Job Number 1354-13-149

Lab ID:	Sample #:	Appearance	Comments	Asbestos %/Type	Non-Asbestos Fibrous %/Type	Non-Fibrous %/Type
13-7346	A1	BLUE/TAN FIBROUS		ND	95 CELLULOSE	5 OTHER
13-7347	A2	BLUE/TAN FIBROUS		ND	95 CELLULOSE <1 GLASS	5 OTHER
13-7348	A3	BLUE/TAN FIBROUS		ND	95 CELLULOSE <1 GLASS	5 OTHER
13-7349A	B1	ORANGE FIBROUS	WRAP	ND	97 CELLULOSE	3 OTHER

Analyzed by: 
 Additional Comments:


 Jane Wasilewski
 Laboratory Manager

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<i>Lab ID:</i>	<i>Sample #:</i>	<i>Appearance</i>	<i>Comments</i>	<i>Asbestos %/Type</i>	<i>Non-Asbestos Fibrous %/Type</i>	<i>Non-Fibrous %/Type</i>
13-7349B	B1	YELLOW FIBROUS	INSULATION	ND	100 FIBERGLASS	
13-7350A	B2	ORANGE FIBROUS	WRAP	ND	97 CELLULOSE <1 GLASS	3 OTHER
13-7350B	B2	YELLOW FIBROUS	INSULATION	ND	100 FIBERGLASS	
13-7351	B3	ORANGE FIBROUS	WRAP (ONLY)	ND	97 CELLULOSE <1 GLASS	3 OTHER
13-7352	C1	ORANGE FIBROUS	WRAP (ONLY)	ND	90 CELLULOSE <1 GLASS	10 OTHER
13-7353	C2	ORANGE FIBROUS	WRAP (ONLY)	ND	75 CELLULOSE <1 GLASS	25 OTHER

Analyzed by: Jane Wasilewski

Additional Comments:

Jane Wasilewski
Laboratory Manager

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<i>Lab ID:</i>	<i>Sample #:</i>	<i>Appearance</i>	<i>Comments</i>	<i>Asbestos %/Type</i>	<i>Non-Asbestos Fibrous %/Type</i>	<i>Non-Fibrous %/Type</i>
13-7354	C3	ORANGE FIBROUS	WRAP (ONLY)	ND	80 CELLULOSE <1 GLASS	20 OTHER
13-7355	D1	BLACK STICKY		ND	6 CELLULOSE	94 OTHER
13-7356	D2	BLACK STICKY		ND	6 CELLULOSE	94 OTHER
13-7357	E1	BLACK SPONGY		ND		100 FOAM
13-7358	E2	BLACK SPONGY		ND		100 FOAM
13-7359	F1	GREY/SILVER FIBROUS		ND	85 CELLULOSE 5 GLASS	10 OTHER


 Analyzed by: Jane Wasilewski
 Additional Comments:


 Jane Wasilewski
 Laboratory Manager

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<i>Lab ID:</i>	<i>Sample #:</i>	<i>Appearance</i>	<i>Comments</i>	<i>Asbestos %/Type</i>	<i>Non-Asbestos Fibrous %/Type</i>	<i>Non-Fibrous %/Type</i>
13-7360	F2	GREY/SILVER FIBROUS		ND	85 CELLULOSE 5 GLASS	10 OTHER
13-7361	F3	GREY/SILVER FIBROUS		ND	85 CELLULOSE 5 GLASS	10 OTHER
13-7362	G1	BEIGE PLIABLE		ND	<1 GLASS	100 OTHER
13-7363	G2	BEIGE PLIABLE		ND		100 OTHER
13-7364	H1	RED FIBROUS		ND	2 GLASS	98 OTHER
13-7365	H2	RED FIBROUS		ND	2 GLASS	98 OTHER

Analyzed by: Jane Wasilewski

Additional Comments:

Jane Wasilewski
Laboratory Manager

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Lab ID:	Sample #:	Appearance	Comments	Asbestos %/Type	Non-Asbestos Fibrous %/Type	Non-Fibrous %/Type
13-7366A	I1	BLACK/SILVER FIBROUS	WRAP	3 CHRYSOTILE		97 OTHER
13-7366B	I1	YELLOW FIBROUS	INSULATION	ND	100 FIBERGLASS	
13-7367	I2	BLACK/SILVER FIBROUS	WRAP (ONLY)	3 CHRYSOTILE		97 OTHER
13-7368	J1	GREY PLIABLE		ND	2 CELLULOSE	98 OTHER
13-7369	J2	GREY PLIABLE		ND	2 CELLULOSE	98 OTHER
13-7370	K1	BLACK NONFIBROUS		ND		100 OTHER

Analyzed by: Jane Wasilewski

Additional Comments:

Jane Wasilewski
Laboratory Manager

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Lab ID:	Sample #:	Appearance	Comments	Asbestos %/Type	Non-Asbestos Fibrous %/Type	Non-Fibrous %/Type
13-7371	K2	BLACK NONFIBROUS		ND		100 OTHER
13-7372A	L1	BEIGE NONFIBROUS	TILE 1	ND		100 OTHER
13-7372B	L1	YELLOW NONFIBROUS	MASTIC 1	ND		100 OTHER
13-7372C	L1	GREY NONFIBROUS	TILE 2	3 CHRYSOTILE		97 OTHER
13-7372D	L1	BLACK FIBROUS	MASTIC 2	4 CHRYSOTILE		96 OTHER
13-7373A	L2	BEIGE NONFIBROUS	TILE 1	ND		100 OTHER


 Analyzed by: Jane Wasilewski
 Additional Comments:


 Jane Wasilewski
 Laboratory Manager

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Lab ID:	Sample #:	Appearance	Comments	Asbestos %/Type	Non-Asbestos Fibrous %/Type	Non-Fibrous %/Type
13-7373B	L2	YELLOW NONFIBROUS	MASTIC 1	ND		100 OTHER
13-7373C	L2	GREY NONFIBROUS	TILE 2	3 CHRYSOTILE		97 OTHER
13-7373D	L2	BLACK FIBROUS	MASTIC 2	4 CHRYSOTILE		96 OTHER
13-7374	M1	GREY FIBROUS		ND	65 CELLULOSE 2 MINERAL WOOL	33 PERLITE
13-7375	M2	GREY FIBROUS		ND	65 CELLULOSE 2 MINERAL WOOL	33 PERLITE
13-7376	N1	YELLOW NONFIBROUS		ND		100 OTHER

Analyzed by: Jane Wasilewski

Additional Comments:

Jane Wasilewski
Laboratory Manager

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Lab ID:	Sample #:	Appearance	Comments	Asbestos %/Type	Non-Asbestos Fibrous %/Type	Non-Fibrous %/Type
13-7377	N2	YELLOW NONFIBROUS		ND		100 OTHER
13-7378	O1	GREY FIBROUS		ND	45 MINERAL WOOL 30 CELLULOSE	25 PERLITE
13-7379	O2	GREY FIBROUS		ND	45 MINERAL WOOL 30 CELLULOSE	25 PERLITE
13-7380A	P1	TAN/BEIGE FIBROUS	SHEETROCK	ND	5 CELLULOSE 2 GLASS	93 GYPSUM
13-7380B	P1	TAN NONFIBROUS	JT COMPOUND	2 CHRYSOTILE		98 OTHER
13-7380C	P1	TAN/BEIGE FIBROUS	COMPOSITE	<1 CHRYSOTILE	5 CELLULOSE 2 GLASS	93 GYPSUM <1 OTHER

