Lothrop Associates LLP Architects
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THE STATE OF CONNECTICUT
DEPARTMENT OF HOUSING (DOH)
COMMUNITY DEVELOPMENT BLOCK GRANT DISASTER RECOVERY PROGRAM (CDBG-DR)

HAZARDOUS MATERIAL ABATEMENT
NEW FOUNDATIONS
ELEVATE EXISTING RESIDENCE

DEGOURSEY RESIDENCE
10 CHETWOOD STREET
MILFORD, CONNECTICUT 06460

ADDENDUM NO. 5065-1

Date: October 9, 2015

Application No. 5065
LAA Project No. 1524-34

This Addendum forms part of the Contract Documents and amends the original Bidding Documents dated September 25, 2015, only in the following particulars. Original provisions of the Contract Documents shall remain in effect except as specifically amended by this Addendum.
Bidders shall consider amendments and the resulting cost differences shall be included in all bids.
Acknowledge receipt of this Addendum in the space provided on the Bid Proposal Form. Failure to do so may subject the bidder to disqualification.

A. GENERAL

1. Mandatory Walk through: Registered bidders list from the 10.8.15 walk through is issued herewith.

B. SPECIFICATIONS

1. Section 000100 Table of Contents: Table of Contents is revised to include **Sections 028200 and 028500.**
2. **Section 028200 "Asbestos Abatement"** is issued herewith.
3. **Section 028500 "Mold Remediation"** is issued herewith.

Attachments: MWT Bidder registration (2 pages)
Revised Table of Contents=Section 000100 (3 pages)
Section 028200 "Asbestos Abatement" (21 pages)
Section 028500 "Mold Remediation" (14 pages)

END OF ADDENDUM 5065-1

Lothrop Associates LLP Architects
100 Pearl Street, Hartford, Connecticut 06103
914 741 1115

CONTRACTOR SIGN-IN SHEET
Pre-Bid Inspection

PLEASE PROVIDE BUSINESS CARD IF POSSIBLE.

DATE: 10.08.15 -11:00 AM
PROJECT: #5065 Degoursey
LOCATION: Site
ADDRESS: 10 Chetwood St.,Milford, Ct.
JOB No: 1524-34

NAME	COMPANY	SIGNATURE	ADDRESS	E-MAIL	PHONE	FAX
Dan Secondino	A. Secondino & Son		21 acorn Rd Branford, CT	Dan@asecondinoandson.com	2034813496	
B. Hayden	MDW Abatement		Talen CT E. Haven CT	mdwabatement@gmail.com		
JOHN DEROSA	CT Renovation Pros		100 Congress St. Bpt. CT	JOHN@CTrenovationpros.com	203.767.7884	
Austin Coppola	Benton Constr.		339 Washington Ave N Haven	TGIAMMATTEI@Bentonconstruction.com		
Ken Esposito	Madison Properties		15 Winthrop Dr. Madison CT	espokje@aol.com	203 218 4141	203-234-2353
Bob Riendeau	Oregon Bob LLC		202 merwin Ave Milford Ct	oregonbob1225@yahoo.com	203-650-1495	
Sean Payne	Payne building movers		36A Dodrd. Clinton	payneconst@msn.com		

CT Renovation PROFESSIONALS

ADDITIONS, RENOVATIONS & NEW CONSTRUCTION

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Founder & CEO

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100 Congress Street
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MDW Abatement Services, LLC
Asbestos, Lead, and Mold Remediation

Windows, siding, carpentry, general construction, painting

Daniel Hayden
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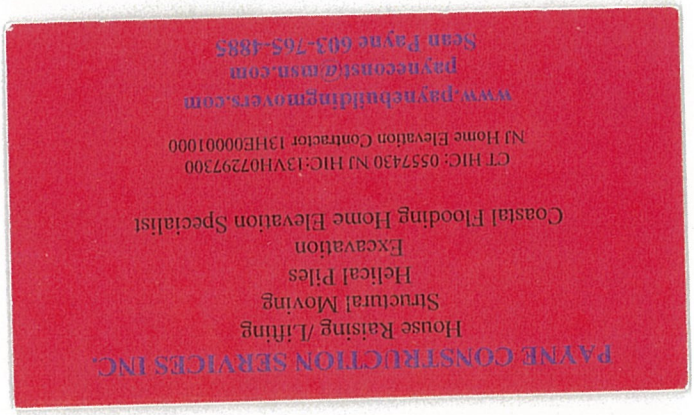

espokje@aol.com

MADISON PROPERTIES LLC.

ELEVATION & RECONSTRUCTION
KEN ESPOSITO
MILFORD,CT

(203)218-4141
STATE OF CT LIC.
NHC.0013148
HIC.0629591

SECTION 3

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END OF SECTION 000100

SECTION 028200 – ASBESTOS ABATEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Limited Hazardous Materials Inspection Report (February 2015)

1.2 CONSULTANT

A. The Architect shall retain a Consultant for the purposes of project management and monitoring during Asbestos Abatement. At the discretion of the Architect, the Consultant shall represent the Owner in all phases of the abatement project. The Contractor shall regard the Consultant's direction as authoritative and binding as provided herein, in matters particularly, but not limited to:

1. Work area approval.
2. Monitoring results review.
3. Various segments of work completion.
4. Abatement final completion.
5. Data submission review
6. Daily field punch list items.

B. The State of Connecticut licensed Asbestos Consultant – Project Designer for this project is Mr. Kevin J. McCarthy (License # 000274).

1.3 SCOPE OF WORK

A. Work outlined in this Section includes all work necessary for the removal and disposal of ACM impacted during renovations (the “Work”) at 10 Chetwood Street in Milford, Connecticut, (the “Site”).

B. This shall include all necessary demolition to access the ACM for abatement.

1.4 USE OF THE CONTRACT DOCUMENTS

A. It shall be incumbent upon the Contractor to visit the Site and determine existing conditions, and what will be required to accomplish the Work intended by the Contract Documents. No increase in the Contract Sum will be permitted as a result of the Contractor's failure to visit the Site and understand the existing conditions.

B. All work shall comply with the Contract Documents and with applicable codes, laws, regulations, and ordinances, wherever applicable. The most stringent of all the foregoing shall govern.

C. It is not intended that these Specifications show every detail of the Work, but the Contractor shall be required to furnish within the Contract Sum all materials and labor necessary for the completion of the Work in accordance with the intent of these Specifications.

D. In case of ambiguity among the Contract Documents, the more stringent requirement as determined by the Consultant shall prevail.

E. The Work of this Contract includes making modifications as necessary, subject to approval by Owner in consultation with the Consultant, to correct any conflicts between contract documents.

F. All items, not specifically mentioned in these Specifications, but implied by trade practices to complete the Work, shall be included.

1.5 SITE EXAMINATION

A. It is understood that the Contractor has examined the Site and made their own estimates of the facilities and difficulties attending the execution of the Work, and has based their bid price thereon.

B. Except for unforeseeable concealed conditions as determined by the Consultant, the Contractor shall make no claim for additional costs due to the existing Site conditions.

1.6 CONTRACTOR QUALIFICATIONS

A. All bidders shall submit a record of prior experience in asbestos abatement projects, listing no less than three completed projects in the past year, with all projects of similar size and scope. The Contractor shall list the experience and training of the project supervisor and all on-site personnel. The information to be included is as follows:

1. Project Name and Address
2. Owner's Name and Address
3. Architect/Consultant
4. Contract Amount
5. Date of Completion
6. Extras and Changes

B. The selected Contractor must appear on the approved list of Asbestos Abatement Contractors on file at the State of Connecticut Department of Public Health (CTDPH) and hold a valid asbestos abatement contractor license within the State of Connecticut.

C. Submit a written, notarized statement regarding whether the Contractor has ever received a federal, state or local citation for non-compliance with the asbestos and/or lead regulations pertaining to worker protection, removal, transport, or waste disposal.

1.7 CONSTRUCTION PROGRESS SCHEDULE

A. To assure adequate planning and execution of the Work, and to assist the Consultant in reviewing the justification for the Contractor's applications for payment, the Contractor shall prepare and maintain a detailed Progress Schedule.

B. Schedule of work of this Contract shall include the notification requirements to regulatory agencies for the work.

C. The Contractor shall supervise and direct all work of theirs and other trades using their best skill and attention. The Contractor shall be solely responsible for all construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work under the Contract.

D. Due to the nature of this construction work, the scheduling or phasing of work under this Contract may be adjusted by the Owner. As long as the Scope of Work is not altered, adjustments to the project phasing shall have no effect on the contract price.

E. The Contractor shall attend a pre-construction meeting and any Subcontractors. The assigned Supervisor must attend this meeting.

1.8 TESTING LABORATORY SERVICES

A. The Contractor shall submit to the Consultant the name; address, accreditations, and qualifications of proposed laboratories intended to be utilized for sample analysis as required by this section.

1.9 ADDITIONAL GENERAL REQUIREMENTS

A. The Contractor shall employ a competent Supervisor with at least three years of experience on projects of similar scope and magnitude, who shall be responsible for all work involving asbestos abatement, as described in the specifications and defined in applicable regulations, and have full-time daily supervision of the same. The Supervisor shall be the competent person as defined by Occupational Safety and Health Administration (OSHA) regulations.

B. If requested or required by local, state, federal, and any other authorities having jurisdiction over such work, the Contractor shall allow the Work of this Contract to be inspected. The Contractor shall immediately notify the Owner, the Architect, and the Consultant and shall maintain written evidence of such inspection for review by the Owner, the Architect, and the Consultant.

C. The Contractor shall incur the cost of all fines resulting from regulatory non-compliance, as issued by federal, state, and local agencies. The Contractor shall incur the cost of all work requirements mandated by federal, state, and local agencies as a result of regulatory non-compliance or negligence.

