

VENDOR NO.
386193

BILL TO

**BOARD OF EDUCATION
TOWNSHIP OF UNION**
COUNTY OF UNION
2369 MORRIS AVENUE • P.O. BOX 3139
UNION, NEW JERSEY 07083-1939
(908) 851-6408, 6409 or 6410 • FAX (908) 964-1462

BUDGET YEAR
2010->2011

PURCHASE ORDER NUMBER

11-02955

THIS NUMBER MUST APPEAR ON
ALL PACKAGES, INVOICES AND
CORRESPONDENCE.

DATE:
01/19/2011

VENDOR:
OMEGA ENVIRONMENTAL SERVICES, INC.
280 HUYLER STREET
SOUTH HACKENSACK, NJ 07606

SHIP TO:
Attn To : Karen M. Dunn, B.A.
BUSINESS OFFICE
2369 MORRIS AVENUE
UNION, NJ 07083

P.O. TYPE		MISC. DESCRIPTION		
Po_type= Other		environ. investigation C-5 pr		
		<input type="checkbox"/> Partial <input type="checkbox"/> Comple		
QUANTITY ORDERED	CATALOG / UNIT	ITEM DESCRIPTION / ACCOUNT NUMBER	UNIT PRICE	TOTAL AMOUNT
1	Each	Proposal for Environmental Investigation, Design and Oversight of the Proposed Central-Five/Jefferson School proposed scope of services. BOE approved 1/18/11	33,590.00	33,590.00
16824	object	16824/30-155-400-390-13-06-2F11 (\$33,590.00)		\$33,590.00

INVENTORY

tag # 6057

- INSTRUCTIONS TO VENDORS**
- PO# 11-02955 Hnd Chk No
 1. Chk# 191 Chk Date 05/10/2011 form.
 2. Vend OMEGA ENVIRONMENTAL SERVICES, INC.
 3. Paid \$14,800.00 Liq \$14,800.00 portation charges, and include amount on bill, Acct 30-155-400-390-13-06-2F11
 - 4.
 5. The right is reserved to cancel this order if reasonable shipment cannot be made.
 6. The purchase is exempt by statute from payment of all Federal, State and Municipal excise, sales and other taxes.
 7. All hazardous Chemical Products must be accompanied by material safety data sheets and labeled with CAS numbers.

ORDER INVALID UNLESS SIGNED BY THE BUSINESS ADMINISTRATOR/BOARD SECRETARY

BUSINESS ADMINISTRATOR/BOARD SECRETARY DATE

VENDOR ACCEPTANCE CERTIFIES COMPLIANCE WITH FEDERAL AND STATE REGULATIONS REGARDING EQUAL EMPLOYMENT OPPORTUNITY WITHOUT REGARD TO RACE, CREED, COLOR, NATIONAL ORIGIN, ANCESTRY, AGE, SEX AFFECTIONAL OR SEXUAL ORIENTATION, MARITAL STATUS, FAMILIAL STATUS, LIABILITY FOR SERVICE IN THE ARMED FORCES OF THE UNITED STATES, ATYPICAL HEREDITARY CELLULAR OR BLOOD TRAIT OF ANY INDIVIDUAL OR NON-APPLICABLE DISABILITY.



Date: January 12, 2012 (revised 2/3/2012)

To: Tom Wiggins *email: twiggins@twpunionschools.org*

From: Veronica Kero, CIH, P.E. and Geiser Fajardo

Re: **(C-5 Jefferson School Building #2 Renovations) – CHANGE ORDER PRICE PROPOSAL TO PROVIDE ASBESTOS DELINEATION AND SUB-CHAPTER 8 ASCM MONITORING SERVICES RELATED TO ADDITIONAL ASBESTOS LIGHTWEIGHT CONCRETE MATERIAL IDENTIFIED**

Dear Tom:

As discussed, Omega is providing a *Change Order Proposal* to continue providing asbestos consulting services according to our *Base Contract* unit prices.

This additional scope of work relates to the additional asbestos-containing lightweight concrete material recently identified in renovation Building #2 slab sections. The 2/3/2012 proposal revision reflects our recent conversation with NJDCA which denied relief from collecting five (5) asbestos TEM final clearance samples on each separate containment area. We now have to collect a total of 63 (9 containments x 5 TEM + 2 field blanks). In addition, the total number of abatement shifts has increased from five to ten.

Other project asbestos issues still open – exterior roof flashing and coping

While Omega delineated asbestos roof flashing previously and the material was included in the general Patock scope of renovation work, there are still questions being raised by Patock on distinguishing flashing and coping asbestos. Omega also collected confirmatory bulk samples of an exterior facade caulk material 1/11/2012 related to this issue.

Scope of Work Details:

Additional asbestos consulting services involve the following work tasks:

1. Delineate positive asbestos materials in question (additional inspection, bulk sampling, and air sampling performed 12/27/2011-1/11/2012 – see report dated 1/11/2012)
2. Develop “Asbestos Clean-up & Spot Abatement Work Plan” so multiple abatement prices can be obtained.
3. Provide ASCM monitoring services during additional clean-up/spot abatement work, including associated during and final clearance asbestos air sampling.
4. Project oversight, project management, and final report preparation.

Pricing:

Service	Price
<i>Delineate positive asbestos materials in question (additional bulk and air sampling performed 12/27/2011-1/11/2012 – see report dated 1/11/2012)</i>	
Field labor: three (3) bulk and one (1) sampling events: 32 hours @ \$75/hour	\$2400
Laboratory analysis of asbestos bulk samples by PLM: 27 samples @ \$15/sample	\$405
Laboratory analysis of non-friable asbestos bulk samples by TEM-NOB: 6 samples @ \$50/sample	\$300
Laboratory analysis of TEM asbestos air samples to assess airborne exposure hazard after issue discovered: 9 samples @ \$100/sample	\$900
Project management time (Geiser Fajardo): 16 hours @ \$75/hour	\$1200
Report preparation: 2 hours @ \$75/hour	\$150
<i>Preparation of hazard characterization report and "Spot Abatement Work Plan" by CIH/Project Designer</i>	
Report preparation: 8 hours @ \$105/hour	\$840
(On-site CIH meeting time) - 1/10 meeting (4 hours) + two additional 4-hour meetings expected: 12 hours @ \$105/hour	\$1260
<i>ASCM monitoring services as required during clean-up and spot abatement (base contract rates apply)</i>	
ASCM field labor: Estimated ten (10) 8-hour shifts @ \$75/hour	\$6000
PCM asbestos air sample analysis: estimated 10 samples per shift x 10 shifts @ \$9/sample	\$900
TEM final clearance asbestos air sample analysis: estimated 9 sets x (5 samples + 2 blanks) @ \$100/sample	\$6300
Recommended contingency budget to address possibly additional shifts of abatement	\$3500
TOTAL ESTIMATED COST OF DELINEATION AND CONSULTING SERVICES = \$20,655 (+ \$3500 recommended contingency)	

PAYMENT TERMS: NET 30 DAYS UPON RECEIPT OF INVOICE

Notes/Exclusion:

- Price does not include project filing fees
- 1.5x overtime multiplier applies to weekend/night shifts

If this proposal is acceptable "as is," and you are authorized to engage the services of our firm, please sign the quote and fax it back to our office at 201.342.5412.

