

TOWN OF GLASTONBURY

INVITATION TO BID

<u>BID #</u>	<u>ITEM</u>	<u>DATE & TIME REQUIRED</u>
GL-2012-16	Academy School D-Wing Demolition	March 21, 2011 at 11:00 a.m

The Town of Glastonbury is currently seeking bids for the demolition of a portion of the Academy School Building known as D-wing, which is part of the Town Hall complex located at 2155 Main Street. The building to be demolished is a three-story masonry building with a footprint of approximately 8,000 square feet.

Prevailing Wages: The Contractor must comply with Section 31-53 of the Connecticut General Statutes as amended, including annual adjustments in prevailing wages.

Bid Forms, Plans, and Specifications may be obtained from the Town's website at www.glastonbury-ct.gov at no cost or at the Office of the Purchasing Agent, Town Hall, 2155 Main Street, Glastonbury, Connecticut 06033, (second level) for a non-refundable fee of \$25.

A mandatory pre-bid meeting and site walk-through will be held at Academy School D-wing on Monday, March 12th at 9:00 AM. All attendees must bring flashlights and have appropriate footwear.

The Town reserves the right to waive informalities or reject any part of, or the entire bid, when said action is deemed to be in the best interests of the Town. All Sealed Bids must be submitted to the Office of the Purchasing Agent no later than the time and date indicated. All bids will be publicly opened and read.

The Town of Glastonbury is an Affirmative Action/Equal Opportunity Employer. Minority / Women / Disadvantaged Business Enterprises are encouraged to bid.

Mary F. Visone
Purchasing Agent

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**ACADEMY SCHOOL D-WING DEMOLITION
INFORMATION FOR BIDDERS**

BID #GL-2012-16

1. Sealed bids **(one original and one copy)** on the attached Bid Forms will be received at the Office of the Purchasing Agent, Town Hall, 2155 Main Street, Glastonbury, Connecticut 06033 (second level). At the designated time of opening, they will be publicly opened, read, recorded and placed on file.
2. Whenever it is deemed to be in the best interest of the Town, the Town Manager, Purchasing Agent or designated representative shall waive informalities in any and all bids. The right is reserved to reject any bid, or any part of any bid, when such action is deemed to be in the best interest of the Town of Glastonbury.
3. Bidders shall submit a Bid on a lump sum basis for the items included in the Base Bid, and shall include a separate price of each alternate described in the Bidding Documents as provided for in the Bid Proposal. The price for each alternate will be the amount added to or deleted from the Base Bid if the Owner selects the alternate. The basis of award will be based upon the sum of the Base Bid plus the sum of any alternates accepted by the Owner. Bidders are advised that the alternate(s) listed herein are contingent upon conditions determined during demolition; the owner reserves the right to increase/decrease the awarded contract amount of any accepted alternate(s) as required during the contract period for this project. Unit prices for various asbestos removal items are included in the bid for any changes in asbestos removal quantities that may be identified during the course of the project as described in Section 15.03 of the Special Conditions; these unit prices will not be used as part of the basis of award.
4. Bids will be carefully evaluated as to conformance with stated specifications.
5. The envelope enclosing your bid should be clearly marked by bid number, time of bid opening, and date.
6. If a bid involves any exception from stated specifications, they must be clearly noted as exceptions, underlined, and attached to the bid.
7. The Bid Documents contain the provisions required for the requested item. Information obtained from an officer, agent, or employee of the Town or any other person shall not affect the risks or obligations assumed by the Bidder or relieve him/her from fulfilling any of the conditions of the bid.
8. Each Bidder is held responsible for the examination and/or to have acquainted themselves with any conditions at the job site which would affect their work before submitting a bid. Failure to meet this criteria shall not relieve the Bidder of the responsibility of completing the bid without extra cost to the Town of Glastonbury.
9. Any bid may be withdrawn prior to the above-scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No Bidder may withdraw a bid within sixty (60) days after the actual date of the opening thereof. Should there be reasons why a bid cannot be awarded within the specified period, the time may be extended by mutual agreement between the Town and the Bidder.
10. Each bid must be accompanied by a bid bond payable to the Town for ten percent (10%) of the total amount of the bid. The bid bond of the successful Bidder will be retained until the payment bond and performance bond have been executed and approved, after which it will be returned. A certified check may be used in lieu of a bid bond. The Town of Glastonbury will not be liable for the accrual of any interest on any certified check submitted. Cashier's checks will not be accepted.
11. A 100% Performance and Payment bond are required of the successful bidder. This bond shall cover all aspects of the specification and shall be delivered to the Purchasing Agent prior to the

issuance of a purchase order. The Performance and Payment Bond will be returned upon the delivery and acceptance of the bid items.

12. The Bidder agrees and warrants that in the submission of this sealed Bid, they will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religion, national origin, sex, or physical disability including, but not limited to blindness, unless it is shown by such Bidder that such disability prevents performance of that which must be done to successfully fulfill the terms of this sealed Bid or in any manner which is prohibited by the laws of the United States or the State of Connecticut: and further agrees to provide the Human Relations Commission with such information requested by the Commission concerning the employment practices and procedures of the Bidder. An Affirmative Action Statement will be required by the successful Bidder.
13. Bidder agrees to comply with all of the latest Federal and State Safety Standards and Regulations and certifies that all work required in this bid will conform to and comply with said standards and regulations. Bidder further agrees to indemnify and hold harmless the Town for all damages assessed against the Town as a result of Bidder's failure to comply with said standards and/or regulations.
14. All correspondence regarding any purchase made by the Town of Glastonbury shall reference the Town's purchase order number. Each shipping container shall clearly indicate both Town purchase order number and item number.
15. Bidder is required to review the Town of Glastonbury Code of Ethics adopted July 8, 2003 and effective August 1, 2003. Bidder shall acknowledge that they have reviewed the document in the area provided on the bid/proposal response page (BP). The selected Bidder will also be required to complete and sign an Acknowledgement Form prior to award. The Code of Ethics and the Consultant Acknowledgement Form can be accessed at the Town of Glastonbury website at www.glastonbury-ct.gov. Upon entering the website click on **General Information**, then **Bids and Quotes** which will bring you to the links for the **Code of Ethics** and the **Consultant Acknowledgement Form**. If the Bidder does not have access to the internet, a copy of these documents can be obtained through the Purchasing Department at the address listed within this bid/proposal.
16. **Non-Resident Contractors:**

The Town is required to report names of non-resident (out-of-State) contractors to the State of Connecticut, Department of Revenue Services (DRS) to ensure that Employment Taxes and other applicable taxes are being paid by Contractors. **Upon award, all non-resident contractors must furnish a five percent (5%) sales tax guarantee bond (State Form AU-766) or a cash bond for five percent (5%) of the total contract price (State Form AU-72) to DRS even though this project is exempt from most sales and use taxes.**

See State Notice to Non-Resident Contractors SN 2005 (12). If the above bond is not provided, the Town is required to withhold five percent (5%) from the contractor's payments and forward it to the State DRS.

The contractor must promptly furnish to the Town a copy of the **Certificate of Compliance** issued by the State DRS.
17. Bidder shall include on a sheet(s) attached to its proposal a complete disclosure of all past and pending mediation, arbitration and litigation cases that the bidder or its principals (regardless of their place of employment) have been involved in for the most recent five years. Please include a statement of the issues in dispute and their resolution. Acceptability of Bidder based upon this disclosure shall lie solely with the Town.

18. Bidder or its principals, regardless of their place of employment, shall not have been convicted of, nor entered any plea of guilty, or nolo contendere, or otherwise have been found civilly liable or criminally responsible for any criminal offense or civil action. Bidder shall not be in violation of any State or local ethics standards or other offenses arising out of the submission of bids or proposals, or performance of work on public works projects or contracts.
19. It is the responsibility of the bidder to check the Town's website before submitting bid for addendums posted prior to bid opening.

.20 **Prevailing Wage Rates:**

Respondents shall comply with State Statutes concerning Employment and Labor Practices, if applicable, and Section 31-53 of the Connecticut General Statutes, as amended (Prevailing Wages). Wage Rate Determination for this project from the State of Connecticut is included in the Bid Documents. Certified payrolls for site labor shall be submitted weekly to the Town's Representative or his designee on the correct State of Connecticut form (see RFP). The Town reserves the right to, without prior notice, audit payroll checks given to workers on site in order to ascertain that wages and fringe benefits are being paid as required by the State of Connecticut. Please make special note of the State requirement to adjust wage and fringe benefit rates on each July 1st following the original published rates.

NOTE that respondent is to include in its proposal all costs required by such annual increases in the PREVAILING RATES. NO escalation clauses are to be included in the respondent's proposal and NO escalation clauses will be in the Contract Agreement. Respondent is to anticipate any future increases and include these costs in the proposal response.

Contractor's invoices will not be paid if certified payrolls are incomplete, incorrect or not received in a timely manner.

All Apprentices must be registered with the State of Connecticut and their number shall not exceed the number allowed by law. Otherwise, all workers must be paid at least the Journeyman rate listed including benefits.

OSHA SAFETY AND HEALTH CERTIFICATION

Effective July 1, 2009: Any Mechanic, Laborer, or Worker, who performs work in a classification listed on the prevailing wage rate schedule on any public works project covered under C.G.S. Section 31-53, both on site and on or in the public building, must have completed a federal OSHA Safety and Health course within the last 5 years.

21. Each bid shall also include a description of three (3) projects completed by the bidder with references to demonstrate successful experience with similar demolition projects in close proximity to other occupied buildings.

IMPORTANT: Failure to comply with general rules may result in disqualification of the Bidder.

NOTE: Any technical questions regarding this bid shall be made in writing (email acceptable) and directed to Daniel A. Pennington, Town Engineer/ Manager of Physical Services, 2155 Main Street, PO Box 6523, Glastonbury, CT 06033; daniel.pennington@glastonbury-ct.gov. Telephone (860) 652-7743 between the hours of 8:00 a.m. – 4:30 p.m. For administrative questions concerning this bid/proposal, please contact Mary F. Visone, Purchasing Agent, at (860) 652-7588. All questions, answers, and/or addenda, as

**ACADEMY SCHOOL D-WING DEMOLITION
INFORMATION FOR BIDDERS**

BID #GL-2012-16

applicable will be posted on the Town's website at www.glastonbury-ct.gov. (Upon entering the website click on Bids & RFP's). The request must be received at least five (5) business days prior to the advertised response deadline. **It is the respondent's responsibility to check the website for addenda prior to submission of any bid/proposal.**

01.00 WORKMANSHIP, MATERIALS AND EMPLOYEES

01.01 Wherever in this contract the word "Engineer" is used, it shall be understood as referring to the Town Engineer/Manager of Physical Services of the Town of Glastonbury acting personally or through any assistants duly authorized.

01.02 The entire work described herein shall be completed in accordance with the plans and specifications to the full intent and meaning of the same. Unless otherwise specified, all materials incorporated in the permanent work shall be new, and both workmanship and material shall be of good quality. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

01.03 The wording "furnish", "install", "construct", "furnish and install", or any similar terms, unless specifically noted to the contrary, shall include all labor, materials, water, tools, equipment, light, power, transportation, and any other services required for the completion of the work.

01.04 The Contractor shall at all times enforce strict discipline and good order among his employees, and shall seek to avoid employing on the work any unfit person or anyone not skilled in the work assigned to him.

02.00 SUPERINTENDENT

02.01 The Contractor shall keep on the work during its progress, in the absence of the Contractor, a competent Superintendent. The Superintendent shall be acceptable to the Engineer and shall fully represent the Contractor. All directions given to the Superintendent shall be binding as if given to the Contractor.

03.00 PRECONSTRUCTION MEETING

03.01 A Preconstruction Meeting will be held with the Engineer, Contractor, and any private utility company prior to commencing any work. The Engineer shall arrange the meeting based on a mutually convenient time.

04.00 PERMITS

04.01 Other than local permits, all permits, licenses, and fees required for the performance of the Contract work shall be secured and paid for by the Contractor.

05.00 PROPERTY ACCESS

05.01 The Contractor shall take all proper precautions to protect from injury or unnecessary interference, and provide proper means of access to abutting property where the existing access is cut off by the Contractor.

05.02 The Contractor shall take all proper precautions to protect persons from injury or unnecessary inconvenience and leave an unobstructed way along the public and private places for travelers, vehicles, and access to hydrants.

05.03 The Contractor shall make arrangements with the adjacent property owners for such trespass as he may reasonably anticipate in the performance of the work. All such arrangements shall be reported, in writing, to the Engineer.

06.00 PROTECTION OF THE PUBLIC AND OF WORK AND PROPERTY

06.01 The Contractor shall continuously maintain adequate protection of all work from damage, and shall take all reasonable precautions to protect the Town from injury or loss arising in connection with the Contract.

06.02 The Contractor shall adequately protect adjacent private and public property as provided by law and the Contract Documents.

06.03 The Contractor shall make good any damage, injury, or loss of his work and to the property of the Town resulting from lack of reasonable protective precautions.

07.00 EXISTING IMPROVEMENTS

07.01 The Contractor shall conduct his work so as to minimize damage to existing improvements. Except where specifically stated otherwise in the specifications, drawings, or as directed by the Engineer, it will be the responsibility of the Contractor to restore to their original condition, as near as practical, all improvements on public or private property. This shall include:

- a. Property within and adjacent to the side of installation such as shrubs, walks, driveways, fences, etc.
- b. Utility mains, ducts, poles, and services. The Contractor is hereby notified that utilities, if/where shown on the plans, are at approximate locations. These locations are subject to possible errors in the source of information and errors in transcription. The Contractor shall make certain of the exact location of all mains, ducts, poles, and services prior to excavation.

08.00 SEPARATE CONTRACTS

08.01 The Engineer reserves the right to let other contracts in connection with this work. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate his work with theirs. Wherever work being done by the Town of Glastonbury forces or by other contractors is contiguous to work covered by this Contract, the respective rights of the various interests involved shall be established by the Engineer to secure the completion of the various portions of the work.

09.00 INSPECTION OF WORK

09.01 The Town shall provide sufficient personnel for the inspection of the work.

09.02 The Engineer shall at all times have access to the work whenever it is in preparation or progress, and the Contractor shall provide proper facilities for such access and for inspection.

09.03 If the specifications or the Engineer's instructions require any work to be specially tested or approved, the Contractor shall give the Engineer timely notice of its readiness for inspection and, if the inspection is by another authority other than the Engineer, of the date fixed for such inspection. Inspections by the Engineer shall be made promptly. If any work should be covered up without approval or consent of the Engineer, it must, if required by the Engineer, be uncovered for examination and properly restored at the Contractor's expense.

09.04 Reinspection of any work may be ordered by the Engineer. If such work is found to be in accordance with the Contract Documents, the Town shall pay the cost of reinspection and replacement. If such work is not in accordance with the Contract Documents, the Contractor shall pay such cost.

10.00 RIGHT TO INCREASE OR DECREASE WORK

10.01 The Town shall have the right to increase or decrease the amount of work herein specified as may be required.

11.00 RIGHT OF ENGINEER TO STOP WORK FOR WEATHER CONDITIONS

11.01 Should the work, in the opinion of the Engineer, be in danger by reason of inclemency of weather, or could not be finished in time to prevent such danger, the Contractor shall cease operations upon order of the Engineer, and shall not resume them until ordered to do so by the Engineer when the weather conditions are favorable. The Contractor shall, upon such orders, discontinue work, remove all materials or appliances for or in use upon the work, and place the streets in proper condition for use by the public during the time the work is suspended as herein provided, without cost to the Town.

12.00 CONTRACTOR TO BE RESPONSIBLE FOR IMPERFECT WORK OR MATERIALS

12.01 Any faithful work or imperfect material that may be discovered before the acceptance and the payment of the work shall be corrected upon the order of the Engineer. The acceptance and payment of the work does not in any manner relieve the Contractor of his obligation to construct work in the proper manner and the use of materials herein specified.

13.00 TOWN MAY NOTIFY CONTRACTOR IF WORK IS NOT CARRIED ON SATISFACTORILY

13.01 If, in the opinion of the Engineer, the Contractor is not proceeding with the work at a sufficient rate of progress so as to finish in the time specified, or has abandoned said work, or is not complying with the terms and stipulations or the Contract and specifications, the Engineer may serve notice on the Contractor to adopt such methods as will ensure the completion of the work in the time specified.

13.02 If, within five days after the Engineer has notified the Contractor that his work is not being carried on satisfactorily as before mentioned, the Engineer shall have the right to annul the Contract and manage the work under the direction of the Engineer, or re-let, for the very best interest of the Town as a new contract, the work under said new Contract shall be considered the responsibility of the defaulting Contractor.

13.03 Additional costs incurred over and above the original Contract shall be borne by the Performance Bond.

14.00 DEDUCTIONS FOR UNCORRECTED WORK

14.01 If the Engineer deems it inexpedient to correct work that has been damaged or that was not done in accordance with the Contract, an equitable deduction from the Contract price shall be made therefor.

14.02 The Contractor shall promptly remove from the premises all materials condemned by the Engineer as failing to meet Contract requirements, whether incorporated in the work or not, and the Contractor shall promptly replace and re-execute his own work in accordance with the Contract and without expense to the Town, and shall bear the expense of making good all work by other contractors destroyed or damaged by such removal or replacement.

14.03 If the Contractor does not remove such condemned work and materials as promptly as possible after written notice, the Engineer may remove them and store the materials at the expense of the Contractor.

15.00 CLEANING UP

15.01 The Contractor must remove all debris of every description as the work progresses and leave the surroundings in a neat and orderly condition to the satisfaction of the Engineer.

15.02 Upon completion, and before acceptance and final payment, the Contractor shall remove from the site all equipment, forms, surplus material, rubbish and miscellaneous debris and leave the site in a neat and presentable condition.

16.00 ROYALTIES AND PATENTS

16.01 The Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall save the Town of Glastonbury harmless from loss on account thereof, except that the Town of Glastonbury shall be responsible for all such loss when a particular manufacturer, product, or process is specified by the Town of Glastonbury.

01.00 NOTICE TO CONTRACTOR

01.01 Intent of Contract: The intent of the Contract is to prescribe a complete work or improvement which the Contractor undertakes to do, in full compliance with the specifications, plans, special provisions, proposal and Contract. The contractor shall perform all work in close conformity with the plans or as modified by written orders, including the furnishing of all materials, supplies, transportation, labor, and all other things necessary to the satisfactory prosecution and completion of the project.

The portion of the building to be demolished is part of the former Academy School Building located within the Town Hall complex on property of the Town of Glastonbury located at 2155 Main Street. The Contractor shall exercise every care in every phase of the work to insure the safety and well being of persons and property.

02.00 COMMUNICATIONS

02.01 All notices, demands, requests, instructions, approvals, proposals, and claims must be in writing.

02.02 Any notice to, or demand upon, the Contractor shall be sufficiently given if delivered at the office of the Contractor stated on the signature page of the Agreement (or at such other office as the Contractor may, from time to time, designate) in a sealed, postage-prepaid envelope or delivered with charges prepaid to any telegraph company for transmission, in each case addressed to such office.

02.03 All papers required to be delivered to the Town shall, unless otherwise specified in writing to the Contractor, be delivered to the Town Engineer/Manager of Physical Services, 2155 Main Street, Glastonbury, CT 06033, and any notice to, or demand upon, the Town shall be delivered at the above address in a sealed, postage-prepaid envelope or delivered with charges prepaid to any telegraph company for transmission, in each case addressed to such office or to such other representatives of the Town, or to such other address as the Town may subsequently specify in writing to the Contractor for such purpose.

02.04 Any such notice shall be deemed to have been given as of the time of actual delivery or, in case of mailing, when the same should have been received in due course of post or, in the case of telegrams, at the time of actual receipt, as the case may be.

03.00 INSURANCE

03.01 The Contractor shall, at its own expense and cost, obtain and keep in force during the entire duration of the Project or Work the following insurance coverage covering the Contractor and all of its agents, employees and sub-contractors and other providers of services and shall name the **Town its employees and agents as an Additional Insured** on a primary and non-contributory basis to the Bidders Commercial General Liability and Automobile Liability policies. **These requirements shall be clearly stated in the remarks section on the Contractors Certificate of Insurance.** Insurance shall be written with Carriers approved in the State of Connecticut and with a minimum Best's Rating of A-. In addition, all Carriers are subject to approval by the Town. Minimum Limits and requirements are stated below:

a. Worker's Compensation Insurance:

- Statutory Coverage

- Employer's Liability
- \$100,000 each accident/\$500,000 disease-policy limit/\$100,000 disease each employee

b. Commercial General Liability:

- Including Premises and Operations, Products and Completed Operations, Personal and Advertising Injury, Contractual Liability and Independent Contractors
- Limits of Liability for Bodily Injury and Property Damage
Each Occurrence: \$1,000,000
Aggregate: \$2,000,000
(The Aggregate Limit shall apply separately to each job.)
- A Waiver of Subrogation shall be provided.

c. Automobile Insurance:

- Including all owned, hired, borrowed, and non-owned vehicles
- Limit of Liability for Bodily Injury and Property Damage
Per Accident: \$1,000,000

d. Asbestos General Liability Insurance:

- Limit of Liability of \$1,000,000

03.02 The Bidder shall direct its Insurer to provide a Certificate of Insurance to the Town before any work is performed. The Contractor shall be responsible to notify the Town 30 days in advance with written notice of cancellation or non-renewal. The Certificate shall evidence all required coverage including the Additional Insured and Waiver of Subrogation. The Bidder shall provide the Town copies of any such insurance policies upon request.

03.02 INDEMNIFICATION: To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Town and the Board of Education and its consultants, agents, and employees from and against all claims, damages, losses and expenses, direct, indirect or consequential (including but not limited to fees and charges of engineers, attorneys and other professionals and court and arbitration costs) arising out of or resulting from the performance of the Contractor's work, provided that such claim, damage, loss or expense is caused in whole or in part by any negligent act or omission by the Contractor, or breach of its obligations herein or by any person or organization directly or indirectly employed or engaged by the Contractor to perform or furnish either of the services, or anyone for whose acts the Contractor may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

04.00 WORK BY OTHERS

04.01 Private utilities, contractors, developers or other parties may be expected to be working within the Contract area during this Contract. It shall be the responsibility of the Contractor to coordinate his work with the work being done by others in order that the construction shall proceed in an efficient and logical manner. The Contractor shall have

no claim or claims whatever against the Town, the Engineer, or other parties due to delays or other reasons caused by the work by others or his failure to coordinate such work.

05.00 CONTRACTOR'S WORK AND STORAGE AREA

05.01 The Contractor shall contact the Town to determine if any specific locations will be designated, or gain its approval prior to using any area for storage of equipment, materials and trailers during the period of this Contract. The Contractor shall confine his work/storage area to the limits as designated or approved and shall be responsible for the security of the work/storage area. Upon completion of the Contract, the Contractor shall remove all equipment and materials, except as otherwise specified, and restore the site to its original condition as approved by the Engineer and at not cost to the Town.

06.00 DISPOSAL AREA

06.01 The Tryon Street Bulky Waste Facility will be available to the Contractor, at no charge, for disposal of materials that are accepted at that facility. Acceptable materials include brush, stumps, demolition materials, and excess excavated earth materials. Unacceptable materials are hazardous wastes such as pesticides, oil based paints and thinners, or other wastes as designated by the State Department of Environmental Protection. **No materials containing lead-based paint, of any level, shall be dumped at the Tryon Street facility.** Demolition material cannot contain asbestos, lead, or any other hazardous materials. The Contractor is required to obtain a disposal area for all other unsuitable or surplus materials at no cost to the Town.