D. The Contractor shall immediately notify the Owner and Consultant of the delivery of all permits, licenses, certificates of inspection, of approval, or occupancy, etc., and any other such instruments required under codes by authorities having jurisdiction, regardless of who issued, and shall cause them to be displayed to the Owner and Consultant for verification and recording.

1.10 PROJECT DESCRIPTION

A. This Section includes the removal and disposal of ACM as identified herein and on the Hazardous Materials Abatement Drawing HM-101, and coordination of the Work on the Architectural, Mechanical, Plumbing, Electrical, and Structural drawings and specifications that will impact ACM, conducted by workers meeting the requirements of OSHA Title 29 CFR, Part 1926.1101 for Class 2 work. The quantities listed herein are estimates only, and should be verified on-site by the Contractor.

B. The following ACM is included in this Project:

LOCATION	MATERIAL TYPE	ESTIMATED QUANTITY
First Floor Bathroom & Boiler Room	Inaccessible Pipe & Pipe Fitting Insulation	100 LF
Exterior Coordinate Required Abatement Work with the Contract Documents	Exterior Gray Cementitious Panel Siding	1,000 SF Includes Quantity of Material Necessary to Facilitate Alterations

LF = Linear Feet; SF = Square Feet

C. Some of the Work will be performed in multiple mobilizations, at different periods of time, in conjunction with other trades (i.e., other trades work, demolition work, etc.).

D. Safety Data Sheets (SDS) for chemicals to be used during the project must be submitted to the Consultant prior to site delivery.

E. Encapsulants applied to any surface that will receive a new finish that requires an adhesive must be compatible with the application of the new finish.

F. The Contractor shall be responsible for providing temporary water, power, and heat as needed at the Site. Temporary lighting within the work areas must be connected to Ground Fault Circuit Interrupter (GFCI) power panels, installed by a State of Connecticut-licensed electrician, and located outside of the work areas.

1.11 DEFINITIONS

A. The following definitions relative to asbestos abatement shall apply:

1. Abatement - Procedures to control fiber release from ACM; includes removal, encapsulation, and enclosure.
2. Air Monitoring - The process of measuring the fiber concentration of an area or of a person.
3. Amended Water - Water to which a surfactant has been added.
4. Architect – Lothrop Associates, LLP
5. Asbestos - The name given to a number of naturally occurring fibrous silicates. This includes the serpentine forms and the amphiboles and includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite, or any of these forms, which have been chemically altered.
6. Asbestos Felt - A product made by saturating felted asbestos with asphalt or other suitable bindery, such as a synthetic elastomer.
7. Asbestos Fibers - Those particles with a length greater than five (5) microns and a length to diameter ratio of 3:1 or greater.
8. Asbestos Work Area - A regulated area as defined by OSHA Title 29 CFR, Part 1926.1101 where asbestos abatement operations are performed which is isolated by physical barriers to prevent the

spread of asbestos dust, fibers, or debris. The regulated area shall comply with requirements of regulated area for demarcation, access, respirators, prohibited activities, competent persons and exposure assessments and monitoring.

9. Caulking - Resilient mastic compound often having a silicone bituminous or rubber base; used to seal cracks, fill joints, and prevent leakage. Typical applications: around windows, and doors. Caulking is at joints between two dissimilar materials. (i.e., masonry to wood, masonry to steel, etc.)
10. Clean Room - An uncontaminated area or room, which is a part of the worker decontamination system with provisions for storage of workers' street clothes and protective equipment.
11. Competent Person - As defined by OSHA Title 29 CFR, Part 1926.1101, a representative of the Abatement Contractor who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure & who has authority to take prompt corrective measures to eliminate such hazards during asbestos removal. Competent person shall be properly trained in accordance with United States Environmental Protection Agency‘s (EPA) Model Accreditation Plan (MAP).
12. Consultant – Fuss & O’Neill EnviroScience, LLC
13. Curtained Doorway - A device to allow ingress and egress from one area to another while permitting minimal air movement between the areas. Two curtained doorways spaced a minimum of six feet apart can form an airlock.
14. Damproofing - Application of a water impervious material to surface such as wall to prevent penetration of moisture, typically at foundation or below grade surface.
15. Decontamination System - A series of connected areas, with curtained doorways between any two adjacent areas, for the decontamination of workers and equipment. A decontamination system always contains at least one airlock and is adjacent and connected to the regulated area, where possible.
16. Encapsulant - A liquid material which can be applied to asbestos containing materials which controls the possible release of asbestos fibers from the materials either by creating a membrane over the surface (bridging encapsulant), or penetrating the material and binding its components together (penetrating encapsulant).
17. Equipment Room - Any contaminated area or a room that is part of the worker decontamination system with provisions for storage of contaminated clothing and equipment.
18. Friable Asbestos Materials - Any material that contains more than 1% asbestos by weight, that can be crumbled, pulverized or reduced to powder by hand pressure.
19. GFCI – Ground Fault Circuit Interrupter
20. Glazing Compound - Any compound used to hold window glass in place, also referred to as putty, or glazier’s putty. It is not field-applied; usually installed during manufacture of windows.
21. HEPA - High Efficiency Particulate Air filtering system capable of filtering out particles of 0.3 microns diameter from a body of air at 99.97% efficiency or greater
22. HEPA Filter - HEPA filter in compliance with ANSI Z9.2 1979.
23. HEPA Vacuum Equipment - Vacuum equipment equipped with a HEPA filter system for filtering the effluent air from the unit.
24. Moveable Object - Unit of equipment of furniture in the work area that can be removed from the work area.

25. Negative Air Pressure Equipment - A portable local exhaust system equipped with HEPA filtration used to create negative pressure in a regulated area (negative with respect to adjacent unregulated areas) and capable of maintaining a constant, low velocity air flow into regulated areas from adjacent unregulated areas.
26. NESHAPs - National Emissions Standard for Hazardous Air Pollutants regulations enforced by the EPA.
27. Owner – Charles and Barbara Degoursey
28. Permissible Exposure Limit (PEL) - The maximum airborne concentration of asbestos fibers to which an employee is allowed to be exposed. The new level established by OSHA Title 29 CFR, Part 1926.1101 is 0.1 fibers per cubic centimeter (fibers/cc) of air as an eight-hour time weighted average (TWA) and 1.0 fibers /cc averaged over a sampling period of 30 minutes as an Excursion Limit. The Contractor is responsible for maintaining work areas in a manner that this standard is not exceeded.
29. Project Monitor - A professional capable of conducting air monitoring and analysis of schemes. This individual should be an industrial hygienist, an environmental scientist, or an engineer with experience in asbestos air monitoring and worker protection equipment and procedures. This individual should have demonstrated proficiency in conducting air sample collection in accordance with OSHA Title 29 CFR, Parts 1910.1001 and 1926.1101.
30. Regulated Area - An area established by the employer to demarcate where Class I, II, and III asbestos work is conducted and any adjoining area where debris and waste from such asbestos work accumulate, and a work area within which airborne concentrations of asbestos exceed or there is a reasonable possibility that they may exceed the PEL.
31. Shower Room - A room between the clean room and the equipment room in the work decontamination system with hot and cold running water and suitably arranged for employee showering during decontamination. The shower room is located in an airlock between the contaminated area and the clean area.

1.12 SUBMITTALS

A. The Contractor shall submit the following in one complete package prior to the pre-construction meeting, and no later than 10 business days prior to the anticipated start of the Work:

1. Submit a schedule to the Architect and the Consultant that defines a timetable for executing and completing the project, including work area preparations, removal, cleanup, decontamination, and final clearance air monitoring (if applicable).
2. Submit the current valid State of Connecticut Asbestos Abatement Contractor license and certificate of insurance.
3. Submit the CTDPH Asbestos Abatement Notification Form.
4. Submit the name and address of the hauling contractor and landfill to be used. Also submit current valid operating permits and certificates of insurance for the transporter and landfill.
5. Submit video documentation showing the conditions of the building prior to the start of work. The contractor will be held responsible for all damage to the building and its contents not shown on the video documentation.

6. Submit the plans and construction details for the construction of the decontamination systems and the isolation of the work areas as may be necessary for compliance with this specification and applicable regulations.
7. Submit the CTDPH license, training, medical, and respirator fit test records of each employee who may be on the project site.
8. Submit the qualifications of the air sampling professional that the Contractor proposed to use for this project to perform OSHA-required employee exposure monitoring.
9. Submit detailed product information on all materials and equipment proposed for asbestos abatement work on this project.
10. Submit pertinent information regarding the qualifications of the Project Supervisor (competent person) for this project as well as a list of past projects completed.
11. Submit a chain-of-command for the project.
12. Submit a site-specific Emergency Action Plan for the project.
13. Submit a written site-specific Respiratory Protection Program for employees for the Work, including make, model and National Institute of Occupational Safety and Health (NIOSH) approval numbers of respirators to be used at the Site (if applicable).
14. No work on the Site will be allowed to begin until the Architect and the Consultant as listed herein approve the Pre-Construction Submittals. Any delay caused by the Contractor's refusal or inability to submit this documentation in a timely manner does not constitute a cause for change order or a time extension;

B. The Contractor shall submit the following to the Consultant during the Work:

1. Copies of personal air sampling results (Consultant will not review or provide any direction or advice regarding results). The Contractor shall be responsible for proper sample analytical review and personal protective equipment (PPE) selection and use. Records are retained solely for project record.
2. Copies of training, CTDPH licenses, fit test records, and medical records for new employees to start work (24-hours in advance) and prior to the new employee arriving at the Site.
3. Carbon copies from waste shipment record, waste manifest records, bill of lading or other waste tracking record for all specified materials.
4. Copies of daily log sheets, daily sign-in sheets, and containment sign-in sheets.

C. The Contractor shall submit the following to the Consultant at the completion of the Work. The Owner reserves right to retain payment(s) until all items are received in completion:

1. Original final completed copies of the waste shipment records, signed by all transporters and the designated disposal site owner/operator.
2. Original final completed copies of bill of laden, weight tickets, recycling tickets, and manifests for all specified materials.
3. Contractor's logs (daily activity logs, daily sign in sheets, containment sign-in sheets), and all worker training, CTDPH licenses, medical records and respirator fit test records.
4. Copies of all OSHA personal monitoring results.