Date: _____

Agreed and accepted by: _____ (Sign)

_____ (Print)

If you have any questions, please contact our office @ 201.489.8700.



**ASBESTOS ABATEMENT PROJECT SPECIFICATION
(Sub-Chapter 8)**

SITE: Central Five Jefferson School
155 Hilton Avenue
Union, NJ 07088
{Omega Project # 12-10018-B}

BUILDING: Renovation Building #2
(3 stories & basement & crawlspace)
155 Hilton Avenue
Union, NJ 07088

*Additional spot abatement of the following approximate quantities of ACM:
2,295 square feet of light weight concrete slab material @ 45 locations*

SITE CONTACT: Union Township Board of Education
Tom Wiggins

PLAN APPROVED BY: _____
Anton Rezin (Project Designer #91-05296)

OMEGA CONTACT(S): Geiser Fajardo and Anton Rezin
(Asbestos Inspector/Investigator)

PROJECT START DATE: **TBD**

COMPLETION DATE: **TBD**

SPECIFICATION ISSUE DATE: 2/03/2012

CONTENTS

1.0 SCOPE OF WORK

2.0 CONTRACTOR RESPONSIBILITIES

3.0 TECHNICAL SPECIFICATIONS

4.0 ADDITIONAL REQUIREMENTS

5.0 PROJECT CONDITIONS

6.0 MATERIALS AND EQUIPMENT

7.0 ATTACHMENTS

- Abatement Drawings

1.0 SCOPE OF WORK:

CENTRAL FIVE JEFFERSON SCHOOL –TENT REMOVAL OF LIGHT WEIGHT CONCRETE LAYER OF FLOOR SLAB

1.1 Asbestos Survey Information:

The presence of asbestos has been identified within the top layer of the floor slabs within Building #2 of the Central Five Jefferson School, located at 155 Hilton Avenue, Union, NJ which is currently undergoing gut rehab renovations. Abatement Contractor is to perform spot abatement at select locations in preparation for non-abatement workers to perform slab cuts/penetrations. It should be noted that the ACM light weight concrete layer at the specified locations is to be removed only.

Since Building #2 is undergoing renovations and is to be re-occupied, Sub-Chapter 8 protocol for non-occupied building applies.

1.2 Quantities:

The following estimated quantities of ACM were delineated in conjunction with pre-demolition survey activities.

Floor	Material Description	Estimated Total Quantity	Number of Locations	Abatement Method
1 st floor	Light weight concrete (top layer)	1,187 square feet	21	Full Containment
2nd floor	Light weight concrete (top layer)	1,108 square feet	24	Full Containment

Abatement Contractor responsible for field verification of all quantities

Since the subject building is used as an educational facility, *N.J.A.C. 5:23 Subchapter 8* requirements shall apply and be enforced by the on-site AST (**unoccupied building status throughout**).

1.4 Asbestos Air Sampling:

PCM air sample analysis shall apply to the “during” sampling. TEM “final clearance” sampling shall be conducted as required for abatement areas.

1.5 Insurance Criteria:

As per the Owner, the abatement Contractor shall provided Union Board of Education Insurance and Bonding requirements (see "general bid documents").

1.6 Fire Code Requirements:

Since the subject building is utilized as an educational facility, the below listed requirements related to fire protection of the structure and specified in N.J.A.C. 5:23 shall apply to the subject project where applicable:

"... where asbestos was utilized originally to satisfy fire code requirements, it shall not be removed unless replaced as part of the project with material or assembly which has equivalent fire resistive or heat resistive characteristics."

AND

"In buildings required by the UCC to be of non-combustible construction, all materials used to construct separation barriers must meet the Uniform Construction Code, building sub-code requirements for that building, and all plastics must be flame resistant."

In the case of a "gut rehab renovation", restoration of fire-rated assemblies/materials shall occur during later phases of general construction prior to re-occupancy.

2.0 CONTRACTOR'S RESPONSIBILITIES:

- 2.1 The work to be performed under this Contract consists of furnishing all materials, including where applicable equipment, supplies, labor, supervision, and transportation. Water will be provided by the owner. GFI/panel installation to be provided by the asbestos abatement Contractor. All installations must be in strict compliance with prevailing jurisdictions, and the specifications schedules and plans. The work shall be complete, and executed in a professional manner by certified and qualified workmen/women.
- 2.2 The Contractor will not be responsible for damage to piping, electrical conduits, or any other equipment enclosed in the work area, which results from existing deterioration, or improper installation by the Building Owner.
- 2.3 The Contractor shall be responsible for the removal and disposal of all asbestos containing materials (light weight concrete) that have been identified in the School in accordance with *the Subchapter 8* requirements, Asbestos Abatement Project Specification and Asbestos Removal Plan drawing.
- 2.4 The project will be conducted under un-occupied building conditions. All applicable sections of N.J.A.C. 5:23-8, and the joint adopted rules N.J.A.C. 5:16 and 8:60 will be strictly adhered to. The project will conform to the requirements applicable tent asbestos abatement procedures.
- 2.5 Project Dates
 - 2.5.1 The Contractor shall complete all work in no more than thirty (30) shifts over the 4-week period when the building will be un-occupied. It is anticipated that this work will commence on July 6, 2012 at 7AM and shall be completed and ready for interior demolition no later than August 6 at 1200 midnight, 2012. The actual start date/time will be announced after the issuance of construction permit. Break down shall be conducted after obtaining of successful final clearance results.
 - 2.5.2 The Contractor, promptly after being awarded the Contract, shall prepare and submit for the owner's and Omega's review a Contractor's construction schedule for the work. The schedule shall not exceed the time limits current under the Contract Documents, and shall be revised at appropriate intervals as required by the conditions encountered. The Contractor shall prepare and keep current, for OMEGA's approval, a schedule that allows OMEGA reasonable time to review submittals.

