

PROJECT MANUAL
FOR

**DR. E. L. TRUDEAU HOUSE
HAZARDOUS MATERIALS ABATEMENT
&
SELECTIVE REMOVALS**

118 MAIN STREET
SARANAC LAKE, NEW YORK 12983

HISTORIC SARANAC LAKE
89 CHURCH STREET
SARANAC LAKE, NY 12983

Project Funding by:
Downtown Revitalization Initiative, NYS Office of Community Renewal Project # 20190301

Project Architect
LANDMARK CONSULTING, LLC
83 Grove Avenue, Albany, NY 12208
T: 518.458.8942

Hazardous Materials Consultant
AMBIENT ENVIRONMENTAL INC.
828 Washington Avenue, Albany, NY 12203
T: 518.482.0704

March 25, 2022 – Bid Documents

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END OF SECTION

**Dr. E. L. Trudeau House
HAZARDOUS MATERIALS ABATEMENT & SELECTIVE REMOVALS PROJECT**

**Historic Saranac Lake
89 Church Street
Saranac Lake, NY 12983**

NOTICE TO BIDDERS

Sealed Bids will be received by Historic Saranac Lake on or before **Tuesday, April 26th, 2022, at 10 a.m.** at 89 Church Street, Suite 2, Saranac Lake, NY, at which time and place said sealed Bids will be publicly opened and read aloud. Bids can be sent in advance to Landmark Consulting, 83 Grove Avenue, Albany, NY 12208 (518-458-8942).

The project involves removal of hazardous materials in the first and second floor interior spaces and the removal of selective wall partitions and finishes as shown in the Contract Documents.

Bidders Inspections: Bidders must visit the site before submitting a bid and make themselves thoroughly familiar with all conditions relating to the Contract Documents. A pre-bid meeting will be held onsite at 10:00 a.m. on Thursday, April 12th, 2022. No exceptions will be made for alternate site visit dates.

Contractors must be able to demonstrate successful completion of abatement projects of similar scope. Qualified contractors may obtain project Bid Documents at the offices of Historic Saranac Lake at 89 Church Street, Suite 2 in Saranac Lake, or requested in PDF format from Historic Saranac Lake via email (mail@historicsaranaclake.org). **Project bid documents are also available for download from the contractor portal at: www.historicsaranaclake.org/contractorportal2022**

Bids must be submitted in a sealed envelope plainly marked "**Trudeau House Hazardous Materials Abatement & Selective Removals Project.**"

Overall Project Schedule:

The following general project schedule has been established. The schedule may vary based on the Owner's final list of alternates to be taken for the project.

4/5/2022	Bid Period Begins / Contract Documents Available
4/12/2022	Pre-bid Meeting, 10:00 a.m.
4/26/2022	Bid Opening, 10:00 a.m.
5/2/2022	Project Award / Execution of Owner/Contractor Agreement
5/11/2022	Construction Start
6/1/2022	Substantial Completion
6/15/2022	Final Completion

Dated: March 25th, 2022

INVITATION TO BID

Name of Project: Hazardous Materials Abatement & Selective Removals
Address: 118 Main Street
City, State, Zip Code: Saranac Lake, New York, 12983

You are invited to bid on the above project, which will consist of 1 contract for construction described in general as follows:

Description of Project:

The proposed project will consist of all work outlined in contract documents dated 1/4/2021 including but not limited to the hazardous materials abatement & selective removals of the boiler and electrical room brick masonry.

Project Owner:

Name: Historic Saranac Lake
Address: 89 Church Street, Suite 2
City, State, Zip Code: Saranac Lake, New York 12983

Architect:

Name: Landmark Consulting, LLC
Address: 83 Grove Avenue
City, State, Zip Code: Albany, New York 12208

The Owner will receive sealed proposals from bidders no later than: Tuesday, April 26th at 10 am.

Location: Historic Saranac Lake's Office: 89 Church Street, Suite 2, Saranac Lake, NY 12983

Proposals received after that time will not be accepted.

Bona fide contract bidders may secure copies of the proposed Contract Documents from the owner on the following basis:

1. Documents for review at 89 Church Street and electronically via email.
2. If addenda are issued during bidding period, they will be sent via email.
3. No partial sets will be issued.

The proposed Contract Documents may be examined at the Owner's Offices (by appointment only): 89 Church Street, Suite 2, Saranac Lake, NY 12983. (518) 891-4606

The owner has arranged for bidders to inspect the site on Tuesday, April 12th at 10 am at 118 Main Street, Saranac Lake, NY 12983

All interested bidders must be on time as there will not be another opportunity to inspect the site.

On Tuesday, April 12th, at 10 am, the Owner and Architect will hold a pre-bid meeting at the project site to clarify:

1. The construction schedule
2. Oversight of the construction
3. The change order process
4. Job meetings
5. Jobsite security
6. Insurance requirements

7. Bonding
8. Required permits
9. Other questions

Owner: Historic Saranac Lake, 89 Church Street, Suite 2, Saranac Lake, NY 12983
Site: 118 Main Street, Saranac Lake, NY 12983
Architect: Landmark Consulting, LLC, 83 Grove Avenue, Albany, NY 12208
Consultant: Ambient Environmental Inc., 828 Washington Avenue, Albany, NY 12203

Attention of Bidders is particularly called to Section 103-d of the General Municipal Law of New York State on non-collusive bidding and to the requirement of conditions of employment to be observed, minimum wage rates in accordance with New York Labor Standards. Note that Labor Law Section 220 and 220d do not apply, as this project is not a public works contract.

Proposals shall remain in effect for 60 calendar days after the time and date of receiving the bid. The bid may be accepted by the Owner any time within that period and may be withdrawn after that time without notice.

The Owner reserves the right to reject any or all bids and to waive irregularity in bidding. The Owner also reserves the right to negotiate a Guaranteed Maximum Price Contract.

BID PROPOSAL FORM

For the furnishing of all Labor, Materials and Equipment for the

PROJECT SPONSOR: Historic Saranac Lake, 89 Church Street, Suite 2, Saranac Lake, NY 12983

PROJECT ADDRESS: Historic Dr. E. L. Trudeau House, 118 Main Street, Saranac Lake, NY 12983

NAME OF BIDDER: _____

ADDRESS: _____

TELEPHONE: (_____) _____ - _____ . FAX: (_____) _____ - _____

DATE: _____

We / I have received the Contract Documents (Contract Drawings and the Project Manual) for the Dr. E. L. Trudeau House Hazardous Materials Abatement & Selective Removals Project. We have also attended the pre-bid meeting and have received the Addenda Numbers listed below and have include their provision in this bid. We have examined both the Contract Documents and the site and submit the following bid:

In submitting this Bid, We / I affirm and agree:

1. To hold our Bid open until forty-five (60) days after Bid Opening.
2. To accept the provisions of the Instructions to Bidders.
3. To enter into and execute a Contract within ten (10) days of the Notice of Award issue date and to furnish an Irrevocable Performance and Payment Bond.
4. To accomplish the Work in accordance with the Contract Documents and the Contract.

Additionally, with this Bid We / I affirm and declare:

1. Our business is validly organized under the laws of the State of New York and is in good standing; that no person, firm or corporation other than herein named has any interest in this bid, or in the Contract proposed to be entered into; and the person executing this Bid on behalf of the Bidder is of lawful age.
2. By submission of this Bid, each Bidder and each person signing on behalf of such Bidder certifies, AND IN THE CASE OF Joint Bid, each party thereto certifies as to its own organization, under the penalty or perjury, that:
 - a. The prices in this Bid have been arrived at independently without collusion, consultation, communication or agreement for the purpose of restricting competition, as to any matter relating to such prices with any other Bidder or with any competitor or potential competitor;
 - b. Unless otherwise required by law, the prices which have been quoted in this Bid have not been knowingly disclosed by the Bidder prior to opening, directly or indirectly to any other Bidder or to any competitor;
 - c. No attempt has been made or will be made by the Bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purposes of restricting competition.
 - d. The person signing this bid certifies that he/she has fully informed himself/herself regarding the accuracy of the statement contained in the certification, and under the penalties of perjury, affirms the truth thereof, such penalties being applicable to the bidder as well as to the person signing in its behalf;
 - e. That attached hereto (if a corporate bidder) is a certified copy of resolution authorizing the execution of this certificate by the signator of this bid on behalf of the corporate bidder.

The bidder acknowledges that it has received and included the following Addenda to the Bid Documents:

<u>Addendum Number</u>	<u>Date of Addendum</u>
------------------------	-------------------------

Base Bid:

The base bid shall be the total cost of the Work for the project outlined and described in all of the Contract Documents.

The Base Bid is as follows:

Div. 1	General Requirements	\$ _____
Div. 2	Existing Conditions	\$ _____
Overhead		\$ _____
Profit		\$ _____
TOTAL BASE BID for project (express in both words and figures)		\$ _____

SIGNATURES

Name of Bidder: _____

Signed: _____

Title: _____

Seal: _____

(If Corporation)

Affidavit where Bidder is an individual:

STATE OF NEW YORK, COUNTY OF _____

ss: _____ being duly sworn, says: I am the person as described in and who executed the foregoing Bid and the several matters therein stated are in all respects true.

(Signature of Bid Signer)

Subscribed and sworn to me on this date:

Notary Public:

Affidavit where Bidder is a Partnership

STATE OF NEW YORK, COUNTY OF _____

ss: _____ being duly sworn says: I am a member of _____ the Partnership described in and which executed the foregoing Bid. I subscribed the name of the firm thereto on behalf of the firm, and the several matters therein stated are in all respects true.

(Signature of Bid Signer)

Subscribed and sworn to me on this date:

Notary Public:

Affidavit where Bidder is a Corporation:

STATE OF NEW YORK, COUNTY OF _____

ss: _____ being duly sworn says: I am a member of _____

_____ the Corporation described in and which executed the foregoing Bid. I subscribed the name of the firm thereto on behalf of the firm, and the several matters therein stated are in all respects true.

(Signature of Bid Signer)

Subscribed and sworn to me on this date:

Notary Public:

RESOLUTION OF AUTHORIZATION (if a Corporation)

Resolved that _____ be authorized to sign and submit the bid of this corporation for the following project _____

(Project Description)

Trudeau House Hazardous Material Abatement & Selective Removals Project as illustrated on drawings and in project manual.

and to include in such bid the certificate as to non-collusion required by Section 139-d of the State Finance law as the act and deed of such corporation, and for any inaccuracies or misstatements in such certificate this corporate bidder shall be liable under the penalty of perjury.

The foregoing is a true and correct copy of the resolution adopted by _____ Corporation at a meeting of its Board of Directors held on the _____ day of _____ 202_.

Secretary

(Seal of the Corporation)

Resolution Authorization

CONTRACTOR QUALIFICATIONS FORM
(return with bid; use additional pages as necessary)

Historic Preservation and Standards of Quality.

- a. **The Dr. E. L. Trudeau House has been determined to possess historic (e.g., architectural, engineering, artistic) significance and is listed on the National Register of Historic Places. The contractor shall recognize that all aspects of the property may potentially contribute to this significance and the contractor shall not judge the relative significance of any features nor the impact of any or all proposed work; this responsibility shall rest solely with the architect. Consequently, no deviations from the contract documents shall be performed and no features or materials shall be altered, removed, reused, or taken from the premises, without the written approval of the architect/environmental consultant as being consistent with the requirements of the contract documents. All work shall be consistent with *The Secretary of the Interior's Standards for the Treatment of Historic Properties*. The general intent is to retain as much historic fabric as possible, and to repair rather than replace deteriorated historic materials.**
- b. Contractor and all personnel are expected to provide the highest level of quality for all project work.
- c. The Contractor shall meet the historic preservation qualifications and shall have a Competent Person in control on the job site at all times during work. This person must comply with applicable Federal, State and Local regulations, which mandate work practices, and be capable of performing the work of this contract. The Bidder shall complete the Statement of Qualifications accompanying the Bid Proposal and shall submit a minimum of three (3) references with the Bid. The same form shall be used for any subcontractors.

Contractor and Sub-Contractor Qualifications.

- a. With the bid submission and using Contractor Qualifications Form provided in this bid package, prospective bidders and sub-contractors to provide descriptions and contact information on 3 completed projects undertaken in the past 5 years that involve hazardous materials abatement and selective removals within a historic building. The identical form provided in these documents is to be used for any proposed Sub contractors.
- b. The Owner reserves the right to reject any Bid if the required Statement of Qualifications is not submitted, or if any additional information requested from the Bidder, or the investigation of such Bidder, fails to demonstrate that the Bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein within the time frame designated.
- c. Contractor's post-Bid Submission.
 1. Within 10-calendar days of receipt of Notice to Proceed, a general construction schedule should be provided including a description of construction sequence. Schedule shall identify any types of work, or specific dates, during construction when the Owner's use of the building will be curtailed. Owner or Contractor shall give at least 7-calendar days' notice of intent to modify schedule.
 2. On notification of intended contract amount, Contractor to provide Schedule of Values for all intended work to be incorporated into the Owner/Contractor agreement.

Note: Bidder to specifically describe abatement and selective removals projects within historic buildings of similar scale and work scope. Separate forms to be submitted for Contractor and each proposed Sub Contractors.

Firm: _____			
	Project #1	Project #2	Project #3
Project Name			
Address			
Owner Contact: name and phone			
Architect Contact: name and phone (if relevant)			
Contract Amount			
Date of Work			
Identification of staff assigned to project			
Description of Project Scope			
Staff to be assigned to this project			

Printed Name

Signature

_____, 2021

PRELIMINARY SCHEDULE / PROJECT APPROACH
(return with bid)

Bidder: _____

Briefly describe approach for undertaking project, including sequence and summary of work. Building will be closed to the public during the Work, however, access driveway along west must remain accessible to Owner as Owner occupies adjacent building at 89 Church Street. Contractor must organize and schedule the project to minimize the adverse impacts on staff and grounds of the Historic Saranac Lake. A firm project schedule, indicating work at specific areas, will be requested from the successful bidder once bids have been received and evaluated.

**NON-COLLUSIVE BIDDING CERTIFICATION REQUIRED BY
SECTION 139-D OF THE STATE FINANCE LAW**

SECTION 139-D, Statement of Non-Collusion in bids to the State:

BY SUBMISSION OF THIS BID, BIDDER AND EACH PERSON SIGNING ON BEHALF OF BIDDER CERTIFIES, AND IN THE CASE OF JOINT BID, EACH PARTY THERETO CERTIFIES AS TO ITS OWN ORGANIZATION, UNDER PENALTY OF PERJURY, THAT TO THE BEST OF HIS/HER KNOWLEDGE AND BELIEF:

[1] The prices of this bid have been arrived at independently, without collusion, consultation, communication, or agreement, for the purposes of restricting competition, as to any matter relating to such prices with any other Bidder or with any competitor;

[2] Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to opening, directly or indirectly, to any other Bidder or to any competitor; and

[3] No attempt has been made or will be made by the Bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

A BID SHALL NOT BE CONSIDERED FOR AWARD NOR SHALL ANY AWARD BE MADE WHERE [1], [2], [3] ABOVE HAVE NOT BEEN COMPLIED WITH; PROVIDED HOWEVER, THAT IF IN ANY CASE THE BIDDER(S) CANNOT MAKE THE FOREGOING CERTIFICATION, THE BIDDER SHALL SO STATE AND SHALL FURNISH BELOW A SIGNED STATEMENT WHICH SETS FORTH IN DETAIL THE REASONS THEREFORE:

[AFFIX ADDENDUM TO THIS PAGE IF SPACE IS REQUIRED FOR STATEMENT.]

Subscribed to under penalty of perjury under the laws of the State of New York, this _____ day of _____, 20____ as the act and deed of said corporation of partnership.

IF BIDDER(S) (ARE) A PARTNERSHIP, COMPLETE THE FOLLOWING:

NAMES OF PARTNERS OR PRINCIPALS

LEGAL RESIDENCE

IF BIDDER(S) (ARE) A CORPORATION, COMPLETE THE FOLLOWING:

NAME

LEGAL RESIDENCE

President:

Secretary:

Treasurer:

President:

Secretary:

Treasurer:

Exhibit 1 Non-Collusive Bidding Certification-3

Identifying Data

Potential Contractor _____

Address _____

Street

City, Town, etc.

Telephone _____

Title _____

If applicable, Responsible Corporate Officer

Name _____

Title _____

Signature _____

Joint or combined bids by companies or firms must be certified on behalf of each participant.