1.13 REGULATIONS AND STANDARDS

A. The Contractor shall be solely responsible for conducting this project and supervising all work in a manner that will be in conformance with all federal, state, and local regulations and guidelines pertaining to asbestos abatement. Specifically, the Contractor shall comply with the requirements of the following:

1. EPA National Emissions Standards for Hazardous Air Pollutants (NESHAPS) Regulations (Title 40 CFR, Part 61, Subpart M);
2. OSHA Asbestos Regulations (Title 29 CFR, Parts 1910.1001 and 1926.1101);
3. Connecticut Department of Energy and Environmental Protection (DEEP) Regulations (Section 22a 209 8(i) and Section 22a 220 of the Connecticut General Statutes);
4. CTDPH Standards for Asbestos Abatement (Sections 19a-332a- 1 to 19a-332a-16);
5. CTDPH Licensing and Training Requirements for Persons Engaged in Asbestos Abatement and Asbestos Consultant Services (Sections 20-440-1 to 20-440-9 and Section 20-441);
6. DOT Hazardous Materials Regulations (Title 49 CFR, Parts 171 – 180)
7. 2003 International Building Code as adopted by the 2005 State of Connecticut Building Code including the 2009, 2011, and 2013 amendments;
8. Life Safety Code (National Fire Protection Association [NFPA]);
9. Local health and safety codes, ordinances or regulations pertaining to asbestos remediation and all national codes and standards including ASTM, ANSI, and Underwriter's Laboratories.

1.14 EXEMPTIONS

A. Any deviations from these specifications require the prior written approval and authorization from the Owner, the Architect, and the Consultant.

B. Any modifications from the standard work practices identified in the CTDPH Standards for Asbestos Abatement, Sections 19a-332a-1 to 19a-332a-16 must be requested in writing and approved in writing by the CTDPH.

1.15 FINAL RE-OCCUPANCY AIR CLEARANCE

A. Following the completion of the encapsulation phase of the Work, the Consultant shall collect final re-occupancy clearance air samples inside the work area per CTDPH Standards for Asbestos Abatement (19a-332-1 to 19a-332-16).

B. The Owner shall be responsible for payment of the sampling and analysis of the initial final air clearance samples only. The Contractor shall be responsible for payment of all costs associated with the collection and analysis of additional final clearance air samples if the first set of samples fail to satisfy the clearance criteria.

C. Contractor shall not conduct demolition or other removal activities during final re-occupancy air clearance sampling.

D. Exterior asbestos abatement work: Re-occupancy clearance air sampling is not required following removal of exterior non-friable ACM if removal does not render materials friable and negative pressure

enclosures (NPEs) are not utilized. If removal renders non-friable materials friable, the Work must be performed within a NPE and final re-occupancy air clearance sampling will be conducted.

1.16 NOTIFICATIONS, POSTINGS, SUBMITTALS, AND PERMITS

A. The Contractor shall make the following written notifications, and provide the submittals to the following agencies prior to the commencement of abatement if the work is going to render the ACM friable. These notifications are required 10-calendar days prior to the start of the abatement project:

1. Connecticut DEEP
   Health Services and Solid Waste Management Unit
   79 Elm St.
   Hartford, CT 06106
   (Only if asbestos waste is disposed of in Connecticut)

2. CTDPH
   410 Capital Avenue
   MS #51 AIR
   P.O. Box 340308
   Hartford, CT 06134

B. The minimum information included in the notification to these agencies includes:

1. Name and address of building Owner/Operator
2. Building location
3. Building size, age, and use
4. Amount of asbestos
5. Work schedule, including proposed start and completion date
6. Asbestos removal procedures to be used
7. Name and location of disposal site for generated asbestos waste, residue, and debris
8. If landfill opens in Connecticut to accept ACM waste, Consultant will notify DEEP prior to utilizing said landfill.

1.17 WORK SITE SAFETY PLAN

A. The Contractor shall establish a set of emergency procedures and shall post them in a conspicuous place at the Site. The safety plan should include provisions for the following:

1. Evacuation of injured workers.
2. Emergency and fire exit routes from all work areas.
3. Emergency first aid treatment.
4. Local telephone numbers for emergency services including ambulance, fire, and police.
5. A method to notify occupants of the building in the event of a fire or other emergency requiring evacuation of the building.

B. The Contractor shall be responsible for properly training all workers in these procedures.

1.18 INDEPENDENT AIR SAMPLING AND ASBESTOS ABATEMENT MONITORING

A. This Section describes independent air sampling work being performed on behalf of the Owner. This work is not in the Contract Sum. This Section describes air monitoring conducted by the Consultant to verify that the building beyond the work area and the outside environment remains uncontaminated. (Personal air monitoring required by OSHA is work shall be performed by the Contractor and is within the Contract Sum.)

B. The purpose of the Consultant's air monitoring is to detect faults in the work area isolation such as:

1. Contamination of area outside of the work area by airborne asbestos fibers

C. Should any of the above occur, the Contractor shall immediately cease all asbestos abatement activities until the fault is corrected. Do not recommence work until authorized by the Consultant.

D. The Consultant may monitor total airborne fiber concentrations in the Work Area. The purpose of this air monitoring will be to detect airborne fiber concentrations, which may challenge the ability of the work area isolation procedures to protect the balance of the building or outside of the building from possible contamination by airborne fibers.

E. The Consultant may perform on-site monitoring throughout the project, as follows:

1. Prior to work on any given day, the Contractor's designated "competent person" shall discuss the day's work schedule with the Consultant to evaluate job tasks with respect to safety procedures and requirements specified to prevent contamination of the building or the employees. This includes a visual inspection of the work area and the decontamination of the building or the employees. This includes a visual inspection of the work area and the decontamination systems.

1.19 CONTRACTOR'S AIR SAMPLING RESPONSIBILITY

A. The Contractor shall independently retain an air sampling professional to monitor airborne asbestos concentrations in the workers' breathing zone and to establish conditions and work procedures for maintaining compliance with OSHA Regulations Title 29 CFR, Parts 1910.1001 and 1926.1101.

B. The Contractor's air sampling professional shall document all air sampling results and provide a report to the Consultant within 48-hours after sample collection.

C. All air sampling shall be conducted in accordance with methods described in OSHA Standards Title 29 CFR, Parts 1910.1001 and 1926.1101.

1.20 PROPER WORKER PROTECTION

A. This Section describes the equipment and procedures required for protecting workers against asbestos contamination and other workplace hazards, except for respiratory protection.

B. All workers are to be accredited as Abatement Workers as required by the EPA's AHERA regulation Title 40 CFR, Part 763 Appendix C to Subpart E, February 3, 1994.

C. The Contractor is required to be certified and accredited, as required by the CTDPH.

D. In accordance with OSHA Title 29 CFR, Part 1926, all workers shall receive a training course covering the dangers inherent in handling asbestos, the dangers of breathing asbestos dust, proper work procedures, and proper worker protective measures. This course must include, but is not limited to the following:

1. Methods of recognizing asbestos
2. Health effects associated with asbestos
3. Relationship between smoking and asbestos in producing lung cancer
4. Nature of operations that could result in exposure to asbestos
5. Importance of and instruction in the use of necessary protective controls, practices and procedures to minimize exposure including:
    a. Engineering controls
    b. Work Practices
    c. Respirators
    d. Housekeeping procedures
    e. Hygiene facilities
    f. Protective clothing
    g. Decontamination procedures
    h. Emergency procedures
    i. Waste disposal procedures
6. Purpose, proper use, fitting, instructions, and limitations of respirators as required by OSHA Title 29 CFR, Part 1910.134
7. Appropriate work practices for the work
8. Requirements of medical surveillance program
9. Review of OSHA Title 29 CFR, Part 1926
10. Pressure Differential Systems
11. Work practices including hands on or on job training
12. Personal Decontamination procedures
13. Air monitoring, personal and area

E. The Contractor shall provide medical examinations for all workers who may encounter a total airborne fiber concentration of 0.1 (fibers/cc) or greater for an 8-hour TWA. In the absence of specific airborne fiber data, provide medical examinations for all workers who will enter the work area for any reason. Examination shall, at a minimum, meet OSHA requirements as set forth in Title 29 CFR, Part 1926. In addition, provide an evaluation of the individual's ability to work in environments capable of producing heat stress in the worker.

F. Submit the following to the Consultant for review. The Contractor shall not start work until these submittals are returned with Consultant action stamp indicating that they are accepted.

1. Submit copies of certificates from an EPA-approved AHERA Abatement Workers course for each worker as evidence that each asbestos Abatement Worker is accredited as required by the EPA's AHERA Regulation Title 40 CFR, Part 763 Appendix C to Subpart E, February 3, 1994.
2. Submit evidence that the Contractor is certified to perform asbestos abatement work by the CTDPH.
3. Submit documents verifying that each worker has had a medical examination within the last 12 months, as part of compliance with OSHA medical surveillance requirements. Submit, at a minimum, for each worker the following:

    a. Name and Social Security Number
    b. Physicians Written Opinion from examining physician including at a minimum the following:
        1) Whether worker has any detected medical conditions that would place the worker at an increased risk of material health impairment from exposure to asbestos.
        2) Any recommended limitations on the worker or on the use of personal protective equipment (PPE) such as respirators.
        3) Statement that the worker has been informed by the physician of the results of the medical examination and of any medical conditions that may result from asbestos exposure.

4. Copy of information that was provided to physician in compliance with OSHA Title 29 CFR, Part 1926.
5. Statement that worker is able to wear and use the type of respiratory protection proposed for the project, and is able to work safely in an environment capable of producing heat stress in the worker.
6. Submit copies of certificates for the site supervisor and the workers issued by the CTDPH.