3.0 TECHNICAL SPECIFICATIONS:

3.1 N.J.A.C. 5:23 Subchapter 8 Code Requirements

5:23-8.1

The New Jersey Department of Environmental Protection (NJDEP) has the authority to enforce regulations regarding the transport and disposal of asbestos-containing materials pursuant to N.J.S.A. 13:1D-9 and 13: 1E-1 ET seq. These rules are cited as N.J.A.C. 7:26.

5:23-8.2

The following words, terms, and abbreviations when used in this Subchapter shall have the following meanings unless the context clearly indicates otherwise.

“Airlock” means a serial arrangement of rooms whose doors are spaced a minimum of four feet apart so as to permit ingress or egress through each room without interfering with the next and constructed in such a manner as to prevent or restrict the free flow of air in either direction.

“Air pressure differential” means air pressure lower than surrounding areas, generally caused by exhausting air from a sealed space (work area).

“Amended water” means water to which a surfactant has been added.

“Asbestos” means a general term used to describe a group of naturally occurring hydrated mineral silicates. The asbestos-form varieties include chrysotile (serpentine); crocidolite (riebeckite); amosite (cummingtonite-grunerite); anthophyllite; tremolite and actinolite.

“Asbestos-containing material” means any material which contains more than one percent asbestos by weight.

“Asbestos hazard abatement project” means the removal, enclosure, or encapsulation of more than 25 square feet of asbestos-containing material used on any equipment or surface area such as wall, or ceiling area; or the removal or encapsulation of more than 10 linear feet of asbestos-containing material on covered piping.

“Asbestos Safety Control Monitor” means a business entity authorized pursuant to N.J.A.C. 5:23-8 to ensure compliance with the Asbestos hazard Abatement Sub code.

“Asbestos Safety Technician” means a person certified by the New Jersey Department of Community Affairs, hired by the ASCM who continuously monitors and inspects the asbestos abatement work pursuant to this sub chapter. This person shall be required to be on the job site during the time the asbestos abatement work is taking place and perform all duties and responsibilities established by these regulations.

“Authorized personnel” means the owner’s representative, asbestos abatement Contractor personnel, emergency personnel, or a representative of any Federal, State, or local regulatory agency or other personnel under contract for or having jurisdiction over the project.

“Certificate of Completion” shall mean the certificate issued by the ASCM signifying that the asbestos hazard abatement work has been completed in conformance with N.J.A.C. 5:23-8

“Construction permit for asbestos abatement” means required official approval to commence any asbestos hazard abatement project. This permit is issued by the enforcing agency.

“Contractor” means the Asbestos Removal Contractor licensed by the New Jersey Department of Labor.

“County facility” means all buildings and structures or parts thereof, which are under the ownership or control of a county. This includes, but is not limited to, administration offices, court houses, sheriff offices, welfare offices, maintenance facilities and garage.

“Critical barrier” means two layers of nominal six mil polyethylene sheeting that completely seals off the work area to prevent the distribution of fibers to the surrounding area, such as the opening between the top of a wall and the underside of ceiling construction, electrical outlets, no removable lights, HVAC systems, windows, doorways, entranceways, ducts, grilles, grates, diffusers, wall clocks, speaker grilles, floor drains, sink drains, etc.

“Decontamination unit” means serial arrangement of rooms or spaces for the purpose of separating the work area from the building environment upon entering the work area and for the cleaning of persons, equipment, and contained waste prior to returning to the clean environment.

“Demolition” means the actual destruction and removal of a building, or part of a building, without intent to renovate, repair, or replace.

“Enclosure” means the construction of an airtight, impermeable, permanent barrier around asbestos-containing material to control the release of asbestos fibers into the air.

“Encapsulation” means the treatment of asbestos-containing materials with a material that surrounds or embeds asbestos fibers in an adhesive matrix to prevent the release of fibers, as the encapsulant creates a membrane over the surface (bridging encapsulant) or penetrates the material and binds its components together (penetrating encapsulant).

“EPA” means the United States Environmental Protection Agency.

“Flame-resistant polyethylene sheet” means a single polyethylene film in the largest sheet size possible to minimize seams, nominal six mil thick, conforming to requirements set forth by the National Fire Protecting Association Standard 701, Small Scale Fire Test for Flame-Resistant Textiles and Films.

“Friable” means any material applied to ceilings, walls, piping, duct work, etc., which when dry may be crumbled, pulverized, or reduced to a powder by hard pressure.

“Glove bag” means a polyethylene bag or other techniques or work practices approved by Department especially designed to enclose sections of equipment for the purpose of removing asbestos-containing material without releasing fibers into the air.

“Glove bag work area enclosure” means the enclosure that defines the work area for glove bag activity.

“HEPA” means high Efficiency Particulate Air Filter, capable of filter efficiency of 99.97 percent down to 0.3 um (microns).

“Miscellaneous asbestos-containing material” means interior building material on structural components, structural members or fixtures such as vinyl asbestos flooring, ceiling tiles, transite and asbestos cement board, and fire-resistant gaskets and seals but does not include surfacing material or thermal systems insulation.

“NESHAP” means the National emission Standards for Hazardous Air Pollutants (40 CTR Part 61)

“NIOSH” means the National Institute for Occupational Safety and Health.

“Non-Friable” means material which when dry may not be crumbled, pulverized, or reduced to powder by hand pressure.

“Occupied building” means a building or structure where occupancy is permitted in certain area outside of the required containment during an asbestos hazard abatement project.

“Operations and maintenance activity” means corrective action not intended as asbestos abatement. The amount of friable asbestos-containing material that can be abated per year project is 25 square feet or less or, if on covered piping, 10 linear feet or less.

“PCM” means Phase Contrast Microscopy.

“Polyethylene sheet” means a single nominal six mil thick polyethylene film.

“Privately owned buildings containing educational facilities” means all buildings and structure, or parts there of which are under the ownership or control of private parties, and which are used for educational purposes or learning experiences. Educational facilities include child day care centers, nurseries, laboratories, and schools.

“Public building” means any building or structure or part thereof, owned, leased, or managed by the State or any of its departments, divisions, bureaus, boards, councils, authorities, or other agencies; or by any county, municipality, or any agency or instrumentality thereof.

“Removal” means the taking out or the stripping of asbestos-containing material from a building or structure.