07.00 DUST CONTROL

07.01 The Contractor is hereby notified that the buildings, grounds, parking area, and athletic fields surrounding the project area are very actively used, and therefore control of dust will be a critical component of the successful completion of this work. During the progress of the work, the Contractor shall conduct his operations and maintain the area of his activities so as to completely control the creation and dispersion of visible dust from the project area during demolition activities. The Contractor shall provide appropriate watering apparatus or other methods as deemed necessary to control dust from the work area. This work shall be considered part of the overall project scope and shall be completed by the Contractor without additional compensation.

08.00 MAINTENANCE / GUARANTEE PERIOD

08.01 The Contractor shall be held responsible to the Town for maintenance for a minimum of one-year following completion of all work under this Contract with respect to defects, settlements, etc.

9.00 PROTECTION OF EXISTING UTILITIES

9.01 Before starting any excavation, the Contractor shall submit to the Engineer plans or details showing the proposed method the Contractor will use to support and protect all existing utilities during construction. The furnishing of such plans and details shall not serve to relieve the Contractor of any responsibility for the proper conduct of the work.

9.02 There will be no extra payment for submitting plans or details for supporting and protecting all existing utilities during construction.

10.00 TIME FOR COMPLETION/NOTICE TO PROCEED

10.01 Within ten (10) calendar days after the date of the Notice of Award, the Contractor must provide the appropriate bond and insurance certificates to the Town Purchasing Agent and must be issued a Purchase Order for the Project prior to initiating any work.

10.02 The work under this Contract shall commence within fourteen (14) calendar days of the Notice to Proceed / Purchase Order. After the work has begun, it shall continue in an orderly fashion such that all contract work is completed within sixty (60) calendar days from the date of commencement.

11.00 ALLOWABLE HOURS OF OPERATION

Allowable hours of work shall be 7:00 a.m. to sunset, Monday through Saturday. No work shall be performed on Sundays or Holidays unless specifically authorized by the Town.

12.00 LIQUIDATED DAMAGES

12.01 As actual damages for any delay in completion of the work that the Contractor is required to perform under this Contract are impossible to determine, the Contractor and the Sureties shall be liable for and shall pay to the Town the sum of \$250.00 as fixed, agreed and liquidated damages for each calendar day of delay from the above-stipulated completion, or completion as modified in writing by both parties, until such work is satisfactorily completed and accepted.

13.00 SCHEDULE OF DRAWINGS

The Contractor is notified that the plan sheets entitled "Proposed Demolition Plan for Academy School D-wing Building Located at 2155/2143 Main Street, Sheet 1 of 4" prepared by the Town of Glastonbury Engineering Division, and "Main Level Enlarged Demo Floor Plan, Sheet D 1.0", "Sections and Details, Sheet D 2.0", and "Main Level Structural Demo Plan, Sheet SD 1.0" prepared by Moser Pilon Nelson Architects, and are hereby incorporated into the Contract.

14.00 EXTRA WORK AND RETAINAGE

14.01 Extra and cost plus work shall be governed by Article 1.04.05 and Article 1.09.04 of the Form 816.

14.02 Retainage shall be governed by Article 1.09.06 of the Form 816, except that the retainage amount shall be equal to five (5) percent.

15.00 MEASUREMENT AND PAYMENT

- 15.01 All direct, indirect, or incidental costs of work and/or services required by these specifications shall be included in the lump sum price for the base bid as listed in the bid proposal form, which shall include all work described by these specifications under Section 003.0 Building Demolition, Section 004.0 Asbestos Abatement, and Section 005.0 Special Procedures for Handling Lead Paint, including all General and Special conditions, all work shown on the construction plans, as well as all related and incidental work reasonable inferred from specifications and as necessary for a complete project.
- 15.02 Add alternates described in the bid proposal form for Additional Brick Salvage and Removal and Disposal of 5,000 Gallon Fuel-Oil Tank will be paid for under the separate lump sum items provided in the bid proposal form if these alternates are accepted by the Town.
- 15.03 Unit costs for various asbestos abatement tasks have also been included in the bid proposal form. These unit prices will be used to add or deduct from the contract as required to address any discrepancy greater than 10% between the actual quantities of ACM removed as compared to the quantity of material that was identified in the asbestos abatement summary table. Discrepancies of less than or equal to 10% will be considered to be included in the lump sum price for asbestos removal contained in the bid proposal. Before any ACM are removed, the contractor and the building owner's representative shall agree on actual quantities of materials in the work area. Contractor shall submit for approval the actual agreed upon quantities before beginning the work.

16.00 HAZARDOUS MATERIALS SURVEY REPORT

A report entitled "Inspection Report for Hazardous Building Materials Former Academy School (D-Wing) 2153 Main Street Glastonbury Connecticut" prepared by Smith & Wessel Associates, Inc. is included as Attachment B to these specifications. Bidders are hereby alerted to the "Exclusions" section on Page 5 of this report.

17.00 LEAD BASED PAINT

Exposure levels of lead in the construction industry are regulated by 29 CFR 1926.62. Construction activities disturbing surfaces with lead-containing paint which are likely to be employed, such as sanding, grinding, welding, cutting and burning, have been known to expose workers to levels of lead in excess of the Permissible Exposure Limit (PEL). Conduct demolition and removal work specified in the technical sections of this specification in conformance with these regulations. In addition, construction debris/waste may be classified as hazardous waste. Disposal of hazardous waste material shall be in accordance with 40 CFR Parts 260 through 271 and Connecticut Hazardous Waste Management Regulations Section 22a-209-1; 22a-209-8(c); 22a-449(c)-11 and 22a-449(c)-100 through 110.

Testing for lead-based paint has been conducted at the facility scheduled for demolition. Under no circumstance shall this information be the sole means used by the Contractor for determining the extent of LBP. The Contractor shall be responsible for verification of all field conditions affecting performance of the work and disposal of demolition materials.

18.00 COMPLIANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS

This award of bid is subject to the conformance of the Contractor to all Federal, State, and Local laws, statutes, regulations, ordinances or other requirements that are applicable to the type of work contained in these specifications.

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003.0 BUILDING DEMOLITION

003.1 SCOPE OF WORK: The portion of the building to be demolished is the D-wing portion of Academy School and is located on property of the Town of Glastonbury at 2155 Main Street. The limits of demolition are described on the construction plans. In general, the work consists of the demolition and disposal of materials from all portions of the building within the limits of demolition, including steps, foundation walls or other structures, and their appurtenances within the demolition areas as shown on the drawings or as specified. Included in the work will be the collapsing of the subsurface masonry and the filling of all excavated areas to the grades shown on the plans. It shall also include all other items of demolition, disposal, site clearing, utility protection or abandonment, salvaging materials for the Town, and any and all work reasonably inferred as needed to make work under his heading complete.

Also included in the scope of work for this item is the careful separation of the portion of the building to be demolished from the existing building as shown on plan sheets D1.0, D2.0, and SD1.0, including additional structural supports, door infills, masonry repairs, new roof edge flashing, fire sprinkler line cutting and capping, and other miscellaneous work shown on the drawings to properly restore the existing adjacent building to remain. The fire protection system shall be cut and capped by a licensed fire protection sprinkler system company to be retained by the Contractor as shown on Sheet D-1 of the plans.

Protection of the existing building to remain, restoration of this building, and protection of the existing sanitary sewer lateral under the existing building to be demolished are also included in the scope of work for this item.

003.2 WORK BY OTHERS: The Town shall be responsible for the disconnection of all existing utility service connections to the structure, with the exception of the fire protection system.

The Town is responsible for the removal of universal waste from the building, including fluorescent bulbs, ballasts, mercury containing thermostats, emergency exit signs, and battery packs

Any other work to be performed by utility companies and required by the demolition Contractor in the performance of the work shall be arranged for and paid for by the Contractor and shall be included in the lump sum price for the project.

003.3 SALVAGE: The Town reserves the right to remove any part or parts of any of the buildings prior to the buildings release to the Contractor. If the Contractor has considered the salvage of any part of the buildings as a part of any contract unit price, this consideration must be noted, as an exception, in the Bid Proposal. If not so noted, the unit price shall be assumed to be the unit price without consideration for salvage value.

Specific items to be protected by the Contractor during demolition operations and set aside for salvage by the Town are as follows below and are further depicted in Attachment A:

1. Cast Stone building plaque (east façade)
2. Southern most cast stone architrave (east façade)
3. Northernmost cast stone architrave (east façade)
4. Cast stone water table material.

In addition to the above mentioned items, approximately 25% of the brick from the building exterior shall be segregated from the waste stream and delivered by the

Contractor to the Town Highway Garage located at 2380 New London Turnpike for re-use by the Town.

- 003.4 APPROVAL OF WORK: All work to be performed under his contact shall at all times be subject to the approval of, and be performed to the satisfaction of, the Engineer or his authorized representative, and his judgment in all matters shall be final.
- 003.5 RESPONSIBILITIES OF THE CONTRACTOR: Except as otherwise specifically stated in these specifications, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, heat, power, transportation, superintendency, temporary construction of every nature, charges, levies, fees or other expenses incurred, and all other services of the contract.
- 003.6 SITE CONDITIONS: The Contractor shall visit the site and shall be fully informed of the type and condition of the structures to be demolished, the items to be salvaged, and the conditions, including adjacent buildings, relating to the work. The Engineer shall not be held responsible for any conflicts between the specifications and actual field conditions.
- 003.7 RELEASE OF BUILDINGS: The structures to be demolished in the project areas will be released to the Contractor by written notification, singularly or in a group, at the discretion of the Engineer. Upon receipt of the notification, the Contractor shall advise the Engineer of the date work is anticipated to begin.
- 003.8 SIGNS: No signs other than those required by law, or by these specifications, shall be permitted.
- 003.9 SITE STORAGE: The Contractor and his subcontractors may maintain storage facilities on the site as are necessary for the work. These shall be located so as to cause no interference with any other work to be performed to the site. The Engineer shall approve all locations. Upon completion of the demolition and associated work, or as directed by the Engineer, the Contractor shall remove all such temporary facilities from the site and leave the premises in the condition required by these specifications.
- 003.10 CONTRACT DOCUMENTS AND DRAWINGS: The Engineer will furnish the Contractor, without charge, three (3) copies of the Contract Documents, including drawings. Additional copies requested by the Contractor will be furnished at the applicable cost schedule.
- 003.11 TRESPASSING: The Contractor's attention is brought to the fact that no person not on the Contractor's, or approved subcontractor's, payroll may be allowed on the site or engage in work covered by these specifications. Such persons will be considered to be "trespassing" unless their presence has been approved by the Engineer.
- 003.12 PERMITS: Permits that the Contractor shall be required to obtain shall include, but not necessarily be limited to, the following:
- a. Town of Glastonbury Building Department - Demolition permit.
 - b. Town of Glastonbury Public Works - Use of Bulky Waste Disposal Site.

The Contractor shall obtain, at no expense to the Town, all permits and licenses, pay all charges and fees, and give all notices necessary and due in connection with the lawful execution of the work. The Contractor shall submit proof of having obtained the above, and any other necessary permits.

003.14 ADJACENT BUILDINGS AND STRUCTURES: The Contractor shall examine the foundations and walls of all buildings, structures, streets, steps, and sidewalks adjacent to the demolition work and shall take the necessary precautions to guard against their movement or settlement (provide sheet piling, shoring, bracing, or other support necessary for the safety, support, and stability of such buildings, structures, streets, and sidewalks). The Contractor will be liable for any movement, settlement, damage, or injury to adjacent buildings, structures, streets, or sidewalks resulting from the demolition. See sheets D1.0, D2.0, and SD1.0 for depiction of the existing adjacent building, limits of demolition, and specific areas requiring support and/or protection.

Where a building to be demolished abuts excluded or occupied buildings, the dividing or party wall supporting the building shall be stripped clean, exposing masonry on the demolition side. Cavities in the masonry resulting from the demolition of floor joists or structural beams shall be filled with cement mortar and the surface troweled to a neat finish, or finished as otherwise depicted on the Contract Drawings.

If, in the opinion of the Engineer or Contractor, the safety of any adjacent building or structure appears to be questionable, the Contractor shall cease operation and shall take the necessary measures to support the endangered building or structure. The demolition work shall not resume until written authority to do so is granted by the Engineer.

003.15 ENFORCEMENT OF MEASURES FOR THE PROTECTION OF THE PUBLIC AND THE WORKMEN: Should the Engineer notify the Contractor of any failure to comply with the provisions relating to safety, the Contractor shall proceed immediately to comply with the instructions of the Engineer. The Engineer shall have full power to correct the condition. All expenses incurred shall be chargeable to the Contractor. The above in no way relieves the Contractor from liability for his work in that the responsibility for safety rests solely with the Contractor.

The Contractor is, at all times, solely responsible for direct supervision of all his employees and subcontractors and for all act of negligence of such employees and subcontractors.

003.16 BARRICADES: A six-foot-tall temporary chain link construction fence shall be erected by the Contractor around the entire perimeter of the demolition area for the duration of the demolition operations. The limits of the fence shall be as shown on the construction plan or as approved by the Engineer. Such fence shall be adequate for safety and shall extend around the entire perimeter of the work area, and in such other locations as ordered by the Engineer. Suitable vehicular and pedestrian gates and other temporary openings shall be provided as may be necessary for the proper prosecution of the work. The Contractor shall not remove barricades until approval to do so is granted by the Engineer.

003.17 EXTENT OF DEMOLITION: The Contractor shall demolish all buildings and miscellaneous structures, including the basement, foundations, footings, steps, and all other underground structures located within the area of demolition and as depicted on the Contract Drawings. The Contractor shall demolish all buildings and structures to a minimum of five (5) feet below the average adjacent grade level and remove completely all steps, vaults, areaways, platforms, tanks, retaining walls, fences, clotheslines, flagpoles, shrubbery, hedges, stumps, and trees, as directed. The basement floor shall be completely broken up sufficiently to prevent the collection of water and, before backfilling, shall be inspected by the Engineer. Such work shall be completed taking

special care to protect the existing sanitary sewer lateral that extends under the foundation of the existing building, as depicted on the Contract Drawings.

All demolition work shall be done on the premises. The Contractor shall provide the water, electricity, and sanitary facilities necessary for his work.

003.18 METHODS OF DEMOLITION: The use of a clamshell bucket, power shovel, bulldozer, or other mechanical contrivance for the purpose of demolition shall be permitted. The use of any explosives will not be permitted.

003.19 BACKFILLING: The Town will provide acceptable fill material from the Bulky Waste Site and load it. The Contractor will be responsible for furnishing the trucks and hauling and placing of material at the demolition site. The Contractor shall not be permitted to excavate earth from the site for the purpose of backfilling unless directed by the Engineer.

The Town will require 48 hours written notice to gain entry to the Bulky Waste Site. The Contractors hours for removing fill shall be limited to the approved hours of operation of the Bulky Waste facility.

Prior to the filling of any basement or opening, the entire area of said basement or opening shall be excavated in its entirety for inspection by the Engineer. Such an excavation must be free of all debris or materials resulting from the demolition of the structure. Backfilling shall proceed only upon approval of the Engineer

The Contractor shall backfill all basements immediately after approval by the Engineer. If backfilling cannot be accomplished immediately, the Contractor shall take the necessary measures to maintain a safe condition around the excavation.

After all excavation has been completed, fill material shall be deposited in layers not exceeding eight (8) inches in depth over the areas. In exceptional cases, the Engineer may permit the first layer to be thicker than eight (8) inches. Each layer shall be leveled off by the use of blade graders or bulldozers with adequate power for the work involved.

The entire area of each layer shall be compacted, to the satisfaction of the Engineer, by use of vibratory, pneumatic tired or tread type compaction equipment. No subsequent layer shall be deposited until acceptable compaction is achieved for the previous layer. If necessary to obtain the required compaction, water shall be added and gentle puddling performed, if authorized by the Engineer.

003.20 SITE RESTORATION: The Contractor shall grade the area disturbed by the work to remove all evidence of former buildings and structures. The area shall be sloped as shown on the grading plan so that no part holds water and areas over basement areas shall be mounded with 12 inches of acceptable fill to compensate for subsequent settling. The disturbed area shall be restored with 6 inches of topsoil and seed.

The Contractor shall be responsible for the protection and preservation of all municipal and public utilities traversing the project site, trees and other vegetation, and devices serving buildings not released for demolition, and shall pay all cost of repair or restoration in the event of damage caused by his work.

003.21 RODENT, VERMIN AND PEST CONTROL: The Town shall have building certified as rodent free prior to release of the building to the Contractor. Upon the entering into a

contract with the Town, the Contractor shall be responsible for maintaining the buildings, structures, and site free from rodents, vermin, and pests during the period of demolition and site clearance. Should the Contractor fail to maintain such level of extermination, he will be required to provide the necessary extermination service at no cost to the Town.

003.22 DUST CONTROL: The Contractor is hereby notified that the buildings, grounds, parking area, and athletic fields surrounding the project area are very actively used, and therefore control of dust will be a critical component of the successful completion of this work. During the progress of the work, the Contractor shall conduct his operations and maintain the area of his activities so as to completely control the creation and dispersion of visible dust from the project area during demolition activities. The Contractor shall provide, at his expense, appropriate watering apparatus or other materials and equipment as deemed necessary to control dust from the work area.

003.23 DISPOSAL OF DEBRIS: The Contractor may use, at no charge, the Bulky Waste Site on Tryon Street for the disposal of all materials that conform to the regulations governing the operation of the facility. **No materials containing lead-based paint, of any level, shall be dumped at the Tryon Street facility.** The Contractor is responsible for confirming the types of demolition acceptable and for locating an alternate source of disposal for any materials not acceptable at the Bulky Waste facility. The Town shall waive all fees at the Bulky Waste site. The Contractor shall be responsible for any other fees or charges associated with an alternate disposal site.

The Contractor shall remove all demolition materials from the site within two (2) days after demolition.

003.24 BURNING OF DEBRIS: Burning of combustible materials is not allowed.

003.25 CLEAN UP: The Contractor shall, at the completion of his work, remove all rubbish, scrap metal, junk, and debris resulting from the work of demolition. No materials or equipment may be stored on the site. The site shall be left in a safe and clean condition.

END OF SECTION 003.0

004.0 ASBESTOS ABATEMENT

PART 1- GENERAL

1.01 SUMMARY

- A. Remove, encapsulate, or otherwise abate asbestos-containing materials (ACM) as described herein.
- B. Dispose all ACM in accordance with governing laws and regulations; pay costs of permits and disposal.

1.02 RELATED WORK

- A. Not applicable.

1.03 CODES, REGULATIONS, AND STANDARDS - ASBESTOS ABATEMENT

- A. Federal Requirements that govern asbestos abatement work or hauling and disposal of asbestos waste materials include but are not limited to the following:
 - 1. OSHA: U.S. Department of Labor, Occupational Safety and Health Administration, (OSHA), including but not limited to:
 - a. Respiratory Protection: Title 29, Part 1910, Section 134 of the Code of Federal Regulations
 - b. Construction Industry: Title 29, Part 1926, of the Code of Federal Regulations
 - c. Hazard Communication: Title 29, Part 1910, Section 1200 of the Code of Federal Regulations
 - 2. DOT: U.S. Department of Transportation, including but not limited to:
 - a. Hazardous Substances: Title 29, Part 171 and 172 of the Code of Federal Regulations
 - 3. EPA: U.S. Environmental Protection Agency (EPA), including but not limited to:
 - a. Asbestos Abatement Projects; Worker Protection Rule: Title 40 Part 763, Sub-part G of the Code of Federal Regulations
 - b. Asbestos Hazard Emergency Response Act (AHERA) Regulation: Asbestos Containing Materials in Schools Final Rule & Notice, Title 40, Part 763, Sub-part E of the Code of Federal Regulations
 - c. Training Requirements of (AHERA) Regulation: Asbestos Containing Materials in Schools Final Rule & Notice, Title 40, Part 763, Sub-part E, Appendix C of the Code of Federal Regulations
 - d. National Emission Standard for Hazardous Air Pollutants (NESHAPS): National Emission Standard for Asbestos, Title 40, Part 61, Sub-part A, and Sub-part M (Revised Sub-part B) of the Code of Federal Regulations
- B. State Requirements that govern asbestos abatement work or hauling and disposal of asbestos waste materials include but are not limited to the following:
 - 1. Department of Public Health, Standards for Asbestos Abatement (Section 19a-332a-1 to 19a-332-16), Licensing and Training Requirements for Personnel Engaged in Asbestos

- Abatement and Asbestos Consultation Services (Section 20-440-1 to 20-440-9 and Section 20-441)
2. Department of Environmental Protection (Sections 22a-208a-1, 22a-209-1 and 22a-209-8)
 3. Department of Transportation
- C. Local requirements that govern asbestos abatement work or hauling and disposal of asbestos waste materials include but are not limited to the following:
1. Local Department of Health (project notification)
 2. Local Police Department (project notification)
 3. Local Fire Department (project notification)
- D. Standards:
1. General Applicability of Standards: Except to the extent that more explicit or more stringent requirements are written directly into the Contract Documents, all applicable standards have the same force and effect (and are made a part of the Contract Documents by reference) as if copied directly into the Contract Documents, or as if published copies are bound herewith.
 2. Contractor Responsibility: The Contractor shall assume full responsibility and liability for the compliance with all standards pertaining to work practices, hauling, disposal, and protection of workers, visitors to the site, and persons occupying areas adjacent to the site.
 3. Standards that apply to asbestos abatement work or hauling and disposal of asbestos waste materials include but are not limited to the following ANSI and ASTM standards.
 4. American National Standards Institute (ANSI), 1430 Broadway, New York, New York 10018, (212) 354-3300
 - a. Fundamentals Governing the Design and Operation of Local Exhaust Systems, Publication Z9.2-79
 - b. Practices for Respiratory Protection Publication Z88.2-80
 5. American Society for Testing and Materials (ASTM), 1916 Race Street, Philadelphia, PA 19103, (215) 299-5400
 - a. Safety and Health Requirements Relating to Occupational Exposure to Asbestos, ASTM E 849-82
- E. EPA Guidance Documents: Discuss asbestos abatement work or hauling and disposal of asbestos waste materials listed below for the Contractor's information only. These documents do not describe the work and are not a part of the work of this contract. EPA maintains an information number (800) 334-8571, publications can be ordered from (800) 424-9065 (554-1404 in Washington, DC):
1. Guidance for Controlling Asbestos-Containing Materials in Buildings (Purple Book) EPA 560/5-85-024.

2. Asbestos in Buildings: Guidance for Service and Maintenance Personnel. EPA 560/5-85-018.
3. Asbestos Waste Management Guidance. EPA 530-SW-85-007.
4. A Guide to Respiratory Protection for the Asbestos Abatement Industry. EPA-560-OPTS-86-001.

F. Posting and Filing of Regulations: Post all notices required by applicable federal, state and local regulations. Maintain two (2) copies of applicable federal, state and local regulations and standard. Maintain one copy of each at job site. Keep on file in Contractor's office one copy of each.