Legal name of person, firm or corporation

Legal name of person, firm or corporation

By _____

Name

Name

Title

Title

Address _____

Street

Address _____

Street

City

State

City

State

Insurance Requirements

- A. Certificates of Insurance shall be submitted to the Owner prior to commencing Work of the Contract and shall provide for 30 days written notice to the Owner before any coverage is cancelled or changed.
- B. Contractor shall maintain the following insurance at all times until final completion of the work:
 - a. Workers Compensation & Employer's Liability Limits:
 - i. BI&PD Per Occurrence: \$2,000,000
 - ii. Personal Injury: \$1,000,000
 - iii. General Aggregate: \$2,000,000
 - iv. Operations Aggregate: \$2,000,000
 - b. Comprehensive Automobile Liability: combined single limit of \$1,000,000 for personal injury and property damage. Include owned and non-owned, hired liability coverage.
 - c. Umbrella Policy: \$1,000,000
- C. The following shall be named as additional insured on the above General Liability policy as follows:
 - a. Village of Saranac Lake, its employees and executives – 39 Main Street, Ste. 9, Saranac Lake, NY 12983
 - b. Historic Saranac Lake, its employees, executives & Board members – 89 Church Street, Saranac Lake, NY 12983
 - c. Landmark Consulting, LLC – 83 Grove Avenue, Albany, NY 12208
 - d. Ambient Environmental, Inc., - 828 Washington Avenue, Albany, NY 12203

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes:

1. Project information.
2. Work covered by Contract Documents.
3. Future work.
4. Access to site.
5. Work restrictions.
6. Specification and drawing conventions.

- B. Related Section:

1. Division 01 Section "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.3 PROJECT INFORMATION

- A. Project Identification: Dr. Edward Livingston Trudeau House, Hazardous Materials Abatement & Selective Removals.

1. Project Location: 118 Main Street, Saranac Lake, NY 12983.

- B. Owner: Historic Saranac Lake, Inc.

1. Owner's Representative: Amy Catania, Executive Director

- C. Architect: Landmark Consulting, LLC – Jack Alvarez, AIA, 83 Grove Avenue, Albany, NY 12208

- D. Other Owner Consultants: The Owner has retained the following design professionals who have prepared designated portions of the Contract Documents:

1. Environmental Consultant: Ambient Environmental Inc., 828 Washington Avenue, Albany, NY 12203

1.4 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of the Project is defined by the Contract Documents and consists of the following:

1. The Dr. E.L. Trudeau House is a National Registered-listed property contributing to the Church Street Historic District. Constructed primarily from 1894-1915, the late 19th and early 20th century,

wood-framed structure was renovated from the 1930s to the 1990s in the conversion of this home into medical offices. The southeast one-story wing was built in the 1980s. It is located at the corner of Main and Church Streets in Downtown Saranac Lake with a driveway and limited parking situated along the west and south sides of the building. The hazardous and selective removals contract is a continuation of one that was conducted in the basement in 2018 and will be completed with the work referenced in these contract documents which provides for abatement of flooring materials, plumbing and window glazing. Roofing abatement will be done at a later time and is noted in the documents as “Phase 2” and is not part of the work of this contract.

2. This property has been determined to possess historic significance and is listed in the National Register of Historic Places. The contractor shall recognize that all aspects of the property may potentially contribute to this significance and the contractor shall not judge the relative significance of any features nor the impact of any or all proposed work; this responsibility shall rest solely with the architect. Consequently, no deviations from the contract documents shall be performed and no features or materials shall be altered, removed, reused, or taken from the premises, without the written approval of the architect as being consistent with the requirements of the contract documents. All work shall be consistent with *The Secretary of the Interior’s Standards for the Treatment of Historic Properties*.
3. Any abatement or removals work that is anticipated to harm or deface original historic fabric such as wood trim, plaster finishes, hardwood flooring, etc. is prohibited. Alternate treatments shall be presented to architect for review and may require NYS OPRHP review to determine least impact on historic materials.

B. Type of Contract

1. Project will be constructed under a single prime contract noted as “Phase I” for abatement on drawing sheet H0.1. Phase II abatement is NOT included in this contract and is planned to occur prior to general construction and renovation as it affects roofing areas.

1.5 FUTURE WORK

- A. The Contract Documents include requirements that will allow Owner to carry out future work following completion of this Project; provide for the following future work:
1. Future work within the interior first and second floor work areas will involve a careful restoration of existing historic building materials. It is of high importance to the Owner that any original finishes, doors, mantles, and wood trim & flooring materials contained within the interior are protected during the work of this contract so that future work to restore these interior spaces can occur without having to restore any damage from abatement work.

1.6 ACCESS TO SITE

- A. General: Contractor shall have full use of Project site for construction operations during construction period. Use of the project site shall be limited to the parking areas along the south and west driveways immediately adjacent to the house. All other portions of the site (lawns, sidewalks) are off-limits to contractor vehicles and equipment. Village roads shall be kept clear for Village traffic and emergency vehicle access at all times.
1. Driveways, Walkways and Entrances: Keep driveways and entrances serving premises clear and available to Owner. Do not block these areas with parking, equipment or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.

- b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- B. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Avoid damage caused by construction operations. Contractor shall be responsible for repairs to any original building components if damaged during work.

1.7 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
 - 1. Comply with limitations on use of public streets and other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: **Limit work in the existing building to normal business working hours of 7 a.m. to 4:30p.m., Monday through Friday**, except as otherwise indicated. No access to site is allowed on Weekends.
- C. Non-smoking Building: Smoking is not permitted within the building or anywhere on the property.
- D. Controlled Substances: Use of tobacco products and other controlled substances on the Project site is not permitted.

1.8 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - 1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 - 2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- C. Drawing Coordination: Requirements for materials and products identified on the Drawings are described in detail in the Specifications. One or more of the following are used on the Drawings to identify materials and products:
 - 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 - 2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and/or scheduled on Drawings.
 - 3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

PART 2 – PRODUCTS (Not Used), PART 3 – EXECUTION (Not Used)

END OF SECTION 011000

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Sections:
 - 1. Division 01 Section "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.

1.3 MINOR CHANGES IN THE WORK

- A. Architect or Environmental Consultant will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Within 10 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - e. Quotation Form: Use format acceptable to Architect.

- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.
1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 4. Include costs of labor and supervision directly attributable to the change.
 5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 6. Comply with requirements in Division 01 Section "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
 7. Proposal Request Form: Use format acceptable to Architect.

1.5 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

1.6 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on Work. Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Sections:
 - 1. Division 01 Section "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.

1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
 - 1. Correlate line items in the schedule of values with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with continuation sheets.
 - b. Submittal schedule.
 - c. Items required to be indicated as separate activities in Contractor's construction schedule.
 - 2. Submit the schedule of values to Architect at earliest possible date but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
- B. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.
 - 1. Identification: Include the following Project identification on the schedule of values:
 - a. Project name and location.
 - b. Name of Architect.
 - c. Contractor's name and address.
 - d. Date of submittal.

2. Arrange schedule of values consistent with format of AIA Document G703.
3. Arrange the schedule of values in tabular form with separate columns to indicate the following for each item listed:
 - a. Related Specification Section or Division.
 - b. Description of the Work.
 - c. Change Orders (numbers) that affect value.
 - d. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
 - 1) Labor.
 - 2) Materials.
 - 3) Equipment.
4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents.
 - a. Include separate line items under Contractor for project closeout requirements in an amount totaling five percent of the Contract Sum and subcontract amount.
5. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
6. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
7. Provide separate line items in the schedule of values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
8. Each item in the schedule of values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor's option.
9. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: Progress application payments shall be submitted to Architect by the fifth day of the month. The period covered by each Application for Payment is one month, ending on the last day of the month.
 1. Submit draft copy of Application for Payment seven days prior to due date for review by Architect.

- C. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment or similar form to convey components and costs of project.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
 2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
 3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
 4. Indicate separate amounts for work being carried out under Owner-requested project acceleration.
- E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
1. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
- F. Transmittal: Submit three signed and notarized original copies of each Application for Payment to Architect.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- G. Waivers of Mechanic's Lien: With final Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 2. When an application shows completion of an item, submit conditional final or full waivers.
 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 4. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.
- H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. Schedule of values.
 2. Contractor's construction schedule (preliminary if not final).
 3. Submittal schedule (preliminary if not final).
 4. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 5. Initial progress report.
 6. Report of preconstruction conference.
- I. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.

1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- J. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Updated final statement, accounting for final changes to the Contract Sum.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Sections:
 - 1. Division 01 Section "Summary" for work restrictions and conditions.
 - 2. Division 02 Section "Asbestos Abatement" for work related to abatement of asbestos-containing materials.
 - 3. Division 02 Section "Disturbance of Lead Containing Materials" for work related to lead-based paint finishes.
 - 4. Division 02 Section "Asbestos Monitoring" for work related to project monitoring and air sampling.

1.3 INFORMATIONAL SUBMITTALS

- A. Site Plan: Show temporary facilities, staging areas, and parking areas for construction personnel.

PART 2 - PRODUCTS

2.1 TEMPORARY FACILITIES

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading if deemed necessary.
- B. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
 - 1. Store combustible materials apart from building.

2.2 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. Air Filtration Units: HEPA primary and secondary filter-equipped portable units with four-stage filtration. Provide single switch for emergency shutoff. Configure to run continuously.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
 - 1. Locate facilities to limit site disturbance as specified in all Division 02 Sections.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
 - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Water Service: Contractor shall have access to water for execution of work. Water source shall be limited to basement area and shut off to all remaining portions of the building. Contractor is responsible for maintenance or installation of functional shut-off valve and water shall be shut off to building at the close of each workday.
- C. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
- D. Electric Power Service: Contractor shall have access to electric power service for execution of work. Power source shall be limited to basement area and shut off to all remaining portions of the building. Contractor is responsible for maintenance and installation of functional circuit breaker and receptacle and power source shall be shut off at the close of each workday.
- E. Lighting: Where possible, maintain power supply to existing interior and exterior light fixtures or provide temporary lighting with local switching to allow operation of lighting after removals/abatement contract is completed. Lighting shall provide adequate illumination for construction operations, observations, inspections, and traffic conditions.
 - 1. Lighting shall fulfill security and protection requirements and any cut wires shall be capped for safety and fire prevention.

3.3 SUPPORT FACILITIES INSTALLATION

- A. Traffic Controls: Comply with requirements of authorities having jurisdiction.
 - 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
 - 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- B. Parking: Use designated areas of Owner's existing parking areas alongside main driveway for construction personnel.
- C. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.

1. Identification Signs: Provide Project identification signs as indicated on Drawings.
 2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.
 - a. Provide temporary, directional signs for construction personnel and visitors.
 3. Maintain and touchup signs so they are legible at all times.
- D. Waste Disposal Facilities: Comply with requirements specified in Division 02 Sections "Asbestos Abatement"
- E. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle non-hazardous construction waste from construction operations. Comply with requirements of authorities having jurisdiction.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
1. Comply with work restrictions specified in Division 01 Section "Summary."
- B. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each workday.
- C. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- D. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
1. Where heating or cooling is needed and permanent enclosure is not complete, insulate temporary enclosures.
- E. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
1. Prohibit smoking in construction areas and on property.
 2. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.

3.5 MOISTURE AND MOLD CONTROL

- A. Contractor's Moisture-Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction.

3.6 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
 - 1. Maintain operation of temporary enclosures, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
 - 2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period.

END OF SECTION 015000

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures.
 - 2. Final completion procedures.
 - 3. Final cleaning.
- B. Related Sections:
 - 1. Division 01 Section "Summary"
 - 2. Division 02 Sections on abatement of hazardous materials cleaning requirements for the Work in those Sections.

1.3 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining final completion, complete the following:
 - 1. Submit a final Application for Payment according to Division 01 Section "Payment Procedures."
 - 2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
- B. Inspection: Per sections in Division 02 for Hazardous Abatement

1.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
 - 1. Organize list of spaces in sequential order.
 - 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 - 3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.

- c. Name of Architect.
 - d. Name of Contractor.
 - e. Page number.
4. Submit list of incomplete items in the following format:
- a. PDF electronic file.

PART 2 - PRODUCTS

2.1 MATERIALS

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

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep interior floors and exterior paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
- C. Construction Waste Disposal: Comply with waste disposal requirements in Division 01 Section "Temporary Facilities and Controls."

END OF SECTION 017700

SECTION 02080

ASBESTOS ABATEMENT

PART 1. GENERAL

1.10 WORK SUMMARY

- A. The work of this project will include the removal and disposal of asbestos containing materials and the cleaning of adjacent surfaces by persons trained, knowledgeable and qualified in the techniques of abatement, handling, cleaning, disposal and working with or around, asbestos containing and asbestos contaminated materials. Those persons shall comply with all applicable Federal, State, and Local regulations including requirements of this specification, and shall be capable of and willing to perform the work of this Contract.
- B. The information provided in this specification is for the abatement of asbestos containing materials at the Historic Trudeau House Museum in Saranac Lake, New York. The reproduction or use of information included in this specification for any other purpose is prohibited.

1.20 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. All work must comply with the current revision of these regulations.
 - 1. United States Department of Labor – OSHA Regulation 1926.1101. Asbestos.
 - 2. United States Department of Labor – OSHA Regulation 1910.1001 Asbestos.
 - 3. United States Department of Labor – OSHA Regulation 1910.134 Respiratory Protection.
 - 4. United States Department of Labor – OSHA Safety and Health Standards (29 CFR 1926/1910). General Industry and Construction industry.
 - 5. U.S. Environmental Protection Agency – 40 CFR 763, Subpart E Asbestos Containing Materials in Schools.
 - 6. U.S. Environmental Protection Agency – 40 CFR Part 61, Subpart M: National Emission Standard for Asbestos, 61.145 Standard for demolition and renovation and 61.150 Standard for waste disposal for manufacturing, fabricating, demolition, renovation and spraying operations.
 - 7. U.S. Environmental Protection Agency – Guidance for Controlling Asbestos Containing Materials in Buildings. EPA 560-5-85-024, June 1985, and EPA 560/5-83-002, March 1983).
 - 8. U.S. Environmental Protection Agency – Asbestos Containing Materials in School buildings: A Guidance Document. (C00090 March 1979 Parts 1 & 2).
 - 9. U.S. Environmental Protection Agency – Asbestos Waste Management Guidance EPA/530-SW-85-007
 - 10. New York State Department of Labor Title 12, Part 56 Asbestos.
 - 11. New York State Department of Health – Title 10, Part 73 Asbestos Safety Training Program Requirements.
 - 12. New York State Department of Environmental Conservation – Title 6, Part 360 Solid Waste Management Facilities.
 - 13. New York State Department of Environmental Conservation – Title 6, Part 364 Waste Transporter Permits.

- B. Any penalties incurred for failure to comply with any of the above referenced regulations, will be the sole responsibility of the Contractor and his Sub-Contractors. The Owner claims no responsibility for fines imposed due to the negligence of the Contractor.

1.30 RELATED SECTIONS

- A. Section 02081: Asbestos Monitoring

1.40 QUALIFICATIONS

- A. Pre-Contract Submittals: Two days after bids are open; those bidders to whom award of contract is under consideration shall be required to submit, to the extent not already submitted with the bid, the following documentation:

1. Asbestos Contractors Resume: Shall include the following:
 - a. Contractor license issued by New York State Department of Labor.
 - b. The number of years engaged in asbestos removal.
 - c. Provide a list of projects performed within the past two years and include the dollar value of all projects. Provide project references to include owner, consultant, and air monitoring firms' name, contact person, address and phone number.
 - d. A list of owned equipment available to be used in the performance of the project.
 - e. An outline of the worker training course and medical surveillance program conducted by the contractor.
 - f. A standard operating procedures manual describing work practices and procedures, equipment, type of decontamination facilities, respirator program, special removal techniques, etc.
2. Citations/Violations/Legal Proceedings - Submit a notarized statement describing:
 - a. Any citations, violations, criminal charges, or legal proceedings undertaken or issued by any law enforcement, regulatory agency, or consultant concerning performance on previous abatement contracts. Briefly describe the circumstances citing the project and involved persons and agencies as well as the outcome of any actions.
 - b. Any Stop Work Orders issued on projects within the past two years.
 - c. Any litigation or arbitration proceedings arising out of performance on past projects.
 - d. Any liquidated damages assessed within the last two years.
3. Preliminary Schedule
 - a. Provide an estimate of manpower to be utilized and the time required for completion of each major work area. Include estimated size and number of crews and work shifts.
4. The Contractor shall inform the Owner, by letter, that he is familiar with all aspects of the job. Any questions shall be addressed before submitting the proposal.
5. The Contractor shall be held financially responsible for any misinterpretations in his estimating and bidding. All errors made in estimating, including costs and difficulties, are the sole responsibility of the contractor, and shall not result in additional expense to the Owner.

