

## SECTION 020830 - ASBESTOS REMOVAL

### PART I -GENERAL

#### 1.1 SCOPE OF WORK

- A. Work of this Section shall be performed in accordance with the requirements of the Contract Documents, including but not limited to Instructions to Bidders, Agreement and General Conditions and General Requirements.
- B. This Section references procedures for the removal of existing asbestos-containing materials (ACM) that will be disturbed or are disturbed during construction of this project.
- C. Contractor shall furnish all labor, materials, supervision, construction tools and equipment necessary to remove and dispose of all asbestos-containing materials disturbed during construction.

An inspection report documenting the presence of known regulated building materials, including ACM, is attached to Section 003126 - Existing Hazardous Material Information. The report incorporates and includes all testing data obtained for the site, based on project scope and materials reported to be disturbed by planned renovations. See the report for detailed descriptions of the types of ACM identified and the locations.

Samples of the following material were collected at the Site per the Limited Pre-Renovation Regulated Building Materials Inspection and identified as containing asbestos:

- 1. White Joint Compound throughout the gypsum board systems
  - 2. White Stucco on the ceilings of the Kitchen, Hallway, and Bedroom 1
- D. The Contractor shall be aware of all conditions of the Project and is responsible for verifying quantities and locations of all Work to be performed referenced in the Contract Documents. Failure to do so shall not relieve the Contractor of its obligation to furnish all labor and materials necessary to perform the Work.
- E. Removal or disturbance of ACM shall be completed in compliance with all governing regulations, including Code Rule 56. Any Contractor, other than the asbestos abatement contractor, who requires the removal or disturbance of asbestos-containing material (ACM) to complete his work shall obtain the services of a certified asbestos abatement contractor to remove the ACM in compliance with this specification and all applicable rules and regulations.
- F. The Owner and Engineer shall approve the asbestos abatement contractor prior to the beginning of the work.
- G. Working hours shall be as required and approved by the Owner. The Contractor shall coordinate and schedule all Work with the Owner and Engineer.
- H. Locations and quantities of all materials to be removed by the abatement contractor must be field verified. Information given on drawings and in the specifications is for general orientation and information only.
- I. The contractor shall have at least one supervisor on the job site at all times who can read and write and is fluent in English, while the project is in progress. The supervisor must be able to communicate fluently with all employees.

- J. Contractor shall provide temporary protection to keep the work areas enclosed, where required, during the performance of the Contract Work. The Contractor shall be responsible for any damage caused as a result of improper temporary protection.
- K. The Contractor is responsible for keeping the work area in a clean and safe condition at all times.
- L. Contractor is to coordinate with other trades on the job concerning scheduling, phasing, etc.

## 1.2 SPECIAL CONDITIONS

- A. Any special job conditions, including variances obtained by the Owner, are described below.
  - No Variance Petitions have been submitted to date.
- B. Abatement may occur in portions of the site where immediately adjacent floors or areas are occupied. The Contractor shall carefully observe regulatory requirements for the isolation of abatement work areas and appropriate notifications to occupants and signage at project area boundaries.

## 1.3 CODES AND REGULATIONS

- A. General Applicability of Codes and Regulations and Standards: Except to the extent that more explicit or more stringent requirements are written directly into the Contract Documents, all applicable codes, regulations and standards have the same force and effect (and are made a part of the Contract Documents by reference) as if copied directly into the Contract Documents, or as if published copies are bound herewith.
- B. Contractor Responsibility: The Contractor shall assume full responsibility and liability for the compliance with all applicable Federal, State and local regulations pertaining to work practices, hauling, disposal, and protection of workers, visitors to the site and persons occupying areas adjacent to the site. The Contractor is responsible for providing medical examinations and maintaining medical records of personnel as required by the applicable Federal, State and local regulations. The contractor shall hold the Owner and Engineer harmless for failure to comply with any applicable work, hauling, disposal, safety, health or other regulation on the part of himself, his employees or his subcontractors.
- C. Federal Requirements which govern asbestos abatement work or hauling and disposal of asbestos waste materials include but are not limited to the following:

OSHA: U.S. Department of Labor, Occupational Safety and Health Administration (OSHA), including but not limited to:

- Respiratory Protection
- ratory Protection  
Title 29, Part 1910, Section 134 of the Code of Federal Regulations
- Access to Employee Exposure and Medical Records  
Title 29, Part 1910, Section 1020 of the Code of Federal Regulations
- Hazard Communication  
Title 29, Part 1910, Section 1200 of the Code of Federal Regulations

- Specification for Accident Prevention Signs and Tags  
Title 29, Part 1910, Section 145 of the Code of Federal Regulations
- Variances from safety and health standards  
Title 29, Part 1926, Section 2 of the Code of Federal Regulations
- General Safety and Health Provisions  
Title 29, Part 1926, Section 20 of the Code of Federal Regulations
- Asbestos General Standard  
Title 29, Part 1926, Section 1001 of the Code of Federal Regulations
- Asbestos Construction Standard - Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite  
Title 29, Part 1926, Section 1101 of the Code of Federal Regulations

DOT: U.S. Department of Transportation, including but not limited to:

- Hazardous Substances  
Title 29, Part 171 and 172 of the Code of Federal Regulations

EPA: U.S. Environmental Protection Agency (EPA), including but not limited to:

- The Asbestos Hazard Emergency Response Act (AHERA), EPA Title 40 CFR, Part 763
- National Emission Standard for Hazardous Air Pollutants (NESHAPS), EPA Title 40 CFR, Part 61
- Title 40, Part 61, Subpart A, and revised Subpart M (Revised Subpart B) of the Code of Federal Regulations dated November 20, 1990

D. State Requirements which govern asbestos abatement work or hauling and disposal of asbestos waste materials include but are not limited to the following:

- New York State Department of Labor (NYSDOL) 12 NYCCR Part 56, as amended March 21, 2007. Also known as Industrial Code Rule 56 (ICR 56).
- New York State Department of Environmental Conservation (DEC) Regulations regarding waste collector registration Title 6, Part 364 of the New York State Official compilation of Codes, Rules and Regulations. An annual "Industrial Waste Hauler Permit" specifically for asbestos-containing materials is required for transportation of asbestos-containing waste to the disposal site.
- New York State Department of Health (NYS DOH), Title 10, Part 73 (Asbestos Safety Program Requirements, Environmental Laboratory Approval Program)

E. Local Requirements: Abide by all local requirements which govern asbestos abatement work or hauling and disposal of asbestos waste materials.

#### 1.4 SUBMITTALS:

- A. Prior to commencement of any work (minimum of seven days prior to starting work) involving the disturbance of ACM, the Contractor shall submit the following to the Engineer for review and approval:
1. Copy of current NYSDOL Asbestos Contractor's License (DOH-432)
  2. Copies of current worker's Asbestos Handler's Certificates
  3. Provide a statement signed by an authorized representative of the company stating that the Building Occupants/Other Trades notification required by ICR 56 will be or has been posted at least 10 days prior to the start of abatement. Provide a copy of the notification that will be posted at the job site
  4. Copies of all proposed site-specific variances
  5. Copy of current insurance certificate held by the Asbestos Contractor that names the Rochester Housing Authority as an additional insured and provides the following coverages: 1) Pollution liability in a general aggregate of \$2,000,000; and 2) General Liability with \$1,000,000/\$2,000,000 for each occurrence/general aggregate; and 3) Workers Compensation
  6. Copies of Project Notifications and proof of submittal (e.g. certified mail receipt) to NYSDOL and USEPA, as applicable
  7. Copy of NYSDEC permit for waste hauler
  8. Name and address of landfill where asbestos-containing waste materials are to be buried. Include contact person and telephone number, and NYSDEC Part 360 permit number or other applicable permits
  9. Site-specific work plan in accordance with Section 1.5 D
  10. On a weekly basis, submit copies of all waste shipment records and disposal site receipts to the Owner
- B. During the project, legible copies of the following items must be submitted to the Engineer. If personnel records are not available at this time, workers will not be able to work on-site until copies are provided:
1. NYSDOL Asbestos Handling Certificates (DOH 442) for all persons employed on the project
  2. Project Logbook entries
  3. Any and all changes to the Contract, should any occur
  4. Personal sampling results within 24 hours of sampling
- C. Upon completion of the phase of the project during which the asbestos removal and disposal occurred, legible copies of the following items must be submitted to the Engineer:
1. Waste manifests, shipment records, and landfill receipts signed by the landfill operator submitted within 30 days after the waste leaves the site. A 10% payment retainage shall be withheld until the Engineer receives all waste shipment manifests.