1.04 DEFINITIONS AND STANDARDS - ASBESTOS ABATEMENT

- A. Air Lock: A mechanism or system of enclosures within the decontamination facility that does not allow air movement between clean and contaminated areas. Consists of three-foot wide space between each of the sections of the decontamination chamber segregated by full polyethylene barriers.
- B. Amended Water: Water to which a surfactant has been added to decrease the surface tension to 35 or less dynes.
- C. Asbestos: The asbestiform varieties of serpentine (Chrysotile), riebeckite (crocidolite), cummingtonite-grunerite, anthophyllite, and actinolite-tremolite. For purposes of determining respiratory and worker protection both the asbestiform and non-asbestiform varieties of the above minerals and any of these materials that have been chemically treated and/or altered shall be considered as asbestos.
- D. Asbestos-Containing Material (ACM): Any material containing more than 1% by weight of asbestos of any type or mixture of types.
- E. Asbestos-Containing Waste Material: Any material that is or is suspected of being or any material contaminated with an asbestos-containing material that is to be removed from a work area for disposal.
- F. Asbestos debris: Pieces of ACM or ACBM that can be identified by color, texture, or composition, or means dust, if the dust is determined by an accredited inspector to be ACM.
- G. Authorized Visitor: The Owner, the Owner's Technical Representative, testing lab personnel, the Architect/Engineer, emergency personnel or a representative of any federal, state and local regulatory or other agency having authority over the project.
- H. Barrier: Any surface that seals off the work area to inhibit the movement of fibers.
- I. Breathing Zone: A hemisphere forward of the shoulders with a radius of approximately 6 to 9 inches.
- J. Ceiling Concentration: The concentration of an airborne substance that shall not be exceeded.
- K. Decontamination Facility: A series of interconnected chambers, typically segregated by polyethylene barriers, that is used as the only means of worker ingress/egress to the work area. Interlocking barriers prevents contamination of areas outside the work area.

- L. Disposal Bag: A properly labeled 6-mil thick leak-tight plastic bags used for transporting asbestos waste from work and to disposal site.
- M. Encapsulant: A material that surrounds or embeds asbestos fibers in an adhesive matrix, to prevent release of fibers.
 - 1. Bridging Encapsulant: An encapsulant that forms a discrete layer on the surface of an in situ asbestos matrix.
 - 2. Penetrating Encapsulant: An encapsulant that is absorbed by the in situ asbestos matrix without leaving a discrete surface layer.
- N. Encapsulation: Treatment of asbestos-containing materials, with an encapsulant.
- O. Equipment Room: A contained room or chamber positioned immediately contiguous to the contaminated work area environment used for removal of protective clothing and decontamination of equipment.
- P. Friable Asbestos Material: Material that contains more than 1.0% asbestos by weight and that can be crumbled, pulverized, or reduced to powder by hand pressure when dry.
- Q. HEPA Filter: A High Efficiency Particulate Air (HEPA) filter capable of trapping and retaining 99.97% of asbestos fibers greater than 0.3 microns in diameter.
- R. HEPA Filter Vacuum Collection Equipment (or vacuum cleaner): High efficiency particulate air filtered vacuum collection equipment with a filter system capable of collecting and retaining asbestos fibers. Filters should be of 99.97% efficiency for retaining fibers of 0.3 microns or larger.
- S. Negative Pressure Respirator: A respirator in which the air pressure inside the respiratory-inlet covering is positive during exhalation in relation to the air pressure of the outside atmosphere and negative during inhalation in relation to the air pressure of the outside atmosphere.
- T. Negative Pressure Ventilation System: A pressure differential and ventilation system.
- U. Personal Monitoring: Sampling of the asbestos fiber concentrations within the breathing zone of an employee.
- V. Pressure Differential and Ventilation System: A local exhaust system, utilizing HEPA filtration capable of maintaining a pressure differential within the inside of the Work Area at a lower pressure than any adjacent area, and which cleans recirculated air or generates a constant air flow from adjacent areas into the Work Area.
- W. Protection Factor: The ratio of the ambient concentration of an airborne substance to the concentration of the substance inside the respirator at the breathing zone of the wearer. The protection factor is a measure of the degree of protection provided by a respirator to the wearer.
- X. Respirator: A device designed to protect the wearer from the inhalation of harmful atmospheres.
- Y. Surfactant: A chemical wetting agent added to water to improve penetration, thus reducing the quantity of water required for a given operation or area.

- Z. Time Weighted Average (TWA): The average concentration of a contaminant in air during a specific time period.
 - AA. Visible Debris: Any visually detectable particulate residue such as dust, dirt, or other extraneous material that may or may not contain asbestos.
 - BB. Visible Emissions: Any emissions containing particulate asbestos material that are visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.
 - CC. Wet Cleaning: The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning utensils which have been dampened with amended water or diluted removal encapsulant and afterwards thoroughly decontaminated or disposed of as asbestos-contaminated waste.
 - DD. Work Area: The area where asbestos-related work or removal operations are performed which is defined and/or isolated to prevent the spread of asbestos dust, fibers or debris, and entry by unauthorized personnel. Work area is a Regulated Area as defined by 29 CFR 1926.
- 1.05 STOP WORK
- A. If the Owner's Technical Representative presents a written stop work order signed by the Owner, stop abatement work immediately. Do not recommence work until authorized in writing by the Owner.
- 1.06 SUBMITTALS
- A. Submit the following items to the Owner's Technical Representative for review and approval. Do not begin work until the Owner's Technical Representative has approved these submittals.
 1. Plan of Action: Submit a detailed plan of the procedures proposed for use in complying with the requirements of this Section. Include in the plan the location and layout of decontamination areas, the sequencing of asbestos work, the interface of trades involved in the performance of work, methods to be used to assure the safety of building occupants and visitors to the site, disposal plan including location of approved disposal site, and a detailed description of the methods to be employed to control pollution. Expand upon the use of portable HEPA ventilation system, closing out of the building's HVAC system, method of removal to prohibit visible emissions in work area, and packaging of removed asbestos debris. The Owner's Technical Representative prior to commencement of work must approve the plan.
 2. Contingency plans for emergency actions.
 3. Resume of Supervisor for asbestos abatement.
 4. Accreditation and Certification: submit evidence in form of training course certificate of accreditation of Supervisor as an asbestos abatement supervisor and Workers as asbestos abatement workers. Also, submit applicable Connecticut Department of Public Health (CT DPH) personnel certifications. All personnel must carry certifications on-site. Personnel without such certificates may not perform any functions related to asbestos abatement.

5. Permit: Submit evidence that asbestos waste transporter maintains a current "Industrial waste hauler permit" specifically for asbestos-containing materials, as required for transporting of asbestos-containing materials waste to a disposal site.
 6. Waste disposal: Submit name, address, telephone number and asbestos waste permit information for landfill where asbestos waste will be disposed.
- B. Submit the following for the Owner's Technical Representative's Information:
1. Telephone numbers and location of emergency services.
 2. Copy of Notifications sent to other entities at the work site.
 3. Copy of Notifications sent to emergency service agencies.
 4. Permits, Licenses, and Certificates: For the Owner's and Owner's Technical Representative's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence and records established in conjunction with compliance with standards and regulations bearing upon performance of the Work including:
 - a. State and Local Regulations: Submit copies of codes and regulations applicable to the work.
 - b. Notices: Submit notices required by federal, state and local regulations together with proof of timely transmittal to agency requiring the notice.
 - c. Permits: Submit copies of current valid permits required by state and local regulations.
 - d. Licenses: Submit copies of all State and local licenses and permits necessary to carry out the work of this contract, including abatement contractor's CT DPH asbestos abatement contractor license.
 5. Respiratory Protection Program: Submit program manual, protection schedule, and historic airborne fiber data applicable to this project.
- C. Asbestos Abatement Schedule: Provide proposed detailed schedule including work dates, work shift time, number of employees, dates of start and completion including dates of preparation work, removals and final inspection dates.
1. Indicate completion and Clearance of each Work Area in advance of the date established for Substantial Completion. Allow time for testing and other Owner's Technical Representative's procedures necessary for certification of Clearance and Substantial Completion.
 2. Work Stages: Indicate important stages of construction for each major portion of the work, including testing and installation. Include indication of start and finish times for the following:
 - a. Preparation of the Work Area.
 - b. Asbestos removal.
 - c. Clearance testing.
 3. Schedule Updating: Revise the schedule after each meeting or activity, where revisions have been recognized or made. Issue the updated schedule concurrently with report of each meeting.

- D. Five days before removing asbestos materials, contractor shall inventory the quantity of asbestos materials in each area of work and submit the quantity for written approval to the Owner's Technical Representative. It shall include the location, date, quantity of asbestos material, and name of the authorized person conducting the quantification. The Owner's Air Monitoring Technician shall verify all asbestos material quantification before work is begun. No claims for additional materials will be considered without performing this inventory and submitting it within the proper time to the Owner's Technical Representative.
- E. At completion of asbestos abatement, submit copies of waste shipment record(s) for all asbestos waste transported from the site, copies of worker logs, copies of workers' certifications as asbestos abatement workers, and any other pertinent information relative to the project.

1.07 NOTIFICATIONS

- A. Notify other entities at the job site of the nature of the asbestos abatement activities, location of asbestos-containing materials, requirements relative to asbestos set forth in these specifications and applicable regulations.
- B. Notify emergency service agencies including fire, ambulance, police or other agency that may service the abatement work site in case of an emergency. Notification is to include methods of entering work area, emergency entry and exit locations, modifications to fire notification or fire fighting equipment, and other information needed by agencies providing emergency services.
- C. Notifications of Emergency: Any individual at the job site may notify emergency service agencies if necessary without effect on this Contract or the Contract Sum.
- D. Notify federal, state, and local agencies having jurisdiction over the work including:
 - 1. Environmental Protection Agency: In Connecticut, the notification sent to the CT DPH for asbestos removal will be sufficient to meet the EPA notification requirement under the National Emission Standards for Hazardous Air Pollutants (NESHAPS) Asbestos Regulations (40 CFR 61 Subpart M).
 - 2. State and Local Agencies: Send written notification and pay fees, as applicable, as required by state and local regulations prior to beginning any work on asbestos-containing materials. In Connecticut, notify the Department of Public Health 10 days to the start of any asbestos abatement.

Notify the local Department of Health, Fire Department, Police Department and Fire Department 10 days prior to beginning any asbestos abatement.

1.08 QUALITY ASSURANCE

- A. Licenses: The Contractor conducting asbestos abatement activities must maintain current licenses as required by applicable state or local jurisdictions for the removal, transporting, disposal or other regulated activity relative to the work of this contract, including a CT DPH license as an Asbestos Abatement Contractor.
- B. Certifications: All personnel conducting asbestos abatement activities shall be certified by the CT DPH as Asbestos Abatement Workers and Asbestos Abatement Supervisors, as applicable, to their role on the project. AHERA Accreditation: workers who conduct asbestos abatement work on friable ACM, are to be accredited as Abatement Workers as required by the AHERA regulation 40 CFR 763 Appendix C to Subpart E, April 30, 1987.

- C. Continuously monitor and record the pressure differential between the Work Area and the building outside of the Work Area with a monitoring device.

1.09 PROJECT/SITE CONDITIONS

- A. The disturbance or dislocation of asbestos-containing materials (ACM) may cause asbestos fibers to be released into the building's atmosphere, thereby creating a potential health hazard to workers and building occupants. Thus, to prevent ACM from becoming a hazard, the Contractor shall abate the ACM in the proper sequence of the project before the materials are disturbed by any renovation or demolition. Apprise all workers, supervisory personnel, subcontractors and consultants who will be at the job site of the seriousness of the hazard and of proper work procedures that must be followed.
- B. The following table includes a listing of materials identified at the site during inspections conducted by Smith & Wessel Associates, Inc. (SWA) of Spencer, Massachusetts in May of 2011. The report is available upon request. The following testing indicated results that contained less than one percent asbestos.

List of Materials Testing Negative for Asbestos		
Type of material	Location	Sample No.
Gray gypsum board (see note 1)	Basement, various locations throughout	01A, 01B
Black mastic adhesive under checkerboard 9" x 9" floor tile	Basement, room D-10	07A
Gray ceiling plaster	Basement, hallway	08A, 08B, 08C
Gray door caulking	Basement, rear doors	09A
Ceramic floor tile grout	Bathrooms throughout	11A
Black mastic adhesive under gray 12" x 12" bottom layer of floor tile	Hallways throughout	15A, 15B, 15C
Cement plasters	Throughout	16A, 16B, 16C, 16D, 16E, 16F, 16G
Brown 12" x 12" floor tile (see note 2)	Northwest lower stairwell	18A
Black mastic adhesive underlying brown 12" x 12" floor tile	Northwest lower stairwell	19A, 19B
Brown mastic adhesive under vinyl baseboard	Various location throughout	20A, 20B
White 2' x 4' ceiling tile	Bathrooms, hallways, select rooms	22A, 22B, 22C
White, interior fire-door insulation	Hallways	23A
Brown linoleum floor sheeting with fabric backing	Second floor room off of southeast stairwell where roof hatch is located	24A, 24B
Brown mastic under carpet	Second floor, Room D203	27A

List of Materials Testing Negative for Asbestos		
Type of material	Location	Sample No.
Gray caulking associated with windows and expansion joint	Exterior	28A, 29A
Black roof felts	Roof field	021612-01A, 021612-01B, 021612-01C
Black damp proofing behind brick facade	Exterior north stairwell	021612-03A, 021612-03B
Stair tread mastic adhesive	Stairwells	2-27-12-04A

Note 1: The gypsum board is cross-contaminated by asbestos-containing joint compound and must be treated as ACM.

Note 2: This floor tile is adhered to the substrate with asbestos-containing mastic adhesive and must be treated as ACM.

- C. Where in the performance of the work, workers, supervisory personnel, subcontractors, or consultants may encounter, disturb, or otherwise function in the immediate vicinity of any identified asbestos-containing materials, take appropriate precautionary measures as necessary to protect all building occupants from the potential hazard of exposure to airborne asbestos. Do not allow asbestos or suspect asbestos materials to be disturbed or cause dust to be created. Stop work activities immediately if any suspect material is encountered and notify the Owner's Technical Representative so testing may be conducted, if necessary, to determine the material's asbestos content. Additional measures shall include the procedures and methods described herein, and compliance with regulations of applicable federal, state and local agencies.

1.10 SCHEDULING

- A. Asbestos abatement schedule shall be determined at a later date. Contractor shall assume that all work will be conducted during normal business hours unless otherwise indicated.

1.11 OWNER'S TESTING

- A. The Owner's Technical Representative will perform the air monitoring specified in this Article in order to verify that the building beyond the work area and the outside environment remains uncontaminated.
 - 1. This Article also sets forth airborne fiber levels both inside and outside the work area as action levels, and describes the action required by the Contractor if an action level is met or exceeded.
 - 2. Analytical Methods: The following methods will be used by the Owner's Testing and Inspection Agency in analyzing filters used to collect air samples. Sampling rates may be varied from printed standards to allow for high volume sampling.
 - a. Phase Contrast Microscopy (PCM) will be performed using the NIOSH 7400 method. This analysis will be carried out at the job site.
 - b. Transmission Electron Microscopy (TEM) will be performed using the method specified in 40 CFR Part 763 Final Rule (AHERA). Note: this method only will be necessary in the event that PCM analysis does not provide definitive results.

- B. Air monitoring required by OSHA is work of the Contractor and is not covered in this section.
- C. Work Area Isolation: The purpose of the Owner's Technical Representative air monitoring during abatement work is to detect faults in the work area isolation such as:
1. Contamination of the building outside of the work area with airborne asbestos fibers,
 2. Failure of filtration or rupture in the differential pressure system,
 3. Contamination of air outside the building envelope airborne asbestos fibers.
 4. Should any of the above occur immediately cease asbestos abatement activities until the fault is corrected. Do not recommence work until authorized by the Owner's Technical Representative.
- D. Work Area Airborne Fiber Count: The Owner's Testing and Inspection Agency will monitor airborne fiber counts in the Work Area. The purpose of this air monitoring will be to detect airborne asbestos concentrations that may challenge the ability of the Work Area isolation procedures to protect the balance of the building or outside of the building from contamination by airborne fibers.
- E. Work area clearance: To determine if the elevated airborne fiber counts encountered during abatement operations have been reduced to an acceptable level, the Owner's Testing and Inspection Agency will sample and analyze air samples in accordance with the requirements of 453 CMR 6.14(g). For this project, analysis of air samples will be performed using PCM.
1. Aggressive Sampling: Air samples will be taken using aggressive sampling techniques as follows:
 - a. Before sampling pumps are started the exhaust from forced-air equipment (leaf blower with an approximately 1 horsepower electric motor) will be swept against walls, ceilings, floors, ledges and other surfaces in the room. This procedure will be continued for 5 minutes per 10,000 cubic feet of room volume.
 - b. One 20-inch diameter fan per 10,000 cubic feet of room volume will be mounted in a central location at approximately 2 meters above floor, directed toward ceiling and operated at low speed for the entire period of sample collection.
 - c. Air samples will be collected in areas subject to normal air circulation away from room corners, obstructed locations, and sites near windows, doors or vents.
 - d. After air-sampling pumps have been shut off, fans will be shut off.
 2. Schedule of Air Samples: The number and volume of air samples taken and analytical methods used by the Architect will be in accordance with the following schedule. Sample volumes given may vary depending upon the analytical instruments used.
 - a. Removal of Less than 1,500 square feet or 500 linear feet of ACM: Testing for airborne fiber concentration will be performed using Phase Contrast Microscopy. In each homogeneous Work Area, after completion of cleaning work, a minimum of five samples will be taken and analyzed.

Samples will be collected 0.8 mixed cellulose ester filter media in 25-millimeter cassettes with a conductive extension cowl.

Location Sampled	Number of Samples	Analysis Method	Detection Limit Fibers/cc	Minimum Volume (LITERS)	Rate (LPM)
Each Work Area	5	PCM	0.01	1,200	1-10
Or Each room	1	PCM	0.01	1,200	1-10
Work Area Blank	1	PCM	0.01	0	Open for 30 Seconds
Lab Blank	1	PCM	0.01	0	Do not open

- 1) Analysis: Fibers on each filter will be measured using the NIOSH Method 7400 entitled "Fibers" published in the NIOSH Manual of Analytical Methods, 3rd Edition, Second Supplement, August 1987.
 - 2) Fibers referred to in this section include fibers regardless of composition as counted by the phase contrast microscopy method used.
 - 3) Release Criteria: Decontamination of the work site is complete when every Work Area sample is at or below 0.01 fibers per cubic centimeter of air (f/cc). If any sample is above this level, then the decontamination is incomplete and re-cleaning per Article 3.05 of this Section is required.
- b. Removal of greater than 1,500 sq. ft. or 500 linear feet: Testing for airborne fiber concentration will be performed using Transmission Electron Microscopy. Samples will be collected and analyzed according to the AHERA method specified in 40 CFR Part 763.
- 1) Release Criteria: Decontamination of the work site is complete when every Work Area sample is at or below the criteria specified by AHERA. If these release criteria are not met, then the decontamination is incomplete and re-cleaning per Article 3.06 of this Section is required.
- c. If testing using PCM is not deemed practical because of background construction, or other factors prevent accurate total fiber counting, testing for airborne fiber concentration will be performed using Transmission Electron Microscopy. Samples will be collected and analyzed according to the AHERA method specified in 40 CFR Part 763.
- 1) Release Criteria: Decontamination of the work site is complete when every Work Area sample is at or below the criteria specified by AHERA. If these release criteria are not met, then the decontamination is incomplete and re-cleaning per Article 3.06 of this Section is required.

F. Stop Action Levels:

1. Inside Work Area: Maintain an average airborne count in the Work Area of less than 0.5 fibers per cubic centimeter. If the fiber counts rise above this figure for any sample taken, revise work procedures to lower fiber counts. If the Time Weighted Average (TWA) fiber count for any work shift or 8-hour period exceeds 0.5 fibers per cubic centimeter, stop work, leave Pressure Differential System in operation and notify Owner's Technical Representative. After correcting cause of high fiber levels, do not recommence work for 24 hours unless otherwise authorized, in writing, by Owner's Technical Representative.
 - a. If airborne fiber counts exceed 2.0 fibers per cubic centimeter for any period of time cease all work except corrective action until fiber counts fall below 0.5 fibers per cubic centimeter and notify Owner's Technical Representative. After correcting cause of high fiber levels, do not recommence work for 24 hours unless otherwise authorized, in writing, by Owner's Technical Representative.
2. Outside Work Area: If any air sample taken outside of the Work Area exceeds 0.01 fibers/cc, immediately and automatically stop work except corrective action. The Owner's Technical Representative will determine the source of the high reading and so notify the Contractor.
 - a. If the high reading was the result of a failure of Work Area isolation measures initiate the following actions:
 - 1) Immediately erect new critical barriers to isolate the affected area from the balance of the building. Erect Critical Barriers at the next existing structural isolation of the involved space (e.g. wall, ceiling, floor).
 - 2) Decontaminate the affected area in accordance with the requirements of Part 3.06 of this Section.
 - 3) Require that respiratory protection be worn in affected area until area is cleared for reoccupancy in accordance with Work Area Clearance requirements.
 - 4) Leave Critical Barriers in place until completion of work and insure that the operation of the pressure differential system in the Work Area results in a flow of air from the balance of the building into the affected area.
 - 5) After Certification of Visual Inspection in the Work Area remove critical barriers separating the work area from the affected area. Final air samples will be taken within the entire area as set forth herein.
 - b. If the high reading was the result of other causes initiate corrective action as determined by the Owner's Technical Representative.

G. Complete corrective work if high airborne fiber counts were caused by Contractor's activities.

PART 2 - PRODUCTS

2.01 HEPA FILTERED FAN UNITS:

- A. General: Supply the required number of HEPA filtered fan units to the site in accordance with these specifications. Use units that meet the following requirements.
- B. Cabinet: Constructed of durable materials able to withstand damage from rough handling and transportation. The width of the cabinet should be less than 30 inches to fit through standard-size doorways. Provide units whose cabinets are:

1. Factory-sealed to prevent asbestos-containing dust from being released during use, transport, or maintenance
 2. Arranged to provide access to and replacement of air filters from intake end
 3. Mounted on casters or wheels
- C. Fans: Rate capacity of fan according to usable air-moving capacity under actual operating conditions.
- D. HEPA Filters: Provide units whose final filter is the HEPA type with the filter media (folded into closely pleated panels) completely sealed on all edges with a structurally rigid frame.
1. Provide units with a continuous rubber gasket located between the filter and the filter housing to form a tight seal.
 2. Provide HEPA filters that are individually tested and certified by the manufacturer to have an efficiency of not less than 99.97 percent when challenged with 0.3 μm dioctylphthalate (DOP) particles when tested in accordance with Military Standard Number 282 and Army Instruction Manual 136-300-175A. Provide filters that bear a UL586 label to indicate ability to perform under specified conditions.
 3. Provide filters that are marked with the name of the manufacturer, serial number, air flow rating, efficiency and resistance, and the direction of test airflow.
- E. Prefilters, which protect the final filter by removing the larger particles, are required to prolong the operating life of the HEPA filter. Two stages of prefiltration are required. Provide units with the following prefilters:
1. First-stage prefilter: low-efficiency type (e.g., for particles 100 μm and larger)
 2. Second-stage (or intermediate) filter: medium efficiency (e.g., effective for particles down to 5 μm)
- F. Provide units with prefilters and intermediate filters installed either on or in the intake grid of the unit and held in place with special housings or clamps.
- G. Instrumentation: Provide units equipped with:
1. Magnehelic gauge or manometer to measure the pressure drop across filters and indicate when filters have become loaded and need to be changed
 2. A table indicating the usable air-handling capacity for various static pressure readings on the Magnehelic gauge affixed near the gauge for reference, or the Magnehelic reading indicating at what point the filters should be changed, noting Cubic Feet per Minute (CFM) air delivery at that point
 3. Elapsed time meter to show the total accumulated hours of operation
- H. Safety and Warning Devices: Provide units with the following safety and warning devices:
1. Electrical (or mechanical) lockout to prevent fan from operating without a HEPA filter

2. Automatic shutdown system to stop fan in the event of a rupture in the HEPA filter or blocked air discharge
3. Warning lights to indicate normal operation (green), too high a pressure drop across the filters (i.e., filter overloading) (yellow), and too low of a pressure drop (i.e., rupture in HEPA filter or obstructed discharge) (red)
4. Audible alarm if unit shuts down due to operation of safety systems

- I. Electrical components: Provide units with electrical components approved by the National Electrical Manufacturers Association (NEMA) and Underwriter's Laboratories (UL). Each unit is to be equipped with overload protection sized for the equipment. The motor, fan, fan housing, and cabinet are to be grounded.