6. The Owner assumes no responsibility for any conclusions or interpretations made by the Contractor based upon the information made available by the Owner.
- B. Pre-work Submittals. The asbestos abatement contractor shall submit to the Owner's Representative three (3) copies of the documents listed below a minimum of five work days prior to the pre-construction conference:
1. Progress Schedule:
 - a. Show the complete sequence of construction by activity and the sequencing of work within each phase or section of the work.
 - b. Show the dates for the beginning and completion of each major element of work including substantial completion dates for each work area, or phase.
 - c. Show projected percentage of completion for each item, as of the first day of each month.
 - d. Show final inspection dates.
 2. Notifications: Submit notifications required by federal, state, and local regulations together with proof of timely transmittal to agencies requiring the notice (e.g., certified mail return receipt).
 3. Permits: Submit copies of current valid permits required by state and local regulations, including arrangements for storage, transportation, and disposal of contaminated material.
 4. Abatement Work Plan: Provide plans which clearly indicate all work areas (numbered sequentially) including the locations and types of all decontamination chambers, entrances and exits to the work area, type of abatement activity/technique, number and location of negative air units and exhaust including calculations, and the proposed location and construction of storage facilities and field office.
 5. Equipment: Submit manufacturer's information about vacuums, negative air pressure equipment, respirators, and air supply equipment, etc. Provide certification that all equipment meets applicable requirements of OSHA and EPA.
 6. Samples: Submit samples of warning notices to be posted, catalog descriptions of protective clothing, replacement materials, etc.
 7. Worker Training and Medical Surveillance: The Contractor shall submit a list of the persons who will be employed by him and his subcontractors in the removal work. Present evidence that workers have received proper training required by the regulations and the medical examinations required by OSHA 29 CFR 1926.1101.
 8. Logs: Specimen copies of daily progress log, visitor's log, and disposal log.
 9. Material List: A complete materials list of all items proposed to be furnished and used under this contract.
 10. Subcontractors List: The Contractor shall submit a list of all subcontractors he intends to use on the project.
 11. Material Safety Data Sheets (MSDS): Submit copies of MSDS for each chemical or material used for the project (encapsulant, surfactant, mastic remover, etc.).
 12. Project Supervisor: Submit the resume of the proposed Project Supervisor.
 13. Rental Notifications: Submit copies of notices sent to rental suppliers informing them of the nature of the work that the Contractor intends to use the equipment for an asbestos abatement project.
 14. Worker's Acknowledgments: Submit statements signed by each employee that the employee has received training in the proper handling of asbestos containing materials; understands the health implications and risks involved; and understands the use and limitations of the respiratory equipment to be used.
- C. Project close out submissions in addition to the requirements of Section 01700 of the specifications:
1. Submit copies of all waste disposal manifests, seals, and disposal logs.

2. Submit OSHA compliance air monitoring records conducted during the work.
3. Submit copies of the daily progress log.
4. Submit copies of the Visitor's log.
5. Submit Certificate of Visual Inspection.
6. Submit a list of all employees utilized on the project with social security number and New York State Asbestos Handler Certificate number.
7. Submit copies of any required Employee Statements such as Medical Examination Statement, Certificate of Worker's Release, or Employee Training Statement.

D. The Contractor shall be financially responsible for:

1. All demolition associated with asbestos removal, asbestos removal and asbestos disposal costs.
2. Installation of temporary electricity and lights.
3. Standby electrician for temporary power.
4. All plumbing work necessary for abatement.

1.50 DESCRIPTION OF WORK ACTIVITIES

A. The Trudeau House Museum Renovations project will include the Phased abatement of asbestos containing materials. Asbestos containing materials that will be removed, or disturbed during this project include:

1. Phase 1 Interior - Countertop sinks with asbestos containing undercoating, floor tile and mastic, and linoleum flooring and Exterior window glazing on the West Cure Porch.
2. Phase 2 Exterior – Roofing.
3. The number and location of containments and decontamination units will be submitted by the contractor and reviewed by the Owner for coordination with their operations.

B. Abatement Work Area Information – Work at the Trudeau House Museum includes abatement on first and second floor levels as well as the roof.

1. Work on the First Floor includes the removal of asbestos containing materials as identified on Drawing H0.1.
 - a. Remove and dispose of the countertop sinks with asbestos containing undercoating in accordance with Site Specific Variance as identified by Removal Keynote 1.
 - b. Remove and dispose of the asbestos containing 9x9 floor tile and vapor barrier/mastic. Remove all covebase/wood baseboard to allow complete removal of asbestos containing materials as identified by Removal Keynote 3. Remove all casework, fixtures and all partitions scheduled for removal that have been built out on top of the asbestos containing material.
 - c. Remove and dispose of the asbestos containing 12x12 floor tile and mastic. Remove all covebase/wood baseboard to allow complete removal of asbestos containing materials as identified by Removal Keynote 4. Remove all casework, fixtures and all partitions scheduled for removal that have been built out on top of the asbestos containing material.
2. Work on the Second Floor includes the removal of the asbestos containing materials as identified on Drawing H0.1.
 - a. Remove and dispose of the countertop sinks with asbestos containing undercoating in accordance with Site Specific Variance as identified by Removal Keynote 1.

- b. Remove and dispose of the asbestos containing window glazing from the west cure porch windows without damage to the wood or glass as identified in Removal Keynote 2.
 - c. Remove and dispose of the asbestos containing 9x9 floor tile and vapor barrier/mastic. Remove all covebase/wood baseboard to allow complete removal of asbestos containing materials as identified by Removal Keynote 3. Remove all casework, fixtures and all partitions scheduled for removal that have been built out on top of the asbestos containing material.
 - d. Remove and dispose of asbestos containing lineoleum flooring as identified in Removal Keynote 5. Remove wood baseboard to ensure complete removal of asbestos containing material.
3. Work on the Roof includes the removal of the asbestos containing materials as identified on Drawing H0.1.
- a. Remove the roofing system in its entirety down to the wood deck, including the asbestos containing vapor barrier (bottom layer) as identified by Removal Keynote 6. Remove all tar from adjacent surfaces.
 - b. Remove the roofing system in its entirety down to the wood deck, including the assumed asbestos containing vapor barrier (bottom layer) as identified by Removal Keynote 7. Remove all tar from adjacent surfaces.
- A. The following definitions apply to this project:
1. Abatement - Procedures to control fiber release from asbestos containing materials. This includes removal, encapsulation, enclosure, and repair. "Abatement Activities" shall mean all activities from the initiation of work area preparation through successful clearance air monitoring performed at the conclusion of an asbestos project or minor project.
 2. Aggressive Sampling - A method of sampling in which the person collecting the air sample creates activity by the use of mechanical equipment during the sampling period to stir up settled dust and simulate activity in that area of the building.
 3. AIHA - The American Industrial Hygiene Association, 475 Wolf Ledges Parkway, Akron, Ohio 44311.
 4. Air Lock - A system for permitting entrance and exit while restricting air movement between a contaminated area and an uncontaminated area. It consists of two curtained doorways separated by a distance of at least 3 feet such that one passes through one doorway into the Air Lock, allowing the doorway sheeting to overlap and close off the opening before proceeding through the second doorway, thereby preventing flow-through contamination.
 5. Air Sampling - The process of measuring the fiber content of a known volume of air collected during a specific period of time. The procedure utilized for asbestos follows the NIOSH Standard Analytical Method 7400, or the provisional method developed by the U.S. EPA that are utilized for lower detectability and specific fiber identification.
 6. Ambient Air Monitoring - Shall mean measurement or determination of airborne asbestos fiber concentrations outside but in the general vicinity of the work site.
 7. Amended Water - Water to which a surfactant has been added.
 8. ANSI - The American National Standards Institute, 1430 Broadway, New York, New York 10018.
 9. Area Air Sampling - Any form of air sampling or monitoring where the sampling device is placed at some stationary location.
 10. Asbestos - Any hydrated mineral silicate separable into commercially usable fibers, including but not limited to chrysotile (serpentine), amosite (cumingtonite-grunerite), crocidolite (riebeckite), tremolite, anthophyllite and actinolite.
 11. Asbestos-Contaminated Objects - shall mean any objects that have been contaminated by asbestos or asbestos containing material.
 12. Asbestos Containing Material (ACM) - Asbestos or any material containing one percent or more asbestos by weight.

13. Asbestos Containing Waste (ACW) – Asbestos containing material or asbestos-contaminated objects requiring disposal.
14. Asbestos Project - Any form of work performed in connection with the alteration, renovation, modification, or demolition of a building or structure which will disturb an asbestos containing material.
15. Asbestos Removal Plan - A plan that will be undertaken so as to prevent asbestos from becoming airborne in the course of the alteration, renovation, modification or demolition of any building or structure.
16. Approved Safety and Health Program - A program that provides training in the handling and use of asbestos containing material, and safety and health risks inherent in such handling and use, together with methods for minimizing the exposure of workers and the public to asbestos fibers, and instruction in all applicable Federal, State and Local laws and regulations pertaining to asbestos related work.
17. ASTM - The American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.
18. Authorized Visitor - The building owner, his representative, and any representative of a regulatory or other agency having jurisdiction over the project.
19. Background Level Monitoring - A method used to determine airborne asbestos fiber concentrations inside and outside a building prior to starting an asbestos abatement project.
20. Baseline Monitoring - Shall mean a measurement or determination of airborne asbestos fiber concentrations inside the workplace and outside a building prior to starting abatement activities.
21. Clean - Shall refer to a state deemed acceptable to the Building Owner and shall be based on visual, analytical and other appropriate methods.
22. Clean Room - An uncontaminated area or room that is a part of the worker decontamination enclosure with provisions for storage of workers' street clothes and protective equipment.
23. Clearance Air Monitoring - The employment of aggressive sampling techniques with a volume of air collected to determine the airborne concentration of residual fibers, and shall be performed as the final abatement activity.
24. Contractor - Any self-employed person, company, unincorporated association, firm, partnership or corporation and any owner or operator thereof, which engages in an asbestos project or employs persons engaged in an asbestos project.
25. Curtained Doorway - A device that consists of at least three overlapping sheets of plastic over an existing or temporarily framed doorway. One sheet shall be secured at the top and left side, the second sheet at the top and right side, and the third sheet at the top and left side. All sheets shall have weights attached to the bottom to ensure that the sheets hang straight and maintain a seal over the doorway when not in use.
26. Decontamination Enclosure System - A series of connected rooms, separated from the work area and from each other by Air Locks, for the decontamination of workers, materials, and equipment.
27. Department - Any regulatory agency having jurisdiction over the project.
28. Disturb - Shall mean to alter, change, or stir, such as but not limited to the removal, encapsulation, enclosure, or repair of asbestos containing material.
29. Encapsulant (sealant) or Encapsulating Agent - A liquid material which can be applied to asbestos containing material and which temporarily controls the possible release of asbestos fibers from the material either by creating a membrane over the surface (bridging encapsulation) or by penetrating into the material and binding its components together (penetrating encapsulant).
30. Encapsulation - The coating or spraying of asbestos material with a sealant.
31. Enclosure - The construction of airtight walls and ceilings between the asbestos material and the facility environment, or around surfaces coated with asbestos materials, or any other appropriate scientific procedure as determined by the Department, which prevents the release of asbestos materials.
32. EPA - The Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460.

33. Equipment/Waste Decontamination Enclosure - That portion of a decontamination enclosure system designated for the controlled transfer of materials and equipment, consisting of airlocks, a washroom, and a holding area.
34. Equipment Room - A contaminated area or room that is part of the worker decontamination enclosure system with provisions for the storage of contaminated clothing and equipment.
35. Fiber - an acicular single crystal or a similarly elongated polycrystalline aggregate which displays some resemblance to organic fibers by having such properties as flexibility, high aspect ratio, silky luster, axial lineation, and others, and which has attained its shape primarily through growth rather than cleavage.
36. Fixed Object - A unit of equipment or furniture in the work area, which cannot be removed from the work area.
37. Friable Asbestos Material - Any material applied onto ceilings, walls, structural members, piping, ductwork, or any other part of the building structure which, when dry, may be crumbled, pulverized or reduced to powder by hand pressure.
38. Glovebag Technique - A method for removing friable asbestos containing material from heating, ventilation, and air conditioning (HVAC) ducts, short piping runs, valves, joints, elbows, and other non-planar surfaces in a non-contained work area. The glovebag assembly is a manufactured device consisting of a glovebag (constructed of 10-mil transparent plastic), two inward-projecting long-sleeve rubber gloves, one inward-projecting water-wand sleeve, an internal tool pouch, and an attached, labeled receptacle for asbestos waste. The glovebag is constructed and installed in such a manner that it surrounds the object or area to be decontaminated and contains all asbestos fibers released during the removal process.
39. HEPA Filter - A high efficiency particulate air filter capable of trapping and retaining 99.97 percent of particles (asbestos fibers) greater than 0.3 micrometers in mass median aerodynamic equivalent diameter.
40. HEPA Filter Equipped Unit - A portable local exhaust system equipped with HEPA filtration. The system shall be capable of creating a negative pressure differential between the outside and inside of the work area.
41. HEPA Vacuum Equipment - Vacuuming equipment with a high efficiency particulate air filter system.
42. Holding Area - A chamber in the equipment decontamination enclosure located between the washroom and an uncontaminated area.
43. Homogeneous Work Area - A site within the abatement work area that contains one type of asbestos containing material and where one type of abatement is used.
44. Incidental Exposure - Shall mean any occupational exposure to asbestos fibers caused by disturbing asbestos containing material during the performance of one's job other than during asbestos abatement activities.
45. Industrial Hygienist - The professional contracted or employed by the Building Owner to supervise and/or conduct air monitoring and analysis, perform inspections and act as the Owner's Representative.
46. Isolation Barrier - Shall mean the construction of partitions, the placement of solid materials, and the plasticizing of apertures to seal off the workplace from surrounding areas and to contain asbestos fibers in the work area.
47. Log - Shall mean an official record of all activities that occurred during the project and it shall identify the Building Owner, Agent, Contractor, and Workers, and other pertinent information.
48. Monitoring - May Include:
 - a. Visual inspection for the presence of visible emissions.
 - b. Air monitoring performed in accordance with accepted methods.
 - c. Core samples of encapsulated or bridged materials.
49. Movable Object - A unit of equipment or furniture in the work area that can be removed from the work area.
50. NESHAPS - The National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61).

51. NIOSH - The National Institute for Occupational Safety and Health CDC - NIOSH, Building J N.E., Room 3007, Atlanta, GA 30333.
52. Non-Asbestos Material - Materials manufactured without knowingly introducing asbestos containing materials and containing a maximum of 1% asbestos by weight.
53. Occupied Area - Area of the work site where abatement is not taking place and where personnel or occupants normally function, or where abatement project workers are not using personal protective equipment.
54. OSHA - The Occupational Safety and Health Administration, 200 Constitution Avenue, Washington, DC 20210.
55. Outside Air - The air outside buildings and structures.
56. Personal Air Monitoring - A method used to determine employees' exposure to airborne fibers. The sample is collected outside the respirator in the worker's breathing zone. This form of sampling is required by the OSHA asbestos standards (29 CFR 1926.1101).
57. Personal Protective Equipment - Appropriate clothing, headgear, eye protection, footwear and NIOSH approved respiratory protection acceptable to the department.
58. Plasticize - To cover floors and walls with fire retardant plastic sheeting or by using spray plastics.
59. Prior Experience - Experience required of the Contractor on asbestos projects of similar nature and scope to ensure capability of performing the asbestos abatement in a satisfactory manner. Similarities shall be in areas related to material composition, project size, abatement methods required, number of employees and the engineering, work practice and personal protection controls required.
60. Removal - The stripping of any asbestos containing material from surfaces or components of a facility or taking out structural components in accordance with 40 CFR 61 Subsections A and M.
61. Renovation - Altering in any way one or more facility components. Operations in which load-supporting structural members are wrecked or taken out are excluded.
62. Respiratory Protection Standard - Respiratory protection provided to workers in accordance with of Personnel Protection Requirements OSHA 29 CFR 1926.1101 and CalOSHA General Industry Safety Orders Section 520B.
63. Shift - Shall mean a worker's, or simultaneous group of workers', complete daily term of work.
64. Shower Room - A room between the Clean Room and the Equipment Room in the Worker Decontamination Enclosure with hot and cold running water controllable at the tap and arranged for complete showering during decontamination.
65. Staging Area - The area near the Waste Transfer Air Lock where containerized asbestos waste has been placed prior to removal from the work area.
66. Strip - To remove friable asbestos materials from any part of the facility.
67. Structural Member - Any load-supporting member of a facility, such as beams and load-supporting walls, or any non-load-supporting member, such as ceiling and non-load-supporting walls.
68. Surfactant - A chemical wetting agent added to water to improve penetration.
69. Visible Emissions - Any emissions containing particulate asbestos material that are visually detectable without the aid of instruments.
70. Washrooms - A room between the Work Area and the Holding Area in the Equipment/Waste Decontamination Enclosure System where equipment and waste containers are wet cleaned and/or HEPA vacuumed prior to disposal.
71. Water Leaks - Special care and consideration will be given to prevent occurrences of water leaks. It is the contractor's responsibility to periodically monitor the exterior of the work area to confirm that no leaks have occurred. In the advent of a leak, all work will stop and the personnel devoted to locating, stopping and properly cleaning up the water leak. Work shall not commence inside the area until the cause of the water leak is documented and procedures to prevent further incidents are enacted.
72. Wet Cleaning - The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning tools that have been dampened with water, and by afterward disposing of these cleaning tools as asbestos contaminated waste.