Analyzed by: Jane Wasilewski

Additional Comments:

Jane Wasilewski
Laboratory Manager

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Lab ID:	Sample #:	Appearance	Comments	Asbestos %/Type	Non-Asbestos Fibrous %/Type	Non-Fibrous %/Type
13-7381A	P2	TAN/BEIGE FIBROUS	SHEETROCK	ND	10 CELLULOSE 2 GLASS	88 GYPSUM
13-7381B	P2	TAN NONFIBROUS	JT COMPOUND	2 CHRYSOTILE		98 OTHER
13-7381C	P2	TAN/BEIGE FIBROUS	COMPOSITE	<1 CHRYSOTILE	10 CELLULOSE 2 GLASS	88 GYPSUM
13-7382A	P3	TAN/BEIGE FIBROUS	SHEETROCK	ND	10 CELLULOSE 2 GLASS	88 GYPSUM
13-7382B	P3	WHITE NONFIBROUS	JT COMPOUND	ND		100 OTHER
13-7383A	P4	TAN/BEIGE FIBROUS	SHEETROCK	ND	5 CELLULOSE	95 GYPSUM

Analyzed by: Jane Wasilewski

Additional Comments:

Jane Wasilewski
Laboratory Manager

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<i>Lab ID:</i>	<i>Sample #:</i>	<i>Appearance</i>	<i>Comments</i>	<i>Asbestos %/Type</i>	<i>Non-Asbestos Fibrous %/Type</i>	<i>Non-Fibrous %/Type</i>
13-7383B	P4	WHITE NONFIBROUS	JT COMPOUND	ND		100 OTHER
13-7384A	P5	TAN/BEIGE FIBROUS	SHEETROCK	ND	90 CELLULOSE	10 GYPSUM
13-7384B	P5	WHITE NONFIBROUS	JT COMPOUND	ND		100 OTHER
13-7385A	P6	TAN/BEIGE FIBROUS	SHEETROCK	ND	98 CELLULOSE	2 GYPSUM
13-7385B	P6	WHITE NONFIBROUS	JT COMPOUND	ND		100 OTHER
13-7386	P7	TAN/BEIGE FIBROUS	SHEETROCK (ONLY)	ND	10 CELLULOSE	90 GYPSUM

Analyzed by: Jane Wasilewski

Additional Comments:

Jane Wasilewski
Laboratory Manager

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Job Number 1354-13-149

Lab ID:	Sample #:	Appearance	Comments	Asbestos %/Type	Non-Asbestos Fibrous %/Type	Non-Fibrous %/Type
13-7387A	Q1	BLUE PLIABLE	BASEBOARD	ND		100 OTHER
13-7387B	Q1	YELLOW NONFIBROUS	MASTIC	ND		100 OTHER
13-7388A	Q2	BLUE PLIABLE	BASEBOARD	ND		100 OTHER
13-7388B	Q2	YELLOW NONFIBROUS	MASTIC	ND		100 OTHER
13-7389A	R1	BEIGE NONFIBROUS	TILE 1	ND		100 OTHER
13-7389B	R1	YELLOW NONFIBROUS	MASTIC 1	ND		100 OTHER

Analyzed by: Jane Wasilewski

Additional Comments:

Jane Wasilewski
Laboratory Manager

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<i>Lab ID:</i>	<i>Sample #:</i>	<i>Appearance</i>	<i>Comments</i>	<i>Asbestos %/Type</i>	<i>Non-Asbestos Fibrous %/Type</i>	<i>Non-Fibrous %/Type</i>
13-7389C	R1	GREY NONFIBROUS	TILE 2	ND		100 OTHER
13-7389D	R1	BLACK/YW NONFIBROUS	MASTIC 2	ND	2 CELLULOSE	98 OTHER
13-7390A	R2	BEIGE NONFIBROUS	TILE 1	ND		100 OTHER
13-7390B	R2	YELLOW NONFIBROUS	MASTIC 1	ND		100 OTHER
13-7390C	R2	GREY NONFIBROUS	TILE 2	ND		100 OTHER
13-7390D	R2	BLACK FIBROUS	MASTIC 2	ND	3 CELLULOSE	97 OTHER

Analyzed by: Jane Wasilewski

Additional Comments:

Jane Wasilewski
Laboratory Manager

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Lab ID:	Sample #:	Appearance	Comments	Asbestos %/Type	Non-Asbestos Fibrous %/Type	Non-Fibrous %/Type
13-7391A	S1	GREY NONFIBROUS	TILE	ND		100 OTHER
13-7391B	S1	YELLOW NONFIBROUS	MASTIC	ND		100 OTHER
13-7392A	S2	GREY NONFIBROUS	TILE	ND		100 OTHER
13-7392B	S2	YELLOW NONFIBROUS	MASTIC	ND		100 OTHER
13-7393	T1	BEIGE PLIABLE		ND	2 CELLULOSE	98 OTHER
13-7394	T2	BEIGE PLIABLE		ND	2 CELLULOSE	98 OTHER

Analyzed by: Jane Wasilewski

Additional Comments:

Jane Wasilewski
Laboratory Manager

For heterogeneous samples easily separated into subsamples, and for layered samples, each component is analyzed separately. ND = None Detected (Asbestos Not Present In Representative Sample). RCF= (Refractory Ceramic Fiber) The results relate only to the items tested.

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Lab ID:	Sample #:	Appearance	Comments	Asbestos %/Type	Non-Asbestos Fibrous %/Type	Non-Fibrous %/Type
13-7395	U1	BEIGE NONFIBROUS		2 CHRYSOTILE		2 VERMICULITE 96 OTHER
13-7396	U2	BEIGE NONFIBROUS		2 CHRYSOTILE		3 VERMICULITE 95 OTHER
13-7397	U3	BEIGE NONFIBROUS		3 CHRYSOTILE		3 VERMICULITE 94 OTHER
13-7398	U4	BEIGE NONFIBROUS		3 CHRYSOTILE		2 VERMICULITE 95 OTHER
13-7399	U5	BEIGE NONFIBROUS		3 CHRYSOTILE		3 VERMICULITE 94 OTHER
13-7400	U6	BEIGE NONFIBROUS		3 CHRYSOTILE		2 VERMICULITE 95 OTHER

Analyzed by: Jane Wasilewski

Additional Comments:

Jane Wasilewski
Laboratory Manager

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Lab ID:	Sample #:	Appearance	Comments	Asbestos %/Type	Non-Asbestos Fibrous %/Type	Non-Fibrous %/Type
13-7401	U7	BEIGE NONFIBROUS		2 CHRYSOTILE		<1 VERMICULITE 98 OTHER
13-7402	V1	BEIGE NONFIBROUS		ND		100 OTHER
13-7403	V2	BEIGE NONFIBROUS		ND		100 OTHER
13-7404	V3	BEIGE NONFIBROUS		ND		100 OTHER
13-7405	V4	BEIGE NONFIBROUS		ND		100 OTHER
13-7406	V5	BEIGE NONFIBROUS		ND		100 OTHER


 Analyzed by: Jane Wasilewski
Additional Comments:


 Jane Wasilewski
 Laboratory Manager

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Lab ID:	Sample #:	Appearance	Comments	Asbestos %/Type	Non-Asbestos Fibrous %/Type	Non-Fibrous %/Type
13-7407	V6	BEIGE NONFIBROUS		ND		100 OTHER
13-7408	V7	BEIGE NONFIBROUS		ND		100 OTHER
13-7409	W1	TAN/SILVER FIBROUS		ND	75 CELLULOSE 10 GLASS 2 WOLLASTONITE	13 OTHER
13-7410	W2	TAN/SILVER FIBROUS		ND	20 CELLULOSE 20 GLASS <1 WOLLASTONITE	60 OTHER
13-7411	X1	TAN PLIABLE		ND		100 OTHER
13-7412	X2	TAN PLIABLE		ND		100 OTHER


 Analyzed by: Jane Wasilewski
 Additional Comments:


 Jane Wasilewski
 Laboratory Manager

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Lab ID:	Sample #:	Appearance	Comments	Asbestos %/Type	Non-Asbestos Fibrous %/Type	Non-Fibrous %/Type
13-7413A	Y1	GREY NONFIBROUS	TILE	6 CHRYSOTILE		94 OTHER
13-7413B	Y1	BLACK FIBROUS	MASTIC	7 CHRYSOTILE		93 OTHER
13-7414A	Y2	GREY NONFIBROUS	TILE	6 CHRYSOTILE		94 OTHER
13-7414B	Y2	BLACK FIBROUS	MASTIC	4 CHRYSOTILE		96 OTHER
13-7415A	Z1	GREY FIBROUS	WRAP	ND	100 CELLULOSE	<1 OTHER
13-7415B	Z1	GREY FIBROUS	INSULATION	2 AMOSITE <1 CHRYSOTILE	45 MINERAL WOOL	53 OTHER


 Analyzed by: Jane Wasilewski
 Additional Comments:


 Jane Wasilewski
 Laboratory Manager

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<i>Lab ID:</i>	<i>Sample #:</i>	<i>Appearance</i>	<i>Comments</i>	<i>Asbestos %/Type</i>	<i>Non-Asbestos Fibrous %/Type</i>	<i>Non-Fibrous %/Type</i>
13-7416A	Z2	BEIGE FIBROUS	WRAP	ND	100 CELLULOSE	<1 OTHER
13-7416B	Z2	GREY FIBROUS	INSULATION	2 AMOSITE	45 MINERAL WOOL	53 OTHER
13-7417A	Z3	GREY FIBROUS	WRAP	ND	100 CELLULOSE	<1 OTHER
13-7417B	Z3	GREY FIBROUS	INSULATION	25 CHRYSOTILE 1 AMOSITE		74 OTHER
13-7418	AA1	BLACK/BEIGE FIBROUS		ND	100 CELLULOSE	<1 OTHER
13-7419	AA2	BLACK/BEIGE FIBROUS		ND	100 CELLULOSE	<1 OTHER


 Analyzed by: Jane Wasilewski
 Additional Comments:


 Jane Wasilewski
 Laboratory Manager

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<i>Lab ID:</i>	<i>Sample #:</i>	<i>Appearance</i>	<i>Comments</i>	<i>Asbestos %/Type</i>	<i>Non-Asbestos Fibrous %/Type</i>	<i>Non-Fibrous %/Type</i>
13-7420	AB1	BEIGE FIBROUS		25 CHRYSOTILE		75 OTHER
13-7421	AB2	BEIGE FIBROUS		25 CHRYSOTILE		75 OTHER
13-7422	AB3	BEIGE FIBROUS		25 CHRYSOTILE		75 OTHER
13-7423	AC1	GREEN NONFIBROUS		ND		100 OTHER
13-7424	AC2	GREEN NONFIBROUS		ND		100 OTHER

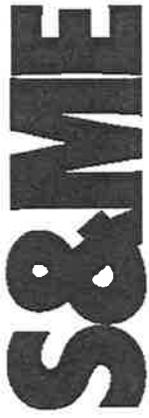
Analyzed by: Jane Wasilewski

Additional Comments:

Jane Wasilewski
Laboratory Manager

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Charlotte Branch
9711 Southern Pine Blvd.
Charlotte, NC 28273

Analysis Date: 8/02/13

Polarized Light Microscopy (PLM) Point Count Results

National Voluntary Accreditation Program (NVLAP) #102075-0

UNCC Sanford Hall
1354-13-149

Sample No.	Lab ID#	Gross Sample Description	Total # Non-Empty Points Counted	Total # Asbestos Points Counted	% Asbestos Based On Point Count
P1	13-7380C	TAN/BEIGE FIBROUS	400	0	NONE DETECTED
P2	13-7381C	TAN/BEIGE FIBROUS	400	0	NONE DETECTED

Jane Wasilewski
Analyst


Laboratory Manager

The analysis followed the procedure found in "Method for the Determination of Asbestos in Bulk Building Materials," (EPA/600/R-93/116).

Notes:

The results pertain only to the sample identification above.
The sample may not be fully representative of the larger material in question.
Samples found to contain less than 1% asbestos are considered positive until point counted to disprove sample content of greater than 1%.
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S&ME, Inc. 9711 Southern Pine Blvd. Charlotte, NC 28273 704-940-1830 FAX 704-565-4929



BULK SAMPLE
CHAIN OF CUSTODY RECORD

POLARIZED LIGHT MICROSCOPY
PERFORMED BY EPA 600/R-93/116 METHOD

PROJECT NO. <i>1354-13-149</i>		PROJECT NAME <i>Sanford Hall UNCC</i>			RELINQUISHED BY: <i>[Signature]</i>		DATE <i>7-30</i>	TIME <i>9:30</i>	RECEIVED BY: <i>[Signature]</i>	
FACILITY <i>Sanford hall</i>					RELINQUISHED BY:		DATE	TIME	RECEIVED BY:	
SAMPLER(S) <i>Thomas Gardner / Jimmy Gardner</i>			DATE TAKEN <i>7-29-13</i>		RELINQUISHED BY:		DATE	TIME	RECEIVED BY:	
SAMPLE #	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS +	N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVER INITIALS	SPECIAL INSTRUCTIONS	
<i>A1</i>	<i>13-7346</i>									
<i>A2</i>	<i>47</i>									
<i>A3</i>	<i>48</i>									
<i>B1</i>	<i>49</i>									
<i>B2</i>	<i>50</i>									
<i>B3</i>	<i>51</i>									
<i>C1</i>	<i>52</i>									
<i>C2</i>	<i>53</i>									
<i>C3</i>	<i>54</i>									
<i>D1</i>	<i>13 73 53</i>									

Same Day
 24 Hour
 48 Hour
 3-5 Day
 6-10 Day

ALL SAMPLES WILL BE DISPOSED OF AFTER ANALYSIS UNLESS OTHERWISE REQUESTED

By signing below, I warrant that I am authorized to enter into this agreement for the client named below, and that I authorize the above analysis subject to the terms and conditions on the reverse hereof.

AUTHORIZED BY _____ (DATE & TITLE) This agreement is governed by the terms and conditions on the reverse side hereof.

PRINT NAME _____ Analysis charges shall be as included in S&ME, Inc.'s fee schedule in effect at the time of the analysis.