G. Submit certification signed by an officer of the abatement-contracting firm and notarized that personal exposure measurements, medical surveillance, and worker training records are in conformance with OSHA Title 29 CFR, Part 1926.

H. The Contractor shall maintain control of and shall be responsible for access to all work areas to ensure the following requirements:

1. Non-essential personnel are prohibited from entering the area.
2. All authorized personnel entering the work area shall read the "Worker Protection Procedures" which are posted at the entry points to the system, and shall be equipped with properly-fitted respirators and protective clothing.
3. All personnel who are exiting from the decontamination system shall be properly and thoroughly decontaminated.
4. Asbestos waste that is removed from the work area must be properly containerized and labeled in accordance with these specifications. The exterior surface of the containers shall be decontaminated. Asbestos waste must be immediately transported off site or immediately placed in locked, posted temporary storage located on site, and removed within 24-hours of project completion.

5. Any material, equipment, or supplies that are removed from the decontamination system shall be thoroughly cleaned and decontaminated by wet cleaning and/or with HEPA-filtered vacuums.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Deliver all materials in the original packages, containers, or bundles bearing the name of the manufacturer and the brand name and product technical description.

B. Damaged or deteriorating materials shall not be used and shall be removed from the Site. Material that becomes contaminated with asbestos shall be decontaminated or disposed as asbestos waste.

C. Polyethylene (poly) sheeting in a roll size to minimize the frequency of joints shall be delivered to the Site with a factory label indicating 4- or 6–mil thickness.

D. Poly disposable bags shall be 6-mil thickness with pertinent pre-printed label. Tie wraps for bags shall be plastic, five-inches long (minimum), pointed and looped to secure filled plastic bags.

E. Tape or spray-adhesive will be capable of sealing joints in adjacent poly sheets and for attachment of poly sheet to finished or unfinished surfaces of dissimilar materials and capable of adhering under both dry and wet conditions, including use of amended water.

F. Surfactant (wetting agent), shall consist of 50 percent polyoxyethylene ether and 50 percent polyoxyethylene ester, or equivalent, and shall be mixed with water to provide a concentration of one ounce surfactant to five-gallons of water or as directed by manufacturer.

G. Removal encapsulant shall be non-flammable factory prepared penetrating chemical encapsulant deemed acceptable to the Consultant. Usage shall be in accordance with manufacturer’s printed technical data.

H. The Contractor shall have available spray equipment capable of mixing wetting agent with water, be capable of generating sufficient pressure and volume, and having sufficient hose length to reach all areas with asbestos.

I. Impermeable containers are to be used to receive and retain asbestos-containing or contaminated materials until disposal at an acceptable disposal site. The containers shall be labeled in accordance with OSHA Title 29 CFR, Part 1926.1101. Containers must be both air and watertight.

J. OSHA-required asbestos labels, warning signs and/or warning tape shall be used.

K. Encapsulant shall be bridging or penetrating type that has been deemed acceptable to the Consultant. Usage shall be in accordance with manufacturer's printed technical data.

L. HEPA filtered local exhaust ventilation shall be utilized during the installation of enclosures and supports where ACM may be disturbed.

2.2 TOOLS AND EQUIPMENT

A. The Contractor shall provide all tools and equipment necessary for asbestos removal, encapsulation and enclosure.

B. The Contractor's air monitoring professional shall have air-monitoring equipment of type and quantity to monitor operations and conduct personnel exposure surveillance per OSHA requirements.

C. The Contractor shall have available sufficient inventory or dated purchase orders for materials necessary for the job including protective clothing, respirators, filter cartridges, poly sheeting of proper size and thickness, tape and air filters.

D. The Contractor shall provide (as needed) temporary electrical power panels, electrical power cables, and electrical power sources (such as generators). Any electrical connection work affecting the building electrical power system shall be performed by a State of Connecticut-licensed electrician.

E. The Contractor shall have available shower stalls and plumbing to support same to include sufficient hose length and drain system or an acceptable alternate.

F. Exhaust air filtration system units shall contain HEPA filter(s) capable of sufficient air exhaust to create negative air pressure of - 0.02 inches of water column within enclosure with respect to outside area. Digital monometers shall be supplied for Class 1 work. Equipment shall be checked for proper operation by smoke tubes or differential pressure gauge before the start of each shift and at least twice during the shift. Adequate exhaust air shall be provided for a minimum of four (4) air changes per hour within the NPE. No air movement system or air filtering equipment shall discharge unfiltered air outside.

G. Vacuum units, of suitable size and capacities for the project, shall have HEPA filter(s) capable of trapping and retaining at least 99.97 percent of all mono-dispersed particles of 0.3 micrometers in diameter or larger.

H. The Contractor will have reserve units so that the station system will operate continuously.

PART 3 - EXECUTION

3.1 PRE-CONSTRUCTION MEETING

A. At least one week prior to the start of work a Pre-Construction Meeting will be scheduled and must be attended by the Contractor and any Sub-Contractors. The assigned Contractor Site Supervisor is also required to attend this meeting.

B. The Contractor shall present a detailed project schedule and project submittal package at the Pre-Construction Meeting. Variations, amendments, and corrections to the presented schedule will be discussed, and the Owner and Consultant will inform the Contractor of any scheduling adjustments for this project.

C. Following the Pre-Construction Meeting, the Contractor shall submit a revised schedule (if needed) no later than one week after the meeting.

3.2 WORK AREA PREPARATION FOR INTERIOR ABATEMENT

A. Where necessary, deactivate electrical power, including receptacles and light fixtures. Under no circumstances during the decontamination procedures will lighting fixtures be permitted to be operating when amended water spray may contact the fixture. Provide GFCI devices, temporary power, and temporary lighting installed in compliance with the applicable electrical codes. All installations are to be made by a State of Connecticut-licensed electrician, permitted as required, and located outside the work areas.

B. Temporary power shall be continuous power. Portable generators for use during interior asbestos abatement are not authorized.

C. Deactivate and/or isolate heating, ventilating, and air conditioning (HVAC) air systems or zones to prevent contamination and fiber dispersal to other areas of the building or structure. During the work, vents within the work area shall be covered with two layers of 6-mil poly, and completely sealed with duct tape.

D. The Contractor shall be responsible for removing furniture, equipment and any other materials to be salvaged from the work areas. The Contractor shall pre-clean moveable objects within the proposed work areas using HEPA-filtered vacuum equipment and/or wet cleaning methods as appropriate and remove such objects from work areas. Non-porous materials (i.e., metal) shall be cleaned, visually inspected by a project monitor prior to removal from the work areas and recycling/disposal as solid waste.

E. Completely seal all openings, including, but not limited to: windows, corridors, doorways, skylights, ducts, grills, diffusers, and any other penetration of the work areas, with poly sheeting a minimum of 6-mil thick, and sealed with duct tape. This includes doorways and corridors that will not be used for passage during work areas and occupied areas.

F. Pre-clean fixed objects within the work areas, using HEPA vacuum equipment and/or wet cleaning methods as appropriate, and enclose with a minimum 6-mil poly sheeting completely sealed with duct tape.

G. Clean the proposed work areas using HEPA vacuum equipment or wet cleaning methods as appropriate. Do not use methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters.

H. After HEPA vacuum cleaning, cover fixed walls with two layers of 4-mil poly sheeting to the floor level. Where fixed walls are not used, two layers of 6-mil poly sheeting will be applied to a rigid framework of wood, metal, or PVC. Overlaps shall be sealed with tape or spray adhesive.

I. Maintain emergency and fire exits from the work areas, or establish alternate exits satisfactory to fire officials.

J. Clean and remove ceiling mounted objects, such as lights and other items not sealed-off, which interfere with asbestos abatement. Use hand-held amended water spraying or HEPA-filtered vacuum equipment during fixture removal to reduce settled fiber dispersal.

K. Create pressure differential between work areas and uncontaminated areas by the use of acceptable negative air pressure equipment sufficient to provide four air changes per hour and create negative air pressure of -0.02 inches of water column within enclosure with respect to outside area as measured on a water gauge.

3.3 WORK AREA PREPARATION FOR EXTERIOR ABATEMENT

A. Where necessary, deactivate electrical power, including receptacles and light fixtures. Under no circumstances during the decontamination procedures will lighting fixtures be permitted to be operating when amended water spray may contact the fixture. Provide GFCI devices, temporary power, and temporary lighting installed in compliance with the applicable electrical codes. All installations are to be made by a State of Connecticut-licensed electrician, permitted as required, and located outside the work areas.

B. Deactivate and/or isolate HVAC air systems or zones to prevent contamination and fiber dispersal to other areas of the structure. During the work, vents within the work area shall be covered with two layers of 6-mil poly and completely sealed with duct tape.

C. Completely seal all openings, including, but not limited to: windows, corridors, doorways, skylights, ducts, grills, diffusers, and any other penetration of the work areas, with poly sheeting a minimum of 6-mil thick, and sealed with duct tape.

D. Install ground cover consisting of one layer of six-mil poly, extending out a minimum of 15 feet from the building foundation in work. Tape and glue ground cover to the building foundation.

E. Install caution tape and OSHA warning signs in accordance with OSHA Title 29 CFR, Part 1926.1101 at edge of ground cover creating a regulated work area.

3.4 DECONTAMINATION SYSTEM

A. The Contractor shall establish contiguous to the work area, a decontamination system consisting of equipment room, shower room, and clean room, in series. The only access between contaminated and uncontaminated areas shall be through this decontamination enclosure. If it is not feasible to erect a contiguous decontamination system, the Contractor shall establish a remote decontamination unit in as close proximity to the work area as is feasible. For exterior work, the Contractor shall establish a remote decontamination system at the perimeter of the regulated work area.

B. Access between rooms in the decontamination system shall be through double-flap curtained openings. The clean room, shower and equipment room within the decontamination enclosure, shall be completely sealed ensuring that the sole source of airflow through this area originates from uncontaminated areas outside the work area.