73. Work Area - Designated rooms, spaces, or areas of the project where asbestos abatement activities take place.
74. Work site - Premises where asbestos abatement activity is taking place and may be composed of one or more work areas.
75. Worker Decontamination Unit - That portion of a Decontamination Enclosure System designated for controlled passage of workers, and other personnel and authorized visitors, consisting of a Clean Room, a Shower Room, and an Equipment Room separated from each other and from the work area by air locks and curtained doorways.

1.70 PERSONNEL QUALIFICATIONS

- A. All personnel of the Contractor's involved with asbestos work must be trained and tested prior to any work, possess an appropriate Asbestos Handlers Certificate, and shall be thoroughly familiar with the standard operating procedure of the Contractor for abatement work. All personnel shall undergo the medical examinations required by OSHA. The project supervisor and the foreman shall be thoroughly familiar with all applicable regulations and practices for asbestos work and shall have participated in at least two abatement projects, similar in size and scope, during the last two years. All personnel shall pass the respirator fit test. Anyone without the above qualifications shall not be allowed to work during the abatement phase at any time.
 1. The Abatement Contractor shall designate a full time Project Supervisor who shall be on-site at all times. If the Project Supervisor is not on site, all work shall be stopped. The Project Supervisor must be able to read and write English fluently, as well as communicate with his workers. The Project Supervisor shall remain until the project is complete and cannot be removed without the written consent of the Owner and the Environmental Consultant.
 2. Prior to the commencement of work, the Abatement Contractor shall submit the proposed Project Supervisor's resume to the Owner and Environmental Consultant for approval. The Project Supervisor shall meet the requirements of a "Competent Person" as defined by OSHA 1926.1101 and have a minimum of one year on-the-job training. This person shall hold certification as an Asbestos Project Supervisor.
- B. Project Supervisor Qualifications
 1. Training and knowledge of applicable regulations and expertise in safety and environmental protection as evidenced by the participation in, successful completion of, and certification by a training course offered by an approved Asbestos Supervisor's course; with current certification by NYS Department of Labor.
 2. Experience with abatement work as evidenced through participation in at least two asbestos abatement projects, similar in size and scope to this project.
 3. Shall be fluent in English and must speak the language of all of the employees or have designated interpreters on each shift and provide a list of designated interpreters and their work schedule for the Owner.
- C. The Supervisor shall:
 1. Maintain a permanently bound project logbook that will:
 - a. Identify the facility, Owner's Representative, agent, Contractors and the project.
 - b. Define each work area.
 - c. Record completely all pertinent facts.
 - d. Record date, time and name after each entry.

- e. Have a daily sign-in for each and every individual crossing into the work area. They must provide, in legible print, name (first and last), worker license number, the time and date entered and exited or proof of authorized visitor status.
 - f. Dates of inspections and documentation of passing.
 - g. A summary of work accomplished at the end of each shift.
 - h. Notes and inspections.
2. Shall see that the decontamination chambers are kept immaculate.
 3. Shall ensure that sufficient personal protective equipment is stored in the clean room.
 4. Shall survey the work area a minimum of two times per shift for proper housekeeping, safety precautions, barrier integrity and integrity of air hoses, and shall record objective observations.
 5. Shall ensure that workers are wearing proper personal protective equipment and are trained in its use, and shall instruct workers on evacuation procedures during air compressor breakdown.
 6. Shall ensure that all workers are certified and licensed.
 7. Shall take precautions to prevent overstressing workers.

D. Workmen Qualifications

1. Training as evidenced by the participation in, successful completion of, and certification by an approved asbestos handler's course. All asbestos handlers shall have current certification by the New York State Department of Labor.
2. Familiarization with the standard operating procedures for asbestos abatement work.

1.80 NOTIFICATIONS, PERMITS, WARNING SIGNS, LABELS, AND POSTERS

- A. It is the specific responsibility of the Contractor to make, in proper and timely fashion, all necessary notifications to relevant federal, state, and local governing bodies and to obtain and comply with the provisions of all permits or applications required by the Work specified, as well as to make all required submittals required under those auspices. The Contractor shall indemnify the Owner and Owner's Representative from, and pay for all claims resulting from failure to adhere to these premises.
1. Provide the required ten working day notification to EPA on the current EPA notification of demolition and renovation form. Provide the required ten day notification to the New York State Department of Labor on Form DOSH-483, and any other state, regional, and local authority having jurisdiction on the project. Secure all the permits required for the work, including disposal of asbestos in an approved landfill.
 2. Erect warning signs around the work space and at every point of potential entry from the outside. Signs should be in accordance with OSHA standard 29 CFR 1926.1101 Paragraph k (1) (ii). The warning signs shall be a bright color so that they will be easily noticeable. The size of the sign and the size of the lettering shall be no less than the OSHA requirements.
 3. Provide the OSHA required labels, DOT required labels, and EPA Generator labels for all plastic bags and all drums utilized to transport contaminated material to the landfill.
 4. Provide any other signs, labels, warning, and posted instructions that are necessary to protect, inform and warn people of the hazard from asbestos exposure. This notification must be posted prior to the commencement of abatement activities. Post in a prominent and convenient place for the workers, a copy of the latest applicable regulations from OSHA, EPA, NIOSH and state of New York.
 5. Provide notification to all occupants of the workplace and areas immediately adjacent to the asbestos project. Information provided in the notification shall include contractor, project location and size, amount and type of ACM, abatement, dates of expected occurrence and the NYS Department of Labor telephone number.

1.90 EMERGENCY PLANNING

- A. The emergency plan and procedure shall be developed by the Contractor prior to abatement initiation and agreed to by Contractor and Owner's Representative.
- B. Emergency procedures shall be in written form and prominently posted in the Clean Change Area and Equipment Room of the worker decontamination area. Everyone prior to entering the work area must read and sign these procedures to acknowledge receipt and understanding of work site layout, location of emergency exits and emergency procedures.
- C. Emergency planning shall include written notification to facility safety department of planned abatement activities, work schedule and layout of work area, particularly barriers that may affect response capabilities.
- D. Emergency planning shall include considerations of fire, explosion, toxic atmospheres, electrical hazards, slips, trips and falls, confined spaces and heat related injury. Written procedures shall be developed and employee training in procedures shall be provided.
- E. Employees shall be trained in evacuation procedures in the event of workplace emergencies.
 - 1. For non-life threatening situations follow normal procedures with assistance from fellow workers if necessary, before exiting the work place to obtain proper medical treatment.
 - 2. For life-threatening injury or illness, worker decontamination shall take lower priority. After measures to stabilize the injured worker, remove him from the workplace and secure proper medical treatment.
 - 3. Telephone numbers of all emergency response personnel shall be prominently posted in the Clean Change Area and Equipment Room, along with the location of the nearest telephone.

1.10 RESPIRATORY SYSTEMS

- A. Provide all workers, foremen, superintendents, authorized visitors and Inspectors personally issued and marked respiratory equipment approved by NIOSH and OSHA. When using respirators with disposable filters, supply replacements as necessary.
- B. Where not in violation of NIOSH, OSHA, and any other regulatory requirements or other provisions of the project specifications, the Contractor shall provide the following minimum respiratory protection to the maximum use concentrations indicated. These requirements are based on the more stringent of the OSHA or NIOSH protection factors and a concentration inside the respirator of 0.01 f/cc.

MSHA/NIOSH APPROVED RESPIRATORY PROTECTION	MAXIMUM USE CONCENTRATIONS
Half-Mask Air Purifying with HEPA Filters	0.1 f/cc
Full-Facepiece Air Purifying HEPA Filters and Quantitative Fit Test	0.5 f/cc
Powered Air Purifying (PAPR), Loose fitting Helmet or Hood, HEPA Filter	0.25 f/cc

Powered Air Purifying (PAPR), Full Facepiece, HEPA Filter	0.5 f/cc
Supplied Air, Continuous Flow, Loose fitting Helmet or Hood	0.25 f/cc
Supplied Air, Continuous Flow, Full Facepiece, HEPA Filter	0.5 f/cc
Full Facepiece, Supplied Air, Pressure Demand, HEPA Filter	10 f/cc
Full Facepiece, Supplied Air, Pressure Demand, with Aux. SCBA, Pressure Demand or Continuous Flow	>10 f/cc

C. Type "C" Respiratory Protection

1. When type "C" Respirators are employed, the Air Supply System shall provide Grade "D" breathing air in accordance with OSHA 29 CFR 1910.134 ANSI 286.1-1973 and Compressed Association Commodity Specification G-7.1 1976.
2. The compressed Air System for Type "C" Respirators shall have a compressor capacity that satisfies the respirator manufacturer's recommendations. The receiver shall have sufficient capacity to allow escape time for the respirator wearers in the event of compressor failure or malfunction. The Compressed Air System shall have a compressor failure alarm, high temperature alarm, carbon monoxide alarm and suitable in-line purifying sorbent beads and filters to assure Grade "D" Breathing Air, and have a minimum of 1 hour of reserve air for emergency evacuations.
3. Emergency evacuation procedures to be followed in the event of compressor failure shall be posted in the work area and shall be explained by the Asbestos Handler Supervisor to all Handlers prior to commencement of work.
4. Safety inspections for airline hoses shall be conducted as necessary with the maximum hose length being 300 feet.

1.11 PERSONAL PROTECTIVE EQUIPMENT

- A. Provide to all workers, foremen, superintendents and authorized visitors and Inspectors protective disposable clothing consisting of full body coveralls, and head covers.
- B. Provide eye protection (contact lenses shall not be worn and spectacle kits which fit each personal respirator shall be issued) and hard hats and safety shoes as required by job conditions and safety regulations. Safety shoes and hard hats shall be approved in accordance with ANSI Z89.1 1969 and ANSI Z41.1 1967.
- C. Reusable footwear, hard hats and eye protection devices shall be left in the "Contaminated Equipment Room" until the end of the asbestos abatement work.
- D. All disposable protective clothing shall be discarded and disposed of as asbestos waste every time the wearer exits from the work space to the outside through the decontamination facilities.
- E. If it is absolutely necessary that non-disposable clothing be worn for the asbestos project, laundering services shall be conducted in accordance with 29 CFR 1926.1101.

1.12 PERSONAL DECONTAMINATION ENCLOSURE SYSTEM

- A. For each abatement area, provide decontamination facilities located in an area agreed upon with the Owner's Representative. The decontamination facilities shall include a Decontamination Enclosure System for workers and visitors and a Decontamination Enclosure System for loading asbestos out of the work area for transportation to the landfill.
- B. The Decontamination Enclosure System for workers and visitors shall consist of three rooms equipped with Air Locks as follows: Clean Room at entrance, Air Lock, Shower Room, Air Lock, an Equipment Room, and Air Lock leading to the Work Area.
 - 1. The worker decontamination unit shall be constructed of appropriate framing and fully lined utilizing two layers of 6-mil fire-retardant polyethylene sheeting.
 - 2. In accordance with regulations, reinforced polyethylene sheeting shall be utilized for lining the floor of the decontamination enclosure unit.
- C. Provide or Post the following information in the Clean Room.
 - 1. A copy of the U.S. Environmental Protection Agency Regulations for Asbestos, 40 CFR 61 Subparts A and M and a copy of OSHA Asbestos Regulations, 29 CFR 1926.1101, and a copy of NYS Department of labor industrial code rule 56 with any applicable or site specific variances.
 - 2. A list of telephone numbers for local hospital, local emergency squad, local fire department, the building owner (or representative) and NYS Department of Labor.
 - 3. A copy of all Material Safety Data Sheets (MSDS) for hazardous chemicals used during the asbestos project.
- D. Provide lockers for storage of street clothes of workers in the Clean Room. Provide in the same room uncontaminated disposable protective clothing and equipment. This room shall be used by workers and visitors to change from street clothes to disposable protective clothing and gear prior to entering into the contaminated area and to dress into street clothing after they have showered and dried in the Shower Room as they exit from the contaminated area.
- E. Provide walk-through type shower facilities (i.e. enter through one side of the shower and exit the opposite side) with hot and cold water so arranged as to provide complete showering of workers and visitors as they exit from the contaminated area. Make provisions to prevent contaminated water run-off from the Shower Room.
- F. There shall be one shower per 6 full-shift abatement personnel calculated on the basis of the largest shift.
- G. Provide the Equipment Room with storage for contaminated clothing and equipment. In this room, workers and visitors dispose of their disposable protective clothing, except the Respirator, as they prepare to enter the Shower Room.
- H. Provide heating and ventilation in the entire Decontamination System so that airflow will be from the outside towards work space.
- I. All water utilized during this project and contaminated by asbestos shall be filtered. The final filter should be of a 5 micron size. A system containing a series of several filters with progressively smaller pore sizes shall be used to avoid rapid clogging of the filtration system by large particles. Filtered waste water shall be discharged to a sanitary sewer. Used filters shall be disposed of as asbestos containing waste.

1.13 WASTE DECONTAMINATION ENCLOSURE SYSTEM

- A. For each abatement area, provide decontamination facilities located in an area agreed upon with the Owner's Representative. The decontamination facilities shall include a Decontamination Enclosure System for workers and visitors and Decontamination Enclosure System for loading asbestos out of the work area for transportation to the landfill.
- B. The Decontamination Enclosure System for transporting asbestos out of the Removal Area shall consist of an Air Lock from the Work Area leading into the Bag Wash and Wipe Room, and another Air Lock leading into the holding area.
 - 1. The waste wash-down room in the decontamination enclosure system shall be a walk-through type (i.e. enter through one side of the waste wash-down room and exit the opposite side).
 - 2. The waste decontamination unit shall be constructed of appropriate framing and fully lined utilizing 2 layers of 6-mil fire-retardant polyethylene sheeting.
 - 3. In accordance with regulations, reinforced polyethylene sheeting shall be utilized for lining the floor of the decontamination enclosure unit.
- C. The Bag Wash and Wipe Room shall be equipped with the facilities to wash and wipe the outside of the bags prior to removing them from the work area for transportation to the landfill. Make provisions to prevent any contaminated water run-off from the Bag Wash and Wipe Room.
- D. Provide heating and ventilation in the entire Decontamination System so that airflow will be from the outside towards work space.
- E. All water utilized during this project and contaminated by asbestos shall be filtered. The final filter should be of a 5 micron size. A system containing a series of several filters with progressively smaller pore sizes shall be used to avoid rapid clogging of the filtration system by large particles. Filtered waste water shall be discharged to a sanitary sewer. Used filters shall be disposed of as asbestos-contaminated waste.

1.14 WORKPLACE ENTRY AND EXIT PROCEDURES

- A. Personnel Entry & Exit
 - 1. Provide all personnel throughout the abatement process with the specified protective clothing and gear. Ensure that all personnel entering and leaving the workplace abide by the following procedures:
 - a. All workers and authorized personnel shall enter the work area through the worker Decontamination Enclosure System.
 - b. All personnel, before entering the work area, shall read and be familiar with all posted regulations, personal protection requirements including workplace entry and exit procedures and emergency procedures. A sign off sheet shall be used to acknowledge that these have been reviewed and understood by all personnel prior to entry.
 - c. All personnel shall proceed first to the Clean Room, remove all street clothes and don appropriate personal protective clothing, equipment and respiratory protection, as deemed adequate for the job conditions.
 - d. Personnel wearing designated personal protective clothing and equipment shall proceed from the Clean Room through the Shower Room and Equipment Room to the main work area.