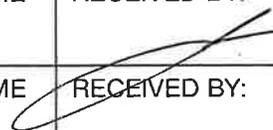
CLIENT INVOICE INFORMATION	Client Name	ATTN:	Name, Dept
	Client PO#		Co.
	Address		Address
	City, State, Zip		City, State, Zip
	Phone:	FAX:	Phone:

WHITE COPY-LABORATORY
YELLOW COPY-ACCOUNTING
PINK COPY-CLIENT



BULK SAMPLE
CHAIN OF CUSTODY RECORD

POLARIZED LIGHT MICROSCOPY
PERFORMED BY EPA 600/R-93/116 METHOD

PROJECT NO. 1354-13-149	PROJECT NAME Sanford Hall UNCC	RELINQUISHED BY:	DATE	TIME	RECEIVED BY: 	7/30/13
FACILITY		RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	
SAMPLER(S)		DATE TAKEN	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:

SAMPLE #	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS +	N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVER INITIALS	SPECIAL INSTRUCTIONS
D2	13-7356								
E1	57								
E2	58								
F1	59								
F2	60								
F3	61								
G1	62								
G2	63								
H1	64								
H2	13-7365								

Same Day
 24 Hour
 48 Hour
 3-5 Day
 6-10 Day

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CLIENT INVOICE INFORMATION	Client Name	ATTN:	SEND COPIES OF RESULTS TO	Name, Dept.
	Client PO#			Co.
	Address			Address
	City, State, Zip			City, State, Zip
	Phone:	FAX:		Phone:

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BULK SAMPLE
CHAIN OF CUSTODY RECORD

POLARIZED LIGHT MICROSCOPY
PERFORMED BY EPA 600/R-93/116 METHOD

PROJECT NO. 1354-13-149		PROJECT NAME Sanford Hall			RELINQUISHED BY:		DATE	TIME	RECEIVED BY:
FACILITY					RELINQUISHED BY:		DATE	TIME	RECEIVED BY:
SAMPLER(S)			DATE TAKEN		RELINQUISHED BY:		DATE	TIME	RECEIVED BY:
SAMPLE #	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS + N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVER INITIALS	SPECIAL INSTRUCTIONS	
I 1	13-7366								
I 2	67								
J 1	68								
J 2	69								
K 1	70								
K 2	71								
L 1	72								
L 2	73								
M 1	74								
M 2	13-73 75								

Same Day
 24 Hour
 48 Hour
 3-5 Day
 6-10 Day

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	Address		Address
	City, State, Zip		City, State, Zip
	Phone:	FAX:	Phone:

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BULK SAMPLE
CHAIN OF CUSTODY RECORD

POLARIZED LIGHT MICROSCOPY
PERFORMED BY EPA 600/R-93/116 METHOD

PROJECT NO. 1354-13-149		PROJECT NAME Sanford Hall			RELINQUISHED BY:		DATE	TIME	RECEIVED BY:
FACILITY					RELINQUISHED BY:		DATE	TIME	RECEIVED BY: <i>[Signature]</i>
SAMPLER(S)		DATE TAKEN			RELINQUISHED BY:		DATE	TIME	RECEIVED BY:
SAMPLE #	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS + N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVER INITIALS	SPECIAL INSTRUCTIONS	
P7	13-7386								
Q1	87								
Q2	88								
R1	89								
R2	90								
S1	91								
S2	92								
T1	93								
T2	94								
U1	13-7395								

Same Day
 24 Hour
 48 Hour
 3-5 Day
 6-10 Day

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	Address		Address
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	Phone:	FAX:	Phone:

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BULK SAMPLE
CHAIN OF CUSTODY RECORD

POLARIZED LIGHT MICROSCOPY
PERFORMED BY EPA 600/R-93/116 METHOD

PROJECT NO. 1354-13-149 Sanford		PROJECT NAME Sanford Hall			RELINQUISHED BY:		DATE	TIME	RECEIVED BY:
FACILITY					RELINQUISHED BY:		DATE	TIME	RECEIVED BY: <i>[Signature]</i>
SAMPLER(S)			DATE TAKEN		RELINQUISHED BY:		DATE	TIME	RECEIVED BY:
SAMPLE #	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS + N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVER INITIALS	SPECIAL INSTRUCTIONS	
U2	13-7396								
U3	97								
U4	98								
U5	7399								
U6	7400								
U7	01								
V1	02								
V2	03								
V3	04								
V4	13-7405								
<input type="checkbox"/> Same Day <input type="checkbox"/> 24 Hour <input type="checkbox"/> 48 Hour <input type="checkbox"/> 3-5 Day <input type="checkbox"/> 6-10 Day									
ALL SAMPLES WILL BE DISPOSED OF AFTER ANALYSIS UNLESS OTHERWISE REQUESTED									

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	Client PO#			Co.		
	Address			Address		
	City, State, Zip			City, State, Zip		
	Phone:	FAX:		Phone:	FAX:	
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BULK SAMPLE
CHAIN OF CUSTODY RECORD

POLARIZED LIGHT MICROSCOPY
PERFORMED BY EPA 600/R-93/116 METHOD

PROJECT NO. 1354-13-149		PROJECT NAME Sanford Hall			RELINQUISHED BY:		DATE	TIME	RECEIVED BY:
FACILITY					RELINQUISHED BY:		DATE	TIME	RECEIVED BY:
SAMPLER(S)			DATE TAKEN		RELINQUISHED BY:		DATE	TIME	RECEIVED BY:
SAMPLE #	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS +	N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVER INITIALS	SPECIAL INSTRUCTIONS
V5	13-7406								
V6	07								
V7	08								
W1	09								
W2	10								
X1	11								
X2	12								
Y1	13								
Y2	14								
Z1	13-7415								

Same Day
 24 Hour
 48 Hour
 3-5 Day
 6-10 Day

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	Address		Address
	City, State, Zip		City, State, Zip
	Phone:	FAX:	Phone:

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BULK SAMPLE
CHAIN OF CUSTODY RECORD

POLARIZED LIGHT MICROSCOPY
PERFORMED BY EPA 600/R-93/116 METHOD

PROJECT NO. 1354-13-149		PROJECT NAME Sanford Hall				RELINQUISHED BY:			DATE	TIME	RECEIVED BY: 7/30/13	
FACILITY						RELINQUISHED BY:			DATE	TIME	RECEIVED BY:	
SAMPLER(S)				DATE TAKEN		RELINQUISHED BY:			DATE	TIME	RECEIVED BY:	
SAMPLE #	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS +	N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVER INITIALS	SPECIAL INSTRUCTIONS			
Z2	13-7416											
Z3	17											
AA1	18											
AA2	19											
AB1	20											
AB2	21											
AB3	22											
AC1	23											
AC2	13-7424											
<input type="checkbox"/> Same Day <input type="checkbox"/> 24 Hour <input type="checkbox"/> 48 Hour <input checked="" type="checkbox"/> 3-5 Day <input type="checkbox"/> 6-10 Day												
ALL SAMPLES WILL BE DISPOSED OF AFTER ANALYSIS UNLESS OTHERWISE REQUESTED												

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	Client PO#		Co.		
	Address		Address		
	City, State, Zip		City, State, Zip		
	Phone:	FAX:	Phone:	FAX:	
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9711 Southern Pine Boulevard
 Charlotte, NC 28273
 704-940-1830 Fax 704-565-4929
 NVLAP Lab Code 102075-0

POLARIZED LIGHT MICROSCOPY

Performed by EPA 600/R-93/116 Method

Asbestos Analysis Summary

Client Name Charlotte Branch 9751 Southern Pine Blvd.
Client Job UNCC Sanford Hall Charlotte NC 28273