“Repair” means returning damaged asbestos-containing material to an undamaged condition or to an intact state using recommended work practices so as to prevent the likelihood of fiber release.

“Separation barrier” means a wall constructed to isolate the clean area the work area and to support the polyethylene sheets.

“Sealant” means a liquid or solution to be used as a binding agent, such as a diluted encapsulant or a water-based paint, on dried exposed surfaces from which asbestos containing material has been removed. The color of the coat shall be separate and distinct from the underlying substrate.

“State facility” means all buildings and structures, or parts, thereof which area owned, managed or leased by the State of New Jersey.

“Strippable coating” means a water-based latex material sprat application, formulated to adhere to surfaces and to be removed clean by peeling off at the completion of the abatement project.

“Surfacing asbestos- containing material” means materials in a building that is sprayed-on, toweled on, or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing or other purposes.

“TEM” means Transmission Electron Microscopy.

“Thermal system insulation” means material in a building applied to pipes, fittings, boilers, breeching, tanks, ducts, or other interior structural compensation, or for other purposes.

“um” means microns, or micrometers.

“UCC “means Uniform Construction Code

“Water column (w.c.)” means a unit of measurement for pressure differential.

“Wet cleaning “means 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 a removal encapsulant and afterwards thoroughly decontaminates or disposed of as asbestos contaminated waste.

“Work Area” means 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.

When the Department is the enforcing agency, the fee for an application for a variation from this Subchapter shall be \$467 and shall be paid by check or money order payable to the “Treasurer, State of New Jersey.”

5:23-8.5

Construction permit for asbestos abatement:

- a. It shall be unlawful to undertake an asbestos hazard abatement project unless the owner of the facility or an authorized representative on behalf of the owner first files an application in writing with the enforcing agency and obtains the required permit. This permit shall serve as notice for public record in the office of the enforcing agency. All work shall be monitored and controlled by the ASCM who will advise the enforcing agency of its findings.
 1. The enclosure of any amount of asbestos-containing material used to cover pipes shall not require a permit for asbestos abatement pursuant to this sub chapter, but it may be considered construction work.
 2. A construction permit shall be obtained when required by the enforcing agency pursuant to N.J.A.C. 5:23-2
- b. All asbestos abatement work shall be conducted under unoccupied buildings, unless a written statement signed by the asbestos AST denoting portions of the building that may be occupied is filed as required by N.J.A.C. 5:23-8.19(c)8.
 1. The ASCM denoting portions of the building by maintenance personnel who are properly trained and/or security personnel essential to the building operation.
 2. The ASCM shall not be required to file such written statement denoting occupied portions of the building for a cleared area in a multiphase project that has received a Temporary Certificate of Occupancy from the enforcing agency when such occupancy applies to Contractors or related personnel involved with post-abatement activity.
- c. The Department or a municipality utilizing by the Department to enforce the Asbestos Hazard Abatement Sub code within its jurisdiction shall be the sole enforcing agency for asbestos hazard abatement work.
- d. The application for a construction permit for asbestos abatement shall be subject to the follows:
 1. The application for a permit shall be submitted in such form as the department may prescribe and shall be accompanied by the required fee as provided for in this Subchapter.
 2. The application for a construction permit for asbestos abatement shall be required to include the following.
- e. The name, address and license number of the asbestos Contractor pursuant to N.J.A.C. 12; 120 Asbestos Licenses and Permits under the jurisdiction of the New Jersey Department of Labor.

- f. The asbestos hazard assessment, which shall be prepared by the New Jersey Department of Health, or by a county or local department of health or a private individual who has received accreditation as an inspector under the United States Environmental Protection Agency's Model Accreditation Program as referenced in 40 CFR 763. The accreditation will be issued by an EPA-approved training agency, and that accreditation will include the place of training, accreditation number and expiration date. Accreditations are issued for one year. This assessment shall be required unless the requirement for an assessment has been waived in writing by the New Jersey Department of Health.
- g. The name and address of the private air monitoring firm, hired by the building owner who shall act as the ASCM authorized by the New Jersey Department of Community affairs and shall be responsible for continuous monitoring the asbestos abatement.
- h. Four (4) sets of plans and specifications indicating: the scope of the proposal work; type and percentage of the asbestos; the total amount of square and/or linear footage of asbestos-containing material to be abated; the provisions proposed to contain the asbestos-containing material during abatement work including, but not limited to, separation barriers, critical barriers, and the route of travel for the moving asbestos waste from the work area ; a copy of the site plan; and a floor plan indicating exits. The approved plans and specifications shall be distributed as follows: one set each to the construction official, ASCM, building owner and project site.
- i. Documentation that all buildings will be unoccupied at the time an asbestos abatement project takes place, except as approved by the ASCM as delineated in N.J.A.C. 5:23-8.19;
- j. The name and address of the New Jersey Department of Environmental Protection and Energy registered landfill where asbestos waste will be deposited;
- k. The scheduled starting and completion dates for the asbestos abatement project;
- l. The method of air analysis used pursuant to N.J.A.C. 5:23-8.21 for determining the final clearance level in order to reoccupy the building;
- m. It shall be the responsibility of the owner or his agent to file with the enforcing agency, in the event of any change in (d) 2i, iii and vi above. Such change shall be filed as an amendment to the application and shall be forwarded to the department as set forth in (h) below. The replacement firm shall assume all responsibilities for the asbestos abatement work to continue, while the preceding firm still bears responsibility for its action;
- n. The issuance of a construction permit for asbestos abatement shall be subject to the following:
 - o. Submission of a completed application.
- p. The described work and containment measure shall conform to the requirements of this Subchapter and the requirements of any other applicable law or rule adopted or enforced by any other state agency.
- q. A written release of the plans and specifications by the ASCM.
- r. Cursory plan review shall be done by the enforcing agency to determine the need of replacement material for maintaining the structural integrity of a building; if required, a separate construction permit shall be done to ensure that means for egress are maintained in occupied buildings.
- s. The issuance of the construction permit for asbestos abatement authorizes preparation of the work area. This initial preparation of the work area shall be observed by the AST to ensure compliance with this Subchapter. No actual asbestos abatement work shall commencement inspection have been conducted and approved by the AST.
- t. A permit, once issued, shall remain valid only as long as all of the information is contained in the application remains correct and is adhere to. Any changes shall require an amendment to the application before the change takes place. Failure to adhere to these requirements may result in a stop work order.