- e. While inside the work area there shall be no smoking, eating, drinking, chewing of gum or tobacco, or wearing of jewelry.
- f. Before leaving the work area all personnel shall remove gross contamination from the outside of respirators and protective clothing by brushing and/or wet wiping procedures.
- g. Personnel shall proceed to Equipment Room where they remove all protective clothing and equipment except respirators.
- h. Reusable, contaminated footwear shall be stored in the Equipment Room when not in use in the work area.
- i. Still wearing respirators, personnel shall proceed to the Shower Area, clean the outside of the respirators and the exposed face area under running water prior to removal of respirator, then shower and shampoo to remove residual asbestos contamination. Various types of respirators will require slight modification of these procedures. An airline respirator with HEPA filtered disconnect protection may be disconnected in the Equipment Room and worn into the Shower. A powered air-purifying respirator (PAPR) face piece will have to be disconnected from the filter/power pack assembly that is not waterproof, upon entering the shower. A negative pressure respirator may be worn into the shower. Cartridges must be replaced for each new entry into the work area.
- j. After showering and drying off, proceed to the Clean Room and don clean clothing.
- k. Personnel will not be allowed outside the decontamination unit at the work site when wearing protective clothing since no determination can be readily made concerning their purpose in that area.

2. These procedures shall be posted in the Clean Room and the Equipment Room.

1.15 EQUIPMENT and WASTE CONTAINER DECONTAMINATION and WASTE REMOVAL PROCEDURES

A. Waste Container Pass-Out Procedures.

1. Asbestos contaminated waste that has been containerized shall be transported out of the work area through the waste Decontamination Enclosure.
2. The following procedures shall be followed whenever equipment or containers are removed from the work area during a large asbestos project.
3. Waste removal shall not occur during worker shift changes or when workers are showering or changing. Care shall be taken to prevent short-circuiting and cycling of air outward through the waste washroom.
4. Workers are to be stationed in each room/area of the decontamination enclosure to transfer/process the containers and equipment to or from adjacent sections. These workers are not to cross into the adjacent areas/rooms until the waste/equipment transfer is finished for that period and the workers have gone through decontamination as required by Section 1.14 of these specifications. The holding area workers shall have entered from uncontaminated areas with appropriate personal protective equipment; or prior to the start of waste transfer, these workers shall have exited the work area, fully decontaminated, and subsequently donned clean personal protective equipment.
5. External surfaces of contaminated containers and equipment shall be cleaned by wet cleaning and/or HEPA vacuuming in the work area before transferring such items into the decontamination enclosure system. Contaminated workers shall not enter the washroom during this procedure.
6. The cleaned containers of ACM and equipment shall be placed in uncontaminated leak-tight plastic bags or sheeting as the item's physical characteristics demand. Air volume shall be minimized and the bags or sheeting shall be sealed. Items that may puncture or tear the plastic bags or sheeting shall be placed in a hardwall container and sealed.

7. The clean recontainerized items shall be moved into the airlock for subsequent transfer to the holding area. The washroom workers shall not enter this airlock or the work area until waste removal is finished for that period.
 8. Recontainerized items and cleaned equipment shall be removed from the airlock to the holding area by workers who have entered from uncontaminated areas with appropriate personal protective equipment.
 9. The recontainerized items of ACM and cleaned, bagged equipment shall be placed in closed top, watertight plastic carts. These carts shall be held in the holding area pending removal. The carts shall be HEPA vacuumed or wet-cleaned following the removal of the containers of ACM from them.
 10. The carts shall be stored in a holding area on the work site.
- B. At the end of a work period, the exit from the Worker Decontamination Enclosure system shall be secured to prevent unauthorized entry.

.16 DISPOSAL ACTIVITIES

- A. All asbestos waste shall be stored, transported and disposed of as per, but not limited to, the regulations included in Subpart 1.2.
- B. Transportation and Disposal Site
1. The Contractor's Hauler and Disposal Site shall be approved by the owner.
 2. The Contractor shall give 24 hour notification prior to removing any waste from the site. Waste shall be removed from site only during normal working hours unless otherwise specified. No waste may be taken from the site without authorization from the Owner's Consultant.
 3. The Contractor shall have the Hauler estimate the date and time of arrival at the Disposal Site.
 4. Upon arrival at the removal site, the Hauler must possess and present to the Owner's Consultant a valid New York State Department of Environmental Conservation part 364 asbestos hauler's permit. The Owner's Consultant may verify the authenticity of the hauler's permit with the proper authority.
 5. The Hauler, with the Contractor and the Owner's Representative, shall inspect all material in the transport container prior to taking possession and signing the asbestos waste manifest.
 6. The Contractor shall not permit any off-site transfers of the waste or allow the waste to be combined with any other off-site asbestos material. The Hauler must travel directly to the disposal site with no unauthorized stops.
- C. Waste Storage Container
1. All waste containers shall be fully enclosed and lockable (i.e. enclosed dumpster, trailer, etc.). NO OPEN CONTAINERS WILL BE PERMITTED ON-SITE (i.e. open dumpster with canvas cover, etc.).
 2. The container shall be plasticized and sealed with a minimum of one (1) layer of 6 mil. polyethylene on the sides and two (2) layers of 6 mil. polyethylene on the floor.
 3. While on-site, the container shall be labeled with EPA Danger signs:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

4. The New York State Department of Environmental Conservation Asbestos Hauler's Permit number shall be stenciled on both sides and back of the container. The container will not be permitted to leave the site without the proper identification.
5. Once the container is loaded at the site, the door(s) will be locked at all times.
6. Before the container is removed from the project site for transportation to the Disposal Site, the Owner's Consultant will confirm the container doors are locked. The locks shall be removed at the Disposal Site by the operator of the Disposal Facility.
7. The Owner may initiate random checks at the Disposal Site to ensure that the procedures outlined herein are complied with.

D. Asbestos Waste Manifest

1. The manifest shall be completed by the Contractor and verified by the Owner's Consultant that all the information and amounts are accurate and the proper signatures are in place.
2. The manifest shall have the signatures of the Owner's Consultant, the Contractor, and the Hauler representatives prior to any waste being removed from the site. A copy of the completed manifest shall be retained by the Owner's Consultant and the Contractor and shall remain on site for inspection.
3. The Contractor shall maintain a waste disposal log which indicates load number, date and time left site, container size, quantity of ACM, Hauler, NYS DEC permit number, trailer and tractor license number, and date manifest was returned to Consultant.
4. Upon arrival at the Disposal Facility, the manifest shall be signed by the Disposal Facility operator to certify receipt of asbestos containing materials covered by the manifest.
5. The Disposal Facility operator shall return the manifest to the Owner's Consultant. Copies of the completed manifest are to be sent by the Disposal Facility operator to the Hauler and Contractor.

E. Compliance

1. Failure to adhere to these procedures shall constitute a material breach of the Contract and the Owner shall have the right to and may terminate the Contract provided, however, the failure of the Owner to so terminate shall not relieve the Contractor from future compliance.

1.17 ENGINEERING CONTROLS

- A. Provide supplied air to and exhaust air from the work area to maintain negative pressure. The ventilation system shall operate on a 24 hour basis throughout the abatement process until the work area clearance requirements are met. The ventilation system shall be in accordance with EPA recommendations included in the "Guidance for Controlling Friable Asbestos Containing Materials in Buildings" and current OSHA standards.
- B. A static negative air pressure of 0.02 inches (minimum) water column shall be maintained at all times in the work area during abatement to ensure that contaminated air in the work area does not filter back to uncontaminated areas.
- C. In a multi-room abatement project, provide a sufficient number of supply and exhaust units to create a stream of air away from faces of the workers in each room, and in such a way as to not damage or compromise the integrity of the plastic isolation barriers.
- D. Install and initiate operation of HEPA filter ventilation units as needed to provide an air change in the work area, every 15 minutes. Four air changes per hour will be used to calculate the number of HEPA filter ventilation units needed to perform this project.

- E. Openings made in the enclosure system to accommodate these shall be made airtight with tape and/or caulking as needed.
- F. Where more than one unit is installed, they should be turned on one at a time, checking the integrity of wall barriers for secure attachment and need for additional reinforcement.
- G. A dedicated power supply for the negative pressure ventilating units shall be utilized.
- H. On electric power failure, all work must stop immediately, and shall not resume until power is restored and exhaust units are operating again. On extended power failure, (longer than 1 hour), the decontamination facilities shall be sealed air tight after the evacuation of personnel from the work area.
- I. HEPA filter ventilation units shall be in compliance with ANSI Z9.2 (1979), Local Exhaust Ventilation.

1.18 MAINTENANCE OF WORKPLACE BARRIERS AND WORKER DECONTAMINATION ENCLOSURE SYSTEMS

- A. Following completion of the construction of all polyethylene barriers and Decontamination System Enclosures, a twelve hour settling period shall be allowed to insure that barriers will remain intact and secured to walls and fixtures before beginning actual work activities.
- B. All polyethylene barriers inside the work place, in the Worker Decontamination Enclosure System, in the Waste Container Pass-Out Air Lock, and at partitions constructed to isolate the work area from occupied areas, shall be inspected at least twice daily, including prior to the start of each day's abatement activities. The time of the inspections and conditions observed shall be documented in the daily project log.
- C. Damage and defects in the Enclosure System are to be repaired immediately upon discovery.
- D. Smoke tubes shall be used to test the effectiveness of the work area barrier and the Worker Decontamination Systems before abatement work begins with the negative pressure ventilation units in operation and at least once a day thereafter until the work is completed. Results and observations shall be documented in the project logbook.
- E. At any time during the abatement activities after barriers have been erected, if visible material is observed outside of the work area or if damage occurs to barriers, work shall immediately stop, repairs made to barriers, and debris/residue cleaned up using appropriate HEPA vacuuming and wet cleaning procedures.
- F. If air samples collected outside of the work area during abatement activities indicate airborne fiber concentrations greater than 0.01 f/cc or pre-measured background levels (whichever is higher), work shall immediately stop for inspection and repair of barriers. Cleanup of surfaces outside of the work area, using HEPA vacuums or wet cleaning techniques, may be necessary.

1.19 ASBESTOS WASTE REQUIREMENTS

- A. All asbestos waste shall be stored, transported and disposed of as per, but not limited to, the regulations included in Subpart 1.2.

- B. Labeled ACM waste containers or bags shall not be used for non-asbestos containing debris or trash. Any material placed in labeled containers or bags, whether turned inside out or not, shall be handled and disposed of as asbestos containing waste (ACW).
- C. When presenting asbestos containing waste (ACW) for storage at the generation site, the Contractor shall:
 - 1. Wet down ACW in a manner sufficient to prevent all visible emissions of dust into the air.
 - 2. Seal material in a leak tight container while wet.
 - 3. Keep ACW separate from any other waste.
- D. When presenting asbestos containing waste (ACW) for storage away from the site of generation, the Contractor shall:
 - 1. Ensure that ACW has been properly packaged and labeled as per requirements above.
 - 2. Examine the containers of ACW to ensure that there are no breaks in the containers and that no visible dusts are being released into the air.
 - a. The examination shall be conducted in a manner reasonably calculated to minimize disturbance and damage to the container.
 - b. If examination reveals damage to a container of ACW the Contractor or person accepting the waste shall immediately wet down the ACW and re-package it into a clean leak tight container. The repackaging shall be conducted in a place and manner to minimize potential exposure to the general public. The subsequent repackaging shall be the financial responsibility of the Contractor and occur at no extra cost to the Owner.
- E. Keep asbestos containing waste (ACW) separate from any other waste.
- F. When storing asbestos containing waste (ACW) - The Contractor shall:
 - 1. Ensure that the ACW has been sufficiently wet down in a leak tight container.
 - 2. Examine the integrity of the container's leak tight seal at a minimum of once per 24 hour period.
 - 3. Re-wet and repackage any damaged containers.
 - 4. Maintain at storage site an adequate supply of spare leak tight containers.
 - 5. Maintain at storage site an adequate supply of amended water.
 - 6. Keep ACW separate from any other waste.
 - 7. Keep ACW in a secured, enclosed, and locked container.
 - 8. If the Contractor has intention of storing a quantity of asbestos containing waste (ACW) greater than or equal to 50 cubic yards, the Contractor shall:
 - a. Submit a written request and receive written approval from the Owner's Representative.
- G. When presenting asbestos containing waste (ACW) for transport, the contractor shall:
 - 1. Ensure that ACW has been sufficiently wetted down.
 - 2. Examine the integrity of the container's air tight seal.
 - 3. Re-wet and re-package any damaged containers.
 - 4. Keep waste separate from all other wastes.
 - 5. Ensure that a person transporting asbestos waste holds a valid permit issued pursuant to law.
- H. When transporting Asbestos Containing Waste (ACW)

1. Examine the integrity of the container's leak tight seal at a minimum of once per 24 hour period.
2. Re-wet and re-package any damaged containers.
3. Keep ACW in a secured, enclosed, and locked container.

I. When asbestos containing waste (ACW) is presented for disposal

1. The Contractor at the time of presenting for disposal of ACW shall:
 - a. Comply with all applicable orders issued pursuant to asbestos disposal.
 - b. Ensure that ACW has been sufficiently wet down.
 - c. Examine the integrity of the container's air tight seal.
 - d. Re-wet and re-package any damaged containers.
 - e. Keep waste separate from all other wastes.

J. Disposal of asbestos containing waste (ACW)

1. NO PERSON UNDER ANY CIRCUMSTANCES SHALL ABANDON ASBESTOS CONTAINING WASTE.
2. Disposal shall be at an approved landfill and a manifest form will be signed by the Landfill Owner documenting receipt and acceptance of the ACW which will be furnished to the Owner's Representative.

1.20 TEMPORARY FACILITIES, CONTROLS, OFFICE

A. A source of water and electricity will be provided at the site without any charge to the Contractor.

B. Temporary Electricity and Lighting.

1. Electrical connections from the source of the electricity to the work area shall be provided by the Contractor.
2. The Contractor shall provide all wiring, lighting, switches, outlets, etc., and shall be in accordance with national, state, local and Underwriters Laboratories requirements and installed by qualified and licensed individuals.
3. The Contractor shall be responsible for any damages caused by them to the Owner's electrical systems.
4. The Contractor shall utilize Ground Fault Interrupts, and undamaged, grounded extension cords
5. The Contractor shall have adequate lighting within the work area.
6. The Contractor shall take all appropriate precautions and steps necessary to protect all people from the hazards involved with electricity and liquids inside the work area.

C. Temporary Water

1. All connections to the Building's water system by the Contractor shall be equipped with Back Flow protection.
2. All fittings, valves, hoses, etc. utilized must be temperature and pressure rated for the project's conditions.

PART 2. MATERIALS AND EQUIPMENT

2.10 MATERIALS AND EQUIPMENT

- A. All materials subject to damage shall be stored off the ground, away from wet or damp surfaces, and under protective cover to prevent damage or contamination. Replacement materials shall be stored outside of the work area until abatement is completed.
 - 1. Damaged and deteriorating materials shall not be used and shall be removed from the premises.
 - 2. When asbestos containing material that has been used for insulation is removed, equivalent protection shall be provided with non-asbestos containing material, in conformity with all applicable NYS Codes.
- B. Plastic (polyethylene) sheeting, or spray-plastics, of 6-mil thickness or greater, in sizes to minimize the frequency of joints, shall be employed for containment. All polyethylene sheeting shall be fire-retardant.
- C. Duct tape or equivalent shall be capable of sealing joints of adjacent sheets of plastic, facilitating attachment of plastic sheets to finished or unfinished surfaces of dissimilar materials, and adhering under both dry and wet conditions, including during the use of amended water.
- D. Spray adhesive shall be capable of providing additional sealing of joints and facilitating attachment of plastic sheeting to finished or unfinished surfaces where needed. Adhesive shall be capable of adhering under dry and wet conditions, including during the use of amended water.
- E. The surfactant shall be a product that is non-toxic, non-carcinogenic, and is not an eye, respiratory system, or skin irritant.
- F. Airtight and watertight containers shall be provided to receive and retain any asbestos containing or contaminated materials for storage until disposal at a disposal site. The containers shall be labeled with the appropriate OSHA required labels (OSHA Regulation 29 CFR 1926.1101(k)), DOT required labels, and EPA Generator labels. Plastic bags used for waste storage or disposal shall be 6-mil in thickness minimum and be marked with the appropriate OSHA and DOT caution labels and the EPA Generator label.
- G. Provide adequate HEPA Filter equipped ventilation units, including HEPA filter replacements.
- H. Provide all tools, respirators and filter replacements necessary.
- I. Provide the necessary water filtration units, including filters to filter waste water through a 5 micron final filter.
- J. The Contractor shall have available ladders and/or scaffolds of sufficient dimension and quantity so that all work surfaces can be easily and safely reached by Inspectors. Scaffold joints and ends shall be sealed with tape to prevent incursion of asbestos fibers. Scaffolding shall comply with the New York State Building Code and OSHA requirements.