Date Received 8/2/2013

Date Analyzed 8/8/2013

Job Number 1354-13-149

Lab ID:	Sample #:	Appearance	Comments	Asbestos %/Type	Non-Asbestos Fibrous %/Type	Non-Fibrous %/Type
13-7539A	AD1	GREY FIBROUS	MEMBRANE	ND	10 GLASS	90 OTHER
13-7539B	AD1	GREY FIBROUS	FELT 1	ND	98 CELLULOSE 2 GLASS	
13-7539C	AD1	YELLOW SPONGY	FOAM	ND		100 OTHER
13-7539D	AD1	GREY FIBROUS	FELT 2	ND	98 CELLULOSE 2 GLASS	

Analyzed by: Jane Wasilewski

Additional Comments:

Jane Wasilewski
 Laboratory Manager

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Job Number 1354-13-149

<i>Lab ID:</i>	<i>Sample #:</i>	<i>Appearance</i>	<i>Comments</i>	<i>Asbestos %/Type</i>	<i>Non-Asbestos Fibrous %/Type</i>	<i>Non-Fibrous %/Type</i>
13-7539E	AD1	BLACK FIBROUS	ROOF	ND	25 CELLULOSE	75 OTHER
13-7540A	AD2	GREY FIBROUS	MEMBRANE	ND	10 GLASS	90 OTHER
13-7540B	AD2	GREY FIBROUS	FELT 1	ND	98 CELLULOSE 2 GLASS	
13-7540C	AD2	YELLOW SPONGY	FOAM	ND		100 OTHER
13-7540D	AD2	GREY/BLACK FIBROUS	FELT 2	ND	97 CELLULOSE 2 GLASS	1 OTHER
13-7540E	AD2	BLACK FIBROUS	ROOF	ND	10 CELLULOSE	90 OTHER

Analyzed by: Jane Wasilewski

Additional Comments:

Jane Wasilewski
Laboratory Manager

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Lab ID:	Sample #:	Appearance	Comments	Asbestos %/Type	Non-Asbestos Fibrous %/Type	Non-Fibrous %/Type
13-7541	AE1	BLACK NONFIBROUS		ND		100 OTHER
13-7542	AE2	BLACK NONFIBROUS		ND		100 OTHER
13-7543	AF1	BLACK RUBBERY		ND		100 OTHER
13-7544	AF2	BLACK RUBBERY		ND		100 OTHER
13-7545A	AG1	GREY FIBROUS	MEMBRANE	ND	10 GLASS	90 OTHER
13-7545B	AG1	YELLOW NONFIBROUS	ADHESIVE	ND		100 OTHER

Analyzed by: Jane Wasilewski

Additional Comments:

Jane Wasilewski
Laboratory Manager

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Lab ID:	Sample #:	Appearance	Comments	Asbestos %/Type	Non-Asbestos Fibrous %/Type	Non-Fibrous %/Type
13-7546A	AG2	GREY FIBROUS	MEMBRANE	ND	10 GLASS	90 OTHER
13-7546B	AG2	BLACK/YW NONFIBROUS	ADHESIVE	ND		100 OTHER
13-7547	AH1	BEIGE RUBBERY		ND		100 OTHER
13-7548	AH2	BEIGE RUBBERY		ND		100 OTHER
13-7549	AI1	TAN/BEIGE FIBROUS		ND	65 CELLULOSE 2 GLASS	33 GYPSUM <1 OTHER
13-7550	AI2	TAN/BEIGE FIBROUS		ND	30 CELLULOSE 2 GLASS	68 GYPSUM <1 OTHER

Analyzed by: Jane Wasilewski

Additional Comments:

Jane Wasilewski
Laboratory Manager

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Job Number 1354-13-149

<i>Lab ID:</i>	<i>Sample #:</i>	<i>Appearance</i>	<i>Comments</i>	<i>Asbestos %/Type</i>	<i>Non-Asbestos Fibrous %/Type</i>	<i>Non-Fibrous %/Type</i>
13-7551	AJ1	GREY STICKY		5 CHRYSOTILE		95 OTHER
13-7552	AJ2	GREY STICKY		5 CHRYSOTILE		95 OTHER
13-7553	AK1	GREY NONFIBROUS		2 CHRYSOTILE		98 OTHER
13-7554	AK2	GREY NONFIBROUS		2 CHRYSOTILE		98 OTHER
13-7555	AL1	GREY PLIABLE		3 CHRYSOTILE		97 OTHER
13-7556	AL2	GREY PLIABLE		3 CHRYSOTILE		97 OTHER

Analyzed by: Jane Wasilewski

Additional Comments:

Jane Wasilewski
Laboratory Manager

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BULK SAMPLE

CHAIN OF CUSTODY RECORD

**POLARIZED LIGHT MICROSCOPY
PERFORMED BY EPA 600/R-93/116 METHOD**

PROJECT NO. 1354-13-149		PROJECT NAME UNCC Sanford wall			RELINQUISHED BY: <i>[Signature]</i>		DATE 8-2-13	TIME	RECEIVED BY: <i>[Signature]</i>	
FACILITY Sanford HQ11					RELINQUISHED BY:		DATE	TIME	RECEIVED BY:	
SAMPLER(S) Jimmy Gosnell			DATE TAKEN 8-1-13		RELINQUISHED BY:		DATE	TIME	RECEIVED BY:	
SAMPLE #	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS +	N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVER INITIALS	SPECIAL INSTRUCTIONS	
AD 1	13-7539									
AD 2	40									
AE 1	41									
AE 2	42									
AF 1	43									
AF 2	44									
AG 1	45									
AG 2	46									
AH 1	47									
AH 2	13-7548									

Same Day
 24 Hour
 48 Hour
 3-5 Day
 6-10 Day

ALL SAMPLES WILL BE DISPOSED OF AFTER ANALYSIS UNLESS OTHERWISE REQUESTED

By signing below, I warrant that I am authorized to enter into this agreement for the client named below, and that I authorize the above analysis subject to the terms and conditions on the reverse hereof.

AUTHORIZED BY _____ This agreement is governed by the terms and conditions on the reverse side hereof.

(DATE & TITLE)

PRINT NAME _____ Analysis charges shall be as included in S&ME, Inc.'s fee schedule in effect at the time of the analysis.

CLIENT INVOICE INFORMATION	Client Name	ATTN:			Name, Dept
	Client PO#				Co.
	Address				Address
	City, State, Zip				City, State, Zip
	Phone:		FAX:		Phone:

WHITE COPY-LABORATORY
YELLOW COPY-ACCOUNTING
PINK COPY-CLIENT



BULK SAMPLE
CHAIN OF CUSTODY RECORD

POLARIZED LIGHT MICROSCOPY
PERFORMED BY EPA 600/R-93/116 METHOD

PROJECT NO. 1354-13-149		PROJECT NAME			RELINQUISHED BY:		DATE	TIME	RECEIVED BY: 8/2/13	
FACILITY Sanford Hall					RELINQUISHED BY:		DATE	TIME	RECEIVED BY:	
SAMPLER(S)			DATE TAKEN 8-1-13		RELINQUISHED BY:		DATE	TIME	RECEIVED BY:	
SAMPLE #	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS + N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVER INITIALS	SPECIAL INSTRUCTIONS		
AI 1	13-7549									
AI 2	50									
AJ 1	51									
AJ 2	52									
AK 1	53									
AK 2	54									
AL 1	55									
AL 2	13-7556									
<input type="checkbox"/> Same Day		<input type="checkbox"/> 24 Hour		<input type="checkbox"/> 48 Hour		<input checked="" type="checkbox"/> 3-5 Day		<input type="checkbox"/> 6-10 Day		
ALL SAMPLES WILL BE DISPOSED OF AFTER ANALYSIS UNLESS OTHERWISE REQUESTED										

By signing below, I warrant that I am authorized to enter into this agreement for the client named below, and that I authorize the above analysis subject to the terms and conditions on the reverse hereof.