C. Construct the decontamination enclosure system with wood or metal framing, cover both sides with a double layer of 6-mil poly sheeting, completely sealed with spray adhesive, and taped at the joints.

D. If Consultant is retained for pre-abatement services, the Contractor and the Consultant shall visually inspect barrier several times daily to assure effective seal and the Contractor shall repair defects immediately.

3.5 ASBESTOS REMOVAL PROCEDURE - GENERAL

A. The Contractor shall have a designated “competent person” on the Site at all times to ensure establishment of a proper enclosure system and proper work practices throughout project.

B. Abatement work will not commence until authorized by the Consultant if Consultant is retained for pre-abatement services.

C. The Contractor shall properly coordinate abatement work with other trades, new construction and Site use. The Contractor shall be responsible for addressing any concerns by the Owner, Architect, and/or Consultant.

D. With a fine mist, spray ACM with amended water using airless spray equipment or apply approved removal wetting agent to reduce the release of fibers during removal operation.

E. To maintain indoor asbestos concentrations to the minimum, the wet asbestos must be removed in manageable sections. Material drop shall not exceed eight feet. For heights up to 15-feet, provide inclined chutes or scaffolding to intercept drop.

F. Remove ACM as appropriate by standard methods. Fill disposal containers as removal proceeds; seal filled containers and clean containers before removal to equipment decontamination enclosure system. Wet clean each container thoroughly, double bag and apply caution label. Ensure that workers do not exit the work area thorough the equipment decontamination enclosure.

G. After completion of stripping work, all surfaces from which asbestos has been removed shall be wet brushed, using a nylon brush, wet wiped, and sponged or cleaned by an equivalent method to remove all visible material (wire brushes are prohibited). During this work, the surfaces being cleaned shall be kept wet.

H. Remove and containerize all visible accumulations of asbestos-containing and/or asbestos-contaminated debris. During cleanup, utilize brooms, rubber dustpan, and rubber squeegees to minimize damage to floor covering.

I. Sealed disposal containers, and all equipment used in the work area, shall be included in the cleanup and shall be removed from work areas via the equipment decontamination enclosure at an appropriate time in the cleaning sequence. All asbestos waste in 6-mil poly disposal bags shall be double-bagged in the equipment decontamination enclosure before removal from the Site.

J. At any time during asbestos removal, should the Consultant suspect contamination of areas outside the work area(s), they shall cause all abatement work to stop until the Contractor takes the necessary steps to decontaminate these areas, and eliminate the causes of such contamination. Unprotected individuals shall be prohibited from entering suspected contaminated areas until air sampling and visual inspections certify decontamination.

K. After completion of the initial final cleaning procedure including removal of the inner layers of poly sheeting, but prior to encapsulation, a pre-sealant inspection shall be conducted by the Consultant. The pre-sealant inspection shall verify that ACM and residual dust has been removed from the work area.

3.6 ASBESTOS REMOVAL PROCEDURES – INACCESSIBLE PIPE AND PIPE FITTING INSULATION

A. The Contractor shall perform selective demolition of walls, wet walls, and ceilings to assess the presence of inaccessible pipe and pipe fitting insulation. Performed selective demolition in a way that does not disturb asbestos containing materials.

B. Once areas containing inaccessible piping are opened up, the Consultant shall verify the presence or non-presence of asbestos containing materials.

C. If ACM are encountered, the Contractor shall ensure that work area preparation has been conducted in accordance with Sections 3.2 and 3.4 of this Specification.

D. The Contractor shall wet the pipe and pipe fitting insulations with amended water or detergent solution, so that entire surface is wet. Do not allow to puddle or run off into other areas. If a detergent is used, use in strict accordance with manufacturer's instructions. Allow time for humidity and water or removal encapsulant to loosen pipe insulation, pipe fitting insulation, or ductwork insulation prior to removal.

E. The Contractor shall keep materials continuously wet throughout removal operation.

F. Remove materials using hand tools. Continuously mist the materials with amended water, removal encapsulant or detergent solution during removal. Wet any debris generated as necessary to keep continuously wet.

G. Pick up materials and place in labeled disposal bags.

3.7 ASBESTOS REMOVAL PROCEDURES – EXTERIOR CEMENTITIOUS PANEL SIDING

A. Spray ACM with amended water using airless spray equipment or apply an approved wetting agent to reduce the release of fibers during removal operations.

B. Remove exterior asbestos-containing cement siding shingles using hand tools and place directly into durable leak-tight containers or in two 6-mil poly bags and properly label.

C. Removal methods shall not make the material a Regulated Asbestos Containing Material (RACM).

D. Surrounding surfaces shall be HEPA-filtered vacuumed and wet-wiped to remove all visible dust and debris.

E. When the Consultant completes their final visual inspection in a satisfactory manner, Contractor shall remove protective poly drop cloths by rolling in all 4 corners of the poly sheets.

F. Check all ground surfaces in work areas after removal is complete, and the protective ground poly drop cloths have been removed. Remove and dispose of any suspect ACM observed on ground.

G. Unless an Approved Alternative Work Practice (AWP) is obtained, removal of cement siding shingles using mechanical equipment shall be performed within negative pressure containment.

3.8 CONSULTANT'S RESPONSIBILITIES

A. Air sampling may be conducted by the Consultant to ascertain the integrity of engineering controls that protect the building from possible asbestos contamination. Independently, the Contractor shall monitor air quality within the work area to ascertain the protection of employees and to comply with OSHA regulations.

B. The Consultant's project monitor may collect and analyze air samples during the following period:

1. Abatement Period. If required, or retained for this service, the Consultant's project monitor shall collect samples on a daily basis during the work period. A sufficient number of area samples shall be collected outside of the work area, at the exhaust of the negative pressure system, and outside of the building to evaluate the degree of cleanliness or contamination of the building during removal. At the discretion of the Asbestos Project Monitor, additional air samples may be collected inside the work area and decontamination enclosure system.

C. The Consultant's project monitor shall collect and analyze air samples during the following period:

1. Post-Abatement Period. If required, the Asbestos Project Monitor shall conduct air sampling following the final cleanup phase of the project, once the "no visible residue" criterion, as established by the Asbestos Project Monitor, has been met and the work area has been encapsulated by the Contractor. Five air samples shall be collected inside the work area utilizing aggressive methods to comply with the CTDPH Standards for Asbestos Abatement, sections 19a 332a 12.

a. Final re-occupancy air clearance sampling shall be conducted by the Consultant project monitor in accordance with the requirements of the CTDPH using the following methods:

1) Phase Contrast Microscopy (PCM) with a total airborne fiber concentration limit of less than or equal to 0.010 fibers/cc.

D. The Consultant's project monitor may provide continual evaluation of the air quality outside the building during removal, using their best professional judgment in respect to the CTDPH guideline of 0.010 fibers/cc.

E. If the Consultant's project monitor determines that the air quality has become contaminated from the Work, they shall immediately inform the Contractor to cease all removal operations and implement a work stoppage clean up procedure. The Contractor shall conduct a thorough cleanup of the areas designated by the Consultant. No further removal work may occur until the project monitor has assessed that the building air has been decontaminated.

F. Abatement air samples shall be collected as required to obtain a volume of 1,200 liters of air. Air samples shall be analyzed by PCM NIOSH Method 7400 sampling protocol.

3.9 CONSULTANT'S INSPECTION RESPONSIBILITIES

A. The Consultant may conduct inspections throughout the progress of the abatement project. Inspections shall be conducted to document the progress of the abatement work, as well as the procedures and practices employed by the Contractor.

B. The Consultant may perform the following inspections during the abatement activities:

1. Pre-commencement Inspection. Pre-commencement inspections shall be performed at the time requested by the Contractor. The Consultant shall be informed 12-hours prior to the time the inspection is needed. If deficiencies are noted during the pre-commencement inspection, the Contractor shall perform the necessary adjustments to obtain compliance.
2. Work Area Inspections. Work area inspections shall be conducted on a daily basis at the discretion of the Consultant. During the work inspections, the Consultant shall observe the Contractor's removal procedures, verify barrier integrity, monitor negative air filtration devices, assess project progress, and if deficiencies are noted, inform the abatement Contractor of specific remedial activities.

C. The Consultant shall perform the following inspections during the abatement activities:

1. Pre-sealant Inspection. Upon the request of the Contractor, the Consultant shall conduct a pre-sealant inspection. The Consultant shall be informed 12-hours prior the time that the inspection is needed. The pre-sealant inspection shall be conducted after completion of the initial cleaning procedures, but prior to encapsulation. The pre-sealant inspection shall verify that all ACM and residual debris have been removed from the work area. If the Consultant identifies residual dust or debris during the pre-sealant inspection, the Contractor shall comply with the request of the Consultant to render the area “dust free.”
2. Final Visual Inspection. Upon request of the abatement Contractor, the Consultant shall conduct a final visual inspection. Following the removal of the inner layer of poly sheeting, but prior to final air clearance, the Consultant shall conduct a final visual inspection inside the work area. If residual dust or debris is identified during the final inspection, the Contractor shall comply with the request of the Consultant to render the area “dust free.”

3.10 ASBESTOS DISPOSAL

A. ACM disposal or asbestos-contaminated material must be in compliance with requirements of and authorized by DEEP and CTDPH.

B. Disposal approvals shall be obtained before commencing asbestos abatement.

C. A copy of approved disposal authorization shall be provided to the Owner and Consultant and any required federal, state, or local agencies.

D. The Consultant will retain copies of all Waste Shipment Records as part of the project file. On receipt, the landfill operator will sign the receipts, and the quantity of asbestos debris leaving the Site and arriving at the landfill acknowledged.

E. All asbestos debris shall be transported in covered, sealed vans, boxes, or dumpsters, which are physically isolated from the driver by an airtight barrier. All vehicles must be properly licensed to meet DOT requirements.