PART 3. EXECUTION

3.10 WORK AREA PREPARATION

- A. The Contractor shall provide notification to all occupants of the floor where abatement is scheduled and adjacent floors of the building of the scheduled asbestos project in accordance with NYS Code Rule 56.
- B. The work area shall be vacated by the occupants prior to work area preparation and until successful clearance air monitoring.
- C. The Contractor shall post caution signs meeting the specifications of OSHA Construction Standard Section 1926.1101 (k) at appropriate approaches to a location where airborne concentrations of asbestos may exceed ambient background levels. Signs shall be posted a distance sufficiently far enough away from the work area so as to permit an employee to read the sign and take the necessary protective measures to avoid exposure. Additional signs may need to be posted following construction of workplace enclosure barriers.
- D. The Contractor shall have at least one supervisor at the job site at all times who can communicate effectively in English. Failure of this provision will result in stoppage of work, and will not resume until such a person is on the job site.
- E. The Contractor shall erect the decontamination enclosure system.
- F. The Contractor shall wet clean and remove all removable items from the work area. This includes furniture and mechanical objects that are movable. All remaining items shall be wet cleaned and protected.
- G. The Contractor shall shut down all existing electric power in the work areas. Provide and ensure safe installation of temporary power sources and equipment, giving special attention to any area of high humidity and/or sprayed water. Installation must comply with all applicable codes. All power to work areas shall be brought into the area through ground-fault interrupters positioned at the source.
- H. The Contractor shall shut down all existing water supplies in the work areas. Provide and ensure safe installation of temporary water source from the basement. Installation must comply with all applicable codes.
- I. Where it is not practical or feasible to prepare the whole room as the regulated work area, due to the minor quantity of material scheduled for disturbance in each room, the Asbestos Abatement Contractor may establish the regulated work area utilizing tents and establishing negative pressure within the tents in accordance with the requirements of New York State Code Rule 56.

3.20 FLOOR PREPARATION

- A. Cover all remaining non-removable items within the removal area with two layers of fire retardant 6 mil polyethylene sheeting taped securely.
- B. Cover all pre-cleaned floors inside the work area, except when the floor covering is the only material scheduled for abatement, with two layers of fire retardant 6 mil (minimum) polyethylene sheeting or equivalent. Additional layers of sheeting may be utilized as drop cloths to aid in cleanup of bulk materials.

1. Plastic shall be sized to minimize seams. If the floor area necessitates seams, those on successive layers of sheeting shall be staggered to reduce the potential for water to penetrate to the flooring material. A distance of at least 6 feet between seams is sufficient. Do not locate any seams at wall/floor joints.
2. Floor sheeting shall extend at least 12 inches up the side walls of the work area.
3. All wall/floor sheeting seams shall overlap a minimum of 12 inches, and be secured by first applying spray adhesive and then firmly securing with tape.
4. Contractor will be responsible for any water damage caused by the removal process to the floor(s) below.

3.30 WALL AND CEILING PREPARATION

- A. All "critical" barriers, those separating removal areas from non-removal areas, shall be constructed according to Section 3.5.
- B. Fill any holes, cracks or inlets into the work area with caulking or equivalent.
- C. Cover all walls and ceiling within the work area with two layers of fire retardant 6 mil polyethylene sheeting or equivalent, with the exception of the panels scheduled for removal.
 1. Each layer of polyethylene sheeting shall be taped securely to the wall/ceiling. Layers shall not be taped to each other.
 2. Plastic shall be sized to minimize seams. Seams shall be staggered and separated by at least a distance of six feet.
 3. Wall sheeting shall overlap floor sheeting by at least 12 inches beyond the wall/floor joint.
 4. Wall sheeting shall be secured so as to prevent it from falling away from walls. This may require additional support/attachments when negative pressure ventilation systems are turned on.
 5. Caulk or seal edges of sheeting at floor, ceiling, walls, and fixtures to form an air tight seal.
- D. Entrances to the workplace that will not be used for worker entry or emergency exits shall be locked to prevent unauthorized entry.
- E. Refer to Section 1.18 for procedures to utilize in properly maintaining Workplace Barriers and Worker Decontamination Enclosure Systems.

3.40 EXPOSURE CONTROLS

- A. The Contractor shall install Enclosure Engineering Controls (refer to section 1.17) before any material is disturbed or removed.

3.50 CRITICAL BARRIER INSTALLATION

- A. The Contractor shall seal all openings from the work area to occupied areas of the building as per the following:
 1. Fire exits: Since they must be accessible at all times, equip each exit location with an emergency egress panel to be utilized only in emergencies.
 2. Critical Barriers: Barriers that separate the protected work area from unprotected non-work areas. These barriers shall be constructed of conventional 2" x 4" (minimum) wood or metal stud framing, 16" o.c. (maximum).

- a. A solid construction material of at least 3/8" thickness shall be applied to the work side of the framing. The edges of the partition will be caulked at the floor, walls, ceiling and fixtures to form an air tight seal. The work area side of the partition will be covered with two layers of at least six-mil fire retardant polyethylene sheeting with staggered joints and sealed. The critical barrier then becomes a floor, wall or ceiling surface requiring two layers of at least six-mil fire-retardant polyethylene sheeting (Section 3.2 or Section 3.3).
 - b. Critical barriers shall be put into place before any disturbance of the asbestos containing material.
- B. Additional barriers (i.e., sealing off of all openings, including but not limited to windows, corridors, doorways, barriers, skylights, ducts, grills, diffusers, and any other penetrations of the work place) shall be installed with 2 layers of fire retardant 6 mil plastic sheeting sealed with tape. All seams of HVAC or other system components that pass through the workplace shall also be sealed.

3.60 ASBESTOS CONTAINING MATERIAL REMOVAL - GENERAL

A. Gross Removal

1. Wet all asbestos containing material with an amended water solution. Equipment used should be capable of providing a fine spray mist, in order to reduce airborne fiber concentrations when the material is disturbed. Adequately wet the material to the substrate; however, do not allow excessive water to accumulate in the work area. Keep all removed material wet until it can be containerized for disposal (to prevent fiber release).
2. All items or obstructions shall be removed or positioned in ways, insofar as practical, so as to fully access the asbestos containing material.
3. Once adequately wetted, the asbestos containing material shall be removed in manageable sections. Removal shall be by teams of people, who containerize all material before moving to a new location. All removal areas shall be periodically sprayed to maintain in a wet condition until all visible material has been cleaned up.
4. Material that is removed shall not be dropped or thrown.
5. Removal shall be performed in teams, broken down into:
 - a. Sprayer - in charge of adequately wetting the ACM.
 - b. Scrapers/Removers - responsible for the careful removal of the ACM.
 - c. Cleaners - responsible to immediately bag all asbestos waste which has just been removed.
 - d. Scrubbers - will scour the now bare surfaces and rid them of all visible dust and debris.
 - e. The team will move in an orderly fashion completing the four steps in each section before moving to a new section.
6. Containerized waste (6 mil polyethylene bags or hardwall containers) shall be sealed when full. Since wet material can be exceedingly heavy, containers shall not be overfilled. Containers shall be securely sealed to prevent accidental opening and leakage (i.e., tying tops of bags in an overhand knot or by taping in goose neck fashion, never with wire or cord). Bags shall be decontaminated on exterior surfaces by wet cleaning or HEPA vacuuming before being placed in clean containers. Bags may be placed in drums for staging and transportation to the landfill.
7. Following completion of gross removal, all visible residue on substrate shall be removed by means of brushes or sponges.
8. Upon completion of all Gross and Residue Removal, initiate Clean-Up Procedures.

3.70 CLEAN-UP PROCEDURES - GENERAL

- A. Clean up of visible accumulations of loose ACM shall occur whenever there is a sufficient amount to fill a single asbestos bag and at the end of each shift.
- B. ACM shall be collected utilizing rubber dust pans and rubber squeegees.
- C. HEPA vacuums shall not be used on wet materials unless specially designed for that purpose.
- D. Metal shovels shall not be used within the work area.
- E. Accumulations of dust shall be cleaned off all surfaces of the work area daily.

3.80 FINAL CLEAN-UP PROCEDURES

- A. After removal of all visible accumulations of ACM, the work areas shall be:
 - 1. HEPA vacuumed on dry surfaces.
 - 2. A wet/dry shop vacuum (dedicated to asbestos abatement) may be used to pick up excess water and gross saturated debris.
 - 3. All surfaces shall be wet cleaned. Contractor will request and pass a visual inspection performed by the consultant before proceeding to the next step. Documentation of passing this inspection shall be recorded in a daily logbook.
 - 4. The Contractor shall encapsulate the polyethylene sheeting with a lockdown encapsulant. The abated surfaces shall not be encapsulated prior to each work area passing final air clearance sampling.
 - 5. The cleaned, exposed surface barrier shall be removed from wall and floor.
 - 6. The work area shall be vacated for 12 hours to allow for fibers to settle.
- B. Second Cleaning:
 - 1. All objects and surfaces covered by the second layer of plastic shall be HEPA vacuumed and/or wet cleaned.
 - 2. The remaining plastic surface barriers will be removed and disposed of as asbestos contaminated waste, while the critical barriers remain in position.
 - 3. The areas shall be vacated for twelve (12) hours to allow fibers to settle.
 - 4. Negative air controls shall still be in operation.
- C. Third Cleaning:
 - 1. A third cleaning shall be performed on all surfaces within the work site using HEPA vacuuming and/or wet cleaning.
 - 2. All containerized waste shall be removed from the work area and holding area.
 - 3. All tools and equipment shall be removed from work area and properly decontaminated in the decontamination enclosure system.
- D. Following successful completion of third cleaning, inform the Owner's Representative that work areas are ready for Clearance Air Monitoring.

END OF SECTION

SECTION 02081

ASBESTOS MONITORING

PART 1. GENERAL

1.10 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, apply to work of this section.
- B. Section 02080: Asbestos Abatement.

1.20 DESCRIPTION OF WORK

- A. The Owner will contract with an Asbestos Monitoring Firm for the project. The Asbestos Monitoring Firm will designate one individual who is a qualified certified Asbestos Project Monitor and Air Sampling Technician to represent the Asbestos Monitoring Firm during the removal program.
- B. The Project Monitor must be on the job site at all times during the abatement work. No Phase II asbestos regulated work area preparation, abatement or cleaning work will occur without the presence of the Project Monitor.
- C. The Project Monitor will conduct five milestone inspections.
 - 1. Pre-abatement inspection shall be conducted as follows:
 - a. Notification in writing to the Asbestos Monitoring Firm shall be made by the Abatement Contractor to request a pre-abatement inspection at least 48 hours in advance of the desired date of inspection. This inspection shall be requested each time another regulated work area is started.
 - b. The Project Monitor shall ensure that:
 - 1) The job site is properly prepared and that all containment measures are in place.
 - 2) All workers shall present to the inspector a valid asbestos handling certificate issued by the New York State Department of Labor.
 - 3) Measures for the disposal of removed asbestos material are in place and shall conform to the adopted standards.
 - 4) The Contractor has a list of emergency telephone numbers at the job site which shall include the monitoring firm employed by the Owner and telephone numbers for fire, police, emergency squad, local hospital and health officer, and the New York State Department of Labor.
 - c. If all is in order, the Project Monitor shall issue a written notice to proceed in the field. If the job site is not in order, then any needed corrective action must be taken before any abatement work activity is to commence. Conditional approvals shall not be granted.

2. Progress inspections shall be conducted as follows:
 - a. Primary responsibility for ensuring that the asbestos abatement work progresses in accordance with these technical specifications rests with the Abatement Contractor. The Project Monitor shall continuously be present to observe the progress of work, perform a minimum of two inspections within each regulated work area daily, and perform required tests.
 - b. If the Project Monitor observes irregularities at any time, he shall direct the Abatement Contractor Supervisor to provide such corrective action as may be necessary. If the Contractor fails to take the corrective action required, or if the Contractor or any of their employees habitually and/or excessively violate the requirements of any regulation, or the specification, then the Project Monitor shall inform the Owner or other authorized representative having jurisdiction who shall issue a Stop Work Order to the Contractor and have the work site secured until all violations are corrected.
3. Final cleaning visual inspections shall be conducted as follows:
 - a. Notice for a final cleaning visual inspection shall be requested by the Abatement Contractor at least 48 hours in advance of the desired date of inspection.
 - b. The final cleaning visual inspection shall be conducted after completion of the final waiting/settling/drying period and prior to the collection of final clearance samples.
 - c. The Project Monitor visual inspection for completeness of abatement and completeness of cleanup shall be performed as per the provisions of the current ASTM Standard E1368 "Standard Practice for Visual Inspection of Asbestos Abatement Projects. It shall ensure that:
 - 1) The work site has been properly cleaned and is free of visible asbestos, asbestos-containing material, waste, debris, dust and residue.
 - 2) All removed asbestos has been properly placed in a locked secure container outside of the work area.
 - 3) There are no visible pools of liquid or condensation.
 - d. The Project Monitor and the Asbestos Abatement Contractor Supervisor shall record detailed findings of the visual inspection in the asbestos abatement contractor supervisor's daily log book.
 - e. If all is in order, the Project Monitor shall conduct final clearance sampling in accordance with all applicable regulations and Subsection 3.2 of this Section.
 - f. Upon receipt of written sample analysis reports that indicate airborne fiber levels meet or exceed clearance requirements, the Project Monitor will provide written notice of authorization to remove barriers from the job site.
4. Work Area Removal inspection shall be conducted as follows:
 - a. Upon notice by the Owner or by the Contractor and within 24 hours after the removal of the critical barriers and any temporary hardwall barriers that were used to establish the regulated abatement work area, an inspection shall be made to ensure that the abatement work in that area is complete and no visible signs of asbestos, asbestos-containing materials, materials or equipment associated with the abatement and no waste/debris remain. After satisfactory completion of the Work Area Removal Inspection, removal of the Decontamination Enclosures may begin.
5. Decontamination Enclosure Removal inspection shall be conducted as follows:
 - a. Upon notice by the Owner or by the Contractor and within 24 hours after the removal of the decontamination enclosure systems, a final inspection shall be made to

ensure that no visible signs of asbestos, asbestos-containing materials, materials or equipment associated with the abatement and no waste/debris remain.

6. Violations:
 - a. The Project Monitor shall ensure that the work conforms to the specification. If it is found that the asbestos abatement work is being conducted in violation of the specifications the Project Monitor shall issue in writing a Stop Work Order to the Contractor and have the work site secured until all violations are abated. If the Contractor fails to correct the violation, the course of action listed under 1.2.C.2.b. will be followed.

PART 2. PRODUCTS (Not used)

PART 3. EXECUTION

3.10 AREA AIR MONITORING

- A. The Asbestos Monitoring Firm will perform the air monitoring for this project.
- B. Monitoring outside the work area shall be provided throughout removal operations to ensure that no outside contamination is occurring.
 1. The sampling zone for indoor air samples shall be representative of the building occupant's breathing zone.
 2. Outdoor ambient and baseline samplers shall be placed four feet to six feet above the ground surface in reasonable proximity to the building and away from obstructions and drafts that may unduly affect airflow.
 3. Samples shall have a chain-of-custody record.
 4. Area air sampling shall be conducted as specified in the following documents except as restricted or modified herein:
 - a. Measuring airborne asbestos following an abatement action, USEPA document 600/4-85-049 (Nov. 1985).
 - b. Guidance for controlling asbestos-containing materials in building; USEPA Publication 560/5-85-024 (June 1984).
 - c. Asbestos Hazard Emergency Response Act of 1986 (AHERA), USEPA 40 CFR 763, Subpart E.
 - d. NIOSH Method 7400, Revised.
 - e. NYS DOL ICR 56.
- C. Filter cassettes and sampling train shall be assembled as specified in NIOSH Method 7400. The total volume shall be a volume sufficient to achieve a detection limit of 0.004 f/cc. A minimum sample volume of 1200 liters shall be collected; flow rate shall be calibrated between 2 and 15 liters per minute before and after sampling, and a record kept of this calibration.
- D. Prior to the asbestos abatement contractor's mobilization, background air samples shall be taken in accordance with NYS Industrial Code Rule 56-6. The samples shall be taken during normal occupancy activities and conditions at the site. Samplers shall be located inside the intended regulated abatement work area and outside of the intended regulated work area within ten feet of the anticipated locations of isolation or critical barriers. The number and location of background

samples shall be sufficient to represent the entire work area and agreed upon by the Asbestos Monitoring Firm.