- u. The owner or his or her agent shall notify the department in writing within three business days of the issuance of the construction permit for asbestos abatement, if the enforcing agency is a municipal enforcing agency and not the department. Such notice shall be supplied in the form of a copy of the completed application for a construction permit for asbestos abatement and a copy of the permit.

Notification shall be sent to:

New Jersey Department of Community Affairs
Bureau of Code Services
Asbestos Safety Unit - CN 816
Trenton, NJ 08625-0816

The owner or his or her agent shall notify the following in writing as required in NESHAPS (4 CFR Part 61, Subpart, M):

U.S. Environmental Protection Agency
Region II NESHAP
26 Federal Plaza, Room 1003
NY, NY 10278

New Jersey Department of Community Affairs
Bureau of Code Services
Asbestos Safety Unit
CN 816
Trenton NJ 08625-0816

- v. The AST shall ensure that:
- (1) Work area is properly prepared and that all containment measures are in place pursuant to this Subchapter.
 - (2) All workers shall present to the asbestos technician a valid work permit issued by the New Jersey Department of Labor.
 - (3) Measures for the disposal of removed asbestos material are in place and shall conform to the adopted standards.
 - (4) Clean-up inspections shall be conducted as follows:
- w. Notice for clean-up inspection shall be requested by the Contractor at least 48 hours in advance of the desired date inspection;
- x. The AST shall ensure that:
- (1) The project site has been properly cleaned and is free of all visible dust and asbestos and asbestos-containing material;
 - (2) All abated asbestos-containing material has been properly placed in a locked secure container outside of the work area.
- y. Final Inspections shall be conducted as follows:
1. Upon notice by the Owner or by the Contractor and within 48 hours after the removal of the critical barriers, a final inspection shall be made to ensure the absence of visible signs of asbestos or asbestos-containing materials and that all removed asbestos and asbestos contaminated materials have been properly disposed of off-site in accordance with the rules of the NJDEP, N.J.A.C. 7:26-1 which is referenced in N.J.A.C. 5; 23-8.22.
 2. The Department reserves the right to make a final inspection in addition to the required final inspection conducted by the AST before a certificate of occupancy is issued by the enforcing agency.

- z The Department inspections shall be conducted as follows:
 - 1. The Department shall make schedule and/or unannounced periodic inspections of any work area involving asbestos abatement work for the purpose of enforcing this Subchapter.
- aa. Violations: The AST shall ensure that the work conforms to this Subchapter. If it is found that the asbestos abatement work is being conducted in violation of this Subchapter, the AST shall direct such corrective action as may be necessary. If the Contractor fails to comply with the corrective action required, or if the Contractor or any of their employees habitually and/or excessively violate the requirements of any rule, then the AST shall order, in writing, that the work be stopped. If the Contractor fails to comply with the order, then the AST shall notify the enforcing agency, which shall issue a stop until all violations are abated.

5.23-8.8 Certification of Occupancy

- (a) Certificate of occupancy requirements are as follows:
 - 1. It shall be unlawful to re-occupy the portion of a building that was vacated during a an asbestos hazard abatement project until a certificate of occupancy of completion issued by the ASCM and verified by the enforcing agency that the building or a portion of a building is in conformance with all applicable requirements of the Uniform Construction Code (UCC) and that any walls, floors, trim, doors, furniture or other items damaged during the work shall be repaired or refinished to match existing materials.
 - 2. The application for a certificate of occupancy shall be in writing and submitted in such form as the Department may prescribe and shall be accompanied by the required fee as provided for in this Subchapter.

The application shall include the following:

- 1. The name and address of the owner;
- 2. The address of the building or structure;
- 3. Certificate of completion submitted by the ASCM.
- 4. If all the information required is complete and in accordance with this Subchapter, a certificate of occupancy shall be issued.
- 5.

- (b) Certificate of Completion requirements are as follows:
 - 1. It shall be unlawful to apply for a certificate of occupancy until a certificate of completion has been issued by the ASCM.
 - 2. Within five days of completion of an asbestos hazard abatement project the owner/agent shall file for a certificate of completion form the ASCM.
 - 3. The application for a certificate of completion shall be in writing and submitted in such a form as the department may prescribe.
 - 4. A certificate of Completion shall be issued only if:
 - i. All information is complete
 - ii. Final inspection by the AST reveals no visible evidence of asbestos
 - iii. All requirements of this Subchapter have been met.
 - iv. An acceptable final air monitoring level has been arraigned pursuant to N.J.A.C. 5:23-8.21 and documentation of that air level has been submitted in writing.

- (c) Duties of the AST shall be as follows:
 - 1. The AST shall perform all air sampling specified in the Subchapter as per the N.J.A.C 5:23- 8.21 and shall be thoroughly familiar with the applicable requirements and pertinent sections of this specification. The AST shall inform the department in writing within 10 working days of any change in status or employer. He or she shall have access to all areas. The AST shall be on site from the initial preparation of the work area through the approved final visual inspection, and shall perform all inspections pursuant to N.J.A.C. 5:23-8.7