#### 1.5 QUALITY ASSURANCE

- A. Comply with the most recent edition of compilation of Codes, Rules and Regulations of the State of New York (Statutory Authority: Labor Law Section 906), including Rule 56 of Title 12 NYCRR, New York State, Department of labor, most currently amended (hereinafter referred to in this Specification as Code Rule 56). Note: Article 30 of the Labor Law sets forth procedures and standards that must be met by parties who desire to obtain variations of any of the requirements of this rule.

- B. Comply with all current and appropriate Federal, State and Local rules and regulations regarding work of this section, including those of the following agencies:
- New York State Uniform Fire Prevention and Building Code
  - New York State Department of Labor
  - New York State Department of Environmental Conservation (DEC)
  - Occupational Safety and Health Administration (OSHA)
  - United States Environmental Protection Agency (EPA)
- C. Pre-Work Conference: Before the work of this section is scheduled to commence, a conference may be held at the site for the purpose of reviewing the Contract Documents, discussing requirements for the work and reviewing the work procedures. The conference shall be attended by the asbestos abatement contractor.
- D. Work Plan: The Contractor shall prepare a detailed work plan and submit the plan no later than one week prior to the start of the abatement project. The work plan shall include, but not be limited to:
1. A preliminary schedule for completion of the work:
    - a. Show the complete sequence of abatement activities and the sequencing of Work.
    - b. Show the dates for the beginning and completion of each Work Area.
  2. Work procedures that will be utilized (including anticipated decon and negative air exhaust locations), as applicable.
  3. Estimated crew size.
  4. The anticipated work hours.
  5. Emergency procedures for fire and medical emergencies and for failure of containment barriers.
  6. Project Notifications: As required by Federal and State regulatory agencies together with proof of transmittal (i.e. certified mail return receipt).
  7. Building Occupant Notification: As required by regulatory agencies.
  8. Abatement Work Plan: Provide plans that clearly indicate the following:
    - a. All Work Areas/containments numbered sequentially.
    - b. Locations and types of all decontamination enclosures.
    - c. Entrances and exits to each Work Areas/containments.
    - d. Type of abatement activity/technique for each Work Area/containment.
    - e. Number and location of negative air units and exhaust. Also provide calculations for determining number of negative air pressure units.
    - f. Proposed location and construction of storage facilities and field office.
    - g. Location of water and electrical connections to building services.
    - h. Waste transport routes through the building to the waste storage container.
  9. Disposal Site/Landfill Permit from applicable regulatory agency.
  10. NYS Department of Environmental Conservation Waste Transporter Permit.
- E. Progress Meetings: The Engineer will hold general progress meetings as required. The Contractor and the Owner shall attend each meeting.
- F. Daily Log: The Contractor is to maintain within the Decontamination Unit a daily log documenting the dates and time of, but not limited to, the following items:
1. Meetings; purpose, attendees, brief discussion

2. Visitations; authorized and unauthorized
3. Special or unusual events, i.e. barrier breeching, equipment failures, accidents
4. Air monitoring tests and test results.
5. Other entries as detailed in Code Rule 56-7.3 Asbestos Contractor Daily Project Log.

Submit three (3) copies of this log at final closeout of the Project as a Project closeout submittal.

G. Project Monitor: The Project Monitor shall be a hired representative of the Owner during the asbestos abatement portion of the project. The Project Monitor has the following responsibilities:

1. The Project Monitor shall oversee work practices and inspect for compliance with all applicable regulations and standards, and the Contract Documents.
2. The Project Monitor shall have at all times access to the work areas whenever it is in preparation or in progress. The Contractor shall provide the Project Monitor with keys to all locks located on the entrance(s) to the decontamination unit(s) and all other secured areas.
3. The Project Monitor, in conjunction with the Owner, will be the interpreter of the requirements of the Contract Documents and the judge of the performance thereunder.
4. The Project Monitor and/or the Owner will have the authority to reject work which is not in compliance with the requirements of the Contract Documents or Federal, State, or Local Regulations. The decision of the Owner will be final.