2.02 SHEET PLASTIC

- A. Polyethylene Sheet: Provide flame-resistant polyethylene film that conforms to requirements set forth by the National Fire Protection Association Standard 701, Small Scale Fire Test for Flame-Resistant Textiles and Films. Provide largest size possible to minimize seams, 6.0 mil thick, frosted or black as indicated.
- B. Reinforced Polyethylene Sheet: Where plastic sheet constitutes the only barrier between the work area and the building exterior, provide translucent, nylon reinforced or woven polyethylene, laminated, flame resistant, polyethylene film that conforms to requirements set forth by the National Fire Protection Association Standard 701, Small Scale Fire Test for Flame-resistant Textiles and Films. Provide largest size possible to minimize seams, 6.0 mil thick, frosted or black as indicated.

2.03 MISCELLANEOUS MATERIALS

- A. Duct Tape: Provide duct tape in 2" or 3" widths as indicated, with an adhesive that is formulated to stick aggressively to sheet polyethylene.
- B. Spray Glue: Provide spray adhesive in aerosol cans which is specifically formulated to stick tenaciously to sheet polyethylene.
- C. Wetting Materials: For wetting prior to disturbance of Asbestos-Containing Materials use either amended water or a removal encapsulant:
 1. Amended Water: Provide water to which a surfactant has been added. Use a mixture of surfactant and water which results in wetting of the Asbestos-Containing Material and retardation of fiber release during disturbance of the material equal to or greater than that provided by the use of one ounce of a surfactant consisting of 50% polyoxyethylene ester and 50% polyoxyethylene ether mixed with five gallons of water.
 2. Removal Encapsulant: Provide a penetrating type encapsulant designed specifically for removal of Asbestos-Containing Material. Use a material which results in wetting of the Asbestos-Containing Material and retardation of fiber release during disturbance of the material equal to or greater than that provided by water amended with a surfactant consisting of one ounce of a mixture of 50% polyoxyethylene ester and 50% polyoxyethylene ether in five gallons of water.
- D. Disposal Bags: Provide 6 mil thick leak-tight polyethylene bags labeled as required by Article 3.08 of this Section.

- E. Fiberboard Drums: Provide heavy-duty leak tight fiberboard drums with tight sealing locking metal tops.
- F. Paper board Boxes: Provide heavy-duty corrugated paperboard boxes coated with plastic or wax to retard deterioration from moisture. Provide in sizes that will easily fit in disposal bags.

2.04 PROTECTIVE CLOTHING:

- A. Coveralls: Provide disposable full-body coveralls and disposable head covers (Tyvek or approved equal), and require that workers in the Work Area wear them. Provide a sufficient number for required changes, for workers in the Work Area.
- B. Boots: Provide work boots with non-skid soles, and where required by OSHA, foot protection, for workers. Provide boots at no cost to workers. Paint uppers of boots red with waterproof enamel. Do not allow boots to be removed from the Work Area for any reason, after being contaminated with asbestos-containing material. Dispose of boots as asbestos-contaminated waste at the end of the work.
- C. Hard Hats: Provide head protection (hard hats) as required by OSHA for workers, and provide 4 spares for use by Owner's Technical Representative, Project Administrator, and Owner. Label hats with same warning labels as used on disposal bags. Require hard hats to be worn at all times that work is in progress that may potentially cause head injury. Provide hard hats of type with plastic strap type suspension. Require hats to remain in the Work Area throughout the work. Thoroughly clean, decontaminate and bag hats before removing them from Work Area at the end of the work.
- D. Goggles: Provide eye protection (goggles) as required by OSHA for workers involved in scraping, spraying, or any other activity which may potentially cause eye injury. Thoroughly clean, decontaminate and bag goggles before removing them from Work Area at the end of the work.
- E. Gloves: Provide construction grade work gloves to workers and require that they be worn at all times in the Work Area Do not remove gloves from Work Area and dispose of as asbestos-contaminated waste at the end of the work.

2.05 AIR PURIFYING RESPIRATORS

- A. Filter Cartridges: Provide, at a minimum, HEPA type filters labeled with NIOSH and MSHA Certification for "Radionuclides, Radon Daughters, Dust, Fumes, Mists including Asbestos-Containing Dusts and Mists" and color coded in accordance with ANSI Z228.2 (1980). In addition, a chemical cartridge section may be added, if required, for solvents, etc., in use. In this case, provide cartridges that have each section of the combination canister labeled with the appropriate color code and NIOSH/MSHA Certification.
- B. Do not use single use, disposable or quarter face respirators.

2.06 ADDITIONAL PROTECTIVE EQUIPMENT

- A. Respirators, disposable coveralls, head covers, and footwear covers shall be provided by the Contractor for the Owner's Technical Representative, Project Administrator, and other authorized representatives who may inspect the job site. Provide two respirators and six complete coveralls and, where applicable, six respirator filter changes per day.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Sequence of Work: Carry out work of this section sequentially. Complete each activity before proceeding to the next.
- B. General:
 - 1. The work of this part is required for the removal of all types of ACM, including both friable and nonfriable materials, unless otherwise noted.
 - 2. Work Area: The location where asbestos-abatement work occurs. It is a variable of the extent of work of the Contract. It may be a portion of a room, a single room, or a complex of rooms. A "Work Area" is considered contaminated during the work, and must be isolated from the balance of the building, and decontaminated at the completion of the asbestos-control work.
 - 3. Completely isolate the Work Area from other parts of the building so as to prevent asbestos-containing dust or debris from passing beyond the isolated area. Should the area beyond the Work Area(s) become contaminated with asbestos-containing dust or debris as a consequence of the work, clean those areas in accordance with the procedures indicated in Article 1.10 of this Section. Perform such required cleaning or decontamination at no additional cost to owner.
 - 4. Place tools, scaffolding, staging, etc. necessary for the work in the area to be isolated prior to completion of Work Area isolation.
 - 5. Remove furniture out of the Work Area into a temporary storage location that Owner will designate. Also remove uncontaminated equipment, and/or supplies from the Work Area before commencing work, or completely cover with two layers of polyethylene sheeting, at least 6 mil in thickness, securely taped in place with duct tape. Such furniture and equipment shall be considered outside the work area unless covering plastic or seal is breached.
 - 6. Disable ventilating systems or any other system bringing air into or out of the Work Area. Disable system by disconnecting wires, removing circuit breakers, by lockable switch or other positive means that will prevent accidental premature restarting of equipment.
 - 7. Lockout power to Work Area by switching off breakers serving power or lighting circuits in work area. Label breakers with tape over breaker with notation "DANGER circuit being worked on." Lock panel and have keys under control of Contractor's Superintendent.
 - 8. Lockout power to circuits running through work area wherever possible by switching off breakers or removing fuses serving these circuits. Label breakers with tape over breaker with notation "DANGER circuit being worked on". Lock panel and have keys under control of contractor's superintendent. If circuits cannot be shut down, label at intervals 4'-0" on center with tags reading, "DANGER live electric circuit. Electrocution hazard." Label in a similar manner circuits in hidden locations but which may be affected by the work.
- C. Emergency Exits: At each existing exit door from the Work Area provide the following means for emergency exiting

1. Arrange exit door so that it is secure from outside the Work area but permits exiting from the Work Area.
2. Mark outline of door on Primary and Critical Barriers with luminescent paint at least 1" wide. Hang a razor knife on a string beside outline. Arrange Critical and Primary barriers so that they can be easily cut with one pass of razor knife. Paint words "EMERGENCY EXIT" inside outline with luminescent paint in letters at least one foot high and 2" thick.
3. Provide clearly visible/easily distinguished EXIT sign at each exit.
4. Provide battery-operated emergency lighting that switches on automatically in the event of a power failure.

D. Control Access:

1. Isolate the Work Area to prevent entry by building occupants into Work Area or surrounding controlled areas. Accomplish isolation by the following:
 2. Lock doors into Work Area, or, if doors cannot be locked, chain shut. Cover signs that direct emergency exiting, either outside or inside of Work Area, to locked doors. Do not obstruct doors required for emergency exits from Work Area or from building.
 3. After receiving written authorization from the Owner's Technical Representative construct partitions or closures across any opening into Work Area. Partitions are to be a minimum of 8 feet high.
 4. Fabricate partitions from 3-5/8", 25 gage metal studs or 2 X 4 wood studs with 1/2" gypsum board on both faces. Brace at 4'-0" on center.
 5. Locked Access: Arrange Work Area so that the only access into Work Area is through lockable doors to personnel and equipment decontamination units.
 6. Install temporary doors with entrance type locksets that are key lockable from the outside and always unlocked and operable from the inside. Do not use deadbolts or padlocks.
 7. Replace locksets or passage sets on doors leading to decontamination units with temporary locksets for duration of the project. Remove any deadbolts or padlocks. Use entry type locksets that are key lockable from outside and always unlocked and operable from inside.
 - a. Provide one key for each door to Owner, and Owner's Technical Representative and maintain one key in clean room of decontamination unit (3 total).
8. Visual Barrier: Where the Work Area is immediately adjacent to or within view of occupied areas, provide a visual barrier of opaque polyethylene sheeting at least 6 mil in thickness so that the work procedures are not visible to building occupants. Where this visual barrier would block natural light, substitute frosted or woven rip-stop sheet plastic in locations approved by the Owner's Technical Representative.

9. Provide warning signs at each locked door leading to Work Area reading as follows:

<u>Legend</u>	<u>Notation</u>
KEEP OUT	3" Sans Serif Gothic or Block
BEYOND THIS POINT	1" Sans Serif Gothic or Block
ASBESTOS ABATEMENT WORK	1" Sans Serif Gothic or Block
IN PROGRESS	1" Sans Serif Gothic or Block
BREATHING ASBESTOS DUST MAY BE HAZARDOUS TO YOUR HEALTH	14 Point Gothic

Immediately inside door and outside critical barriers post an approximately 20 inch by 14 inch manufactured caution sign displaying the following legend with letter sizes and styles of a visibility required by 29 CFR 1926:

LEGEND

DANGER

ASBESTOS

CANCER AND LUNG DISEASE HAZARD
RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED
IN THIS AREA

- E. Alternate Methods of Enclosure: Alternate methods of containing the Work Area may be submitted to the Owner's Technical Representative for approval. Do not proceed with any such method(s) without approval of the Owner's Technical Representative.
- F. Respiratory and Worker Protection: Before proceeding beyond this point in providing Temporary Enclosures:
1. Provide Worker Protection per Article 3.02.
 2. Provide Respiratory Protection per Article 3.03
 3. Provide Personnel Decontamination Unit per Article 3.04.
- G. Critical Barriers:
1. Completely separate the Work Area(s) from other portions of the building, and the outside by closing openings with two sheet plastic barriers at least 6 mil in thickness each, and by sealing cracks leading out of Work Area with duct tape.
 2. Individually seal ventilation openings (supply and exhaust), lighting fixtures, clocks, doorways, windows, convectors and speakers, and other openings into the Work Area with duct tape alone or with polyethylene sheeting at least 6 mil in thickness, taped securely in place with duct tape. Maintain seal until all abatement work including Project Decontamination is completed. Take care in sealing of lighting fixtures to avoid melting or burning of sheeting.
 3. Mechanically support sheet plastic independently of duct tape or spray glue seals so that seals do not support the weight of the plastic. Following are acceptable methods of

supporting sheet plastic barriers. Alternative support methods may be used if approved in writing by the Owner's Technical Representative.

- a. Plywood squares 6" x 6" x 3/8" held in place with one 6d smooth masonry nail or electro-galvanized common nail driven through center of the plywood and duct tape on plastic so that plywood clamps plastic to the wall. Locate plywood squares at each end, corner and at maximum 4 feet on centers.
- b. Nylon or polypropylene rope or wire with a maximum unsupported span of 10 feet, minimum 1/4" in diameter suspended between supports securely fastened on either side of opening at maximum 1 foot below ceiling. Tighten rope so that it has 2" maximum dip. Drape plastic over rope from outside Work Area so that a two-foot long flap of plastic extends over rope into Work Area. Staple or wire plastic to itself 1" below rope at maximum 6" on centers to form a sheath over rope. Lift flap and seal to ceiling with duct tape or spray cement. Seal loop at bottom of flap with duct tape. Erect entire assembly so that it hangs vertically without a "shelf" upon which debris could collect.

4. Provide Pressure Differential System per Part 3.01 L of this Section.
5. Clean housings and ducts of over spray materials prior to erection of any Critical Barrier that will restrict access.

H. Prepare Area:

1. Scaffolding: If fixed scaffolding is to be used to provide access, HEPA vacuum and wet clean area prior to scaffolding installation.
2. Remove electrical and mechanical items, such as lighting fixtures, clocks, diffusers, and registers that cover any part of the surface to be worked on.
3. Remove general construction items such as cabinets, casework, door and window trim, moldings, ceilings, and trim that cover the surface of the work as required to prevent interference with the work. Clean, decontaminate and reinstall such materials, upon completion of removal work with materials, finishes, and workmanship to match existing installations before start of work.
4. Clean contaminated furniture, equipment, and or supplies with a HEPA filtered vacuum cleaner or by wet cleaning. Remove movable objects out of the Work Area to a temporary storage location designated by the Owner's Technical Representative.
5. Clean surfaces in Work Area with a HEPA filtered vacuum or by wet wiping prior to the installation of primary barrier.

I. Primary Barrier:

1. Protect building and other surfaces in the Work Area from damage from water and high humidity and from contamination from asbestos-containing debris, slurry or high airborne fiber levels by covering with a primary barrier as described below.
2. Sheet Plastic: Protect surfaces in the Work Area with two layers of plastic sheeting on floors, ceilings and walls, or as otherwise directed by the Owner's Inspection and Testing Agency. Perform work in the following sequence.

- a. Cover Floor of Work Area with 2 individual layers of clear polyethylene sheeting (except where floor tile abatement is occurring), each at least 6 mil in thickness, turned up walls at least 12 inches. Form a sharp right angle bend at junction of floor and wall so that there is no radius that could be stepped on causing the wall attachment to be pulled loose. Both spray-glue and duct tape seams in floor covering. Locate seams in top layer six feet from, or at right angles to, seams in bottom layer. Install sheeting so that top layer can be removed independently of bottom layer.
 - b. Cover walls in Work Area including Critical Barrier sheet plastic barriers with two layers of polyethylene sheeting at least 6 mils in thickness, mechanically supported and sealed with duct tape or spray-glue in the same manner as described above for critical barriers. Tape joints including the joining with the floor covering with duct tape or as otherwise indicated on the Contract Documents or in writing by the Owner's Technical Representative.
 - c. Similarly, cover suspended ceiling tile, acoustical plaster ceiling, and other ceilings with a porous surface, with a minimum of one layer of polyethylene sheeting, at least 6 mil in thickness.
 - d. Repair of Damaged Polyethylene Sheeting: Remove and replace plastic sheeting that has been damaged by removal operations or where seal has failed allowing water to seep between layers. Remove affected sheeting and wipe down entire area. Install new sheet plastic only when area is completely dry.
- J. Stop Work: If the Critical or Primary barrier falls or is breached in any manner stop work immediately. Do not start work until authorized in writing by the Owner's Technical Representative.
- K. Exterior Enclosures: Construct exterior enclosures as a Critical Barrier as necessary to completely enclose the work. Fabricate from reinforced polyethylene sheeting and 2" x 4" wood framework. Attach to existing building components or brace as necessary for lateral stability. Construct walls to meet state and local regulations for construction of temporary buildings.
- L. Pressure Differential Isolation:
1. Isolate the Work Area from adjacent areas or systems of the building with a Pressure Differential that will cause a movement of air from outside to inside at any breach in the physical isolation of the Work Area.
 2. Relative Pressure in Work Area: Continuously maintain the work area at an air pressure that is lower than that in any surrounding space in the building, or at any location in the immediate proximity outside of the building envelope. This pressure differential when measured across any physical or critical barrier must equal or exceed a static pressure of:

0.02 inches of water.

Install manometer and related tubing to continuously measure pressure differential.
 3. Accomplish the pressure differential by exhausting a sufficient number of HEPA filtered fan units from the work area. The number of units required will depend on machine characteristics, the seal at barriers, and required air circulation. The number of units will

increase with increased make-up air or leaks into the Work Area. Determine the number of units required for pressure isolation by the following procedure:

- a. Establish required air circulation in the work area, personnel and equipment decontamination units.
 - b. Establish isolation by increased pressure in adjacent areas or as part of seals where required.
 - c. Exhaust a sufficient number of units from the work area to develop the required pressure differential.
4. The required number of units is the number determined above plus one additional unit.
5. Vent HEPA filtered fan units to outside of building unless authorized in writing by Owner's Technical Representative.
- a. Mount units to exhaust directly or through disposable ductwork.
 - b. Use only new ductwork except for sheet metal connections and elbows.
 - c. Use ductwork and fittings of same diameter or larger than discharge connection on fan unit.
 - d. Use inflatable, disposable plastic ductwork in lengths not greater than 100 feet.
 - e. Use spiral wire-reinforced flex duct in lengths not greater than 50 feet.
 - f. Arrange exhaust as required to inflate duct to rigidity sufficient to prevent flapping.
 - g. If direction of discharge from fan unit is not aligned with duct use sheet metal elbow to change direction. Use six feet of spiral wire reinforced flex duct after direction change.

M. Air Circulation in the Work Area:

1. Air Circulation: For purposes of this section air circulation refers to either the introduction of outside air to the Work Area or the circulation and cleaning of air within the Work Area.
2. Air circulation in the Work Area is a minimum requirement intended to help maintain airborne fiber counts at a level that does not significantly challenge the work area isolation measures. The Contractor may also use this air circulation as part of the engineering controls in his worker protection program.
3. Determining the Air circulation Requirements: Provide a fully operational air circulation system supplying a minimum of 4 air changes per hour.
4. Add one (1) additional unit as a backup in case of equipment failure or machine shutdown for filter changing.

N. Exhaust System: Pressure differential isolation and air circulation in the Work Area are to be accomplished by an exhaust system as described below.

1. Exhaust units from the Work Area to meet air circulation requirement of this section.
2. Location of HEPA Filtered Fan Units: Locate fan unit(s) so that makeup air enters work area primarily through decontamination facilities and traverses Work Area as much as possible. This may be accomplished by positioning the HEPA filtered fan unit(s) at a maximum distance from the worker access opening or other makeup air sources.
3. Vent to outside of building, unless authorized in writing by the Owner's Technical Representative. If venting indoors is necessary, area air samples will be collected at the vent exhaust and analyzed by PCM twice per shift. No venting indoors shall be permitted

until testing of HEPA filters associated with each air filtration device indicates an efficiency of at least 99.97 %.

4. Decontamination Units: Arrange Work Area and decontamination units so that the majority of make up air comes through the Decontamination Units. Use only personnel or equipment Decontamination Unit at any time and seal the other so that make up air passes through unit in use.
 5. Supplemental Makeup Air Inlets: Provide where required for proper air flow through the Work Area in location approved by the Owner's Technical Representative by making openings in the plastic sheeting that allow air from outside the building into the Work Area. Locate auxiliary makeup air inlets as far as possible from the fan unit(s) (e.g., on an opposite wall), off the floor (preferably near the ceiling), and away from barriers that separate the Work Area from occupied clean areas. Cover with flaps to reseal automatically if the pressure differential system should shut down for any reason. Spray flap and around opening with spray adhesive so that if flap closes meeting surfaces are both covered with adhesive. Use adhesive that forms contact bond when dry.
- O. Recirculation System: Pressure differential isolation and air circulation in the Work Area are to be accomplished by a recirculation system as described below.
1. Recirculate air in the Work Area through HEPA filtered fan units to accomplish air circulation requirements of this section.
 2. Location of Fan Units: Locate HEPA filtered fan units so that air is circulated through all parts of the Work Area, and so that required pressure is maintained at all parts of Work Area geometry. Move units as necessary so that in any location where asbestos-containing materials are being disturbed the discharge from one HEPA filtered fan unit is blowing contamination away from workers. Direct airflow in these locations so that it is predominantly toward workers' backs at the breathing zone elevation.
- P. Use of the Pressure Differential and Air Circulation System:
1. General: Each unit shall be serviced by a dedicated minimum 115V-20A circuit with ground fault circuit interrupter (GFCI) supplied from temporary power supply installed by the Contractor's licensed electrician. Do not use existing branch circuits to power fan units.
 2. Testing the System: Test pressure differential system before any asbestos-containing material is wetted or removed. After the Work Area has been prepared, the decontamination facility set up, and the fan unit(s) installed, start the unit(s) (one at a time). Demonstrate operation and testing of pressure differential system to Owner's Technical Representative.
 3. Demonstrate Condition of Equipment for each HEPA filtered fan unit and pressure differential monitoring equipment including proper operation of the following:
 - a. Squareness of HEPA Filter
 - b. Condition of Seals
 - c. Proper operation of lights
 - d. Proper operation of automatic shut down if exhaust is blocked
 - e. Proper operation of alarms
 - f. Proper operation of magnehelic gauge
 - g. Proper operation and calibration on pressure monitoring equipment

4. Demonstrate Operation of the pressure differential system to the Owner's Technical Representative will include, but not be limited to, the following:
 - a. Plastic barriers and sheeting move lightly in toward Work Area.
 - b. Curtain of decontamination units moves lightly in toward Work Area.
 - c. There is a noticeable movement of air through the Decontamination Unit.
 - c. Use smoke tube to demonstrate air movement from Clean Room through Shower Room to Equipment Room.
 - e. Use smoke tubes to demonstrate a definite motion of air across all areas in which work is to be performed.
 - f. Use a differential pressure meter or manometer to demonstrate the required pressure differential at every barrier separating the Work Area from the balance of the building, equipment, ductwork or outside.
5. Modify the Pressure Differential System as necessary to demonstrate successfully the above.
6. Use of System during Abatement Operations:
 - a. Start fan units before beginning work (before any asbestos-containing material is disturbed). After abatement work has begun, run units continuously to maintain a constant pressure differential and air circulation until decontamination of the work area is complete. Do not turn off units at the end of the work shift or when abatement operations temporarily stop.
 - b. Do not shut down air pressure differential system during encapsulating procedures, unless authorized by the Owner's Technical Representative in writing. Supply sufficient pre-filters to allow frequent changes.
 - c. Start abatement work at a location farthest from the fan units and proceed toward them. If an electric power failure occurs, immediately stop all abatement work and do not resume until power is restored and fan units are operating again.
 - d. At completion of abatement work, allow fan units during final cleaning sequence to remove airborne fibers that may have been generated during abatement work and cleanup and to purge the Work Area with clean makeup air. The units may be required to run for a longer time after decontamination, if dry or only partially wetted asbestos material was encountered during any abatement work. Replace all used pre-filters with new pre-filters and decontaminate the exterior surfaces of air filtration device prior to performing clearance air testing.
7. Dismantling the System: When a final inspection and the results of final air tests indicate that the area has been decontaminated, fan units shall remain operational in the Work Area until all polyethylene sheeting and containment barriers are dismantled. Before removal from the Work Area, remove and properly dispose of pre-filter, decontaminate exterior of machine and seal intake to the machine with 6-mil polyethylene to prevent environmental contamination from the filters.