2. The AST shall direct the actions of the Contractor verbally and in writing to ensure compliance with the Subchapter and these specifications. The AST shall require that all workers present a valid asbestos worker performance permit issued by the New Jersey Department of Labor as well as any other credentials required by the owner and/or ASCM before entering the work area. In matters of negligence and/or flagrant disregard of the safety of any person, including the possibility of contaminating the building environment and the emergence of an unsafe condition at the work area, the AST shall order, in writing, that the work be stopped. If the Contractor fails to comply with the order the AST shall notify the enforcing agency, which shall issue a Stop Work Order to the Contractor and have the work area secured until all violations are abated.
3. The AST shall calculate, based on the actual available output (not the rated output) of the air filtering units, the required number of AFDs for each work area. This calculation shall be made whenever the volume of the work area changes. The AST shall inform the owner, Contractor and the abatement project designer of any discrepancies between the number of units required and those in operation within the work area. If problem area identified and not corrected, the AST shall inform the enforcing agency who shall make necessary measures to ensure corrective action;
4. At the beginning of each work shift, every four hours thereafter, and at the end of the Contractor's work day, the AST shall monitor pressure differential by digital manometers with continuous print out or other approved low pressure monitoring device for each work area. One or more separate monitoring systems shall be installed for every 10,000 square feet of monitoring shall be representative of all adjacent areas. The pressure differential shall meet the minimum requirement set forth in N.J.A.C. 5:23-8.15 (b) 9 or 8.17(d) 6i or 8.19 (c) 4ii, as appropriate.
5. The AST shall ensure that the Contractor smoke tests all the glove bags (if applicable) after they are attached and before the commencement of work.
6. For unoccupied buildings, upon receipt of testing results indicating that concentration above the acceptance criteria established in N.J.A.C. 5:23-8.21 have occurred during the abatement project, the AST shall immediately direct corrective action and verbally report these results within 24 hours to the Contractor, the owner and the abatement project designer. Such as verbal notification shall be followed by a written notification shall be followed by written notification to the Contractor, owner and the abatement project, the asbestos safe technician shall immediately direct corrective action and verbally report these results within 24 hours to the Contractor, the owner and the abatement project designer. A copy shall be sent to the enforcing agency and the Department within three business days from receipt of the results. For occupied buildings, the procedure set forth at N.J.A.C. 5:23-8.19 shall be followed.
7. The AST shall monitor the removal of all asbestos-contaminated waste from the work area to ensure that it takes place in conformance with N.J.A.C 16:49.
 - i. Direct removal by a collector/hauler registered with the New Jersey Department of Environmental Protection registered waste hauler.
 - ii. Indirect removal by placement in a locked and secure container, for temporary storage, awaiting the NJDEP registered waste hauler.
8. The AST shall keep an up-to-date a comprehensive, site dedicated daily log of all pertinent on-site activities. The log shall be updated continuously. The name of the project, name of the ASCM/AST, and date shall be recorded. Each entry shall contain the event the time of event and shall be initialed by the AST. One section of the log shall contain observations concerning Contractor compliance with activities required under this Subchapter listing all deficiencies encountered; in addition, the log shall list the name of each person entering the work area. The log shall be a bound book and all entries shall be in ink. The log shall be kept at the project site and shall be made available upon request at all times to the owner, the abatement project designer and to representative(s) of appropriate local and State agencies.
9. The AST shall prepare a comprehensive final report to include daily logs, required inspection reports, observations and air monitoring results. This report shall be made part of the official record filed by the ASCM.

- (d) Penalties: The Department may suspend or revoke a certification, or assess a civil penalty of not more than \$500.00, for each offense, if the Department determines that an individual:
1. Has violated the provisions of the UCC regulations.
 2. Has obtained a certification by fraud or misrepresentation.
 3. Has aided or abetted in practice as an AST any person not authorized to practice as an AST under the provisions of this Subchapter
 4. Has fraudulently or deceitfully practiced as an AST.
 5. Has been grossly negligent or has engaged in misconduct in the performance of any of his duties;
 6. Has failed to maintain a minimal acceptable level of competence;
 7. Has been found to have accepted or failed to report an offer of a bribe or other favors in a proceeding under this act or other appropriate laws of this or any other state or jurisdiction;
 8. Has failed to comply with any order issued by the Department;
 9. Has made a false or misleading written statement, or has made a willful material omission much submission to the Department;
 10. Has failed to enforce this Subchapter; or
 11. Has performed the duties of an AST without being certified as such.

5:23-8.13

Pre-Project Procedures

Before an asbestos abatement project begins the owner or owner's representative shall have evaluated whether or not the scope of work for a specific project will require that all surfaces in the work area are to be HEPA vacuumed and/or wet-wiped. This is in order to remove any dust which may contain asbestos and might, therefore interfere with the final inspections and final air clearance level needed to reoccupy the building. The surfaces to be cleaned shall include but not be limited to. All horizontal and vertical surfaces and such inside spaces as room ventilators, storage lockers, and utility and storage closets. The cleaning shall be accomplished by trained employees of the building owner as delineated in this Subchapter before the asbestos abatement project begins or it shall be made part of the scope of work of an asbestos abatement project to be completed by the licensed Contractor.

5:23-8.17

Full containment removal procedures apply to this project.

Full Containment Removal Procedures

1. Decontamination units shall be constructed of stud lumber or other alternative material and enclosed with plastic sheeting in accordance with the requirements of Subchapter 8. The locations of these units are to be at the entrance of the containment work area. The AST must approve the design and implementation of each work area. For this project, the decontamination unit shall be constructed attached to each work area inside the building and shall be adequately protected (i.e., weatherproofed and secured). It is the Contractor's responsibility to supply adequate hot water to the decontamination shower unit.
2. All penetrations (airways) into the work area shall be covered with critical barriers consisting of two (2) individual layers of 6 mil. thick polyethylene — this includes any existing HVAC duct work found in the area. All penetrations, holes, and seams found are also to be sealed accordingly. All walls and the ceilings in each work area shall be covered by a single layer of 6 millimeter thick polyethylene. All open vertical spaces in which a wall does not exist shall be covered with three (3) individual layers of 6 mil thick polyethylene sheeting. It may be necessary to construct a framework consisting of 2" x 4" or 2" x 3" lumber so as to provide sufficient support to the plastic. Also, the floor in the work area is to be covered by two layers of 6 mil thick plastic sheeting as per Subchapter 8 requirements. In addition any articles or fixtures found inside each work area are either to be removed prior to the start of abatement or protected by covering them in two layers of 6 mil thick plastic. All existing electrical boxes, panels, etc. located in each work area is to be protected by placing over each a barrier constructed of stud lumber and plywood. These barriers in turn are to be covered with two layers of 6 mil thick plastic sheeting.
3. Temporary panels within the work area shall be properly protected as not to cause damage during the abatement activities.
4. A sufficient number of negative air filtration units as determined by the AST are to be placed inside each work area and made operable. The final determination on the number of AFD's required for the work areas will be the responsibility of the AST and the Contractor's Supervisor. These unit(s) are to be exhausted to outside the building and are to be used to create and maintain negative pressure differential of 0.03 inches of water column within the work area. It will be the responsibility of the Contractor to provide a digital manometer with continuous readout so that measurements of the negative pressure differential in each work area can be continually monitored.
5. Once all preparations have been completed to the satisfaction of the AST all asbestos containing materials as identified within these specifications shall be removed and disposed utilizing proper wet methods. Before removal from each work area, all abated waste and debris is to be placed and sealed in 6 mil thick plastic asbestos waste bags bearing the required warning labels.
6. Upon being removed from each work area, these waste bags are to be placed and sealed inside a second asbestos waste bag bearing all of the required warning and waste generator identification labels.
7. After the on site AST has inspected the area, in order to ensure all of the asbestos materials identified in these specifications, and that the work area in question is cleaned of any asbestos debris, the Contractor shall be required to apply an encapsulant material to all of the surface areas found inside each work area. This encapsulant shall be of color that contrasts the surfaces being encapsulated.