F. Any vehicles used to store or transport ACM will either be removed from the property at night, or shall be securely locked and posted to prevent disturbance.

G. Any incident and/or accident that may result in spilling, exposure or environmental release of asbestos waste outside the work area, on and off the property, and all related issues shall be the sole responsibility of the Contractor.

END OF SECTION 028200

SECTION 028500– MOLD REMEDIATION

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Limited Hazardous Materials Inspection Report (February 2015).

1.2 CONSULTANT

A. The Architect shall retain a Consultant for the purposes of project management and monitoring during Mold Remediation. At the discretion of the Architect, the Consultant shall represent the Owner in all phases of the mold remediation project. The Contractor shall regard the Consultant's direction as authoritative and binding as provided herein, in matters particularly, but not limited to:

1. Work area approval,
2. Monitoring results review,
3. Various segments of work completion,
4. Abatement final completion,
5. Data submission review, and
6. Daily field punch list items.

1.3 SCOPE OF WORK

A. Work outlined in this Section includes all work necessary for the removal and disposal of mold-contaminated building materials impacted during the Renovation Project (the “Work”) at 10 Chetwood Street in Milford, Connecticut (the “Site”).

B. This shall include all necessary demolition to access the material(s) for mold abatement.

1.4 USE OF CONTRACT DOCUMENTS

A. It shall be incumbent upon the Contractor to visit the Site and determine existing conditions, and what will be required to accomplish the Work intended by the Contract Documents. No increase in the Contract Sum will be permitted as a result of the Contractor's failure to visit the Site and understand the existing conditions.

B. All work shall comply with the Contract Documents and with applicable codes, laws, regulations, and ordinances wherever applicable. The most stringent of all the foregoing shall govern.

C. It is not intended that the Specifications show every detail of the Work, but the Contractor shall be required to furnish within the Contract Sum all material and labor necessary for the completion of the Work in accordance with the intent of the Specifications.

D. In case of ambiguity among the Contract documents, the more stringent requirement as determined by the Consultant shall prevail.

E. The Work of this Contract includes making modifications as necessary, subject to approval by Owner and the Architect in consultation with the Consultant, to correct any conflicts between the contract documents.

F. All items, not specifically mentioned in the Specifications but implied by trade practices to complete the work, shall be included.

1.5 SITE EXAMINATION

A. It is understood that the Contractor has examined the Site and made their own estimates of the facilities and difficulties attending the execution of the Work, and has based their price thereon.

B. Except for unforeseeable concealed conditions as determined by the Consultant, the Contractor shall make no claim for additional cost due to the existing conditions at the Site.

1.6 CONTRACTUAL QUALIFICATIONS

A. All bidders shall submit a record of prior experience in similar projects, listing no less than three completed projects in the past year, with all projects of similar size and scope. The Contractor shall list the experience and training of the project foremen and all on-site personnel. The information that should be included is as follows:

1. Project Name and Address
2. Owner's Name and Address
3. Architect/Consultant
4. Contract Amount
5. Date of Completion
6. Extras and Changes

B. Submit a written and notarized statement regarding whether the Contractor has ever been cited for non-compliance with federal or state regulations pertaining to worker protection, removal, transport, or disposal of hazardous materials.

1.7 CONSTRUCTION PROGRESS SCHEDULE

A. To assure adequate planning and execution of the Work, and to assist the Consultant in appraising the reasonableness of the Contractor's applications for payment, the Contractor shall prepare and maintain a detailed Progress Schedule.

B. The Contractor shall supervise and direct all work of theirs and other trades using their best skill and attention. The Contractor shall be solely responsible for all construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work under the Contract.

C. Due to the nature of this construction work, the scheduling or phasing of work under this Contract may be adjusted by the Owner. As long as the Scope of Work is not altered, adjustments to the project phasing shall have no effect on the contract price.

D. A pre-construction meeting shall be attended by the Contractor and any Subcontractors. The assigned Supervisor must attend this meeting.

1.8 TESTING LABORATORY SERVICES

A. The Contractor shall submit to the Consultant the name, address and qualifications of proposed laboratories intended to be utilized for sample analysis as required by this Section.

1.9 ADDITIONAL GENERAL REQUIREMENTS

A. The Contractor shall employ a competent Supervisor with at least three years of experience on projects of similar scope and magnitude who shall be responsible for all work involving mold abatement as described in the specifications and defined in applicable regulations, and have full time daily supervision of the same. The Supervisor shall be the competent person as defined by Occupational Safety and Health Administration (OSHA) regulations.

B. The Contractor shall allow the Work of this Contract to be inspected, if requested or required by local, state, federal, and any other authorities having jurisdiction over such work. The Contractor shall immediately notify the Owner, the Architect, and the Consultant and shall maintain written evidence of such inspection for review by the Owner, the Architect, and the Consultant.

C. The Contractor shall incur the cost of all fines resulting from regulatory non-compliance, as issued by federal, state, and local agencies. The Contractor shall incur the cost of all work requirements mandated by federal, state, and local agencies as a result of regulatory non-compliance or negligence.

D. The Contractor shall immediately notify the Owner, the Architect, and Consultant of the delivery of all permits, licenses, certificates of inspection, of approval, or occupancy, etc., and any other such instruments required under codes by authorities having jurisdiction, regardless of who issued, and shall cause them to be displayed to the Owner, the Architect, and the Consultant for verification and recording.

1.10 PROJECT DESCRIPTION

A. This Section includes requirements and procedures for removal and disposal of mold-contaminated building materials, cleaning of interior surfaces to remain, and packaging, transporting, and disposing of waste generated during mold abatement.

B. The work specified herein shall be the minimum requirements necessary to render the building dry and all surfaces within the area cleaned.

C. The following material was determined to be mold-contaminated and shall be packaged, transported, and disposed, and surfaces to remain shall be cleaned by the Contractor:

LOCATION	MATERIAL TYPE	ESTIMATED QUANTITY
1st Floor Boiler Room	Gypsum Wall & Ceiling Board Includes Removal, Packaging, Transporting, & Disposing Fiberglass Insulation Located in Wall & Ceiling Cavities.	300 SF

D. The following materials to remain following Mold Abatement shall be cleaned by the Contractor:

LOCATION	MATERIAL TYPE	ESTIMATED QUANTITY
1st Floor Boiler Room	Wood Framing & Sheeting	300 SF

E. Some of the Work shall be performed in multiple mobilizations, at different periods of time, in conjunction with other trades (i.e., other trades work, demolition work, etc.).

F. Safety Data Sheets (SDS) for chemicals to be used during the project must be submitted to the Consultant prior to site delivery.

G. The Contractor shall be responsible for work area preparations, set-up, worker protection, demolition, disposal, removal, and cleaning of identified building areas and materials, as necessary.

H. The Contractor shall be responsible for the following general requirements:

1. Obtain and pay all associated fees for all approvals and permits, and submit all notifications required.
2. Provide, erect, and maintain all containment work areas, barricades, and warning signs.
3. Unless otherwise specified, all debris resulting from mold abatement, cleaning, and necessary selective demolition shall become the property of the Contractor and shall be removed from the premises.
4. Maintain a contained work area to eliminate building occupant exposures, and the spread of contamination to the unaffected areas of the building.
5. Protect and preserve in operating condition, all utilities traversing the building and Site. Damage to any portion of the building due to work by the Contractor shall be repaired to the satisfaction of the Owner at no cost to the Owner.

1.11 DEFINITIONS

A. The following definitions relative to mold abatement may apply:

1. Accessible - A space easily accessed, and which can be entered or seen without performing demolition.
2. Architect – Lothrop Associates LLP
3. Biocide - A chemical substance or micro-organism which can deter, render harmless, or exert a controlling effect on any harmful organism by chemical or biological means.

4. Competent Person - A representative of the Contractor who is capable of identifying existing mold hazards in the workplace and selecting the appropriate control strategy for exposure. Individual who has authority to take prompt corrective measures to eliminate such hazards during removal.
5. Consultant – Fuss & O'Neill EnviroScience, LLC
6. Debris - Any solid materials, including particulate substances, on a surface not intended to be present.
7. Decontamination System - A series of connected areas, with curtained doorways between any two adjacent areas, for the decontamination of workers and equipment. A decontamination system always contains at least one airlock and is adjacent and connected to the regulated area, where possible.
8. Demolition - The wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.
9. Equilibrium Moisture Content (EMC) - A recommended moisture content of wood, which is to be matched as close as practical to the expected moisture conditions of wood in service. The EMC shall be based on average conditions for both exterior and interior applications.
10. Exposed - Open to view.
11. Fixed Object - A piece of equipment or furniture in the Work Area, which cannot be removed from the Work Area, as determined by the Owner.
12. GFCI – Ground Fault Circuit Interrupter
13. HEPA - High Efficiency Particulate Air filtering system capable of filtering out particles of 0.3 microns diameter from a body of air at 99.97% efficiency or greater.
14. HEPA Filter - HEPA filter in compliance with ANSI Z9.2 1979.
15. HEPA Vacuum Equipment - Vacuum equipment equipped with a HEPA filter system for filtering the effluent air from the unit.
16. Inaccessible - A space not accessible, and which cannot be entered or seen without performing demolition.
17. Mechanical Cleaning - Physical removal of debris and other foreign matter from building surfaces.
18. Moveable Object - A piece of equipment or furniture in the Work Area, which can be removed from the Work Area.
19. Negative Air Pressure Equipment - A portable local exhaust system equipped with HEPA filtration used to create negative pressure in a regulated area (negative with respect to adjacent unregulated areas) and capable of maintaining a constant, low velocity air flow into regulated areas from adjacent unregulated areas.
20. Non-Porous Surface - Any surface of the building in contact with the air stream, which cannot be penetrated by either solutions or air. This would exclude materials such as wood, fiberboard, thermal insulation, and concrete.
21. Owner – Charles and Barbara Degoursey
22. Project Monitor - The trained or certified individual employed by the Architect contracted or employed by the building owner, or Contractor to supervise and/or conduct air monitoring and analysis. This individual is responsible for recognition of technical deficiencies in procedures during both planning and on-site phases of the project.
23. SDS – Safety Data Sheets
24. Shower Room - A room between the clean room and the equipment room in the work decontamination system with hot and cold running water and suitably arranged for employee showering during decontamination. The shower room is located in an airlock between the contaminated area and the clean area.