3.02 WORKER PROTECTION AND DECONTAMINATION PROCEDURES

- A. The work of this part is required for the removal or other abatement of all types of ACM, including both friable and nonfriable materials unless otherwise noted.

- B. Provide worker protection as required by the most stringent OSHA and/or EPA standards applicable to the work. The following procedures are minimums to be adhered to regardless of fiber count in the Work Area.
- C. Each time Work Area is entered remove street clothes in the Changing Room of the Personnel Decontamination Unit and put on new disposable coverall, new head cover, and a clean respirator. Proceed through shower room to equipment room and put on work boots.
- D. Require workers to adhere to the following personal decontamination procedures whenever they leave the Work Area:
 - 1. When exiting area, remove disposable coveralls, disposable head covers, and disposable footwear covers or boots in the equipment room.
 - 2. Still wearing respirators, proceed to showers. Showering is mandatory. Care must be taken to follow reasonable procedures in removing the respirator to avoid asbestos fibers while showering. The following procedure is required as a minimum:
 - 3. Thoroughly wet body including hair and face. If using a Powered Air-Purifying Respirator (PAPR) hold blower unit above head to keep canisters dry.
 - 4. With respirator still in place thoroughly wash body, hair, respirator face piece, and all parts of the respirator except the blower unit and battery pack on a PAPR. Pay particular attention to seal between face and respirator and under straps.
 - 5. Take a deep breath, hold it and/or exhale slowly, completely wet hair, face, and respirator. While still holding breath, remove respirator and hold it away from face before starting to breath.
 - 6. Carefully wash face piece of respirator inside and out.
 - 7. If using PAPR, shut down in the following sequence, first cap inlets to filter cartridges, then turn off blower unit (this sequence will help keep debris which has collected on the inlet side of filter from dislodging and contaminating the outside of the unit). Thoroughly wash blower unit and hoses. Carefully wash battery pack with wet rag. Be extremely cautious of getting water in battery pack as this will short out and destroy battery.
 - 8. Dispose of wet filters from air purifying respirator.
 - 9. Rinse thoroughly.
 - 10. Rinse shower room walls and floor prior to exit.
 - 11. Proceed from shower to Changing Room and change into street clothes or into new disposable work clothes.
- E. Within Work Area: Require that workers NOT eat, drink, smoke, chew tobacco or gum, or apply cosmetics in the Work Area. To eat, chew, drink or smoke, workers shall follow the procedure described above, and then dress in street clothes before entering the non-Work Areas of the building.

3.03 RESPIRATORY PROTECTION

- A. Require that respiratory protection be used at all times that there is any possibility of disturbance of asbestos-containing materials whether intentional or accidental.
- B. Require that a respirator be worn by anyone in a Work Area at all times, regardless of activity, during a period that starts with any operation which could cause airborne fibers until the area has been cleared for re-occupancy in accordance with Article 1.10 of this Section.
- C. Regardless of Airborne Fiber Levels: Require that the minimum level of respiratory protection used be half-face air-purifying respirators with high efficiency filters.
- D. Do not allow the use of single-use, disposable, or quarter-face respirators for any purpose.
- E. Fit Testing:
 - 1. Initial Fitting: Provide initial fitting of respiratory protection during a respiratory protection course of training set up and administered by a Certified Industrial Hygienist. Fit types of respirator to be actually worn by each individual. Allow an individual to use only those respirators for which training and fit testing has been provided.
 - 2. On a Weekly Basis, check the fit of each worker's respirator by having irritant smoke blown onto the respirator from a smoke tube.
 - 3. Upon Each Wearing: Require that each time an air-purifying respirator is put on it be checked for fit with a positive and negative pressure fit check in accordance with the manufacturer's instructions or ANSI Z88.2 (1980).
- F. Type of Respiratory Protection Required: Provide respiratory protection as indicated in accordance with OSHA requirements. In the event that an initial exposure assessment has previously been conducted, determine the proper level of protection by dividing the expected or actual airborne fiber count in the Work Area by the appropriate "protection factors" specified by OSHA for various types of respirators. The level of respiratory protection that supplies an airborne fiber level inside the respirator, at the breathing zone of the wearer, at or below the permissible exposure limit (PEL) is the minimum level of protection allowed.
- G. Permissible Exposure Limit (PEL):
 - 1. 8-Hour Time Weighted Average (TWA) of asbestos fibers to which any worker may be exposed shall not exceed 0.1 fiber/cc.
 - 2. 8-Hour Time Weighted Average (TWA) and Ceiling Concentration of asbestos fibers based on a 30 minute period to which any worker may be exposed shall not exceed 1.0 fiber/cc.
 - 3. Contractor must assess asbestos operations for their potential to generate airborne fibers. Contractor must use exposure-monitoring data to assess worker exposures.
 - 4. Fibers: For purposes of this section, fibers are defined as all fibers regardless of composition as counted in the OSHA Reference Method (ORM), or NIOSH 7400 procedure.

L. Air Purifying Respirators:

1. Negative pressure - half or full-face mask: Supply a sufficient quantity of respirator filters approved for asbestos, so that workers can change filters during the workday. Require that respirators be wet-rinsed, and filters discarded, each time a worker leaves the Work Area. Require that new filters be installed each time a worker re-enters the Work Area. Store respirators and filters at the job site in the changing room and protect totally from exposure to asbestos prior to their use.
2. Powered air purifying - half or full face mask: Supply a sufficient quantity of high efficiency respirator filters approved for asbestos so that workers can change filters at any time that flow through the face piece decreases to the level at which the manufacturer recommends filter replacement. Require that regardless of flow, filter cartridges be replaced after 40 hours of use. Require that HEPA elements in filter cartridges be protected from wetting during showering. Require entire exterior housing of respirator, including blower unit, filter cartridges, hoses, battery pack, face mask, belt, and cords, be washed each time a worker leaves the Work Area. Caution should be used to avoid shorting battery pack during washing. Provide an extra battery pack for each respirator so that one can be charging while one is in use.

- M. Type "C" Respirator: Continuously monitor the air system operation including compressor operation, filter system operation, backup air capacity and warning and monitoring devices at all times that system is in operation. Assign an individual, trained by manufacturer of the equipment in use or by a Certified Industrial Hygienist, in the operation and maintenance of the system to provide this monitoring. Assign no other duties to this individual that will take him away from monitoring the air system.

3.04 DECONTAMINATION UNITS

- A. Personnel Decontamination Unit: Provide a Personnel Decontamination Unit consisting of a serial arrangement of connected rooms or spaces, Clean Room, Shower Room, Equipment Room with airlocks between spaces. Require all persons without exception to pass through this Decontamination Unit for entry into and exiting from the Work Area for any purpose. Do not allow parallel routes for entry or exit. Do not remove equipment or materials through Personnel Decontamination Unit. Provide temporary lighting within Decontamination Units as necessary to reach a lighting level of 100-foot candles.

1. Changing Room (clean room): Provide a room that is physically and visually separated from the rest of the building for the purpose of changing into protective clothing.
 - a. Construct using polyethylene sheeting, at least 6 mil in thickness, to provide an airtight seal between the Changing Room and the rest of the building.
 - b. Locate so that access to Work Area from Changing Room is through Shower Room.
 - c. Separate Changing Room from the building by a sheet plastic flapped doorway.
 - d. Require workers to remove street clothes in this room, dress in clean, disposable coveralls, and don respiratory protection equipment. Do not allow asbestos-contaminated items to enter this room. Require Workers to enter this room either from outside the structure dressed in street clothes, or naked from the showers.
 - e. An existing room may be utilized as the Changing Room if it is suitably located and of a configuration whereby workers may enter the Changing Room directly from the Shower Room. Protect surfaces of room with sheet plastic as set forth in Temporary Enclosures. Authorization for this must be obtained from the Owner's Technical Representative in writing prior to start of construction.

- f. Maintain floor of changing room dry and clean at all times. Do not allow overflow water from shower to wet floor in changing room.
 - g. Damp wipe surfaces twice after each shift change with a disinfectant solution.
 - h. Provide posted information for emergency phone numbers and procedures.
 2. Airlocks: Provide an airlock between Clean Room and Shower Room and an airlock (3' minimum) between shower room and equipment room.
 3. Shower Room: Provide a completely watertight operational shower to be used for transit by cleanly dressed workers heading for the Work Area from the Changing Room, or for showering by workers headed out of the Work Area after undressing in the Equipment Room.
 - a. Construct room by providing a shower pan and 2 shower walls in a configuration that will cause water running down walls to drip into pan. Install a freely draining wooden floor in shower pan at elevation of top of pan.
 - b. Separate this room from the rest of the building with airtight walls fabricated of two layers of 6-mil polyethylene.
 - c. Provide showerhead and controls.
 - d. Provide hot and cold water.
 - e. Provide temporary extensions of existing hot and cold water and drainage, as necessary for a complete and operable shower.
 - f. Provide a soap dish and a continuously adequate supply of soap and maintain in sanitary condition.
 - g. Arrange so that water from showering does not splash into the Changing or Equipment Rooms.
 - h. Arrange water shut off and drain pump operation controls so that a single individual can shower without assistance from either inside or outside of the Work Area.
 - i. Provide flexible hose shower head.
 - j. Pump waste water to drain or to storage for use in amended water. If pumped to drain, provide 20 micron and 5 micron wastewater filters in line to drain or waste water storage. Change filters daily or more often if necessary. Locate filters inside shower unit so that water lost during filter changes is caught by shower pan.
 - k. Provide hose bib.
 4. Equipment Room (contaminated area): Require work equipment, footwear and additional contaminated work clothing to be left here. This is a change and transit area for workers.
 - a. Separate this room from the rest of the building with airtight walls fabricated of two layers of 6-mil polyethylene.
 - b. Provide a drop cloth layer of sheet plastic on floor in the Equipment Room for every shift change expected. Roll drop cloth layer of plastic from Equipment Room into Work Area after each shift change. Replace before next shift change. Provide a minimum of two (2) layers of plastic at all times. Use only clear plastic to cover floors.
- B. Equipment Decontamination Unit:
 - 1 Provide an Equipment Decontamination Unit consisting of a serial arrangement of rooms, Clean Room, Holding Room, Wash Room for removal of equipment and material from Work Area. Do not allow personnel to enter or exit Work Area through Equipment Decontamination Unit.
 2. Wash Down Station: Provide an enclosed Shower Unit located in Work Area just outside Wash Room as an equipment, bag and container cleaning station.

- a. Fabricate waterproof floor extending 6' - 0" beyond Wash Down station in all directions. Install seamless waterproof membrane over area and extend over curbs on all four sides. Form curbs from 2" x 4" lumber laid on the flat.
 - b. Waterproof membrane shall be fabricated from elastomeric membrane or 10 mil polyethylene, minimum.
 - c. Do not allow water to collect on waterproof membrane. Remove continuously with a wet vacuum or mops.
3. Wash Room: Provide washroom for cleaning of bagged or containerized asbestos-containing waste materials passed from the Work Area.
 - a. Construct wash room of nominal 2" x 4" wood framing and polyethylene sheeting, at least 6 mil in thickness and located so that packaged materials, after being wiped clean, can be passed to the Holding Room.
 - b. Separate this room from the Work Area by a single flapped door of 6-mil polyethylene sheeting.
 - c. Provide a drop cloth layer of plastic on floor in the Wash Room for every load-out operation. Roll this drop cloth layer of plastic from Wash Room into Work Area after each load-out. Provide a minimum of two (2) layers of plastic at all times. Use only clear plastic to cover floors.
4. Airlock: Provide an airlock (4' minimum) between Wash Room and Holding Room. This is a transit area.
 - a. Separate this room from adjacent spaces by a sheet plastic flapped doorway.
 - b. Separate this room from the rest of the building and adjacent spaces with airtight walls fabricated of two layers of 6-mil polyethylene.
5. Holding Room: Provide Holding Room as a drop location for bagged asbestos-containing materials passed from the Wash Room. Construct Holding Room of nominal 2" x 4" wood framing and polyethylene sheeting, at least 6 mil in thickness and located so that bagged materials cannot be passed from the Wash Room through the Holding Room to the Clean Room.
 - a. Separate this room from the adjacent rooms by flap doors fabricated from 6-mil sheet plastic.
6. Airlock: Provide an airlock (4' minimum) between Holding Room and Clean Room. This is a transit area.
 - a. Separate this room from adjacent spaces by a sheet plastic flap doorway.
 - b. Separate this room from the rest of the building and adjacent spaces with airtight walls fabricated of two layers of 6-mil polyethylene.
7. Clean Room: Provide Clean Room to isolate the Holding Room from the building exterior. If possible locate to provide direct access to the Holding Room from the building exterior.
 - a. Erect Critical and Primary Barriers as described herein in an existing space. If no space exists construct Clean Room of 2"x 4" wood framing and polyethylene sheeting, at least 6 mil in thickness.
 - b. Separate this room from the exterior by a single flap door of 6-mil polyethylene sheeting.
8. Load-out Area: The load-out area is the transfer area from the building to a truck or dumpster. It may be the Clean Room of the Equipment Decontamination unit or a separate room or loading dock area. Erect Critical and Primary barriers as described in Part 3.01 in load-out area.

- a. During transfer of material from load-out area erect primary barriers as described in Part 3.01 as necessary to seal path from load-out area to truck or dumpster.
- C. Decontamination Sequence: Take equipment or material from the Work Area through the Equipment Decontamination Unit according to the following procedure:
1. At wash down station, thoroughly wet clean contaminated equipment or sealed polyethylene bags and pass into Wash Room.
 2. When passing equipment or containers into the Wash Room, close doorways of the Equipment Decontamination Unit, other than the doorway between the Wash down Station and the Wash Room. Keep outside personnel clear of the Equipment Decontamination Unit.
 3. Once inside the washroom, wet clean the bags and/or equipment.
 4. When cleaning is complete pass items into Holding Room. Close doorways except the doorway between the Holding room and the Clean Room.
 5. Workers from the building exterior enter Holding Area and remove decontaminated equipment and/or containers for disposal.
 6. Require these workers to wear full protective clothing and appropriate respiratory protection.
 7. At no time is a worker from an uncontaminated area to enter the enclosure when a removal worker is inside.
- D. Construction of the Decontamination Units:
1. Walls and Ceiling: Construct airtight walls and ceiling using 2 layers (minimum) of polyethylene sheeting, at least 6 mil in thickness. Attach to existing building components or a temporary framework.
 2. Floors: Use 2 layers (minimum) of 6-mil polyethylene sheeting to cover floors in all areas of the Decontamination Units. Use only clear plastic to cover floors.
 3. Flap Doors: Fabricated from three (3) overlapping sheets with openings a minimum of three feet (3') wide. Configure so that sheeting overlaps adjacent surfaces. Weigh sheets at bottoms as required so that they quickly close after being released. Put arrows on sheets to indicate direction of overlap and/or travel. Provide a minimum of six feet (6') between entrance and exit of any room. Provide a minimum of three feet (3') between doors to airlocks.
 1. If the Decontamination area is located within an area containing friable asbestos on overhead ceilings, ducts, piping, etc., provide the area with a minimum 1/4 inch hardboard or 1/2 inch plywood "ceiling" with 2 layers, minimum, polyethylene sheeting, at least 6 mil in thickness covering the top of the "ceiling".
 4. Visual Barrier: Where the Decontamination area is immediately adjacent to and within view of occupied areas, provide a visual barrier of opaque polyethylene sheeting at least 6 mil in thickness so that worker privacy is maintained and work procedures are not visible to building occupants. Where the area adjacent to the Decontamination area is accessible to the public, construct a solid barrier on the public side of the sheeting to

protect the sheeting. Construct barrier with wood or metal studs covered with minimum 1/4-inch thick hardboard or 1/2-inch plywood. Where the solid barrier is provided, sheeting need not be opaque.

1. Alternate methods of providing Decontamination facilities may be submitted to the Owner's Technical Representative for approval. Do not proceed with any such method(s) without written authorization of the Owner's Technical Representative.
 5. Electrical: Provide sub panel at Changing Room to accommodate removal equipment. Power sub panel directly from a building electrical panel. Connect electrical branch circuits in Decontamination unit and particularly any pumps in shower room to a ground-fault circuit protection device.
- E. Cleaning of Decontamination Units: At a minimum, clean debris and residue from inside of Decontamination Units on a daily basis or as often as deemed necessary. Damp wipe or hose down all surfaces after each shift change. Clean debris from shower pans on a daily basis.
- F. Signs:
1. Post an approximately 20 inch by 14 inch manufactured caution sign at each entrance to the Work Area displaying the following legend with letter sizes and styles of a visibility required by 29 CFR 1926.1101.

LEGEND

DANGER

ASBESTOS

CANCER AND LUNG DISEASE HAZARD
RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED
IN THIS AREA

- a. Provide signs in both English and Spanish.
 - b. Provide spacing between respective lines at least equal to the height of the respective upper line.
2. Post an approximately 10 inch by 14 inch manufactured sign at each entrance to each Work Area displaying the following legend with letter sizes and styles of a visibility at least equal to the following:

<u>LEGEND</u>	<u>NOTATION</u>
NO FOOD, BEVERAGES OR TOBACCO PERMITTED	3/4" Block
ALL PERSONS SHALL DON PROTECTIVE CLOTHING (COVERINGS) BEFORE ENTERING THE WORK AREA	3/4" Block
ALL PERSONS SHALL SHOWER IMMEDIATELY AFTER LEAVING WORK AREA AND BEFORE ENTERING THE CHANGING AREA	3/4" Block

3.05 ASBESTOS REMOVAL

A. Pre-work inspection

1. Do not begin any work in any abatement work area until the Owner's Technical Representative has performed a pre-work inspection. It is the Contractor's responsibility to notify the Owner's Technical Representative of their schedule and anticipated dates for the pre-work inspection.
2. Inspection will be performed to assure all work area preparations are in place, as described herein. Any deficiencies in work area preparations will be corrected at this time. Work may not proceed until the Contractor receives written authorization from the on-site representative of the Owner's Technical Representative.

B. Wet Removal:

1. Thoroughly wet to satisfaction of Owner's Technical Representative Asbestos-Containing Materials to be removed prior to stripping to reduce fiber dispersal into the air. Accomplish wetting by a fine spray (mist) of amended water or removal encapsulant. Saturate material sufficiently to wet to the substrate without causing excess dripping. Allow time for amended water or removal encapsulant to penetrate material thoroughly. If amended water is used, spray material repeatedly during the work process to maintain a continuously wet condition. If a removal encapsulant is used, apply in strict accordance with manufacturer's written instructions.
2. Mist work area continuously with amended water whenever necessary to reduce airborne fiber levels.
3. Remove intact, saturated Asbestos-Containing Material in small sections from all areas. Do not allow material to dry out. Lower ACM to ground—do not drop ACM from any height. As it is removed, simultaneously package material while still wet into disposal bags or other appropriate waste container. Twist neck of bags, bend over and seal with minimum three wraps of duct tape.
4. Evacuate air from disposal bags with a HEPA filtered vacuum cleaner before sealing.

C. Clean substrate from which ACM was removed by wet wiping and using a HEPA vacuum until no visible debris remains.

- D. Encapsulation of Substrate: Perform encapsulation of substrate to lockdown any nonvisible fibers that may be remaining.
- E. Floor material abatement shall be conducted in the same manner as abatement of friable ACM. Full work area preparation, including two layers of polyethylene on all walls and ceilings, five-chamber decontamination facilities, and similar requirements, are necessary. Mastic and associated subflooring and tarpaper and similar materials underlying linoleum floor sheeting or floor tile shall be removed to a clean substrate. Asbestos Abatement Contractor shall be responsible for dismantling shelving, cabinetry, partition walls, etc., necessary to access asbestos flooring and underlying materials to be removed.

3.06 WORK AREA DECONTAMINATION

- A. General: Decontamination of the Work Area following asbestos abatement.
 - 1. If the asbestos abatement work is on damaged or friable materials the work is a three-step procedure with two cleanings of the Primary Barrier plastic prior to its removal and one cleaning of the room surfaces to remove any new or existing contamination. Unless specifically indicated otherwise all materials are considered damaged or friable for purposes of this section.
 - 2. If the asbestos abatement work is on undamaged, nonfriable materials that have not been rendered friable, the decontamination procedure is a two-step procedure with two cleanings of the Primary Barrier plastic to remove contamination, thus preventing contamination of the building when the Work Area isolation barriers are removed.
 - 3. In both cases operation of the pressure differential system is used to remove airborne fibers generated by the abatement work.
- B. Start of Work: Work of this part begins with the cleaning of the Primary Barrier. At start of work the following will be in place:
 - 1. Primary Barrier: Two layers of polyethylene sheeting on floor and one layer on walls.
 - 2. Critical Barrier: An airtight barrier between the Work Area and other portions of the building or the outside.
 - 3. Critical Barrier Sheeting: Over lighting fixtures and clocks, ventilation openings, doorways, convectors, speakers and other openings.
 - 4. Decontamination Units: For personnel and equipment in operating condition.
 - 5. Pressure Differential System: In operation.
- C. First Cleaning: Carry out a first cleaning of all surfaces of the work area including items of remaining sheeting, tools, scaffolding and/or staging by use of damp-cleaning and mopping, and/or a High Efficiency Particulate Air (HEPA) filtered vacuum. (Note: A HEPA vacuum may fail if used with wet material.) Do not perform dry dusting or dry sweeping. Use each surface of a cleaning cloth one time only and then dispose of as contaminated waste. Continue this cleaning until there is no visible debris from removed materials or residue on plastic sheeting or other surfaces.
- D. Remove Filters in Air Handling System(s) and dispose of as asbestos-containing waste in accordance with requirements of Part 3.08 of this Section.