H. Air Sampling and Analysis

1. Area Air Sampling and Analysis

- a. As necessary, the Owner will be responsible for hiring an independent third party firm to perform the required area air sampling and analysis in accordance with ICR 56.
- b. If area air sampling is necessary, the Contractor is required to ensure cooperation of its personnel with the Air Sampling Technician (AST) for general air sampling, and testing of each work area after completion of asbestos work prior to removal of containment barriers.
- c. All air samples shall be analyzed using Phase Contrast Microscopy (PCM) in accordance with NIOSH method 7400.
- d. The Contractor shall pay for all additional costs incurred by the Owner, including additional air monitoring, project monitoring, engineering fees, and sample analysis required if clearance air monitoring fails, or if completion of abatement work is not in accordance with approved progress schedule.

2. Personal Air Sampling:

- a. As per the requirements of OSHA 1926.1101, the Contractor shall be required to perform personal air monitoring in order to determine that appropriate respiratory protection is being utilized.
- b. The analysis of personal air samples shall be conducted by an ELAP approved laboratory, subject to approval of the Owner and the Engineer.
- c. Results of personnel air sample analyses shall be available, verbally, within twenty-four (24) hours of sampling and shall be posted at the work site within 48 hours. Results shall be submitted in accordance with the requirements of Section 1.5 F.

1.6 GENERAL PROCEDURES

- A. General Requirements - Comply with Code Rule 56's procedures for entry, exit, logging in, showering, personal protective equipment, tools, clothing, etc., throughout the asbestos abatement.

Respiratory equipment shall be as required by OSHA and air monitoring results. (Except for authorized visitors as required by Rule 56). Non-certified workers will not be allowed in the work area.

- B. Equipment and Waste Container Decontamination and Removal – Code Rule 56's procedures for large projects (cleaning, recontainerization, holding areas, etc.) shall be followed.

## PART 2 - PRODUCTS

### 2.1 MATERIALS AND EQUIPMENT

- A. General Requirements: Code Rule 56's requirements for materials and equipment shall apply.
- B. Miscellaneous protective materials - Provide plywood sheathing, hardboard, etc., as required to provide protective cover over surfaces of existing construction and finishes to eliminate damage resulting from work of this section, including impact and water damage. Poly shall comply with Code Rule-56 including fire retardant requirements.
- C. Water and electricity shall be furnished by Owner without charge. Contractor shall provide an in-line backflow preventer at water source, and utilize non-leaking hoses.
- D. The Contractor shall supply the Project Monitor and Air Monitor with sufficient electricity to operate all high-volume air monitoring pumps as may be required during the course of the project.

## PART 3 - EXECUTION

### 3.1 REMOVAL REQUIREMENTS

- A. Perform work under this contract in accordance with the standards referenced in Part 1 of this Section. The provisions of any site-specific variances to Code Rule 56, or other asbestos standards, obtained for this project may not be implemented until approval is given by the Owner and Engineer.
- B. Work that results in the disturbance of asbestos-containing materials shall be performed by a licensed asbestos abatement contractor who employs certified workers in accordance with all applicable standards referenced herein. If additional suspect ACM is discovered during the course of abatement, the Contractor shall not disturb it and shall notify the Owner and Engineer immediately.
- C. The Contractor shall protect all items/existing construction intended to remain.
- D. Should the area beyond the asbestos work area(s) become contaminated with asbestos-containing dust or debris as a consequence of the work, immediately institute emergency procedures established for asbestos removal. All costs incurred in decontaminating such non-work areas shall be borne by the Contractor at no additional cost to the Owner.

### 3.2 WORK AREA PROTECTION

- A. General Requirements: Code Rule 56's requirements for general work area preparation shall apply, including vacating, signs, power, timing, HVAC isolation, isolation barriers, objects, exits, toilets, etc.

### 3.3 PERSONAL AND WASTE DECONTAMINATION ENCLOSURE SYSTEMS

- A. Comply with Code Rule 56's requirements for enclosure, showers, room types and configuration, etc.