25. Visibly Clean - Determined by visual inspection, that all portions or components of the building are both 1) free of any visible mold growth, and 2) in the Contractor's professional judgment, capable meeting cleaning verification goals established herein.
26. Visual Inspection - Examination of the cleaned building components to evaluate the effectiveness of the cleaning process using the human eye or another optical instrument.
27. Work Area - Specific area or location where the actual work is being performed, or such other area of a facility, which the Project Monitor determines to befall under the control of these Specifications.

1.12 SUBMITTALS

A. The Contractor shall submit the following in one complete package prior to the pre-construction meeting, and no later than 10 business days prior to the anticipated start of the Work:

1. Submit a schedule to the Architect and the Consultant which defines a timetable for executing and completing the project, including work area preparations, removal, cleanup, decontamination, and final visual inspection.
2. Submit the current certificate of insurance.
3. Submit the name and address of the hauling contractor and landfill to be used. Also submit current valid operating permits in certificates of insurance for the transporter and landfill.
4. Submit video documentation showing the conditions of the building prior to the start of work. The contractor will be held responsible for all damage to the building and its contents not shown on the video documentation.
5. Submit the plans and construction details for the decontamination systems construction, and the isolation of the work areas as may be necessary for compliance with this specification and applicable regulations.
6. Submit the training, medical, and respirator fit test records of each employee who may be on the project site.
7. Submit detailed product information on all materials and equipment proposed for mold abatement work on this project including, but not limited, to the following:

    a. HEPA Vacuum Equipment
    b. Respirators
    c. Polyethylene (poly) Sheeting
    d. Airless Sprayers
    e. MSDS/SDS for products and materials (including biocides) to be used at the Site
    f. Specialty In-Place Drying Equipment including, but not limited to: air scrubbers, desiccant or other de-humidifying equipment, hot air drying systems, air movers/fans, etc.

8. Submit pertinent information regarding the qualifications of the Project Supervisor (competent person) for this project as well as a list of past projects completed.
9. Submit a chain-of-command for the project.
10. Submit a site-specific Emergency Action Plan for the project.
11. Submit a written site-specific Respiratory Protection Program for employees for the Work, including make, model and National Institute of Occupational Safety and Health (NIOSH) approval numbers of respirators to be used at the Site.
12. No work on the Site will be allowed to begin until the Architect and the Consultant as listed herein approve the Pre-Construction Submittals. Any delay caused by the Contractor’s refusal or inability to submit this documentation in a timely manner does not constitute a cause for change order or a time extension.

B. The following shall be submitted to the Consultant during the Work:

1. Training and medical records for new employees to start Site work (24-hours in advance)

C. The following shall be submitted to the Consultant at the completion of the Work:

1. Contractor logs.
2. Containment sign-in/sign-out sheets.
3. Fully-completed waste disposal sheets and bill-of-ladings.

1.13 REFERENCES

A. The current issue of each document referenced below shall govern the Work. Where conflict among requirements or with these specifications or other project specifications exists, the more stringent requirements shall apply.

1. Occupational Safety and Health Administration (OSHA):

a. Title 29 CFR, Part 1910.134 – Respiratory Protection
b. Title 29 CFR, Part 1926.21 – Safety Training and Education
c. Title 29 CFR, Part 1926.32 – Definitions
d. Title 29 CFR, Part 1926.51 – Sanitation
e. Title 29 CFR, Part 1926.59 – Hazard Communication
f. Title 29 CFR, Part 1926.200 – Accident Prevention Signs and Tags
g. Title 29 CFR, Part 1926.417 – Lockout and Tagging of Circuits

2. United States Environmental Protection Agency (EPA):

a. Building Air Quality, December 1991+
b. Guidance Document – “Mold Remediation in Schools and Commercial Buildings”
c. The Institute of Inspection Cleaning and Restoration Certification (IICRC)
d. Standard and Reference Guide for Professional Water Damage Restoration S500.
e. Standard and Reference Guide for Professional Mold Remediation” S520.

3. American National Standards Institute (ANSI):

a. ANSI Z9.2 – Fundamentals Governing the Design and Operation of Local Exhaust Systems
b. ANSI Z88.2 – Respiratory Protection

4. American Society of Testing and Materials (ASTM):

a. ASTM D4442 – Direct Moisture Content Measurements of Wood and Wood Based Materials
b. ASTM E 84 – Surface Burning Characteristic of Building Materials
c. ASTM E 119 – Fire Tests of Building and Construction Materials
d. ASTM F 710 – “Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring”

5. Underwriters Laboratories, Inc. (UL):

a. UL 586 – High Efficiency Particulate, Air Filter Units
b. UL 181 – Factory-Made Air Ducts and Air Connectors
c. UL 181A – Closure Systems for Use with Rigid Air Ducts and Air ConnectorsGENERAL

A. Any substitution in materials, equipment, or methods to those specified shall be approved by the Owner, Architect, and Consultant prior to use. Any requests for substitution shall be provided in writing to the Owner, Architect, and Consultant. The request shall clearly state the rationale for the substitution.

B. Submit to the Owner, Architect, and Consultant product data of all materials and equipment and samples of all materials to be considered as an alternate.

C. Product data shall consist of manufacturer; catalog sheets, brochures, diagrams, schedules, performance charts, illustrations, SDS, and other standard descriptive data. Submittal data shall be clearly marked to identify pertinent materials, products or equipment and show performance characteristics and capacities.

D. Samples shall be of sufficient size and quantity to clearly illustrate the functional characteristics of the product or material with integrally related parts and attachment devices.

2.2 MATERIALS AND PRODUCTS

A. Deliver all materials in the original packages, containers, or bundles bearing the name of the manufacturer and the brand name and product technical description.

B. Damaged or deteriorating materials shall not be used and shall be removed from the premises.

C. The Contractor shall have available sufficient inventory or dated purchase orders for materials necessary for the job including protective clothing, respirators, filter cartridges, poly sheeting of proper size and thickness, tape, cleaning chemicals, and air filters.

D. Materials

1. Poly sheeting in a roll size to minimize the frequency of joints shall be delivered to the Site with factory label indicating either 4-mil or 6-mil.
2. Poly disposable bags shall be 6-mil. Tie wraps for bags shall be plastic, five-inches long (minimum), pointed and looped to secure filled plastic bags.
3. Tape or adhesive spray will be capable of sealing joints in adjacent poly sheets and for attachment of poly sheet to finished or unfinished surfaces of dissimilar materials and capable of adhering under both dry and wet conditions, including use of amended water.
4. Impermeable containers are to be used to receive and retain any lead containing or contaminated materials until disposal at an acceptable disposal site.
    a. The containers shall be labeled in accordance with EPA, OSHA, and DOT standards.
5. HEPA-filtered exhaust systems shall be used during powered dust generating abatement operations. The use of powered equipment without HEPA exhausts is prohibited.
6. Cleaning disinfectant, such as product manufactured by Fiberlock Technologies, Inc., IAQ 2500, or equivalent.
7. Mold resistant coating such as Fiberlock Technologies, IAQ 6000, or equivalent.

2.3 TOOLS AND EQUIPMENT

A. Tools and equipment shall be suitable for work specified.

B. Electrical equipment, protective devices and power cables shall conform to all applicable codes.

C. Shower stalls and plumbing shall include sufficient hose length and drain system or an acceptable alternate. One shower stall shall be provided for each eight workers.

D. Vacuum units, of suitable size and capabilities for the project, shall have HEPA filters capable of trapping and retaining at least 99.97 percent of all monodispersed particles of three micrometers in diameter or larger.

E. Ladders and/or scaffolds shall be of adequate length, strength and sufficient quantity to support the work schedule. Scaffolds shall be equipped with safety rails and kick boards in compliance with OSHA requirements.

F. For manual scraping activities, the Contractor shall supply each worker with multiple newly-sharpened scrapers on a daily basis.

G. Sanders, grinders, wire brushes and needle gun removal equipment shall be equipped with a HEPA-filtered vacuum dust pick-up system.

H. Other materials such as lumber, nails and hardware necessary to construct and dismantle the decontamination enclosures and the barriers that isolate the work area shall be provided as appropriate for the Work.

I. Dehumidification equipment such as conventional refrigerant dehumidifiers, low grain refrigerant (LGR), or high capacity desiccant dehumidifiers as deemed necessary based on conditions necessary to achieve in-place drying as determined by Contractor and Project Monitor.

J. Hot Air (Ventilated) Drying Systems utilized to increase temperature and ventilate space to lower relative humidity levels for enhanced drying operations as determined appropriate including for dense wood materials such as hardwoods.

3.1 PRE-ABATEMENT MEETING

A. At least one week prior to the start of work a Pre-Construction Meeting will be scheduled and must be attended by the Contractor and any Subcontractors. The assigned Contractor Site Supervisor is also required to attend this meeting.

B. The Contractor shall present a detailed project schedule and project submittal package at the Pre Construction Meeting. Variations, amendments, and corrections to the presented schedule will be discussed, and the Owner and Consultant will inform the Contractor of any scheduling adjustments for this project.

C. Following the Pre-Construction Meeting, the Contractor shall submit a revised schedule (if needed) no later than one week after the meeting.

3.2 HEALTH AND SAFETY

A. Safety Standards. Remediation Contractor shall comply with all applicable federal, state, and local requirements for protecting the safety of the Contractor's employees, building occupants, and the environment. In particular, all applicable standards of the OSHA shall be followed when working in accordance with this specification.