- E. Wait 96 air changes to allow HEPA filtered fan units to clean air of airborne asbestos fibers. Use oscillating fans as necessary to assure circulation of air in all parts of work areas during this period. Maintain Pressure Differential System in operation for the entire 96-air change period.
- F. Second Cleaning: Carry out a second cleaning of all surfaces in the work area in the same manner as the first cleaning.
- G. Encapsulation of substrate: Perform encapsulation of substrate at this time. Maintain Pressure Differential System in operation during encapsulation work. Perform work only after meeting the following requirements:
 - 1. Surfaces to be covered have met the requirements for a visual inspection in this section.
 - 2. Airborne fiber counts in the Work Area are at or below 0.01 fibers per cubic centimeter as measured by phase contrast microscopy.
- H. Removal of Primary Barriers: Immediately following the second cleaning of the Primary plastic, remove Primary Barrier sheeting and Material Decontamination Unit, if there is one, leaving only:
 - 1. Critical Barrier: Which forms the sole barrier between the Work Area and other portions of the building or the outside.
 - 2. Critical Barrier Sheeting: Over lighting fixtures and clocks, ventilation openings, doorways, convectors, speakers, and other openings.
 - 3. Decontamination Unit: For personnel, in operating condition.
 - 4. Pressure Differential System: Maintain in continuous operation.
- I. Final cleaning: Carry out a final cleaning of all surfaces in the work area in the same manner as the first cleaning immediately after removal of Primary plastic. This cleaning is now being applied to existing room surfaces. Take care to avoid watermarks or other damage to surfaces.
- J. Contractor's Testing: At the completion of the above cleaning visually inspect all surfaces. Reclean if any dust, debris, etc. is found. At completion of this inspection sweep entire Work Area including walls, ceilings, ledges, floors and other surfaces in the Work Area with exhaust from forced-air equipment (leaf blower with approximately 1 horsepower electric motor or equivalent). Do not direct forced-air equipment at any seal in any Critical Barrier. If any debris or dust is found repeat the cleaning. Continue this process until no debris dust or other material is found while sweeping of all surfaces with forced-air equipment.
- K. Wait 48 air changes to allow HEPA filtered fan units to clean air of airborne asbestos fibers. Use oscillating fans as necessary to assure circulation of air in all parts of work areas during this period. Maintain pressure differential system in operation for the entire 48-air change period.
- L. After final cleaning perform a complete visual inspection of the entire Work Area including: all surfaces, ceiling, walls, floor, decontamination unit, plastic sheeting, seals over ventilation openings, doorways, windows, and other openings; look for debris from any sources, residue on surfaces, dust or other matter. During visual inspection sweep entire work area including walls, ceilings, ledges, floors, and other surfaces in the room with exhaust from forced air equipment (leaf blower with approximately 1 horsepower electric motor or equivalent). If any

debris, residue, dust or other matter is found repeat final cleaning and continue decontamination procedure from that point. When the area is visually clean, and if after sweeping of all surfaces with leaf blower, no debris, residue, dust or other material is found, complete the certification at the end of this section. Visual inspection is not complete until confirmed in writing, on the certification, by Project Administrator.

- M. Temporary Lighting: Provide a minimum of 100-foot candles of lighting on all surfaces in the areas to be subjected to visual inspection. Provide hand held lights providing 150-foot candles at 4 feet capable of reaching all locations in work area.
- N. Final Air Sampling:
 - 1. After the work area is found to be visually clean, air samples will be taken and analyzed in accordance with the procedure for PCM, as applicable, set forth in Article 1.12 of this Section.
 - 2. If Release Criteria are not met, repeat Final Cleaning and continue Decontamination Procedure from that point. Contractor will bare cost for additional PCM air testing if first set fails.
 - 3. If Release Criteria are met, proceed to work of this Section on Removal of Work Area Isolation.
- O. Encapsulation of Substrate: Perform encapsulation of substrate or installation of spray-applied finishes or fireproofing, where required, before Removal of Work Area Isolation as specified below. Maintain Pressure Differential System in operation during encapsulation work.

3.07 DISPOSAL OF ASBESTOS WASTE

- A. Disposal Bags or Polyethylene Sheet Wrapping: Provide 12 mil thick, in total, leak-tight polyethylene bags or sheet wrapping, to contain all waste. On outermost layer, apply three labels with text as follows:
 - 1. First Label:

CAUTION
CONTAINS ASBESTOS FIBERS
AVOID OPENING OR BREAKING CONTAINER
BREATHING ASBESTOS IS HAZARDOUS TO YOUR HEALTH
 - 2. Second Label: Provide in accordance with 29 CFR 1910.1200(f) of OSHA's Hazard Communication standard:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD
BREATHING AIRBORNE ASBESTOS, TREMOLITE, ANTHOPHYLLITE, OR
ACTINOLITE FIBERS IS HAZARDOUS TO YOUR HEALTH
 - 3. Third Label: Provide in accordance with U.S. Department of Transportation regulation on hazardous waste marking. 49 CFR parts 171 and 172. Hazardous Substances: Final Rule. Published November 21, 1986 and revised February 17, 1987:

RQ HAZARDOUS

SUBSTANCE,
SOLID, NOS,
ORM-E, NA 9188
(ASBESTOS)

4. Fourth Label: Provide in accordance with U.S. Environmental Protection Agency Regulation of the National Emission Standards for Hazardous Air Pollutants 40 CFR Part 61.150(v) Asbestos NESHAP Revision, Final rule published November 20, 1990.

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- B. Carefully load containerized waste in fully enclosed dumpsters, trucks or other appropriate fully enclosed vehicles for transport. Exercise care before and during transport, to insure that no unauthorized persons have access to the material.
1. Do not store containerized materials outside of the Work Area. Take containers from the Work Area directly to a sealed truck or dumpster.
 2. Do not transport disposal bagged materials on open trucks. Label drums with same warning labels as bags. Uncontaminated drums may be reused. Treat drums that have been contaminated as asbestos-containing waste and dispose of in accordance with this specification.
- C. Employ a waste hauler with required licenses from state and local authority with jurisdiction to haul the waste from the abatement work.
- D. Dispose of waste in a landfill that accepts asbestos waste materials. Advise the landfill operator or processor, at least ten days in advance of transport, of the quantity of material to be delivered. All waste shall be delivered to only **one** landfill.
- E. At disposal site unload containerized waste. At a disposal site, sealed plastic bags may be carefully unloaded from the truck. If bags are broken or damaged, repair or re-bag materials. Clean entire truck and contents, as appropriate.
- F. Retain receipts from landfill or processor for materials disposed.
- G. At completion of hauling and disposal of each load, submit copy of waste shipment record (WSR) and landfill receipt to the Owner's Technical Representative. The WSR must be returned to the Building Owner in no more than 35 days.
- 3.08 REMOVAL OF WORK AREA ISOLATION:
- A. Perform work specified in this article only after all requirements of this Section and Work Area Clearance have been met:
 - B. Remove the Critical Barriers separating the Work Area from the rest of the building. Remove any small quantities of residual material found upon removal of the plastic sheeting with wet wiping, HEPA filtered vacuum cleaners and local area protection. If significant quantities, as determined by the Owner's Technical Representative, are found then the entire area affected shall be decontaminated.

- C. Remove equipment, materials, and debris from the work site.
- D. Dispose of asbestos-containing waste material as specified in Article 3.07 of this Section.

3.09 SCHEDULE OF REMOVALS

- A. Conduct asbestos abatement work as specified in accordance with lettered line items and Asbestos Abatement Summary Table.
- B. Abatement Contractor is responsible for the removal of all structures including, but not limited to, fixed furniture, partition walls, fixed ceilings, wet walls and other items affixed to and preventing the removal of all identified ACM, as outlined in the scope and Asbestos Abatement Summary Table. All construction debris generated by this activity shall be properly disposed of as general construction waste by the Abatement Contractor. If selective demolition will impact ACM, it must be conducted under full-containment conditions and all generated debris disposed of as ACM waste.
- C. Abatement Contractor shall note that the majority of floor tile located throughout the first and second floor is under either 1 or 2 layers of carpet. If floor tiles lift during the removal of carpet, all work impacting these materials shall be halted and the carpet shall be removed under full containment conditions. All affected carpeting shall then be disposed of as ACM waste due to cross-contamination.
- D. Abatement Contractor shall note that there is cement floor leveler covering some of the floor tile in various locations throughout. Abatement Contractor is responsible for properly packaging all cement levelers, wood flooring and carpeting that is cross-contaminated by asbestos-containing mastic adhesive to be disposed of as ACM waste. Where asbestos-containing glue daubs are adhered to plaster, Contractor shall remove glue daubs from plaster substrate until no visible debris or staining is observed.
- E. Contractor shall note that there is original tar flashing located under the fiberboard associated with the parapet walls that also contains asbestos. Where exterior roof materials are abated Asbestos Abatement Contractor shall establish an exclusion zone by erecting barrier warning tape and asbestos warning signs. Contractor shall place polyethylene sheeting on the ground directly below the impact area extending out 10' to collect any roof materials that fall during removal. Contractor shall not use mechanical methods to cut roof into manageable sections, but shall pry the roof sections free from the substrate. The roof materials shall be wetted during removal and properly packaged and carefully lowered to the ground for placement into lined dumpsters or trailers.
- F. Because there is no way to guarantee that all ACM were identified during the building inspection conducted by Smith & Wessel Associates dated May 27, 2011, it is possible that additional ACM is present other than that identified herein. If any suspect materials are uncovered during abatement activities or demolition work that are not detailed in this design, halt further work that could possibly disturb the ACM or suspect ACM until the materials can be further tested to determine if they contain asbestos as part of the materials composition.

Asbestos Abatement Summary Table		
Type of Material	Location	Estimated Quantity
Basement		
Joint compound and associated gypsum wall/ceiling board	Storage B-1, Locksmith, Electric storage, D-15, Plumbing, Electric storage, D-10, D-12, D-14 and incoming water room	3,900 sf
Gray pipe fitting insulation	Storage B-1, incoming water closet off of room D-14 and bathroom wet walls	50 fittings
Tan 9" x 9" floor tile and underlying black mastic adhesive	Locksmith room, D-12, D-14	1,250 sf
Black/white checkerboard 9" x 9" floor tile	Room D-10	680 sf
Gray/white ceiling cement plaster and associated lath and wire mesh	Basement hallway	1,200 sf
Main Level		
Gray vibration damper cloth	Boy's bathroom	1 sf
Tan mottled 12" x 12" floor tile and underlying black mastic adhesive	Stairwell landing outside boy's bathroom	100 sf
Gray mottled 12" x 12" floor tile, mastic adhesive over gray 12" x 12" floor tile (2 layers)	Hallway and stairwell landing off of boy's bathroom	885 sf
Gray 12" x 12" floor tile over brown floor tile and underlying black mastic adhesive (2 layers)	Stair landing off girls' bathroom	185 sf
Brown floor tile, mastic adhesive and cross-contaminated pressed wood floor	D-101, D-102, D-103, D-104, D-105, D-106, D-107	3,500 sf
Gray pipe fitting insulation	Bathroom wet walls and enclosed chases	75 fittings
Brown glue daubs and associated 1' x 1' ceiling tiles and affected ceiling plaster	Stairwell landings, D-102, D-103, D-104, D-105, D-106, D-107	4,250 sf

Asbestos Abatement Summary Table		
Type of Material	Location	Estimated Quantity
Black glue daubs and associated chalk and white boards	Rooms D-102, D-103, D-104, D-105, D-106 , D-107	1,100 sf
Second floor		
Gray vibration damper cloth	Boy's bathroom, girl's bathroom	2 sf
Gray 12" x 12" floor tile over brown floor tile and underlying black mastic adhesive (2 layers)	Stair landings, mid landings and hallway	1,360 sf
Brown floor tile and mastic adhesive on pressed wood floor	D-201, D-202, D-203, D-204, D-205, D-206, D-207	4,360 sf
Gray pipe fitting insulation	Bathroom wet walls, D-207, and enclosed chases	75 fittings
Brown glue daubs associated with 1' x 1' ceiling tiles and affected ceiling plaster	Stairwell landings, D-201, D-202, D-203, D-204, D-205, D-206, D-207, D-208, boy's room, girl's room	4,650 sf
Brown glue daubs associated with 1' x 1' upper wall tiles and affected wall plaster	Rooms 201, 203	250 sf
Black glue daubs and associated chalk and white boards	Rooms D-202, D-203, D-204, D-205, D-206 , D-207	1,150 sf
Remove sink coated with condensate mastic	Rooms D-104, D-204	2 sinks
Door/window caulking	Between door/window frames and masonry opening at exterior doors on circle drive side of building	2 door/window systems
Window glazing	Stairwell windows	2 windows
Roof tar flashing	Along perimeter ice-edge, on parapet walls including cross-contaminated fiberboard, around all penetrations and additional flashing layers under fiberboard	1,250 sf and 800sf (second layers) under fiberboard at parapet walls

END OF SECTION 004.0

005.0 SPECIAL PROCEDURES FOR HANDLING LEAD PAINT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. All of the Contract Documents, including General and Supplementary Conditions and Division 1 General Requirements, apply to the work of this section.

1.2 SUMMARY

- A. This section specifies requirements for working with existing materials that have been painted with lead-based paint (LBP). The Contractor and all subcontractors who may impact LBP are responsible for compliance with all regulations, as well as specific requirements of this Section pertaining to the handling and disposal of materials that contain or are contaminated by lead. A licensed deleading contractor does not have to conduct work where LBP is impacted, rather, the requirements of this Section are intended to ensure that personnel, the Contractor and all subcontractors who disturb LBP are properly trained and qualified, use appropriate personal protection, use methods that do not create lead dust, chips, or fume, and properly dispose of or recycle components that are covered by LBP.
- B. At all times, utilize methods that minimize the generation of airborne lead particulates and fumes, and the dispersal of paint chips, soil, or other materials that are covered or contaminated by lead. Provide engineering controls and dust control measures, as necessary, to prevent the migration of lead particulates and fumes to adjacent areas. Where workers will be exposed to lead, provide all appropriate personal protective equipment as specified herein, by OSHA, and applicable state and local regulations.

1.3 SUBMITTALS

- A. Work Plan: Submit a site specific OSHA written compliance plan before conducting any work that impacts LBP. Plan must include a worker orientation plan that at a minimum includes a description of lead hazards and abatement methodologies, a review of worker protection requirements, and the outline of safety procedures.
- B. Permits for transportation and disposal of debris. Also, submit copies of manifests and receipts acknowledging disposal of all hazardous and non-hazardous waste material from the project showing delivery date, quantity, and appropriate signature of landfill's authorized representative.
- C. Where Contractor or any subcontractor determines that certain work activities may cause employee exposure to lead above the OSHA Action Level of 30 micrograms per cubic meter of air ($\mu\text{g}/\text{m}^3$), provide the following documentation for employees:
 - 1. Copies of medical records, including lead blood level monitoring data and a notarized statement by the examining medical doctor that such examinations took place and when, covering all employees to be used on the project.
 - 2. Record 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.

3. Proposed respiratory protection program for employees throughout all phases of the job, including make, model, and NIOSH approval numbers of respirators to be used; if applicable.
4. If exposure monitoring or historic data has determined that employees will not be exposed to lead above the OSHA action level, the above requirements are not necessary. If personal samples are collected, submit the results to Owner's representative in a timely manner.

1.4 QUALITY ASSURANCE

- A. Coordinate work which may disturb surfaces coated with lead-based paint among the trades and with the Owner, so that work is performed in the proper sequence to minimize disturbance of lead-based paint and to protect other trades
- B. The Contractor shall be responsible for the following precautions:
 1. Take care to prevent unqualified personnel from disturbing the existing lead-based paint.
 2. Apprise the demolition subcontractor and all other personnel or subcontractors who disturb LBP of proper work procedures which must be followed; subcontractors who disturb LBP shall be responsible for educating and monitoring its own personnel.
 3. The Contractor shall be responsible for apprising all other workers, supervisory personnel, subcontractors, and consultants who will be at the job site of the hazards and of proper procedures, and shall be responsible for enforcing proper procedures.

1.5 EXISTING CONDITIONS

- A. Testing for lead based paint, glazed tile, and other coatings have been conducted in the buildings associated with the work. Results are summarized in the table below:

Results of XRF Testing Former Academy School (D-Wing) Glastonbury, CT				
Location	Substrate	Color	Component	Result mg/cm²
<i>Basement</i>				
Storage B-1	Concrete	Blue	Wall	<0.1
	Wood	Brown	Door	<0.1
	Wood	Green	Door frame	<0.1
Hallway	Concrete	Yellow	Wall	<0.1
	Wood	Orange	Door	0.3
	Metal	Brown	Door frames	<0.1
Locksmith	Wood	Beige	Window frame	3.5
	Metal	Beige	Window	<0.1
	Concrete	Blue	Wall	0.3
Slop sink	Ceramic	Beige	Wall	1.7

Results of XRF Testing Former Academy School (D-Wing) Glastonbury, CT				
closet				
Carpentry	Metal	Beige	Window	<0.1
	Wood	Beige	Window frame	0.3
Room D-17	Metal	Tan	Door	7.0
	Metal	Silver	Door	1.7
Room D-14	Wood	Orange	Door	1.4
Room D-10	Wood	Orange	Door	0.5
	Wood	Blue	Window frame	<0.1
	Wood	Blue	Window sill	<0.1
Main Level				
Hallway	Metal	Black	Deck joist	<0.1
	Plaster	Yellow	Wall	<0.1
	Metal	Tan	Locker	<0.1
Room D-101	Metal	Brown	Door frame	<0.1
	Wood	Beige	Window frame	0.2
	Wood	Beige	Window sill	<0.1
Room D-105	Wood	Yellow	Window frame	<0.1
	Wood	Brown	Door frame	<0.1
	Plaster	Beige	Wall	<0.1
	Wood	Beige	Wainscot	<0.1
Second floor				
Stairwell	Metal	Brown	Rail	0.5
	Metal	Brown	Kick-plate	<0.1
	Metal	Brown	Stair baluster	0.4
Room D-206	Wood	Yellow	Window frame	0.2
	Plaster	Beige	Wall	<0.1
	Wood	Brown	Door frame	<0.1
Room D-205	Wood	Beige	Door frame	<0.1
	Plaster	Yellow	Wall	0.2
	Wood	Brown	Door frame	<0.1
Hallway	Wood	Beige	Display case	<0.1

Results of XRF Testing Former Academy School (D-Wing) Glastonbury, CT				
Exterior				
Circle side	Wood	Brown	Door frame	15.5
	Metal	Brown	Door	<0.1
	Wood	Brown	Window frame	5.5
Rear	Metal	Green	Door	<0.1

Note: Ceramic wall tiles are not painted – lead is in the glazing.

- B. OSHA does not provide a standard lead concentration for determining lead based paint. Their approach regarding determining lead hazards is to evaluate the type of work being performed, with torch burning, abrasive blasting, and similar work that might generate the highest levels of lead dust or fume, being of most concern. However, common sense dictates that the higher the lead content in paint, the higher will be the airborne lead concentrations when paint is disturbed. Thus, particular concern and careful evaluation of work practices shall be taken by the contractor and any subcontractors who disturb painted surfaces or components where lead concentrations exceed 1.0 mg/cm². This is the concentration established by the U.S. Department of Housing and Urban Development for abatement action associated with compliance with childhood lead poisoning prevention programs.
- C. The condition of locations and substrates not specifically named above is unknown.

1.6 APPLICABLE REGULATIONS

- A. The following may be applicable State and Federal regulations for the project:
 - 1. Occupational Safety and Health Administration
 - a. 29 CFR 1910: General Industry Standards
 - b. 29 CFR 1910.1025: Lead Standard for General Industry
 - c. 29 CFR 1910.134: Respiratory Protection
 - d. 29 CFR 1910.1200: Hazard Communication
 - e. 29 CFR 1926: Construction Industry Standards
 - f. 29 CFR 1926.62: Construction Industry Lead Standard
 - 2. State of Connecticut
 - a. Connecticut General Statutes, Chapter 400c
- B. All regulations by the above and other governing agencies in their most current versions 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 and subcontractors who disturb LBP responsibility to know, understand, and abide by all such regulations, guidelines, and common practices. State of Connecticut regulations regarding compliance with housing associated with children under the age of six do not apply to the work although applicable work practices associated with handling lead paint do apply.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Fire rated polyethylene sheet in a roll size to minimize the frequency of joints shall be delivered to job site with factory label indicating 6 mil.
- B. Polyethylene disposable bags shall be six (6) mil with pre-printed labels.
- C. Tape or adhesive spray will be capable of sealing joints in adjacent polyethylene sheets, for attachment of polyethylene sheet to finished or unfinished surfaces of dissimilar materials, and capable of adhering under both dry and wet conditions, including amended water.
- D. Impermeable containers are to be used to receive and retain any lead containing or contaminated materials until disposal at an acceptable disposal site. The containers shall be labeled in accordance with EPA and DOT standards.
- E. Machine Sanding Equipment - Sanders shall be of the dual action, rotary action, orbital, or straight line system type, fitted with a high efficiency particulate air (HEPA) dust pick-up system.

2.2 TOOLS AND EQUIPMENT

- A. Provide suitable tools for all operations related to LBP.
- B. Have available sufficient inventory or dated purchase orders for materials necessary for the job, including protective clothing, respirators, filter cartridges, 6-mil fire-rated polyethylene sheeting of proper size, tape, and air filters.
- C. Have available power cables or sources such as generators (where required).

PART 3 - EXECUTION

3.1 SPOT REMOVALS

- A. Where lead is present on surfaces that will be impacted by high impact work, including torch burning, spot welding, power cutting, and so on, conduct spot removal of lead paint before conducting the impact work. Utilize methods that do not create lead dust or fume, such as chemical stripping.
- B. If spot removals are not practical, take appropriate precautions to contain lead emissions and to protect workers, when conducting dust or fume creating activities.
- C. Where more than three square feet of painted components will be impacted by the work where elevated concentrations of lead are present, assure all work area preparations, as outlined in Article 3.02 are utilized.

3.2 WORK AREA PREPARATION

- A. The Contractor or the applicable subcontractor who is performing work that may cause employees to be exposed to an airborne concentration of lead above the OSHA 8-hour time weighted average (TWA) permissible exposure limit (PEL) of $50 \mu\text{g}/\text{m}^3$, and in all cases where LBP will be disturbed utilizing power tools, abrasive blasting, torch burning or similar activities that create airborne dust or fume, shall assure the following work area preparation are conducted:

1. Signs warning of the potential exposure to lead shall be posted. The signs shall have the following designation:

WARNING:
LEAD WORK AREA
POISON
NO SMOKING OR EATING

2. Decontamination Area. At a minimum, construct a change area with attached shower (hand-washing facilities may be used in lieu of showers during the period that initial monitoring to determine worker exposure to airborne lead is being conducted). This decontamination area shall be directly adjacent to the work area for the decontamination of workers contaminated with lead. Require employees to use the worker decontamination area prior to leaving the work area. The decontamination area shall be constructed with six-mil polyethylene sheeting on floors, walls, and ceiling.
 3. The work area boundary shall be defined by caution tape supplemented by appropriate warning signs. For interior work areas, all openings to the work area shall be covered with two layers of 6-mil polyethylene and sealed with duct tape. A decontamination unit, consisting of change area and shower, shall be installed at the entrance to the work area.
 4. Cover any fixed objects, furniture or other permanent items with tarps or polyethylene drop cloths to prevent them from becoming contaminated with lead particles.
- B. Maintain tarps/polyethylene barriers and a clean area as long as needed for the safe and proper completion of the work. Any openings or tears in the work area barriers shall be at the beginning of each work day. Work will not be allowed to commence until all barriers are in place and acceptable to the Architect.