### 3.4 DECONTAMINATION ENCLOSURE SYSTEMS/WORK AREA BARRIERS

- A. General Requirements: Comply with Code Rule 56 requirements for maintenance of work area barriers. (Setting, inspection, repairs, cleaning, etc.)

### 3.5 HANDLING AND REMOVAL PROCEDURES

- A. General Requirements: Comply with Code Rule 56 requirements regarding handling and removal procedures.
- B. Dry removal or disturbance: No dry removal or disturbance or asbestos materials shall be permitted.
- C. Wetting requirements: The asbestos material shall be wetted as necessary with amended water to keep asbestos fibers from becoming airborne. If any friable material is encountered, all of its surfaces shall be saturated.
- D. The use of open flame, torches, welding, and other Hot Work is not permitted without review and approval by the Owner and Engineer. A Hot Work Permit system shall be required for authorized use.
- E. Cleaning of surfaces: After completion of all stripping work, surfaces where asbestos material has been removed or handled shall be HEPA vacuumed.

### 3.6 CLEANING PROCEDURES

- A. General requirements: Code Rule 56's requirements for containerization, dust cleanup, tools and enclosure cleanup, etc., shall apply. Cleanup shall be by HEPA vacuum.
- B. Post-abatement requirements: Code Rule 56's requirements shall apply (tool/equipment cleanup, general cleanup), waste removal, clearance air monitoring, etc.

### 3.7 ASBESTOS WASTE TRANSPORTATION AND DISPOSAL

- A. Contractor shall minimally transport and dispose of all the Category I non-friable asbestos waste material according to correct applicable NYSDEC transportation requirements, Part 364, and solid waste requirements Part 360.
- B. If any removed material is "friable", Contractor shall handle it as such and transport and dispose of as "friable" asbestos waste per regulations referenced in Part 1 of this Section.
- C. All waste generated as a result of this work shall be removed from the site within 10 days of completion and clearance of abatement work.



- D. Log disposal site transportation names, etc., per Code Rule 56.
- E. All loading, transportation, and disposal shall also comply with NESHAPS 40 CFR 61 - 150 paragraphs C, D and E including all requirements for loading signs, shipment records, content certificate, record receipts, notifications, etc.

### 3.8 TEMPORARY PROTECTION OF FACILITIES

- A. Contractor shall provide temporary enclosure as required to protect the existing facilities from adverse weather conditions and maintain the interior environment in its normal condition. The contractor shall maintain the building secure from intrusion at all times and exits shall be operational during construction whenever the building is occupied. Temporary door and window enclosures shall be secure, weather resistant and lockable, if operable.

### 3.9 RESTORATION

- A. Remove temporary decontamination facilities and restore area designated for these facilities to its original condition or better.
- B. After final clearance, the Contractor shall replace all filters of the associated portions of the existing building HVAC system that were affected by the abatement operations, remove locks and restore power. All temporary power supplies shall be disconnected, power lockouts removed and building power restored. All temporary plumbing shall be removed.
- C. Finishes damaged by asbestos removal operation including, but not limited to, plaster/paint damage due to taping of polyethylene sheeting and floor tile lifted due to humid conditions, shall be restored prior to final payment.
  - 1. Finishes unable to be restored shall be replaced under this Contract.
  - 2. All foam and expandable foam products and materials used to seal Work Area openings shall be completely removed upon completion of abatement activities.
- D. All penetrations (including, but not limited to, pipes, ducts, etc.) through fire rated construction shall be fire stopped using materials and systems tested in accordance with ASTM E814 on projects where re-insulation is part of the required work.

### 3.10 ASBESTOS REMOVAL COMPLETION REQUIREMENTS

- A. Contractor shall submit to the Engineer the job logbook as described in Section 1.5 paragraph F.
- B. Inspection of the work site(s) by the Contractor and the Engineer for substantial completion of the Scope of Work specified within this Section.
- C. Contractor shall submit to Owner and Engineer the waste disposal manifest verifying that all waste generated at the project site has been disposed of at an EPA approved waste site. A 10% payment retainage shall be withheld by the Owner until receipt of all waste manifests.

END OF SECTION 020830