5:23-8.21 Air Monitoring Methodology

- (a) Air sampling specified in this section shall be performed by the asbestos safety technician in accordance with the procedures specified in this Subchapter and shall be analyzed by a laboratory pursuant to 40 CFR 763.90.

1. For phase contract microscopy (PCM) analysis, laboratories shall be currently enrolled in the American Industrial Hygiene Association Proficiency Analytical Testing Program or an equivalent recognized program.
 2. Analysis by PCM shall use the NIOSH 7400 method delineated in "Fibers" publication in the NIOSH Manual of Analytical Methods, 3rd edition, 2nd supplement, August 1987 or the latest edition. Maximum turn-around-time from sample collection through data reporting shall be 24 hrs.
 3. For transmission electron microscopy (TEM) analysis, laboratories shall participate in the National Institute of Standards and Technology – National Voluntary Laboratory Accreditation Program (NIST-NVLAP) and shall certify that the analysis they performed was according to the protocol listed in Appendix A to Subpart E of 40 CFR 763. Maximum turnaround time from sample collection through data reporting shall be 72 hours.
 4. All pumps shall be calibrated prior to initial sampling using a primary standard. Pumps shall be recalibrated with a minimum of a secondary standard before and after each sample is collected. Protocols shall be established for periodic calibration, using a primary standard. The frequency of primary recalibration checks shall be initially high, until experience is accumulated to show that it can be reduced while maintaining the required sampling accuracy. Records shall be kept of all calibrations and shall be part of the daily log.
- (b) Air sampling while abatement is in progress shall comply with the following procedures:
1. A minimum of three samples per eight-hour shift shall be collected (one at the beginning of each shift, one every four hours thereafter, and one at the end of the Contractor's work day). One stationary sample shall be collected within the clean room of the decontamination unit and two samples collected adjacent to the work area but remote from the decontamination unit entrance. In the selection of adjacent areas to be monitored, preference shall be given to rooms adjacent to critical barriers and/or work area. Testing results shall not indicate that concentrations above 0.01 fibers per cubic centimeter have occurred outside the containment barrier or above 0.02 fibers per cubic centimeter within the clean room of the decontamination chamber during the abatement project.
- (c) Post abatement visual inspections and air monitoring shall comply with the following procedures:
1. Within 48 hours after clean-up for post-removal air testing, and before the removal of critical barriers, a thorough and complete visual inspection and a subsequent final air test shall be performed. This test is required to establish safe conditions for the removal of critical barriers and to permit the beginning of reconstruction activity, if required. Sufficient time following clean-up activities shall be allowed so that all surfaces shall be dry during monitoring. Air pressure differential filtration units shall be in use during this monitoring. Post removal testing shall begin when all work area surfaces are completely dry.
 2. Aggressive air sampling is not required on small asbestos abatement projects which employ tent and glove bag removal procedures.
- (d) Post abatement sampling and analysis for an asbestos hazard abatement project under full containment procedures and encapsulation shall be as follows:
1. Five (5) samples shall be collected inside work. Because this is a Large Project, samples collected within the affected work area may be analyzed by TEM using the methodology specified in AHERA Standards.
- (e) For TEM analysis, the project shall be considered complete when the results of samples collected in the affected work area show that the concentration of fibers is less than 70 s/cc.

- (f) When the air analysis results for projects covered by this Subchapter show asbestos fiber concentration above the acceptance criteria, and then clean-up shall be repeated until compliance is achieved by re-cleaning all surfaces using wet methods and operating all HEPA equipped air pressure differential units to filter the air.

5:23-8.22 Disposal of asbestos waste

The disposal of friable/non-friable asbestos-containing material and asbestos-contaminated waste from the project site shall be in accordance with New Jersey Department of Environmental Protection and Energy requirements specified in N.J.A.C. 7:26 and 40 CFR Part 61, Subpart M.

3.2 Additional Contractor Requirements

Use of the Site: Confine operations at the site in the areas permitted under the direction of the Owner and Omega.

Do not unreasonably encumber the site with materials or equipment - ample storage and rest facilities are available in the basement of the building, outside of the work area.

3.3 Use of the Existing Building: Maintain the existing building in a safe and weather-tight condition throughout the construction period. Repair damage caused by the construction operations occurring during the project.

3.3.1 Keep public areas such as hallways, stairs, elevator lobbies, and toilet rooms free from accumulation of waste, rubbish, or construction debris.

3.3.2 Smoking or open fires, such as burning or welding operations will not be permitted within the building enclosure or on the premises.

3.4 Work to be performed by others

Central Five Jefferson School shall be responsible for the removal of all furniture, equipment, tools, supplies, etc. from the work area. In various work areas, it is necessary for machinery and equipment to remain in place. All such items shall be pre-cleaned and protected by the abatement Contractor.

3.5 Signage: *ASBESTOS HAZARD SIGNS SHALL BE POSTED AT EACH ENTRANCE TO THE WORK AREA AND EACH ENTRANCE TO THE BUILDING IN WHICH WORK IS BEING CONDUCTED.*

3.6 Pre-Abatement and Preparation Procedures

3.6.1 The drawings governing the work under this program are found at the end of this document. The drawings are provided to supply the Contractor with information to aid in the bidding process. The drawings provided do not indicate as-built conditions and shall in no way limit the Scope of Work. The Contractor shall be responsible to fully investigate the character of the work area and provide a proposal based on the existing conditions.

3.6.2 Critical barriers consisting of, at minimum, two (2) layers of six (6) mil. Polyethylene sheeting shall be placed over any active electrical switches etc. that remain in the mini enclosure/containment area.

- 3.6.3 Prior to the start of work, the Contractor shall coordinate the shutdown of the HVAC system within the work area(s), and the lockout of all-electric into the work area. All electrical equipment used by the Contractor will be supported utilizing GFI's powered by the Contractor's own independent electrical panel or generator(s).
- 3.6.4 Personnel/Waste Decontamination Facility - The Contractor shall construct a fully functional remote personnel decontamination facility consisting of a serial arrangement of connected rooms as required by N.J.A.C. 5:23-8. The equipment or "DIRTY" room will be a common area for personnel and equipment/waste.
- 3.6.5 If applicable the Contractor shall immediately seal, when directed by the AST on-site, all openings, and penetrations with fire-rated, expandable foam or "smooth kote" on walls during abatement activities.
- 3.6.6 Install a sufficient quantity of HEPA equipped air filtration devices (AFDs) to provide, at a minimum, four (4) complete air exchanges per hour.
- 3.6.7 All existing fire alarms systems, other protective signaling systems, sprinklers systems, standpipe systems, and other extinguishing systems shall remain operative during abatement procedures.
- 3.6.8 All emergency doors shall not be obstructed, locked, bolted, or otherwise fastened by any means which would prevent the door from being opened from the inside by the use of an ordinary latch or knob or by pressure of the door or panic release drive.