- E. Background and post-abatement clearance air monitoring samples for each large regulated asbestos abatement work area shall include 5 inside and 5 outside samples, at a minimum, to be taken. In addition to the five sample minimum, one representative sample shall be collected for every 5,000 square feet above 25,000 square feet of floor space.
- F. Background air monitoring samples for a small regulated asbestos abatement work area shall include 3 inside and 3 outside samples, at a minimum, to be taken. Post-abatement clearance air monitoring samples for a small regulated asbestos abatement work area shall include 5 inside and 5 outside samples, at a minimum, to be taken, in accordance with AHERA requirements.
- G. For minor regulated asbestos abatement work areas that are part of a small or large asbestos project, post-abatement clearance air samples will be collected. A minimum of 1 sample will be collected from inside the regulated work area and 1 sample will be collected outside the work area within 10 feet of the work area.
- H. The following minimum number of samples shall be provided during abatement for large regulated work areas. The frequency and duration shall be representative of the actual conditions. Air sampling shall be performed during work area preparation when the regulated work area includes the abatement of OSHA Class 1 and/or OSHA Class II friable materials. Air sampling is not required during work area preparation of large regulated work areas if only OSHA Class II non-friable materials are present in the work area.
 - 1. Two area samples outside the regulated abatement work area in uncontaminated areas of the building, within ten feet of the isolation or critical barriers.
 - a. Primary location selection shall be within ten feet of isolation barriers.
 - b. When positive pressurized HVAC ducts are located within the regulated work area, one of these samples will be collected within ten feet of an HVAC diffuser, at the downstream side of the regulated work area.
 - c. Where the entire building is the regulated work area, one additional exterior ambient air sample shall be collected.
 - 2. One ambient air sample will be collected outside of the building.
 - 3. One sample within ten feet of and within proximity to each entrance or exit from the regulated work area, i.e., at the uncontaminated entrance to each worker decontamination and waste decontamination enclosure system.
 - 4. Once negative air systems have been established, one sample shall be collected in front of and within ten feet of each unobstructed negative pressure exhaust or bank of up to five exhausts.
 - 5. Once negative pressure air systems have been established, where exhaust ducts run through non-work areas of the building to access the exterior, one sample shall be collected within ten feet of the exhaust duct system.
- I. If the Contractor's barriers or other control methods are observed to malfunction and if the Contractor does not correct the problems immediately upon notification, the Project Monitor shall inform the Owner or other authorized representative. In such a situation additional area sampling of up to three samples per day shall be performed by the air monitoring company.
- J. Criteria during preparation and abatement activities - If air samples collected outside of the work area during preparation or abatement activities indicate airborne fiber concentrations at or above 0.01 f/cc or the established background level, whichever is greater, as determined by Phase Contrast Microscopy (PCM), work shall stop immediately for inspection and repair of barriers and

negative air ventilation systems as necessary. Clean-up of surfaces outside of the regulated work area using HEPA vacuums and wet cleaning techniques shall be performed prior to resuming preparation or abatement activities.

- K. The turn-around time for analysis of the samples shall be a maximum of 48 hours from the time samples are collected. This requirement may be superseded by a site specific variance that requires a faster turn-around time for analysis.
- L. The evaluation criteria shall be 0.01 fibers per cubic centimeter.
- M. A series of smoke tests shall be performed at the decontamination unit entrance/exit, by the Project Monitor to ensure continuous negative air pressure during abatement activities.
- N. The Project Monitor shall calculate the required number of negative air filtration units for each work area. This calculation shall be made whenever the volume of the work area changes. The Project Monitor will alert the Contractor of any discrepancies between the number of units required and those in operation within the work area. If problems are identified and not corrected, the monitor shall inform the Owner or other authorized representative.
- O. The Project Monitor shall keep a record in a daily log of all on-site observations, and required activities of the Contractor.

3.20 POST-ABATEMENT FINAL AIR CLEARANCE TESTING

- A. Post-abatement testing shall be conducted as follows:
 - 1. After completion of the final cleaning, appropriate drying time and visual inspection, an aggressive final clearance air test shall be performed. This test is required to establish safe conditions for removal of critical barriers and to permit renovation activity to proceed. Sufficient time following clean-up activities shall be allowed so that all surfaces are dry during monitoring.
 - 2. Samplers shall be placed at random around the work area. If the number of rooms within the work area is equivalent to the number of required samples based on floor area, a sampler shall be placed in each room. When the number of rooms is greater than the required number of samples a representative sample of rooms shall be selected.
 - 3. The representative samplers placed outside the work area but within the building shall be located in uncontaminated areas within ten feet of the isolation barriers.
 - 4. The following aggressive sampling procedures shall be used within the work area during all clearance air monitoring:
 - a. Before starting the sampling pumps use forced air equipment (such as a one horsepower leaf blower) to direct exhaust air against all walls, ceilings, floors, ledges and other surfaces in the work area.
 - 1) This pre-sampling procedure shall take at least five minutes per 1,000 square feet of floor area.
 - 2) At a minimum, place a 20-inch fan 3 feet above the floor in the center of each room. (Use one fan per 10,000 cubic feet of room space). Place the fan on slow speed and point it toward the ceiling.
 - 3) Start the sampling pumps and sample for the required time or volume.
 - 4) Turn off the pumps and then the fan(s) when sampling is completed.

5. For post-abatement monitoring, area samples shall conform to the following schedule:

AREA SAMPLES FOR ANALYSIS BY	MINIMUM VOLUME	FLOW RATE
PCM	1200 Liters	5 to 15 l/min.
TEM	1800 Liters	5 to 9.9 l/min.

6. Each homogeneous work area that does not meet the clearance criteria shall be thoroughly recleaned using wet methods, with the negative pressure ventilation system in operation. A full set of samples shall be collected in the work area as described above. The process shall be repeated until the work site passes the test.
7. For an asbestos project with more than one homogeneous work area, the release criteria shall be applied to each work area.
8. Preparation and analysis of area samples by PCM shall be by NIOSH Method 7400.
9. Preparation and analysis of area samples by TEM shall be accordance with AHERA procedures.
10. Clearance and/or Re-occupancy Criteria
- The clearance criteria shall be applied to each homogeneous work area independently.
 - For PCM analysis, the clearance level of any work area shall be less than 0.01 f/cc, or the background level, whichever is greater for each sample collected inside and outside the work area.
 - For TEM analysis, the clearance level of any work area shall be less than the average of 70 structures per square millimeter for the samples collected inside the work area.

- B. Final inspections shall be conducted by the Project Monitor as follows:

- Upon notice by the Owner or by the Contractor and within 48 hours after the removal of the remaining barriers and decontamination enclosures, a final inspection shall be made to ensure the absence of any visible signs of asbestos or asbestos-containing material.
- The Project Monitor shall ensure that all asbestos waste and asbestos-contaminated waste has been removed from the work site in a registered vehicle by a registered waste hauler.

3.30 PERSONAL AIR MONITORING

- The Contractor shall be responsible for conducting personal sampling in accordance with applicable rules and regulations.
- In addition to the requirements of OSHA 1926.1101, the contractor shall be required to perform personal air monitoring during every work shift in each work area during which abatement activities occur in order to verify that appropriate respirator protection is being utilized.
- Results of the monitoring shall be returned to the site, at least verbally, and posted no later than 24 hours following the time the sample was collected. Written results shall be returned to the site and posted no more than five days after the monitoring was performed.
- Personal air samples shall be analyzed by a laboratory which holds certification by the New York State Department of Health's Environmental Laboratory Approval Program. The asbestos consultant must approve the laboratory the contractor intends to use.

END OF SECTION

SECTION 02090

DISTURBANCE OF LEAD-CONTAINING MATERIALS

PART 1 GENERAL

1.1 WORK SUMMARY

- A. The work specified herein is expected to disturb lead-based paint and/or lead containing paint identified on components throughout portions of the Trudeau House Museum in Saranac Lake, New York NY. The disturbance of the paint is expected to occur during renovation activity.

1.2 RELATED DOCUMENTS

- A. Division 1, the General Conditions and all parts of the Bid and Contract Documents are made part of this Section as if fully repeated herein.

1.3 DESCRIPTION OF WORK

- A. Renovations at the Trudeau House Museum require the disturbance of lead-containing paint and lead-based paint on painted finishes scheduled for disturbance. Surfaces covered with lead-based paint that are scheduled for disturbance during this project are indicated in the Hazardous Materials Survey Report.
- B. Lead-containing paint and lead-based paint have been identified on building components that will be disturbed during the renovation project. Each Contractor who will disturb lead-containing paint while working on this project is responsible to comply with the Occupational Safety and Health Administration (OSHA) regulation 1926.62, Lead in Construction. Each Contractor who will disturb lead-based paint while working on this project is required by the New York State Education Department to comply with the United States Department of Housing and Urban Development Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing, dated June 1995. Compliance includes, but is not limited to, providing training and education for their employees working on this project. A copy of the lead paint inspection is included in the project manual.
- C. Any material that has not been tested shall be assumed to contain lead unless proven otherwise by the Contractor. The Contractor may elect to perform additional testing to confirm the presence of lead containing materials at the site. However, all costs associated with additional testing and compliance with this Section shall be borne by the Contractor. The Contractor shall be required to comply with all aspects of OSHA 29 CFR 1926.62 Lead in Construction Regulations with regards to disturbance of these materials.
- D. OSHA 29 CFR 1926.62 regulates activities that disturb lead, including lead-containing paint and lead-based paint, by the use of manual techniques. Regulated activities include abrasive blasting, welding, cutting, burning on structures, manual scraping or sanding, and manual demolition of structures. The work practices described in this Section are intended to adequately protect the workers from exposure to lead containing paint (LCP), provide a safe workplace, and protect the environment.
- E. Materials and Equipment: The work of this Section, without limiting the generality thereof, includes the furnishing of labor, materials, tools, equipment, services and incidentals necessary to safely accomplish tasks that will disturb lead containing paint.

- F. Approvals and Inspections: Temporary facilities, work procedures, equipment, materials, services, and agreements must fully comply with EPA, OSHA, and NIOSH recommendations, standards and guidelines, as well as any other applicable federal, state, and local regulations. Where an overlap of these regulations and guidelines exists, the most stringent shall apply.
- G. Disposal: The Contractor shall dispose of all loose paint chips and scraped paint chip debris as Hazardous Waste in accordance with Part 3.6 of this Section.

1.4 DEFINITIONS

- A. Action Level: Action Level as defined by OSHA 29 CFR 1926.62 shall refer to employee exposure, without regard to the use of respirators, to an airborne concentration of lead of 30 micrograms per cubic meter of air (30 $\mu\text{g}/\text{m}^3$) calculated as an 8-hour time-weighted average (TWA).
- B. Competent Person: Competent Person shall refer to a person who is capable of identifying existing and predictable lead hazards in the surroundings or working conditions and who has authorization to take prompt corrective measures to eliminate them.
- C. HEPA Filter: HEPA Filter shall refer to a filter capable of filtering out monodisperse particles of 0.3 microns or greater diameter from a body of air at 99.97 percent efficiency or greater.
- D. Lead-Based Paint (LBP): LBP shall refer to paint found to contain lead in a concentration of 1.0 mg/cm^2 , 5,000 $\mu\text{g}/\text{g}$ (0.5%) by weight, or paint assumed to contain lead as indicated in this Section.
- E. Lead Containing Paint (LCP): LCP shall refer to paint found to contain lead in any concentration or paint assumed to contain lead as indicated in this Section.
- F. Permissible Exposure Limit (PEL): PEL shall refer to employee exposure, without regard to the use of respirators, to an airborne concentration of lead of 50 micrograms per cubic meter of air (50 $\mu\text{g}/\text{m}^3$) calculated as an 8 hour time-weighted average.

1.5 PERMITS AND INSPECTIONS

- A. Notifications/Approvals: The Contractor shall make, in proper and timely fashion, any necessary notifications to relevant Federal, State, and local authorities and shall obtain and comply with the provisions of all permits or applications required by the work specified, as well as make all required submittals required under those auspices. The Contractor shall indemnify the Owner, their representatives and agents from, and pay for claims resulting from failure to adhere to these provisions. The costs for permits, applications, and the like, are to be assumed by the Contractor.
- B. Fees, Permits and Licenses: The Contractor shall pay licensing fees, royalties, and other costs necessary for the use of any copyrighted or patented product, design, invention, or processing associated with the performance of the job specified in this Section. The Contractor shall be solely responsible for costs, damages or losses resulting from any infringement of these patent rights or copyrights. The Contractor shall hold the Owner, Architect and Consultant harmless from any costs, damages, and losses resulting from any infringement of these patent rights or copyrights. If the Specification requests the use of any product, design, invention, or process that requires a licensing fee or royalty fee for use in the performance of the job, the Contractor shall be responsible for the fee or royalty and shall disclose the existence of such rights.

Contractor shall be responsible for costs for licensing requirements and notification requirements and other fees related to the ability to perform the work in this Section. The Contractor shall be responsible for securing necessary permits for work under this Section, including removal, materials usage, or any other permits required to perform the specified work.

1.6 SUBMITTALS

- A. Pre-Construction Submittals: Prior to the commencement of the required work, the Contractor shall provide the Owner with copies of the following:
1. Copies of certifications, notifications and licenses (as applicable)
 2. Written Respirator and Hazard Communications Programs
 3. Written Lead Compliance Program in accordance with OSHA 29 CFR 1926.62
- B. Post-Construction Submittals: Final payment to the Contractor shall not be made unless the following items are submitted to the Owner.
1. Original Copy of Waste Disposal Manifests acknowledging disposal of hazardous and non-hazardous waste material from the project showing delivery date, quantity, and appropriate signature of landfill's authorized representative.
 2. Copy of Personal Air Sample Results

1.7 QUALITY CONTROL/ASSURANCE

- A. Training Requirements: Workers who will have the potential of lead exposure shall have proof of successfully completing a training course which covers the topics required by 29 CFR 1926.62. Contractors are also advised that training in other areas may be required and are responsible to ensure that all training requirements for appropriate trades and procedures are met.
- B. Specified Supervisor Qualifications: The Contractor shall specify an on-site Supervisor or Competent Person who is fully qualified in all aspects of safe work practices and procedures with lead containing materials, and have (or will have) completed a training course within the previous year prior to the commencement of lead related work. The lead training course will cover all topics required by 29 CFR 1926.62 as well as training in relevant federal, state and local regulatory requirements, procedures and standards, supervisory techniques, and proper disposal procedures.
- C. Site Specific Written Compliance Program: The program will be evaluated to ensure the elements required by 29 CFR 1926.62(e) (2) (ii) (A)-(I) are specific to the conditions at the job site.
- D. Respiratory Protection Program: The contractor must provide for review a written respiratory protection program in accordance with 29 CFR 1920.103 if respiratory protection is to be worn during this project.
- E. Fit Test Records: If respiratory protection is to be worn as part of this project, records of successful respirator fit testing performed by a qualified individual within the previous six months, for each employee to be used on this project with the employee's name and social security number with each record.
- F. Medical Surveillance: The Contractor shall provide biological monitoring to workers who have the potential of lead exposure. This monitoring shall be performed in accordance with 29 CFR 1926.62. If workers are expected to exceed the action level for more than 30 days in any consecutive 12 months the contractor shall institute a medical surveillance

program in accordance with 29 CFR 1926.62. Blood lead level sampling and analysis shall be conducted by a laboratory approved by OSHA and the New York State Department of Health Environmental Laboratory Approval Program (NYSDOH ELAP).

1.8 CODES AND STANDARDS

- A. Work shall conform to the standards set by applicable federal, state and local laws, regulations, ordinances, and guidelines in such form in which they exist at the time of the work on the contract and as may be required by subsequent regulations.
- B. In addition to any detailed requirements of the Specification, the Contractor shall at his own cost and expense comply with all laws, ordinances, rules and regulations of federal, state, regional and local authorities regarding handling and storing of lead waste material.
- C. Regulations by the above and other governing agencies in their most current version are applicable throughout this project. Where there is a conflict between this Specification and the cited federal, state or local regulations or guidelines, the more restrictive or stringent requirements shall prevail. This Section refers to many requirements found in these references, but in no way is it intended to cite or reiterate all provisions therein or elsewhere. It is the Contractor's responsibility to know, understand, and abide by all such regulations, guidelines and common practices.