AUTHORIZED BY _____ (DATE & TITLE) This agreement is governed by the terms and conditions on the reverse side hereof.

PRINT NAME _____ Analysis charges shall be as included in S&ME, Inc.'s fee schedule in effect at the time of the analysis.

CLIENT INVOICE INFORMATION	ATTN:		SEND COPIES OF RESULTS TO	Name, Dept.	
	Client Name			Co.	
	Client PO#			Address	
	Address			City, State, Zip	
	City, State, Zip			Phone: _____ FAX: _____	
Phone: _____ FAX: _____					

WHITE COPY-LABORATORY
YELLOW COPY-ACCOUNTING
PINK COPY-CLIENT



9771D Southern Pine Boulevard
 Charlotte, NC 28273
 704-940-1830 Fax 704-565-4929
 NVLAP Lab Code 102075-0

POLARIZED LIGHT MICROSCOPY

Performed by EPA 600/R-93/116 Method

Asbestos Analysis Summary

Client Name Charlotte Branch

9751 Southern Pine Blvd.

Date Received 9/9/2015

Client Job UNCC Sanford Hall

Charlotte NC 28273

Date Analyzed 9/9/2015

NOTE: THESE SAMPLE NUMBERS ARE PRECEDED BY THE NUMBER "2" IN THE REPORT

Job Number 1354-13-149

Lab ID:	Sample #:	Appearance	Comments	Asbestos %/Type	Non-Asbestos Fibrous %/Type	Non-Fibrous %/Type
15-10105	A1	BEIGE NONFIBROUS		2 CHRYSOTILE		98 OTHER
15-10106	A2	BEIGE NONFIBROUS		2 CHRYSOTILE		98 OTHER
15-10107	A3	BEIGE NONFIBROUS		2 CHRYSOTILE		98 OTHER
15-10108	A4	GREEN NONFIBROUS		2 CHRYSOTILE		98 OTHER

Analyzed by: Jane Wasilewski

Additional Comments:

Jane Wasilewski
 Laboratory Manager

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<i>Lab ID:</i>	<i>Sample #:</i>	<i>Appearance</i>	<i>Comments</i>	<i>Asbestos %/Type</i>	<i>Non-Asbestos Fibrous %/Type</i>	<i>Non-Fibrous %/Type</i>
15-10109	A5	GREEN NONFIBROUS		2 CHRYSOTILE		98 OTHER
15-10110	A6	BEIGE NONFIBROUS		2 CHRYSOTILE		98 OTHER
15-10111	A7	BEIGE NONFIBROUS		2 CHRYSOTILE		98 OTHER
15-10112	A8	BEIGE NONFIBROUS		2 CHRYSOTILE		98 OTHER
15-10113	A9	BEIGE NONFIBROUS		2 CHRYSOTILE		98 OTHER
15-10114	A10	BEIGE NONFIBROUS		2 CHRYSOTILE		98 OTHER

Analyzed by: Jane Wasilewski

Additional Comments:

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Laboratory Manager

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<i>Lab ID:</i>	<i>Sample #:</i>	<i>Appearance</i>	<i>Comments</i>	<i>Asbestos %/Type</i>	<i>Non-Asbestos Fibrous %/Type</i>	<i>Non-Fibrous %/Type</i>
15-10115	B1	BEIGE NONFIBROUS		2 CHRYSOTILE		98 OTHER
15-10116	B2	GREY NONFIBROUS		ND		100 OTHER
15-10117	B3	BEIGE NONFIBROUS		2 CHRYSOTILE		98 OTHER
15-10118	B4	BEIGE NONFIBROUS		ND		100 OTHER
15-10119	B5	BEIGE/GRY NONFIBROUS		<1 CHRYSOTILE		100 OTHER
15-10120	B6	BEIGE/GRY NONFIBROUS		ND		100 OTHER

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Additional Comments:

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Laboratory Manager

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<i>Lab ID:</i>	<i>Sample #:</i>	<i>Appearance</i>	<i>Comments</i>	<i>Asbestos %/Type</i>	<i>Non-Asbestos Fibrous %/Type</i>	<i>Non-Fibrous %/Type</i>
15-10121	B7	GREY NONFIBROUS		ND		100 OTHER
15-10122	C1	BEIGE NONFIBROUS		<1 CHRYSOTILE		100 OTHER
15-10123	C2	GREY NONFIBROUS		ND		100 OTHER
15-10124	C3	GREEN NONFIBROUS		<1 CHRYSOTILE		100 OTHER
15-10125	C4	BEIGE NONFIBROUS		2 CHRYSOTILE		98 OTHER
15-10126	C5	BEIGE NONFIBROUS		2 CHRYSOTILE		98 OTHER

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Laboratory Manager

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<i>Lab ID:</i>	<i>Sample #:</i>	<i>Appearance</i>	<i>Comments</i>	<i>Asbestos %/Type</i>	<i>Non-Asbestos Fibrous %/Type</i>	<i>Non-Fibrous %/Type</i>
15-10127	C6	BEIGE NONFIBROUS		2 CHRYSOTILE		98 OTHER
15-10128	C7	BEIGE NONFIBROUS		2 CHRYSOTILE		98 OTHER
15-10129	D1	BEIGE PLIABLE		5 CHRYSOTILE		95 OTHER
15-10130	D2	BEIGE PLIABLE		5 CHRYSOTILE		95 OTHER
15-10131	E1	BLACK PLIABLE		ND		100 OTHER
15-10132	E2	BLACK PLIABLE		ND		100 OTHER

Analyzed by: Jane Wasilewski

Additional Comments:

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Laboratory Manager

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<i>Lab ID:</i>	<i>Sample #:</i>	<i>Appearance</i>	<i>Comments</i>	<i>Asbestos %/Type</i>	<i>Non-Asbestos Fibrous %/Type</i>	<i>Non-Fibrous %/Type</i>
15-10133A	F1	GREY PLIABLE	STAIR TREAD	ND		100 OTHER
15-10133B	F1	YELLOW NONFIBROUS	MASTIC	ND		100 OTHER
15-10134A	F2	GREY PLIABLE	STAIR TREAD	ND		100 OTHER
15-10134B	F2	YELLOW NONFIBROUS	MASTIC	ND		100 OTHER
15-10135	G1	BEIGE PLIABLE		ND		100 OTHER
15-10136	G2	BEIGE PLIABLE		ND		100 OTHER

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Additional Comments:

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Laboratory Manager

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<i>Lab ID:</i>	<i>Sample #:</i>	<i>Appearance</i>	<i>Comments</i>	<i>Asbestos %/Type</i>	<i>Non-Asbestos Fibrous %/Type</i>	<i>Non-Fibrous %/Type</i>
15-10137	H1	GREY PLIABLE		2 CHRYSOTILE		98 OTHER
15-10138	H2	GREY PLIABLE		2 CHRYSOTILE		98 OTHER
15-10139	I1	GREY NONFIBROUS		2 CHRYSOTILE		98 OTHER
15-10140	I2	GREY NONFIBROUS		2 CHRYSOTILE		98 OTHER
15-10141	J1	BEIGE NONFIBROUS		ND		100 OTHER
15-10142	J2	BEIGE NONFIBROUS		ND		100 OTHER