B. Occupant Safety. No processes or materials shall be employed in such a manner that they will introduce hazards into building spaces.

C. Work Area Entry. Workers shall don personal protective equipment (PPE) within the decontamination system prior to entering work area, including respiratory protection, disposable coveralls, gloves, headgear, and footwear.

D. Work Area Departure. While leaving respirators on, workers shall remove all gross contamination, debris, and dust from disposable coveralls within the decontamination system and proceed to change room and remove coveralls and footwear and place in disposal container.

E. Wash Facilities. All workers must wash their hands, faces, and bodies within the decontamination system upon leaving the work area.

F. Equipment. All equipment used by workers inside the work area shall be wet-wiped or bagged for later decontamination before removal from the work area.

G. Prohibited Activities. Under no circumstances shall workers eat, drink, smoke, chew gum or tobacco, apply cosmetics, or remove their respirators in the work area.

H. Shock Hazards. The Contractor shall be responsible for using safe procedures to avoid electrical hazards. All temporary electrical wiring will be protected by ground fault circuit interrupters (GFCI).

3.3 PERSONAL PROTECTION

A. The Contractor shall have in place a Site-Specific Safety and Health Plan (SSHP) and a written Respiratory Protection Plan in accordance with the requirements of OSHA.

B. Minimum Respirators will be equipped with appropriate dual P100 filter cartridges for mold abatement.

C. Where spray applications of products will be used, a half-face or full-face air purifying respirator (APR) equipped with a dual P100 filter cartridges shall be used. For spray applications in addition to HEPA filtration, vapors and gases cartridges should also be used in series (combination filter).

D. Workers shall be provided with appropriate personal protective disposable clothing during spray application of disinfectants. Gloves and eye protection as required by manufacturer of disinfectants shall also be utilized.

E. The Contractor shall ensure that all workers who may wear respiratory protection have undergone a medical examination and questionnaire to ensure that they can wear designated respiratory protective equipment.

3.4 WORK AREA PREPARATION

A. Where necessary, deactivate electrical power, including receptacles and light fixtures. Under no circumstances during the decontamination procedures will lighting fixtures be permitted to be operating while spraying of amended water may contact the fixture. Provide GFCI devices, temporary power, and temporary lighting installed in compliance with the applicable electrical codes. All installations are to be made by a State of Connecticut-licensed electrician, permitted as required, and located outside the work area.

B. Deactivate and/or isolate heating, ventilating, and air conditioning (HVAC) air systems or zones to prevent contamination and fiber dispersal to other areas of the structure. During the Work, vents within the work area shall be covered with one layer of 6-mil poly sheeting sealed with duct tape and glue.

C. The Contractor shall be responsible for removing moveable objects from the work area. The Contractor shall pre-clean moveable objects within the proposed work areas using HEPA filter-equipped vacuums or equipment and/or wet cleaning methods as appropriate and remove such objects from work areas to a temporary location.

D. Seal all openings, including, but not limited to, windows, corridors, doorways, skylights, ducts, grills, diffusers, and any other penetration of the work areas, with 6-mil thick poly sheeting, completely sealed with duct tape. This includes doorways and corridors that will not be used for passage during work areas and occupied areas.

E. Pre-clean fixed objects within the work areas, using HEPA-filtered vacuum equipment and/or wet cleaning methods as appropriate, and enclose with a minimum 6-mil poly sheeting, completely sealed with duct tape.

F. Clean the proposed work areas using HEPA-filtered vacuum equipment or wet cleaning methods as appropriate. Do not use methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters.

G. After HEPA-filtered vacuum cleaning, cover fixed walls and floors not scheduled for remediation with one layer of 4-mil poly sheeting. Where fixed walls are not used, two layers of 4-mil poly sheeting will be applied to a rigid framework of wood, metal, or PVC. All overlaps shall be sealed with tape or spray adhesive.

H. Maintain emergency and fire exits from the work areas, or establish alternate exits satisfactory to fire officials.

I. Clean and remove ceiling-mounted objects, such as lights and other items not covered with poly sheeting that interfere with mold abatement. Use hand-held biocide spray or clean with HEPA-filtered vacuum equipment during fixture removal to reduce mold spore dispersal.

J. Create pressure differential between work areas and uncontaminated areas by the use of acceptable negative air pressure equipment sufficient to provide four air changes per hour and create negative pressure of -0.02 inches of the water column within enclosure with respect to outside area as measured on a water gauge.

3.5 DECONTAMINATION SYSTEM

A. The Contractor shall establish contiguous to the work area, a decontamination system consisting of equipment room, shower room, and clean room in series. The only access between contaminated and uncontaminated areas shall be through this decontamination system.

B. Access between rooms in the decontamination system shall be through double flap-curtained openings. The clean room, shower and equipment rooms within the decontamination system shall be completely sealed.

C. Construct the decontamination system with plastic, wood, or metal framing and cover both sides with a double layer of 6-mil poly sheeting, completely sealed with spray glue or tape at the joints.

D. The Contractor and the Consultant shall visually inspect barriers routinely to assure effective seal, and the Contractor shall repair defects immediately.

3.6 MOLD-CONTAMINATED BUILDING MATERIALS REMOVAL PROCEDURE - GENERAL

A. The Contractor shall have a designated “competent person” on Site at all times to ensure establishment of a proper enclosure system and proper work practices throughout project.

B. Perform selective demolition of moveable objects to expose mold-contaminated building materials requiring abatement. Perform selective demolition and material disposal in accordance with Architect’s drawings and specifications.

C. The Contractor shall spray mold-contaminated building materials with biocide using airless spray equipment or apply approved removal wetting agent to ensure no visible emissions during removal. Removal shall be performed using hand tools and performed in a manner to minimize breakage.

D. Remove and containerize all visible accumulations of mold-contaminated building materials. Waste shall be containerized in labeled and signed 6-mil poly disposable bags. Tie wraps for bags shall be plastic, 5-inches long (minimum), pointed and looped to secure filled plastic bags.

E. Fill disposal containers as removal proceeds; seal filled containers and clean containers before removal to equipment decontamination system. Wet clean each container thoroughly. Ensure that workers do not exit the work area thorough the equipment decontamination system.

F. After completion of removal work, all surfaces from which mold-contaminated building materials has been removed shall be wet brushed, using a nylon brush, wet wiped, and sponged or cleaned by an equivalent method to remove all visible material (wire brushes are prohibited). During this work, the surfaces being cleaned shall be kept adequately-wet.

G. Sealed disposal containers, and all equipment used in the work area, shall be included in the cleanup and shall be removed from work areas via the equipment decontamination system at an appropriate time in the cleaning sequence. All waste in 6-mil poly disposal bags shall be double-bagged in the equipment room of the decontamination system before Site removal.

H. At any time during removal, should the Consultant suspect contamination of areas outside the work area, the Consultant shall issue a stop work order until the Contractor takes the necessary steps to decontaminate these areas and eliminate the causes of such contamination.

I. After completion of the initial final cleaning procedure including removal of the inner layers of poly sheeting, but prior to encapsulation, a pre-sealant inspection shall be conducted by the Consultant.

3.7 CLEANING PROCEDURES

A. Cleaning Method Following Removal of Mold-Contaminated Building Materials:

1. The building components to remain shall be cleaned by cleaning methods designed to extract contaminants from the building components and safely remove contaminants from the facility. It is the Contractor’s responsibility to select removal methods that will render the building components visibly clean and capable of passing cleaning verification methods and other specified tests, in accordance with all general requirements. No cleaning method, or combination of methods, shall be used which could potentially damage building components to remain.

    a. All methods used shall incorporate the use of vacuum collection devices that are operated continuously during cleaning. The vacuum collection device must be of sufficient power to render all areas being cleaned under negative pressure, such that containment of debris and the protection of the indoor environment are assured.
    b. All methods require wet-wiping to dislodge debris adhered to building component surfaces, such that debris may be safely conveyed to damp cloths or vacuum collection devices.

B. Mold Inhibitors and Coatings:

1. Mold Inhibitors shall be applied, and shall receive prior approval by the Owner, the Architect, and the Consultant. Mold Inhibitors will be applied only after removal of mold-contaminated gypsum board is complete. Mold Inhibitors shall be applied to the surfaces remaining after removal of mold-contaminated materials.
2. Application of Mold Inhibitors used to control the growth of fungal or bacteriological contaminants shall be performed after the removal of surface deposits and debris from surfaces.
3. Only Mold Inhibitor registered by the EPA specifically for use in buildings shall be used.
4. Mold Inhibitors shall be clear.
5. Mold Inhibitors shall be applied in strict accordance with manufacturer's instruction.
6. Mold Inhibitor coating products for both porous and non-porous surfaces shall be EPA- registered water soluble solutions with supporting efficacy data and SDS.
7. Mold Inhibitor coatings shall be applied according to manufacturer's instructions. Coatings shall be sprayed directly onto surfaces, rather than "fogged" onto surfaces. A continuous film must be achieved on the surface to be treated by the coating application. Application of any Mold Inhibitor coatings shall be in strict accordance with manufacturer's minimum millage surface application rate standards for effectiveness.

3.8 MOLD-CONTAMINATED WASTE DISPOSAL

A. Properly labeled and containerized waste shall be disposed as construction and demolition debris.

B. Provide Owner and Architect will weight tickets, bill of ladings, etc. indicating proper disposal of mold-contaminated building materials.

3.9 FINAL VISUAL INSPECTION

A. A final visual inspection of the work area shall be conducted by the Consultant to determine if remediation as detailed herein is complete.

B. General. Verification of building component cleanliness will be determined after the cleaning and before the application of any treatment or introduction of any treatment-related substance to the building components, including mold inhibitors and coatings.

C. Visual Inspection. The Consultant shall inspect the various building components visually to ensure that no visible contaminants are present.

1. If visible contaminants are evident through visual inspection, the work area shall be re-cleaned and subjected to re-inspection for cleanliness.

END OF SECTION 028500