3.3 PERSONAL AIR MONITORING

- A. General: The Contractor or subcontractor who is performing work that disturbs LBP are required to perform personal air monitoring in accordance with OSHA standards during all work involving a potential exposure to airborne lead. The results of such sampling shall be posted, provided to individual workers, and submitted to the Architect as described herein.
1. In lieu of monitoring, use historical data from previous projects in accordance with the criteria outlined in 29 CFR Part 1926.62 (d).
- B. Sampling: Samples shall be taken for the duration of the work shift or for eight hours, whichever is less. 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 location or the type of work. Sampling will be used to determine eight-hour Time-weighted Averages (TWA) as outlined in OSHA Standard 29 CFR 1926.62. This sampling will determine the degree of respirator protection required, subject to the regulations.
- C. Sampling Results: Air sampling results shall be transmitted to the Architect and individual workers in written form no more than forty-eight (48) hours after the completion of a sampling cycle. The reporting document shall list each sample's result, sampling time and date, personnel monitored and their social security numbers, flow rate, sample duration, sample yield, cassette size, and analyst's name and company, and shall include an interpretation of the results. Air sample analysis results shall be reported in micrograms of lead per cubic meter of air (μm^3).

- D. Air Monitoring Frequency: The air monitoring frequency shall be established in accordance with the requirements set forth in 29 CFR 1926.62

3.4 WORKER PROTECTION REQUIREMENTS

- A. Biological Monitoring: The Contractor or subcontractor who impacts LBP shall be responsible for medical surveillance and record keeping, as defined in the OSHA Lead in Construction Standard (29 CFR 1926.62) and Local Law. In addition, have a medical examination performed on each employee if exposure is above the OSHA Action Level. This medical examination must be performed before workers enter a lead contaminated work area and at the termination of an employee's employment or yearly, whichever comes first.

- B. Training Requirements: All workers shall be trained about the hazards of exposure to lead at a minimum to the requirements of OSHA regulation 29 CFR 1926.62.

- C. Respirators and Personal Protective Equipment (PPE):

1. Personal protection in the form of disposable coveralls and NIOSH and MSHA approved respirators is required for all workers, supervisors, and authorized visitors entering the work area during operations that generate airborne lead.
2. Provide a clean area for workers to put on suits and other personal protective equipment and to store their street clothes. In addition to disposable suits for the workers, supply suits for the Consultant and other personnel who are authorized to inspect the work site. Disposable suits, such as TYVEK suits, and other personal protective equipment (PPE) must be donned prior to entering the work area. Light weight nylon clothes may be worn under the suit, but these clothes must be changed before leaving the work area and should be laundered separately.
3. Supply workers and supervisory personnel with NIOSH and MSHA approved respirators and HEPA filters. The respirators shall be sanitized and maintained according to the manufacturer's specifications. Disposable respirators shall not be considered acceptable under any circumstances. Maintain on-site a sufficient supply of HEPA filters to allow workers and supervisory personnel to change contaminated filters per manufacturer's recommendations or when breathing resistance is encountered. The Contractor and applicable subcontractors are responsible for means and methods used and for compliance with applicable regulations pertaining to respiratory protection.
4. Respirators shall be individually assigned to workers for their exclusive use. All respiratory protection shall be provided to workers in accordance with the approved respiratory protection program, which includes all items in OSHA 29 CFR 1910.134 (B), (D), (E) & (F).

3.5 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 applicable federal, state, county, or local regulations and guidelines. The requirements of the Resource Conservation and Recovery Act (RCRA) must be complied with, as well as any or all other applicable federal, state, county, or local waste requirements.
- B. Where LBP is removed and chips and related wastes are generated, inform the owner of such occurrence so that his consultant may perform testing utilizing the toxicity characteristic leaching procedure (TCLP). Results of the TCLP testing will determine whether the wastes are hazardous or are not hazardous waste. Similarly, where whole components are removed that

will be landfilled, inform the owner of the need for conducting additional TCLP testing. Testing of the entire waste stream is advised including components that are both painted and unpainted to determine the average leaching content of lead. Because the lead content of most components at the site is low, it is anticipated that the wastes will not be hazardous. However, if elevated results are obtained when testing the entire waste stream, the owner's consultant will determine which component(s) are contributing to the elevated results. Contractor shall then segregate these components from other components to minimize the total volume of hazardous waste. Such components shall be disposed in a hazardous waste landfill under preestablished unit rates for such disposal.

END OF SECTION 005.0

006.0 REMOVAL AND DISPOSAL OF 5,000 GALLON FUEL-OIL TANK

006.1 DESCRIPTION: Work under this item includes the removal and disposal of the 5,000 gallon fuel-oil tank located on the west side of the building according to applicable Federal, State, and Town regulations.

To the Town's knowledge no tanks exist other than those specifically mentioned within these specifications. If additional tanks are discovered during the execution of the work, the Contractor shall immediately notify the Engineer.

006.2 CONSTRUCTION METHODS: The Contractor shall remove and dispose of an existing 5,000 gallon underground fuel-oil tank as shown on the plans and in accordance with all relevant Federal, State, and Local regulations. Contractor shall obtain necessary permits, including coordination with the local Building Official and the Fire Marshal, and shall complete the UST Notification Forms as required by Connecticut Department of Energy and Environmental Protection (CTDEEP).

The Contractor shall pump all tanks dry of their contents prior to the demolition of buildings and structures. The Contractor shall locate, excavate, and dispose of all tanks and connected piping in a safe and workmanlike manner and in accordance with the applicable regulations.

The tank shall be pumped dry of any waste product or sludge and the tank carefully removed. Tank shall be disposed of at an approved recycling facility and a certificate of disposal provided.

Excavated soil shall be field screened for volatile organic compounds (VOC's) using a photo-ionization detector (PID).

Soil samples from the tank grave shall be collected and delivered to a Connecticut-approved laboratory for testing per CTDEEP Sampling and Analytical Methods for Underground Storage Tank Closure. Five (5) soil samples shall be analyzed by method CTEPH and one (1) sample tested for volatile organic compounds and MTBE in accordance with EPA method 8260, or other testing as required by the above mentioned CTDEEP procedures.

The tank grave shall be backfilled to grade and compacted.

A close out report shall be prepared and submitted that documents the work performed, certificate of disposal, and laboratory test results.

006.3 BASIS OF PAYMENT: This work shall be paid for at the Contract Lump Sum price listed in the bid proposal for "Add Alternate No. 2: Removal and Disposal of 5,000 Gallon Fuel-Oil Tank", which price shall include all of the above mentioned work listed in this specification and as required to meet all applicable, Federal, State and Local Regulations, including all labor, equipment, tools, and materials.

Any work necessary to address contamination of soil surrounding the tank, if required, will be handled as extra work as long as it was not caused by Contractor error or negligence.

END OF SECTION 006.0

Proposal of _____
(hereinafter called "Bidder"), organized and existing under the laws of the State of _____
_____, doing business as _____
_____.

To the Town of Glastonbury (hereinafter called "Town").

In compliance with your Invitation to Bid, the Bidder hereby proposed to furnish materials and/or services as per Bid Number GL-2012-16 in strict accordance with the Bid Documents, within the time set forth therein, and at the prices stated below.

By submission of this bid, the Bidder certifies, and in the case of a joint bid each party thereto certifies as to their own organization that this bid has been arrived at independently without consultation, communication, or agreement as to any matter relating to this bid with any other Bidder or with any competitor.

The Bidder acknowledges receipt of the following:

Addendum #1 _____

Addendum #2 _____

Addendum #3 _____

It is the responsibility of the Bidder to check the Town's website for any Addendum before submitting the bid.

BASE BID AMOUNT: \$ _____ Lump Sum

WRITTEN BASE BID AMOUNT: _____

ADD ALTERNATE NO. 1: ADDITIONAL BRICK SALVAGE

Under this add alternate, Section 003.3 of the Detailed Construction Specifications is revised such that the Contractor shall salvage an additional 25% of the brick exterior from the building (for a total of 50% to be salvaged) and deliver this material to the Town Highway Garage located at 2380 New London Turnpike. This add alternate shall include only the costs for salvaging and hauling the additional 25% of brick that is not included in the base bid.

ADD ALTERNATE NO. 1 BID AMOUNT: \$ _____ Lump Sum

ADD ALTERNATE NO. 2: REMOVAL AND DISPOSAL OF 5,000 GALLON FUEL-OIL TANK

Under this add alternate, the the Contractor shall complete the work of removal and disposal of the 5,000 gallon fuel-oil tank in accordance with Section 006.0 of the Detailed Construction Specifications

ADD ALTERNATE NO. 2 BID AMOUNT \$ _____ Lump Sum

**TOTAL BID AMOUNT INCLUDING BASE BID AND
ADD ALTERNATES NO. 1 AND NO. 2** \$ _____ Lump Sum

**WRITTEN TOTAL BID AMOUNT INCLUDING BASE
BID AND ADD ALTERNATES NO. 1 AND NO. 2:**

ASBESTOS ABATEMENT UNIT PRICES

Unit add/deduct prices are to be provided by the Contractor for the removal and proper disposal of asbestos-containing materials as specified, including but not limited to the costs for labor, materials, and administrative requirements required for work area preparation and removing and disposing the following materials. See Information for Bidders Item 3 and Special Conditions Section 15.03 for additional information.

1. Removal and disposal of asbestos-containing pipe insulation and associated fittings \$ _____/L.F.
2. Removal and disposal of asbestos-containing pipe insulation debris \$ _____/S.F.
3. Removal and disposal of asbestos-containing mudded pipe fitting insulation \$ _____/fitting
4. Removal and disposal of asbestos-containing joint compound and associated gypsum board \$ _____/S.F.
5. Removal and disposal of asbestos-containing vibration damper cloth \$ _____/S.F.
6. Removal and disposal of asbestos-containing floor tile \$ _____/S.F.
7. Removal and disposal of asbestos-containing floor tile and mastic adhesive \$ _____/S.F.
8. Removal and disposal of asbestos-containing mastic adhesive \$ _____/S.F.
9. Removal and disposal of cross contaminated Cement floor leveler \$ _____/S.F.
10. Remove and disposal of asbestos-containing glue daubs and associated ceiling tiles \$ _____/S.F.
11. Remove and dispose of asbestos-contaminated wood flooring \$ _____/S.F.
12. Removal and disposal of cross contaminated carpet \$ _____/S.F.
13. Removal and disposal of asbestos containing Cement plaster lathe \$ _____/S.F.
14. Removal and disposal of asbestos containing Chalkboard and whiteboard glue daubs \$ _____/S.F.
15. Removal and disposal of sink with Condensate mastic undercoat \$ _____/sink
16. Remove and dispose of asbestos-containing window caulking \$ _____/L.F.

**ACADEMY SCHOOL D-WING DEMOLITION
BID PROPOSAL**

BID #GL-2012-16

17. Remove and dispose of asbestos-containing window glazing (4'x6') \$ _____/window
18. Remove and dispose of asbestos-containing Roof tar flashing \$ _____/S.F.

OTHER ITEMS REQUIRED WITH SUBMISSION OF BID PROPOSAL:

The following bid checklist describes items required for inclusion with the above-referenced bid proposal package. It is provided for the convenience of the bidders and, therefore, should not be assumed to be a complete list.

- _____ 1. Included Bid Bond as per Section 10 of the Information for Bidders.
- _____ 2. Included Disclosure of Past and Pending Mediation, Arbitration, and Litigation cases against the Bidder or its Principals as per Section 17 of the Information for Bidders.
- _____ 3. Included Qualifications Statement as per Section 21 of the Information for Bidders.
- _____ 4. Checked Town web site for Addendums and acknowledged Addendums on page BP-1.
- _____ 5. Acknowledged Code of Ethics on page BP-3.
- _____ 6. Clearly marked envelope with Bid Number, Date, and Time of opening.

**ACADEMY SCHOOL D-WING DEMOLITION
BID PROPOSAL**

BID #GL-2012-16

TOWN OF GLASTONBURY

BID / PROPOSAL

GL # or RPGL #

2012-16

DATE ADVERTISED

March 6, 2012

DATE / TIME DUE

**March 21, 2012 at
11:00 a.m.**

NAME OF PROJECT

Academy School D-wing Demolition

It is the responsibility of the Bidder to clearly mark the outside of the bid envelope with the Bid Number, Date and Time of Bid Opening, and it also THE RESPONSIBILITY OF THE BIDDER TO CHECK THE TOWN'S WEBSITE BEFORE SUBMITTING BID FOR ADDENDUMS POSTED PRIOR TO BID OPENING.

CODE OF ETHICS:

I/We have reviewed a copy of the Town of Glastonbury's Code of Ethics and agree to submit a Consultant Acknowledgement Form if I/We are selected. Yes _____ No _____*

***Bidder is advised that effective August 1, 2003, the Town of Glastonbury cannot consider any bid or proposal where the Bidder has not agreed to the above statement.**

Respectfully submitted:

Type or Print Name of Individual

Doing Business as (Trade Name)

Signature of Individual

Street Address

Title

City, State, Zip Code

Date

Telephone Number/Fax Number

E-Mail Address

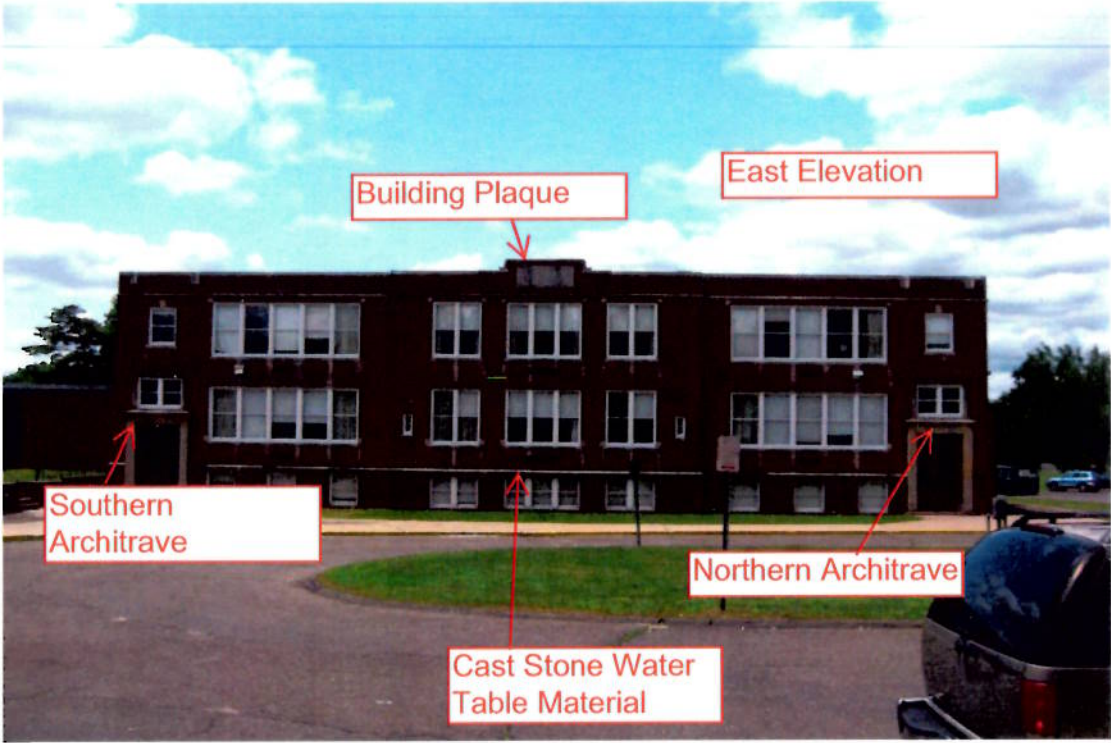
SS# or TIN#

(Seal – If bid is by a Corporation)

Attest

ATTACHMENT A: SALVAGE PHOTOS

ATTACHMENT A





Southern Architrave



Northern Architrave



ATTACHMENT B: HAZARDOUS MATERIALS SURVEY REPORT

ATTACHMENT C: PREVAILING WAGE DOCUMENTATION

Project: Academy School D Wing Demolition

**Minimum Rates and Classifications
for Building Construction**

ID# : B 16142

**Connecticut Department of Labor
Wage and Workplace Standards Division**

By virtue of the authority vested in the Labor Commissioner under provisions of Section 31-53 of the General Statutes of Connecticut, as amended, the following are declared to be the prevailing rates and welfare payments and will apply only where the contract is advertised for bid within 20 days of the date on which the rates are established. Any contractor or subcontractor not obligated by agreement to pay to the welfare and pension fund shall pay this amount to each employee as part of his/her hourly wages.

Project Number:

Project Town Glastonbury

State#:

FAP#:

Project: Academy School D Wing Demolition

CLASSIFICATION

Hourly Rate

Benefits

1a) Asbestos Worker/Insulator (Includes application of insulating materials, protective coverings, coatings, & finishes to all types of mechanical systems; application of firestopping material for wall openings & penetrations in walls, floors, ceilings - Last updated 7/21/11

36.86

25.51

1b) Asbestos/Toxic Waste Removal Laborers: Asbestos removal and encapsulation (except its removal from mechanical systems which are not to be scrapped), toxic waste removers, blasters. **See Laborers Group 7**

2) Boilermaker

34.94

19.00

As of: Monday, March 05, 2012

Project: Academy School D Wing Demolition

3a) Bricklayer, Cement Mason, Concrete Finisher (including caulking), Stone Masons	32.50	24.20 + a
3b) Tile Setter	32.00	21.44
3c) Terrazzo Mechanics and Marble Setters	31.69	22.35
3d) Tile, Marble & Terrazzo Finishers	25.50	24.20
3e) Plasterer	32.50	24.20

-----LABORERS-----

As of: Monday, March 05, 2012

Project: Academy School D Wing Demolition

4) Group 1: Laborers (common or general), acetylene burners, carpenter tenders, concrete specialists, wrecking laborers, fire watchers.	25.75	15.60
4a) Group 2: Mortar mixers, plaster tender, power buggy operators, powdermen, fireproofers/mixer/nozzleman, fence erector.	26.00	15.60
4b) Group 3: Jackhammer operators, mason tender (brick) and mason tender (cement/concrete)	26.25	15.60
4c) **Group 4: Pipelayers (Installation of water, storm drainage or sewage lines outside of the building line with P6, P7 license) (the pipelayer rate shall apply only to one or two employees of the total crew who primary task is to actually perform the mating of pipe sections)[If using this classification call the Labor Department for clarification]	26.00	15.60
4d) Group 5: Air track operators, Sand blasters	26.50	15.60
4e) Group 6: Nuclear toxic waste removers, blasters	28.75	15.60

As of: Monday, March 05, 2012

Project: Academy School D Wing Demolition

4f) Group 7: Asbestos removal and encapsulation (except it's removal from mechanical systems which are not to be scrapped)	26.75	15.60
4g) Group 8: Bottom men on open air caisson, cylindrical work and boring crew	26.25	15.60
4h) Group 9: Top men on open air caisson, cylindrical work and boring crew	25.75	15.60
4i) Group 10: Traffic Control Signalman	16.00	15.60
5) Carpenter, Acoustical Ceiling Installation, Soft Floor/Carpet Laying, Metal Stud Installation, Form Work and Scaffold Building, Drywall Hanging, Modular-Furniture Systems Installers, Lathers, Piledrivers, Resilient Floor Layers.	29.11	20.29
5a) Millwrights	30.01	20.18

As of: Monday, March 05, 2012

Project: Academy School D Wing Demolition

6) Electrical Worker (including low voltage wiring) (Trade License required: E1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9)	36.40	21.31
7a) Elevator Mechanic (Trade License required: R-1,2,5,6)	45.97	23.535+a+b
-----LINE CONSTRUCTION-----		
Groundman	23.80	3% + 13.70
Linemen/Cable Splicer	43.28	3% + 13.70
8) Glazier (Trade License required: FG-1,2)	32.73	16.35 + a

As of: Monday, March 05, 2012

Project: Academy School D Wing Demolition

9) Ironworker, Ornamental, Reinforcing, Structural, and Precast Concrete Erection	33.50	27.03 + a
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----OPERATORS----

Group 1: Crane handling or erecting structural steel or stone, hoisting engineer 2 drums or over, front end loader (7 cubic yards or over); work boat 26 ft. and over. (Trade License Required)	35.05	19.40 + a
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Group 2: Cranes (100 ton rate capacity and over); Backhoe/Excavator over 2 cubic yards; Piledriver (\$3.00 premium when operator controls hammer). (Trade License Required)	34.73	19.40 + a
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Group 3: Excavator; Backhoe/Excavator under 2 cubic yards; Cranes (under 100 ton rated capacity), Grader/Blade; Master Mechanic; Hoisting Engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power of operation), Rubber Tire Excavator (Drott-1085 or similar); Grader Operator; Bulldozer Fine Grade. (slopes, shaping, laser or GPS, etc.).	33.99	19.40 + a
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Group 4: Trenching Machines; Lighter Derrick; Concrete Finishing Machine; CMI Machine or Similar; Koehring Loader (Skooper).	33.60	19.40 + a
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As of: Monday, March 05, 2012

Project: Academy School D Wing Demolition

Group 5: Specialty Railroad Equipment; Asphalt Paver; Asphalt Reclaiming Machine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling Machine (over 24" Mandrell)	33.01	19.40 + a
Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller; Pile Testing Machine.	33.01	19.40 + a
Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer).	32.70	19.40 + a
Group 7: Asphalt roller, concrete saws and cutters (ride on types), vermeer concrete cutter, Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24" and under Mandrell).	32.36	19.40 + a
Group 8: Mechanic, grease truck operator, hydroblaster; barrier mover; power stone spreader; welding; work boat under 26 ft.; transfer machine.	31.96	19.40 + a
Group 9: Front end loader (under 3 cubic yards), skid steer loader regardless of attachments, (Bobcat or Similar): forklift, power chipper; landscape equipment (including Hydroseeder).	31.53	19.40 + a

As of: Monday, March 05, 2012

Project: Academy School D Wing Demolition

Group 10: Vibratory hammer; ice machine; diesel and air, hammer, etc.	29.49	19.40 + a
Group 11: Conveyor, earth roller, power pavement breaker (whiphammer), robot demolition equipment.	29.49	19.40 + a
Group 12: Wellpoint operator.	29.43	19.40 + a
Group 13: Compressor battery operator.	28.85	19.40 + a
Group 14: Elevator operator; tow motor operator (solid tire no rough terrain).	27.71	19.40 + a
Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator.	27.30	19.40 + a

As of: Monday, March 05, 2012

Project: Academy School D Wing Demolition

Group 16: Maintenance Engineer/Oiler.	26.65	19.40 + a
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Group 17: Portable asphalt plant operator; portable crusher plant operator; portable concrete plant operator.	30.96	19.40 + a
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Group 18: Power safety boat; vacuum truck; zim mixer; sweeper; (Minimum for any job requiring a CDL license).	28.54	19.40 + a
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-----PAINTERS (Including Drywall Finishing)-----

10a) Brush and Roller	29.17	16.35
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10b) Taping Only/Drywall Finishing	29.92	16.35
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As of: Monday, March 05, 2012

Project: Academy School D Wing Demolition

10c) Paperhanger and Red Label	29.67	16.35
10e) Blast and Spray	32.17	16.35
11) Plumber (excluding HVAC pipe installation) (Trade License required: P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2)	38.67	24.46
12) Well Digger, Pile Testing Machine	33.01	19.40 + a
13) Roofer (composition)	31.11	16.94
14) Roofer (slate & tile)	31.61	16.94

As of: Monday, March 05, 2012

Project: Academy School D Wing Demolition

15) Sheetmetal Worker (Trade License required for HVAC and Ductwork: SM-1,SM-2,SM-3,SM-4,SM-5,SM-6)	32.27	29.33
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16) Pipefitter (Including HVAC work) (Trade License required: S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4, G-1, G-2, G-8 & G-9)	38.67	24.46
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-----TRUCK DRIVERS-----

17a) 2 Axle	27.88	15.71 + a
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17b) 3 Axle, 2 Axle Ready Mix	27.98	15.71 + a
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17c) 3 Axle Ready Mix	28.03	15.71 + a
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As of: Monday, March 05, 2012

Project: Academy School D Wing Demolition

17d) 4 Axle, Heavy Duty Trailer up to 40 tons	28.08	15.71 + a
17e) 4 Axle Ready Mix	28.13	15.71 + a
17f) Heavy Duty Trailer (40 Tons and Over)	28.33	15.71 + a
17g) Specialized Earth Moving Equipment (Other Than Conventional Type on-the-Road Trucks and Semi-Trailers, Including Euclids)	28.13	15.71 + a
18) Sprinkler Fitter (Trade License required: F-1,2,3,4)	40.50	16.85 + a
19) Theatrical Stage Journeyman	22.22	6.53

As of: Monday, March 05, 2012

Project: Academy School D Wing Demolition

Welders: Rate for craft to which welding is incidental.