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Additional Comments:

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Laboratory Manager

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<i>Lab ID:</i>	<i>Sample #:</i>	<i>Appearance</i>	<i>Comments</i>	<i>Asbestos %/Type</i>	<i>Non-Asbestos Fibrous %/Type</i>	<i>Non-Fibrous %/Type</i>
15-10143	J3	BEIGE NONFIBROUS		ND		100 OTHER
15-10144	J4	BEIGE NONFIBROUS		ND		100 OTHER
15-10145	J5	BEIGE NONFIBROUS		ND		100 OTHER
15-10146	J6	BEIGE NONFIBROUS		ND		100 OTHER
15-10147	J7	BEIGE NONFIBROUS		ND		100 OTHER
15-10148	K1	TAN PLIABLE		ND		100 OTHER

Analyzed by: Jane Wasilewski

Additional Comments:

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Laboratory Manager

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<i>Lab ID:</i>	<i>Sample #:</i>	<i>Appearance</i>	<i>Comments</i>	<i>Asbestos %/Type</i>	<i>Non-Asbestos Fibrous %/Type</i>	<i>Non-Fibrous %/Type</i>
15-10149	K2	TAN PLIABLE		ND		100 OTHER
15-10150	L1	GREY NONFIBROUS		2 CHRYSOTILE		98 OTHER
15-10151	L2	GREY NONFIBROUS		2 CHRYSOTILE		98 OTHER
15-10152	M1	GREY FIBROUS		5 CHRYSOTILE		95 OTHER
15-10153	M2	GREY FIBROUS		5 CHRYSOTILE		95 OTHER

Analyzed by: Jane Wasilewski

Additional Comments:

Jane Wasilewski
Laboratory Manager

For heterogeneous samples easily separated into subsamples, and for layered samples, each component is analyzed separately. ND = None Detected (Asbestos Not Present In Representative Sample). RCF= (Refractory Ceramic Fiber) The results relate only to the items tested. The sample may not be fully representative of the larger material in question. This sheet may not be reproduced except with permission from SME, Inc. This report may not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. Although Polarized Light Microscopy (PLM/Dispersion Staining) (Method EPA 600/R-93/116) is the specified method for analysis of bulk material samples for asbestos under the EPA Asbestos Hazard Emergency Response Act, there have been reports that this method may not identify asbestos when fiber sizes are extremely small or if they are bound in a resinous material. Such materials include floor tile, mastic and asphaltic roofing. Currently, reanalysis by Transmission Electron Microscopy (TEM) to verify results of <1% or "None Detected" for these materials is recommended.

BULK SAMPLE

CHAIN OF CUSTODY RECORD



411506334

POLARIZED LIGHT MICROSCOPY
PERFORMED BY EPA 600/R-93/116 METHOD

PROJECT NO. 1354-13149		PROJECT NAME UNCC			RELINQUISHED BY: <i>[Signature]</i>		DATE 9/8/15	TIME 0700	RECEIVED BY: <i>[Signature]</i>	
FACILITY San Ford Hall					RELINQUISHED BY:		DATE	TIME	RECEIVED BY: 9/9/15	
SAMPLER(S) T. Gardner			DATE TAKEN 9/4/15		RELINQUISHED BY:		DATE	TIME	RECEIVED BY:	
SAMPLE #	LAB NUMBER	DATE ANALYZED	ANALYST'S INITIALS	ASBESTOS +	N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVER INITIALS	SPECIAL INSTRUCTIONS	
A1	15-10105								PO 62861	
A2	06								Results to Mike Cashio	
A3	07								mcashio@smelnc.com	
A4	08									
A5	09									
A6	10									
A7	11									
A8	12									
A9	13									
A10	10114									
<input type="checkbox"/> Same Day		<input type="checkbox"/> 24 Hour		<input type="checkbox"/> 48 Hour		<input checked="" type="checkbox"/> 3-5 Day		<input type="checkbox"/> 6-10 Day		
ALL SAMPLES WILL BE DISPOSED OF AFTER ANALYSIS UNLESS OTHERWISE REQUESTED										

By signing below, I warrant that I am authorized to enter into this agreement for the client named below, and that I authorize the above analysis subject to the terms and conditions on the reverse hereof.

AUTHORIZED BY _____ (DATE & TITLE) This agreement is governed by the terms and conditions on the reverse side hereof.

PRINT NAME _____ Analysis charges shall be as included in S&ME, Inc.'s fee schedule in effect at the time of the analysis.

CLIENT INVOICE INFORMATION	Client Name	ATTN:	Name, Dept.
	Client PO#		Co.
	Address		Address
	City, State, Zip		City, State, Zip
	Phone:	FAX:	Phone:
WHITE COPY-LABORATORY			YELLOW COPY-ACCOUNTING
			PINK COPY-CLIENT

BULK SAMPLE
CHAIN OF CUSTODY RECORD



411506334

POLARIZED LIGHT MICROSCOPY
PERFORMED BY EPA 600/R-93/116 METHO

PROJECT NO. 1354-13-149	PROJECT NAME UNCC	RELINQUISHED BY: <i>Jan [Signature]</i>	DATE 9/8/15	TIME 0700	RECEIVED BY: <i>[Signature]</i>	
FACILITY Sanford Hall		RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	
SAMPLER(S) T. Gardner		DATE TAKEN 9/4/15	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:

SAMPLE #	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS +	ASBESTOS N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVER INITIALS	SPECIAL INSTRUCTIONS
B1	15-10115								
B2	16								
B3	17								
B4	18								
B5	19								
B6	20								
B7	21								
C1	22								
C2	23								
C3	10124								

Same Day
 24 Hour
 48 Hour
 3-5 Day
 6-10 Day

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 PRINT NAME _____

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CLIENT INVOICE INFORMATION	Client Name	ATTN:	SEND COPIES OF RESULTS TO	Name, Dept.
	Client PO#			Co.
	Address			Address
	City, State, Zip			City, State, Zip
	Phone:	FAX:		Phone:

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YELLOW COPY-ACCOUNTING

PINK COPY-CLIENT

BULK SAMPLE



POLARIZED LIGHT MICROSCOPY

PERFORMED BY EPA 600/R-93/116 METHO

CHAIN OF CUSTODY RECORD

411506334

PROJECT NO. 1354-13-149	PROJECT NAME UNCC	RELINQUISHED BY: <i>Ja. Ju</i>	DATE 9/8/15	TIME 0700	RECEIVED BY: <i>[Signature]</i>
FACILITY Stanford Hall		RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
SAMPLER(S) T. Gardner		DATE TAKEN 9/4/15	RELINQUISHED BY:	DATE	TIME

SAMPLE #	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS + N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVER INITIALS	SPECIAL INSTRUCTIONS
C4	15-10125							
C5	26							
C6	27							
C7	28							
D1	29							
D2	30							
E1	31							
E2	32							
F1	33							
F2	10134							

Same Day
 24 Hour
 48 Hour
 3-5 Day
 6-10 Day

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	Client PO#			Co.
	Address			Address
	City, State, Zip			City, State, Zip
	Phone:	FAX:		Phone:

WHITE COPY-LABORATORY

YELLOW COPY-ACCOUNTING

PINK COPY-CLIENT

BULK SAMPLE

CHAIN OF CUSTODY RECORD



411506334

POLARIZED LIGHT MICROSCOPY
PERFORMED BY EPA 600/R-93/116 METHO

PROJECT NO. 1354-13-149		PROJECT NAME UNCC				RELINQUISHED BY: <i>Ja M</i>		DATE 9/8/15	TIME 0700	RECEIVED BY: <i>[Signature]</i>
FACILITY Sanford Hill						RELINQUISHED BY:		DATE	TIME	RECEIVED BY:
SAMPLER(S) T. Gardner				DATE TAKEN 9/4/15		RELINQUISHED BY:		DATE	TIME	RECEIVED BY:
SAMPLE #	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS +	N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVER INITIALS	SPECIAL INSTRUCTIONS	
G1	15-10135									
G2	36									
H1	37									
H2	38									
I1	39									
I2	40									
J1	41									
J2	42									
J3	43									
J4	101 44									

Same Day
 24 Hour
 48 Hour
 3-5 Day
 6-10 Day

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	Client PO#			Co.
	Address			Address
	City, State, Zip			City, State, Zip
	Phone:	FAX:		Phone:

WHITE COPY-LABORATORY

YELLOW COPY-ACCOUNTING

PINK COPY-CLIENT

BULK SAMPLE



POLARIZED LIGHT MICROSCOPY

PERFORMED BY EPA 600/R-93/116 METHO

CHAIN OF CUSTODY RECORD

411506334

PROJECT NO. 1354-B-149	PROJECT NAME UNCC	RELINQUISHED BY: Jan M	DATE 9/2/15	TIME 0700	RECEIVED BY: <i>[Signature]</i>
FACILITY Sanford Hall		RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
SAMPLER(S) T. Gardner		DATE TAKEN 9/4/15	RELINQUISHED BY:	DATE	TIME

SAMPLE #	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS +	N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVER INITIALS	SPECIAL INSTRUCTIONS
J5	15-10145								
J6	46								
J7	47								
K1	48								
K2	49								
B3 C1	50								
L2	51								
M1	52								
M2	101 53								

Same Day
 24 Hour
 48 Hour
 3-5 Day
 6-10 Day

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	Client PO#			Co.
	Address			Address
	City, State, Zip			City, State, Zip
	Phone:	FAX:		Phone:

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PINK COPY-CLIENT



9771D Southern Pine Boulevard
 Charlotte, NC 28273
 704-940-1830 Fax 704-565-4929
 NVLAP Lab Code 102075-0

POLARIZED LIGHT MICROSCOPY

Performed by EPA 600/R-93/116 Method

Asbestos Analysis Summary

Client Name Charlotte Branch

9751 Southern Pine Blvd.

Date Received 7/15/2015

Client Job UNCC Sanford Hall

Charlotte NC 28273

Date Analyzed 7/15/2015

Job Number 1354-13-149

Lab ID:	Sample #:	Appearance	Comments	Asbestos %/Type	Non-Asbestos Fibrous %/Type	Non-Fibrous %/Type
15-8301	A-1	BEIGE GRANULAR		<1 CHRYSOTILE		100 OTHER
15-8302	A-2	BEIGE GRANULAR		<1 CHRYSOTILE		100 OTHER
15-8303	A-3	BEIGE GRANULAR		<1 CHRYSOTILE		100 OTHER

Analyzed by: Jane Wasilewski

Additional Comments:

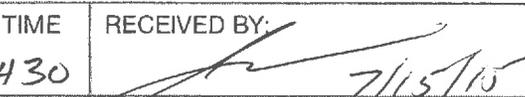
Jane Wasilewski
 Laboratory Manager

For heterogeneous samples easily separated into subsamples, and for layered samples, each component is analyzed separately. ND = None Detected (Asbestos Not Present In Representative Sample). RCF= (Refractory Ceramic Fiber) The results relate only to the items tested. The sample may not be fully representative of the larger material in question. This sheet may not be reproduced except with permission from SME, Inc. This report may not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. Although Polarized Light Microscopy (PLM/Dispersion Staining) (Method EPA 600/R-93/116) is the specified method for analysis of bulk material samples for asbestos under the EPA Asbestos Hazard Emergency Response Act, there have been reports that this method may not identify asbestos when fiber sizes are extremely small or if they are bound in a resinous material. Such materials include floor tile, mastic and asphaltic roofing. Currently, reanalysis by Transmission Electron Microscopy (TEM) to verify results of <1% or "None Detected" for these materials is recommended.



BULK SAMPLE
CHAIN OF CUSTODY RECORD

POLARIZED LIGHT MICROSCOPY
PERFORMED BY EPA 600/R-93/116 METHOD

PROJECT NO. 1354-13-149		PROJECT NAME UNCC			RELINQUISHED BY: Josh Garrison			DATE 7/15/15	TIME 1430	RECEIVED BY: 
FACILITY Santford Hall					RELINQUISHED BY:			DATE	TIME	RECEIVED BY:
SAMPLER(S) Josh Garrison			DATE TAKEN 7/15/15		RELINQUISHED BY:			DATE	TIME	RECEIVED BY:
SAMPLE #	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS + N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVER INITIALS	SPECIAL INSTRUCTIONS		
A-1	15-8301							Send copy Results to Mike Cashio and Josh Garrison		
A-2	02									
A-3	03									
<input checked="" type="checkbox"/> Same Day <input type="checkbox"/> 24 Hour <input type="checkbox"/> 48 Hour <input type="checkbox"/> 3-5 Day <input type="checkbox"/> 6-10 Day										
ALL SAMPLES WILL BE DISPOSED OF AFTER ANALYSIS UNLESS OTHERWISE REQUESTED										

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AUTHORIZED BY Joshua Garrison 7/15/15 (DATE & TITLE) This agreement is governed by the terms and conditions on the reverse side hereof.

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	Address			Address
	City, State, Zip			City, State, Zip
Phone:	FAX:		Phone:	FAX:

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Charlotte Branch
9751 Southern Pine Blvd.
Charlotte, NC 28273

Analysis Date: 7/22/15

Polarized Light Microscopy (PLM) Point Count Results

National Laboratory Voluntary Accreditation Program NVLAP Lab Code 102075-0

1354-13-149
UNCC Sanford Hall Rm1010

Sample No.	Lab ID#	Gross Sample Description	Total # Non-Empty Points Counted	Total # Asbestos Points Counted	% Asbestos Based On Point Count
S-1	15-8290	GREY GRANULAR	400	0	NONE DETECTED
S-3	15-8295	GREY GRANULAR	400	0	NONE DETECTED
A-1	15-8301	BEIGE GRANULAR	400	0	NONE DETECTED
A-2	15-8302	BEIGE GRANULAR	400	0	NONE DETECTED
A-3	15-8303	BEIGE GRANULAR	400	1	0.25%

Jane Wasilewski
Analyst

Laboratory Manager

The analysis followed the procedure found in "Method for the Determination of Asbestos in Bulk Building Materials," (EPA/600/R-93/116).

Notes:

The results pertain only to the sample identification above.

The sample may not be fully representative of the larger material in question.

Samples found to contain less than 1% asbestos are considered positive until point counted to disprove sample content of greater than 1%.

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