PART 2.0 PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. The Contractor shall be responsible for providing all material and protective equipment required for performance of the work. The Contractor shall comply with all local, state and federal regulations pertaining to the selection and use of materials and equipment on this project. The Contractor shall provide a submittal on all materials and equipment to be used for review and approval by the Engineer.

PART 3 EXECUTION

3.1 WORKER PROTECTION

- A. Initial Determination: The Contractor shall determine, through personal exposure monitoring on the job site or through relevant documentation from other similar jobs, whether workers will be exposed to airborne lead at or above the OSHA Action Level and Permissible Exposure Limit. If exposures at or above the action level are documented, appropriate health and safety procedures identified herein shall be followed. If levels below the action level are documented, the Contractor shall exercise an appropriate level of care to ensure that exposures above the action level do not occur.

Whenever there is a change of equipment, process, control, personnel or a new task has been initiated that may result in additional employees being exposed to lead at or above the action level, or may result in employees already exposed at or above the action level being exposed above the PEL, the Contractor shall conduct additional monitoring.

- B. Biological Monitoring: Until a negative initial determination is achieved, any worker having the potential of lead exposure must have baseline blood level screenings determined by the whole blood lead method, utilizing Vena-Puncture technique. This test must be performed before workers re-enter a lead contaminated work area. A worker will be removed from the job if his blood lead level is 40 ug/dl or greater. The Contractor shall be responsible for medical surveillance and record keeping.

- C. Personal Hygiene Practices: Where exposures to airborne lead above the OSHA PEL occurs or may be expected to occur, the Contractor shall enforce and follow good personal hygiene practices. These practices shall be performed until personal exposure sampling indicates that exposures are below the PEL at which time the Contractor has the option to continue or discontinue the use of personal hygiene facilities. These practices shall include but not be limited to the following:
1. No eating, drinking, smoking or applying of cosmetics in the work area. The Contractor will provide a clean space, separated from the work area, for these activities.
 2. Workers must wash upon leaving the work area. The Contractor will provide wash facilities. This wash facility will consist of, at least, running potable water, towels, and a HEPA vacuum. Upon leaving the work area, each worker will remove and dispose of work suit, wash and dry face and hands, and vacuum clothes.
 3. Disposable clothing, such as TYVEK suits, and other personal protective equipment (PPE) must be donned prior to entering work area. A clean room will be provided for workers to put on suits and other personal protective equipment and to store their street clothes. Disposable suits shall be used once, and then properly discarded.
 4. A lavatory facility must be provided and located adjacent to the work area. The eating and drinking area, clean room, and the lavatory facility must be maintained in a clean and orderly fashion at all times. The Contractor will provide portable lavatories when needed and disinfect them daily.
 5. If air monitoring data gathered by the Contractor shows that employees' exposure to airborne lead exceeds 50 ug/m^3 , the following conditions apply:
 - a. Showers must be provided. Shower water must pass through at least a 5.0 micron filter before returning to the public waste system.
 - b. Workers must shower upon leaving work area.
 - c. Three-stage decontamination unit must be established consisting of an Equipment Room, Shower, and Clean Room in series.

3.2 WORK AREA SET UP

- A. Site Safety: The Contractor is responsible for all safety at the work site. This includes, but is not limited to, electrical safety, mechanical (tool) safety, fire safety, and personnel protection safety. Safety requirements are, for the most part, common sense and sound business practice; however, the Contractor is advised that federal, state, and local regulations exist which govern safety on the work site. Therefore, in addition to the following, the Contractor is responsible for adhering to the most stringent requirements in effect.
- B. Signage: Prior to the preparation for work which will disturb lead containing paint, the Contractor shall place warning signs immediately outside all entrances and exists to the area, warning that deleading work is being conducted in the vicinity. The signs shall be at least 20" x 14" and read:

WARNING:
LEAD WORK AREA
POISON
NO SMOKING, EATING OR DRINKING
ALLOWED IN THE WORK AREA

The signs shall be in bold lettering with lettering not smaller than two inches tall. Should personal exposure monitoring results indicate that exposures to lead are below the Action Level, then the signs will not be required.

- C. Access to Work Areas: It will be the Contractor's responsibility to allow only authorized personnel into the work area. Barrier tape shall be used to limit access to the exterior work area. Contractor shall maintain a bound log book, in which any person entering or leaving the lead work area must sign and enter the dates and times of entry and departure. Should personal exposure results indicate the exposures to lead are below the Action Level, then a log book will not be required. The Contractor or competent person will not allow anyone access to the work area unless they have successfully passed an approved training program, and have been fitted and wearing a properly fitted respirator.
- D. Dumpsters: All dumpsters used to store hazardous waste shall be DOT approved, solid enclosed containers, locked and secured at all times. The location shall be designated by the Owner.

3.3 WORK PROCEDURES

- A. General: These procedures detail generalities of component work procedures. Resulting bundles or "containers" of removed components and/or debris shall be carefully handled to reduce the potential of ripping, bursting or otherwise diminishing the integrity of the bundle or "container". Care must be taken so that leaded materials are neither burned, nor dusted, nor result in further exposure to workers, residents or observers. Paint chips shall be contained either in the HEPA vacuum or in approved six-mil polyethylene disposal bags.
- B. Specific: Component Attachment, Hanger Attachment
 - 1. Any construction work where an employee may be occupationally exposed to lead must comply with OSHA Regulations 29 CFR 1926.62, which includes safety training and education. Workers performing reconstruction work that may disturb surfaces containing lead are not required to be EPA trained and certified.
 - 2. All work is to be performed in accordance with Chapters 8 through 12, 14 and 15 of the HUD "Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing", dated June 1995.
 - 3. The work area shall be vacated prior to the start of any pre-cleaning and preparation of the work area.
 - 4. The work area shall be prepared in accordance with the requirements of Level 1 for an Interior Worksite, Table 8.1 of the HUD Guideline.
 - 5. Worker protection shall be provided in accordance with Chapter 9 of the HUD Guideline and OSHA Regulation 29 CFR 1926.62.

6. Waste generated from the attachment of components or hangers to structural I-beams shall be handled in accordance with the categories identified in Chapter 10 of the HUD Guideline.
7. Installation of the hangers or attachments and wall penetrations shall be performed in accordance with the following procedure. Drilling of pilot holes, drilling of anchor holes and installation of screws into lead painted surfaces will require the use of a HEPA-filtered vacuum, either attached to the drill, or manually held to pickup dust and debris generated during the attachment process. Alternate methods that may be considered include drilling or screwing through a wet sponge placed on the lead painted surface at the point of attachment or penetration. Sponges may not be reused and will be disposed as lead contaminated waste.
8. Cleaning of the work area shall be performed in compliance with Chapter 14 of the HUD Guidelines.
9. Clearance of the work area will include a visual inspection to determine the required work is completed and all lead-based paint hazards have been controlled and if there is visible settled dust, paint chips, or debris in, or in the vicinity of, the work area.
10. After the completion of the visual clearance, clearance wipe sampling will be performed. The work area will be maintained until receipt of results that are lower than the HUD Interim Clearance Standards.
11. Subsequent renovation work should be performed in a manner that will not disturb the remaining lead-based painted surfaces.

C. Specific: Removal of Window Units from Exterior

1. Any construction work where an employee may be occupationally exposed to lead must comply with OSHA Regulations 29 CFR 1926.62, which includes safety training and education. Workers performing reconstruction work that may disturb surfaces containing lead are not required to be EPA trained and certified.
2. All work is to be performed in accordance with Chapters 8 through 12, 14 and 15 of the HUD "Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing", dated June 1995.
3. The work area shall be vacated prior to the start of any pre-cleaning and preparation of the work area.
4. The work area shall be prepared in accordance with the requirements of Table 8.3 Window Treatment or Replacement Worksite Preparation, in Chapter 8 of the HUD Guideline. Window unit removal will be performed from the building exterior. Interior isolation barriers will include two layers of plastic sheeting on the work area side of a hardwall barrier.
5. Worker protection shall be provided in accordance with Chapter 9 of the HUD Guideline and OSHA Regulation 29 CFR 1926.62.
6. Waste generated from the removal of the window units shall be handled in accordance with the categories identified in Chapter 10 of the HUD Guideline.
7. Removal of the window units shall be performed in accordance with Chapter 12, Section II.

8. Paint stabilization of the metal lintel will be required prior to cleaning and clearance of the work area. Chapter 11, Section II includes the procedures for paint stabilization.
9. Cleaning of the work area shall be performed in compliance with Chapter 14 of the HUD Guidelines.
10. Clearance of the work area will include a visual inspection to determine the required work is completed and all lead-based paint hazards have been controlled and if there is visible settled dust, paint chips, or debris in, or in the vicinity of, the work area.
11. After the completion of the visual clearance, clearance wipe sampling will be performed. The work area will be maintained until receipt of results that are lower than the HUD Interim Clearance Standards.
12. Subsequent renovation work should be performed in a manner that will not disturb the remaining lead-based painted surfaces.

3.4 AIR SAMPLING - CONTRACTOR

- A. Personal Exposure Monitoring: The Contractor shall perform personal exposure sampling to monitor personal exposure levels to airborne lead. Samples shall be taken for the duration of the work shift or for eight hours, whichever is greater. Personal samples need not be taken every day after the first day if working conditions remain unchanged, but must be taken every time there is a change in the removal operation, either in terms of the personnel, location or the type of work. Sampling will be used to determine eight-hour Time-Weighted-Averages (TWA). The Contractor is responsible for personal sampling as outlined in OSHA Standard 29 CFR 1926.62.
- B. Frequency: Air monitoring frequency will be established in accordance with the requirements set forth in 29 CFR 1926.62.

3.5 CLEAN-UP PROCEDURES

- A. When work is in progress, the work site shall be cleaned at the end of each day's activities. The building shall be secured to prevent entry by any person after termination of the work day. Durable equipment, such as power and hand tools, generators, and vehicles shall be cleaned weekly.
- B. Equipment shall be cleaned by HEPA vacuuming. Surfaces shall be maintained as free as practicable of accumulations of lead containing dust and debris. Clean up of lead containing dust and debris shall be accomplished with HEPA vacuum or wet methods. The debris shall be misted with water with an airless type sprayer and collected with a mop or broom.
- C. Equipment shall be cleaned prior to removal from the work area. Alternatively, when equipment is being transferred from one work area directly to another work area on site, the equipment may be wrapped with polyethylene sheeting and sealed air tight prior to transfer.

3.6 DISPOSAL OF WASTE MATERIAL

- A. All materials, whether hazardous or non-hazardous, shall be disposed of in accordance with all laws, and the provisions of this Section and any or all other applicable federal,

state, county or local regulations and guidelines. It shall be the sole responsibility of the Contractor to assure compliance with all laws and regulations relating to disposal.

- B. The Contractor shall contact the regional EPA, State and local authorities to determine disposal requirements for construction and demolition debris that contains lead containing paint coated debris. The requirements of the Resource Conservation and Recovery Act (RARA) shall be complied with as well as applicable state solid waste requirements.
- C. The following materials are considered Hazardous Waste (Lead) and shall be disposed of as such:
 - 1. Paint chips and paint chip debris
- D. Storage Requirements: Any item determined to be hazardous waste shall be kept in a secured area or lockable container that is inaccessible to all persons other than abatement personnel. All hazardous waste shall be labeled "*Hazardous Waste*", and include the date that the Contractor began to collect waste in that container. Hazardous and non-hazardous waste shall be kept in totally and completely separate containers.
- E. Disposal Packaging: Any hazardous or potentially hazardous waste shall be stored in US Department of Transportation (DOT) approved containers and properly labeled and stored in a secure manner.
- F. Waste Transportation: The Contractor shall employ a New York State DEC, US DOT, and EPA certified Hazardous Waste Transporter for the disposal of hazardous wastes.
- G. Waste Manifests: The Contractor shall be responsible for the preparation of any manifests necessary for the disposal of project-related hazardous wastes. The Engineer will only sign a manifest or manifests for project-related hazardous wastes; defined as those wastes present at the site at project initiation. Disposal of any hazardous wastes generated by the Contractor shall be the sole responsibility of the Contractor.
- H. All costs associated with disposal of hazardous and non-hazardous waste on this project shall be included in the Contractors Base Bid. The cost for disposal of such materials shall include all fees, permits, land-ban requirements, waste reduction, labor, material, profit, overhead, waste transfer, analytical fees, dumpster rental/storage fees and all other incidental costs associated with waste disposal. Also included shall be the costs for all drums and transport, etc.
- I. The Contractor shall supply all manifests for hazardous waste or Bills of Lading for disposal of non-hazardous waste to the Owner. No payment for disposal will be made until all documentation is received and approved by the Owner and Engineer.

END OF SECTION 02090

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:

- 1. Demolition and removal of selected elements within first and second floor work area as defined on floor plans.

- B. Related Requirements:

- 1. Section 011000 "Summary" for restrictions on the use of the premises.

1.3 DEFINITIONS

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

1.4 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor for offsite disposal.
- B. Historic items, relics, antiques, and similar objects and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
 - 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.
 - 2. Owner has designated specific areas for items that contractor shall remove and store. Contractor shall install temporary protection of exposed wood floor, then move items to designated areas.

1.5 PREINSTALLATION MEETINGS

- A. Pre-demolition Conference: Conduct conference at Project site.
 - 1. Inspect and discuss condition of construction to be selectively demolished.
 - 2. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 - 3. Review areas where existing construction is to remain and requires protection.

1.6 INFORMATIONAL SUBMITTALS

- A. Proposed Protection Measures: Submit report or statement that indicates the measures proposed for protecting original masonry walls and wood structure and per 02 Division Sections on hazardous material abatement, for environmental protection & dust control. Indicate proposed locations and construction of barriers.
- B. Schedule of Selective Demolition Activities: Indicate the following:
 - 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity.
- C. Pre-demolition Photographs: Submit before Work begins.

1.7 CLOSEOUT SUBMITTALS

- A. Inventory: Submit a list of items that have been removed and salvaged.
- B. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.8 FIELD CONDITIONS

- A. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- B. Hazardous Materials: Hazardous materials are present in buildings and structures to be selectively demolished. A report on the presence of hazardous materials is contained in this Project Manual. Examine report to become aware of locations where hazardous materials are present.
 - 1. Hazardous material remediation is specified elsewhere in these Contract Documents.
- C. Historic Areas: Demolition and hauling equipment and other materials shall be of sizes that clear surfaces within historic spaces, areas, rooms, and openings, including temporary protection to avoid damage to those surfaces.
- D. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 - 1. Maintain fire-protection and detection facilities in service during selective demolition operations.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

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

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.
- D. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs and submit electronic copy to architect prior to commencement of construction.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Utilities in building are active; contractor shall field verify each encountered utility prior to abatement/removal and shut off at basement level, allowing access to water and power at basement level.
 - 1. Disconnect, demolish, and remove plumbing fixtures, equipment, cabinetry and components indicated to be removed.
 - a. Piping to Be Removed: Remove portion of domestic water supply piping within cabinetry to be removed and cap or plug remaining piping with same or compatible piping material.
 - b. Equipment to Be Removed: Disconnect and cap services and remove equipment.
 - c. All wires within walls to be removed shall be cut & capped for safety and fire prevention.

3.3 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Comply with requirements for access and protection specified in Section 015000 "Temporary Facilities and Controls."
- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
 - 2. Provide temporary weather protection, during removals.
 - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
 - 4. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Section 015000 "Temporary Facilities and Controls."
- C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

1. Strengthen or add new supports when required during progress of selective demolition.

3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
1. Proceed with selective demolition systematically.
 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 3. Do not use cutting torches.
 4. Maintain adequate ventilation during removals.
 5. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 6. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 7. Dispose of demolished items and materials promptly.
- B. Work in Historic Areas: Selective demolition may be performed only in areas of the Project that are not designated as historic. In historic spaces, areas, and rooms or on historic surfaces, the terms "demolish" or "remove" shall mean historic "removal" or "dismantling" and protection of adjacent surfaces is implied.
- C. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition.

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Gypsum Wall Board: Remove in small sections. Cut at junctures with construction to remain, using power-driven saw, then remove wall board on studs/joists, leaving studs/joists to remain.
- B. Hazardous Materials: See Sections 02080, 02081 & 02090 for additional information.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
1. Do not allow demolished materials to accumulate on-site.
 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.7 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

3.8 SELECTIVE DEMOLITION SCHEDULE

- A. Existing Items to Be Removed: See schedules on SR0.1, SR0.2 & H0.1

END OF SECTION 024119