**Note: Hazardous waste removal work receives additional \$1.25 per hour for truck drivers.*

***Note: Hazardous waste premium \$3.00 per hour over classified rate*

Crane with 150 ft. boom (including jib) - \$1.50 extra

Crane with 200 ft. boom (including jib) - \$2.50 extra

Crane with 250 ft. boom (including jib) - \$5.00 extra

Crane with 300 ft. boom (including jib) - \$7.00 extra

Crane with 400 ft. boom (including jib) - \$10.00 extra

All classifications that indicate a percentage of the fringe benefits must be calculated at the percentage rate times the "base hourly rate".

Apprentices duly registered under the Commissioner of Labor's regulations on "Work Training Standards for Apprenticeship and Training Programs" Section 31-51-d-1 to 12, are allowed to be paid the appropriate percentage of the prevailing journeymen hourly base and the full fringe benefit rate, providing the work site ratio shall not be less than one full-time journeyman instructing and supervising the work of each apprentice in a specific trade.

The Prevailing wage rates applicable to this project are subject to annual adjustments each July 1st for the duration of the project.

Each contractor shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.

It is the contractor's responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's website.

The annual adjustments will be posted on the Department of Labor's Web page: www.ct.gov/dol

The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project.

All subsequent annual adjustments will be posted on our Web Site for contractor access.

As of: Monday, March 05, 2012

Project: Academy School D Wing Demolition

Effective October 1, 2005 - Public Act 05-50: any person performing the work of any mechanic, laborer, or worker shall be paid prevailing wage

All Person who perform work ON SITE must be paid prevailing wage for the appropriate mechanic, laborer, or worker classification.

All certified payrolls must list the hours worked and wages paid to All Persons who perform work ON SITE regardless of their ownership i.e.: (Owners, Corporate Officers, LLC Members, Independent Contractors, et. al)

Reporting and payment of wages is required regardless of any contractual relationship alleged to exist between the contractor and such person.

~~Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clause (29 CFR 5.5 (a) (1) (ii)).

Please direct any questions which you may have pertaining to classification of work and payment of prevailing wages to the Wage and Workplace Standards Division, telephone (860)263-6790.

As of: Monday, March 05, 2012

CONNECTICUT DEPARTMENT OF LABOR
Wage and Workplace Standards Division

FOOTNOTES

Please Note: If the “Benefits” listed on the schedule for the following occupations includes a letter(s) (+ a or + a+b for instance), refer to the information below.

Benefits to be paid at the appropriate prevailing wage rate for the listed occupation.

If the “Benefits” section for the occupation lists only a dollar amount, disregard the information below.

Bricklayers, Cement Masons, Cement Finishers, Plasters, Stone Masons
(Building Construction)
(Residential- Hartford, Middlesex, New Haven, New London and Tolland Counties)

- a. Paid Holiday: Employees shall receive 4 hours for Christmas Eve holiday provided the employee works the regularly scheduled day before and after the holiday. Employers may schedule work on Christmas Eve and employees shall receive pay for actual hours worked in addition to holiday pay.

Bricklayer (Residential- Fairfield County)

- a. Paid Holiday: If an employee works on Christmas Eve until noon he shall be paid for 8 hours.

Electricians

Fairfield County: West of the Five Mile River in Norwalk

- a. \$2.00 per hour not to exceed \$14.00 per day.

Elevator Constructors: Mechanics

- a. Paid Holidays: New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day, plus the Friday after Thanksgiving.
- b. Vacation: Employer contributes 8% of basic hourly rate for 5 years or more of service or 6% of basic hourly rate for 6 months to 5 years of service as vacation pay credit.

Glaziers

- a. Paid Holidays: Labor Day and Christmas Day.

Power Equipment Operators

(Heavy and Highway Construction & Building Construction)

- a. Paid Holidays: New Year's Day, Good Friday, Memorial day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, provided the employee works 3 days during the week in which the holiday falls, if scheduled, and if scheduled, the working day before and the working day after the holiday. Holidays falling on Saturday may be observed on Saturday, or if the employer so elects, on the preceding Friday.

Ironworkers

- a. Paid Holiday: Labor Day provided employee has been on the payroll for the 5 consecutive workdays prior to Labor Day.

Laborers (Tunnel Construction)

- a. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. No employee shall be eligible for holiday pay when he fails, without cause, to work the regular workday preceding the holiday or the regular workday following the holiday.

Roofers

- a. Paid Holidays: July 4th, Labor Day, and Christmas Day provided the employee is employed 15 days prior to the holiday.

Sprinkler Fitters

- a. Paid Holidays: Memorial Day, July 4th, Labor Day, Thanksgiving Day and Christmas Day, provided the employee has been in the employment of a contractor 20 working days prior to any such paid holiday.

Truck Drivers

(Heavy and Highway Construction & Building Construction)

- a. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas day, and Good Friday, provided the employee has at least 31 calendar days of service and works the last scheduled day before and the first scheduled day after the holiday, unless excused.

Information Bulletin

Occupational Classifications

The Connecticut Department of Labor has the responsibility to properly determine "job classification" on prevailing wage projects covered under C.G.S. Section 31-53.

♪ Note: This information is intended to provide a sample of some occupational classifications for guidance purposes only. It is not an all-inclusive list of each occupation's duties. This list is being provided only to highlight some areas where a contractor may be unclear regarding the proper classification.

Below are additional clarifications of specific job duties performed for certain classifications:

Asbestos Insulator

- Handle, install, apply, fabricate, distribute, prepare, alter, repair, or dismantle heat and frost insulation, including penetration and fire stopping work on all penetration fire stop systems.

Carpenter

- Assembly and installation of modular furniture/furniture systems.
[New] a. Free-standing furniture is not covered. This includes: student chairs, study top desks, book box desks, computer furniture, dictionary stand, atlas stand, wood shelving, two- position information access station, file cabinets, storage cabinets, tables, etc.
- Applies fire stopping materials on fire resistive joint systems only.
- Installation of insulated material of all types whether blown, nailed or attached in other ways to walls, ceilings and floors of buildings.
- Installation of curtain/window walls only where attached to wood or metal studs.

Cleaning Laborer

- The clean up of any construction debris and the general cleaning, including sweeping, wash down, mopping, wiping of the construction facility, washing, polishing, dusting, etc., prior to the issuance of a certificate of occupancy falls under the *Labor classification*.

Delivery Personnel (Revised)

- If delivery of supplies/building materials is to one common point and stockpiled there, prevailing wages are not required. If the delivery personnel are involved in the distribution of the material to multiple locations within the construction site then they would have to be paid prevailing wages for the type of work performed: laborer, equipment operator, electrician, ironworker, plumber, etc.
- An example of this would be where delivery of drywall is made to a building and the delivery personnel distribute the drywall from one "stockpile" location to further sub-locations on each floor. Distribution of material around a construction site is the job of a laborer/tradesman and not a delivery personnel.

Electrician

- Installation or maintenance of telecommunication, LAN wiring or computer equipment.
- Low voltage wiring.

Fork Lift Operator

- Laborers Group 4) Mason Tenders - operates forklift solely to assist a mason to a maximum height of nine (9) feet only.
- Power Equipment Operator Group 9 - operates forklift to assist any trade, and to assist a mason to a height over nine (9) feet.

Glaziers

- Installs light metal sash, head sills, and 2-story aluminum storefronts.
- Installation of aluminum window walls and curtain walls is the "joint work" of the Glaziers and Ironworkers classification which requires either a blended rate or equal composite workforce.

Ironworkers

- Handling, sorting, and installation of reinforcing steel (rebar).
- Installation of aluminum window walls and curtain walls is the "joint work" of the Glaziers and Ironworkers classification which requires either a blended rate or equal composite workforce. Insulated metal and insulated composite panels are still installed by the Ironworker.
- Metal bridge rail (traffic), metal bridge handrail, and decorative security fence installation.

Insulator

- Installing fire stopping systems/materials for "Penetration Firestop Systems": transit to cables, electrical conduits, insulated pipes, sprinkler pipe penetrations, ductwork behind radiation, electrical cable trays, fire rated pipe penetrations, natural polypropylene, HVAC ducts, plumbing bare metal, telephone and communication wires, and boiler room ceilings. Past practice using the applicable licensed trades, Plumber, Sheet Metal, Sprinkler Fitter, and Electrician, is not inconsistent with the Insulator classification and would be permitted.

Lead Paint Removal

- Painter Rate
 1. Removal of lead paint from bridges.
 2. Removal of lead paint as preparation of any surface to be repainted.
 3. Where removal is on a Demolition project prior to reconstruction.
- Laborer Rate
 1. Removal of lead paint from any surface NOT to be repainted.
 2. Where removal is on a *TOTAL* Demolition project only.

Roofers


- Preparation of surface, tear-off and/or removal of any type of roofing, and/or clean-up of any areas where a roof is to be relaid.

Sheet Metal Worker

- Fabrication, handling, assembling, erecting, altering, repairing, etc. of coated metal material panels and composite metal material panels when used on building exteriors and interiors as soffits, fascia, louvers, partitions, wall panel siding, canopies, cornice, column covers, awnings, beam covers, cladding, sun shades, lighting troughs, spires, ornamental roofing, metal ceilings, mansards, copings, ornamental and ventilation hoods, vertical and horizontal siding panels, trim, etc. The sheet metal classification also applies to the vast variety of coated metal material panels and composite metal material panels that have evolved over the years as an alternative to conventional ferrous and non-ferrous metals like steel, iron, tin, copper, brass, bronze, aluminum, etc. Insulated metal and insulated composite panels are still installed by the Iron Worker. Fabrication, handling, assembling, erecting, altering, repairing, etc. of architectural metal roof, standing seam roof, composite metal roof, metal and composite bathroom/toilet partitions, aluminum gutters, metal and composite lockers and shelving, kitchen equipment, and walk-in coolers.

Truck Drivers

- Truck Drivers delivering asphalt are covered under prevailing wage while on the site and directly involved in the paving operation.
- Material men and deliverymen are not covered under prevailing wage as long as they are not directly involved in the construction process. If, they unload the material, they would then be covered by prevailing wage for the classification they are performing work in: laborer, equipment operator, etc.
- Hauling material off site is not covered provided they are not dumping it at a location outlined above.
- Driving a truck on site and moving equipment or materials on site would be considered covered work, as this is part of the construction process.


 Any questions regarding the proper classification should be directed to the Contract Compliance Unit, Wage and Workplace Standards Division, Connecticut Department of Labor, 200 Folly Brook Blvd, Wethersfield, CT 06 109 at (860) 263-6543.

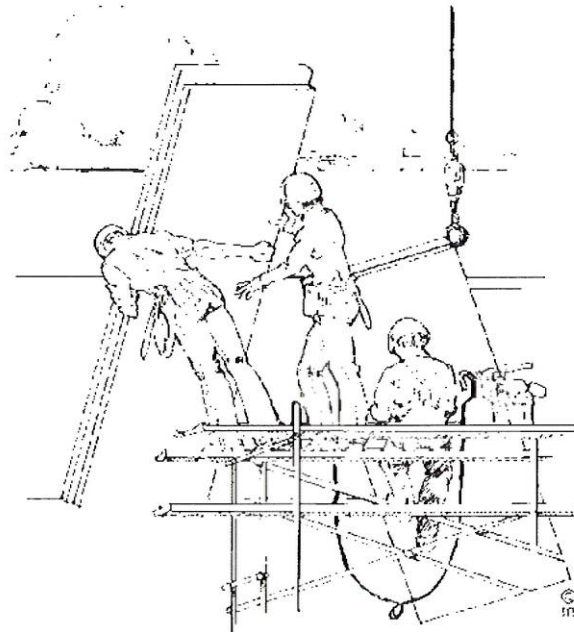
~NOTICE~

TO ALL CONTRACTING AGENCIES

Please be advised that Connecticut General Statutes Section 31-53, requires the contracting agency to certify to the Department of Labor, the total dollar amount of work to be done in connection with such public works project, regardless of whether such project consists of one or more contracts.

Please find the attached “Contracting Agency Certification Form” to be completed and returned to the Department of Labor, Wage and Workplace Standards Division, Public Contract Compliance Unit.

 Inquiries can be directed to (860)263-6543.



CONNECTICUT DEPARTMENT OF LABOR
WAGE AND WORKPLACE STANDARDS DIVISION
CONTRACT COMPLIANCE UNIT

CONTRACTING AGENCY CERTIFICATION FORM

I, _____, acting in my official capacity as _____,
authorized representative title

for _____, located at _____,
contracting agency address

do hereby certify that the total dollar amount of work to be done in connection with

_____, located at _____,
project name and number address

shall be \$ _____, which includes all work, regardless of whether such project
consists of one or more contracts.

CONTRACTOR INFORMATION

Name: _____

Address: _____

Authorized Representative: _____

Approximate Starting Date: _____

Approximate Completion Date: _____

Signature

Date

Return To: Connecticut Department of Labor
Wage & Workplace Standards Division
Contract Compliance Unit
200 Folly Brook Blvd.
Wethersfield, CT 06109

Date Issued: _____

Informational Bulletin

THE 10-HOUR OSHA CONSTRUCTION SAFETY AND HEALTH COURSE

(applicable to public building contracts entered into *on or after July 1, 2007*, where the total cost of all work to be performed is at least \$100,000)

- (1) This requirement was created by Public Act No. 06-175, which is codified in Section 31-53b of the Connecticut General Statutes (pertaining to the prevailing wage statutes);
- (2) The course is required for public building construction contracts (projects funded in whole or in part by the state or any political subdivision of the state) entered into on or after July 1, 2007;
- (3) It is required of private employees (not state or municipal employees) and apprentices who perform manual labor for a general contractor or subcontractor on a public building project where the total cost of all work to be performed is at least \$100,000;
- (4) The ten-hour construction course pertains to the ten-hour Outreach Course conducted in accordance with federal OSHA Training Institute standards, and, for telecommunications workers, a ten-hour training course conducted in accordance with federal OSHA standard, 29 CFR 1910.268;
- (5) The internet website for the federal OSHA Training Institute is http://www.osha.gov/fso/ote/training/edcenters/fact_sheet.html;
- (6) The statutory language leaves it to the contractor and its employees to determine who pays for the cost of the ten-hour Outreach Course;
- (7) Within 30 days of receiving a contract award, a general contractor must furnish proof to the Labor Commissioner that all employees and apprentices performing manual labor on the project will have completed such a course;
- (8) Proof of completion may be demonstrated through either: (a) the presentation of a *bona fide* student course completion card issued by the federal OSHA Training Institute; *or* (2) the presentation of documentation provided to an employee by a trainer certified by the Institute pending the actual issuance of the completion card;
- (9) Any card with an issuance date more than 5 years prior to the commencement date of the construction project shall not constitute proof of compliance;

- (10) Each employer shall affix a copy of the construction safety course completion card to the certified payroll submitted to the contracting agency in accordance with Conn. Gen. Stat. § 31-53(f) on which such employee's name first appears;
- (11) Any employee found to be in non-compliance shall be subject to removal from the worksite if such employee does not provide satisfactory proof of course completion to the Labor Commissioner by the fifteenth day after the date the employee is determined to be in noncompliance;
- (12) Any such employee who is determined to be in noncompliance may continue to work on a public building construction project for a maximum of fourteen consecutive calendar days while bringing his or her status into compliance;
- (13) The Labor Commissioner may make complaint to the prosecuting authorities regarding any employer or agent of the employer, or officer or agent of the corporation who files a false certified payroll with respect to the status of an employee who is performing manual labor on a public building construction project;
- (14) The statute provides the minimum standards required for the completion of a safety course by manual laborers on public construction contracts; any contractor can exceed these minimum requirements; and
- (15) Regulations clarifying the statute are currently in the regulatory process, and shall be posted on the CTDOL website as soon as they are adopted in final form.
- (16) Any questions regarding this statute may be directed to the Wage and Workplace Standards Division of the Connecticut Labor Department via the internet website of <http://www.ctdol.state.ct.us/wgwkstnd/wgemenu.htm>; or by telephone at (860)263-6790.

THE ABOVE INFORMATION IS PROVIDED EXCLUSIVELY AS AN EDUCATIONAL RESOURCE, AND IS NOT INTENDED AS A SUBSTITUTE FOR LEGAL INTERPRETATIONS WHICH MAY ULTIMATELY ARISE CONCERNING THE CONSTRUCTION OF THE STATUTE OR THE REGULATIONS.

Sec. 31-53b. Construction safety and health course. New miner training program. Proof of completion required for mechanics, laborers and workers on public works projects. Enforcement. Regulations. Exceptions.

(a) Each contract for a public works project entered into on or after July 1, 2009, by the state or any of its agents, or by any political subdivision of the state or any of its agents, described in subsection (g) of section 31-53, shall contain a provision requiring that each contractor furnish proof with the weekly certified payroll form for the first week each employee begins work on such project that any person performing the work of a mechanic, laborer or worker pursuant to the classifications of labor under section 31-53 on such public works project, pursuant to such contract, has completed a course of at least ten hours in duration in construction safety and health approved by the federal Occupational Safety and Health Administration or, has completed a new miner training program approved by the Federal Mine Safety and Health Administration in accordance with 30 CFR 48 or, in the case of telecommunications employees, has completed at least ten hours of training in accordance with 29 CFR 1910.268.

(b) Any person required to complete a course or program under subsection (a) of this section who has not completed the course or program shall be subject to removal from the worksite if the person does not provide documentation of having completed such course or program by the fifteenth day after the date the person is found to be in noncompliance. The Labor Commissioner or said commissioner's designee shall enforce this section.

(c) Not later than January 1, 2009, the Labor Commissioner shall adopt regulations, in accordance with the provisions of chapter 54, to implement the provisions of subsections (a) and (b) of this section. Such regulations shall require that the ten-hour construction safety and health courses required under subsection (a) of this section be conducted in accordance with federal Occupational Safety and Health Administration Training Institute standards, or in accordance with Federal Mine Safety and Health Administration Standards or in accordance with 29 CFR 1910.268, as appropriate. The Labor Commissioner shall accept as sufficient proof of compliance with the provisions of subsection (a) or (b) of this section a student course completion card issued by the federal Occupational Safety and Health Administration Training Institute, or such other proof of compliance said commissioner deems appropriate, dated no earlier than five years before the commencement date of such public works project.

(d) This section shall not apply to employees of public service companies, as defined in section 16-1, or drivers of commercial motor vehicles driving the vehicle on the public works project and delivering or picking up cargo from public works projects provided they perform no labor relating to the project other than the loading and unloading of their cargo.

(P.A. 06-175, S. 1; P.A. 08-83, S. 1.)

History: P.A. 08-83 amended Subsec. (a) by making provisions applicable to public works project contracts entered into on or after July 1, 2009, replacing provision re total cost of work with reference to Sec. 31-53(g), requiring proof in certified payroll form that new mechanic, laborer or worker has completed a 10-hour or more construction safety course and adding provision re new miner training program, amended Subsec. (b) by substituting "person" for "employee" and adding "or program", amended Subsec. (c) by adding "or in accordance with Federal Mine

Safety and Health Administration Standards" and setting new deadline of January 1, 2009, deleted former Subsec. (d) re "public building", added new Subsec. (d) re exemptions for public service company employees and delivery drivers who perform no labor other than delivery and made conforming and technical changes, effective January 1, 2009.

November 29, 2006

Notice
To All Mason Contractors and Interested Parties
Regarding Construction Pursuant to Section 31-53 of the
Connecticut General Statutes (Prevailing Wage)

The Connecticut Labor Department Wage and Workplace Standards Division is empowered to enforce the prevailing wage rates on projects covered by the above referenced statute.

Over the past few years the Division has withheld enforcement of the rate in effect for workers who operate a forklift on a prevailing wage rate project due to a potential jurisdictional dispute.

The rate listed in the schedules and in our Occupational Bulletin (see enclosed) has been as follows:

Forklift Operator:

- **Laborers (Group 4) Mason Tenders** - operates forklift solely to assist a mason to a maximum height of nine feet only.
- **Power Equipment Operator (Group 9)** - operates forklift to assist any trade and to assist a mason to a height over nine feet.

The U.S. Labor Department conducted a survey of rates in Connecticut but it has not been published and the rate in effect remains as outlined in the above Occupational Bulletin.

Since this is a classification matter and not one of jurisdiction, effective January 1, 2007 the Connecticut Labor Department will enforce the rate on each schedule in accordance with our statutory authority.

Your cooperation in filing appropriate and accurate certified payrolls is appreciated.

Statute 31-55a

Last Updated: April 22, 2010

You are here: [DOL Web Site](#) » [Wage and Workplace Standards](#) » Statute 31-55a

- Special Notice -

To All State and Political Subdivisions, Their Agents, and Contractors

Connecticut General Statute 31-55a - Annual adjustments to wage rates by contractors doing state work.

Each contractor that is awarded a contract on or after October 1, 2002, for (1) the construction of a state highway or bridge that falls under the provisions of section 31-54 of the general statutes, or (2) the construction, remodeling, refinishing, refurbishing, rehabilitation, alteration or repair of any public works project that falls under the provisions of section 31-53 of the general statutes shall contact the Labor Commissioner on or before July first of each year, for the duration of such contract, to ascertain the prevailing rate of wages on an hourly basis and the amount of payment or contributions paid or payable on behalf of each mechanic, laborer or worker employed upon the work contracted to be done, and shall make any necessary adjustments to such prevailing rate of wages and such payment or contributions paid or payable on behalf of each such employee, effective each July first.

- The prevailing wage rates applicable to any contract or subcontract awarded on or after October 1, 2002 are subject to annual adjustments each July 1st for the duration of any project which was originally advertised for bids on or after October 1, 2002.
- Each contractor affected by the above requirement shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.
- It is the **contractor's** responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's Web Site. The annual adjustments will be posted on the Department of Labor Web page: www.ctdol.state.ct.us. For those without internet access, please contact the division listed below.
- The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project. All subsequent annual adjustments will be posted on our Web Site for contractor access.

Any questions should be directed to the Contract Compliance Unit, Wage and Workplace Standards Division, Connecticut Department of Labor, 200 Folly Brook Blvd., Wethersfield, CT 06109 at (860)263-6790.

←-- [Workplace Laws](#)

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ATTACHMENT D: CONSTRUCTION PLANS