DIRTY

4.0 ADDITIONAL REQUIREMENTS:

- 4.1 Only permitted or otherwise essential personnel to the project shall be allowed access to the work area. The entire school staff shall be "OFF LIMITS" to anyone else with the exception of the Owner's IN HOUSE facility maintenance staff.
- 4.2 Asbestos handlers involved in the construction of the containment and the removal of the asbestos containing materials shall wear two (2) disposable suits, including gloves, hood and footwear, and respiratory equipment. All street clothes shall be removed and stored in a clean room at the work site. The double layer of personal protective suits shall be used for installation of the containment and throughout the removal procedure.
- 4.3 During the removal phase, and any other time from the beginning of the project, any disturbance of Asbestos Containing Material (ACM) shall be thoroughly dampened and placed immediately into the proper waste bags. Only AMENDED water will be utilized for these purposes.
- 4.4 All ACM and other work area debris shall be placed in leak-tight containers. No throwing or dropping of these containers is permitted.
- 4.5 The bagged waste shall be wet cleaned and HEPA vacuumed and then transferred outside the containment, double-bagged, and appropriately handled prior to disposal.
- 4.6 After the gross removal is completed, and prior to start of fine cleaning, appropriate equipment and materials shall be on hand. AMMENDED wet cleaning using rags or sponges, followed by HEPA vacuuming. A sufficient time to dry thoroughly should be permitted prior to HEPA vacuuming of all substrates.
- 4.7 With the Contractor having previously requested a PRE-SEALANT INSPECTION, permission to encapsulate will be given by the AST after the inspection and any subsequent re-inspections validate that it is appropriate to do so.
 - 4.7.1 The bagged waste shall be wet cleaned or HEPA vacuumed and the transferred outside the containment area, double bagged, and appropriately handled prior to disposal.
 - 4.7.2 Upon completion of abatement and prior to containment collapse, the enclosed surfaces in the containment shall be:
 - (a.) Wet cleaned using rags or sponges
 - (b.) Permitted sufficient time to dry, prior to HEPA vacuuming of all substrates.
 - (c.) Lightly encapsulated with an approved tinted encapsulated to lock-down residual asbestos fibers.
 - 4.7.3 All existing fire alarm systems, other protective signaling system, sprinkler systems, standpipe systems, and other extinguishing systems shall remain operative during abatement procedures.
 - 4.7.4 All emergency doors shall not be obstructed, locked, bolted, or otherwise fastened by any means which could prevent the door being opened from the inside by the use of an ordinary latch or knob or by pressure of the door or panic release drive.
 - 4.7.5 The air clearance procedure required is Polarized Contrast Microscopy (PCM) for the containment and shall be collected throughout, as required by Federal and State standards.
- 4.8 Project Schedule- it is the Contractor's responsibility to supply a sufficient number of workers to complete the project by the completion date and time indicated on the most recent notification submitted to the NJDCA.

5.0 PROJECT CONDITIONS:

- 5.1 Building's Equipment Operation: The owner is responsible for the start-up and shut down of any or all equipment on an "as needed" basis to facilitate the asbestos removal project. The Contractor shall be responsible for giving adequate notice to coordinate any equipment operation necessary.
- 5.2 Temporary Services - Water Supply: The Owner/Representative will designate a connection for water supply to the work area. The Contractor shall utilize an approved heavy-duty water hose for temporary water services. The water hose shall have a shut-off valve station in the clean room to separate the water supply from the main water source.
- 5.3 Temporary Services- Electrical Supply: Adequate ground faults shall be stationed in or immediately adjacent to the containment.
- 5.4 The Contractor shall be responsible for insuring that adequate protection for the client's property. The Contractor shall take whatever preventive measure he/she feels is necessary to insure adequate protection is given to all items. The Contractor, in the event damage results from abatement related activities to any of, but not limited to, the items to the Owner's/Representative's satisfaction at no cost to the Owner/Representative.
- 5.5 The Contractor shall be responsible for all site security while at the site. The building will be secured until the end of the project.
- 5.6 SubContractors: The Contractor must have twenty-four (24) hour access to the building and utilize only a licensed plumber, electrician if necessary. Names and telephone numbers, along with licenses, must be included in the bid package.
- 5.7 OSHA Sampling: Contractor is responsible for collecting OSHA samples daily, throughout the course of this project.
- 5.8 Work Site Inspection: The Building Owner/Representative will be permitted to inspect the subject building at any time (excluding the containment). The visitor will present appropriate identification to the AST on-site for documentation purposes.
- 5.9 Supervisors: A N.J. Licensed English-speaking supervisor must be on-site at all times for the duration of the project or the NJ ASBESTOS SAFETY TECHNICIAN will not let the project proceed.
- 5.10 Ceiling Plaster: The Contractor shall immediately seal, when discovered or directed by the AST on-site, any wall or ceiling penetrations that fall in the containment with fire rated, expandable foam or "smooth kote", on walls and/or ceilings during abatement activities. There will be NO EXCEPTIONS.
- 5.11 Floor Drains: The Contractor shall provide watertight seals on all floor drains to the satisfaction of the AST on-site.
- 5.12 Permanent Fixtures (Switches, Meters, Equipment, etc): All fixtures remaining in place must be pre-cleaned and protected with two (2) layers of six (6) mil. Poly sheeting.
- 5.13 Negative Air: AFD exhausts that are utilized for air exchanges inside of the containment shall be exhausted to the outside of the building. In this case a panel will be installed at the emergency exit.

- 5.14 Fire Alarm System: The owner requires that the fire-alarm system remain operational throughout the project. The Contractor shall be responsible for maintain and protecting the system, including the cost of changing sprinkler heads, if required.
- 5.15 Hot Water Heater: The Contractor shall provide adequate hot water to the shower in the decontamination chamber at all times.
- 5.16 Waste Disposal: All ACM waste must be sent to a licensed asbestos waste facility. The name and address of the site must be included with the bid package. All demolition waste which will not be able to be transported and disposed of safely in disposal bags or poly sheeting will be drummed in approved fiber or metal type drums with appropriate labels.
- 5.17 Decontamination Chamber: A three-chamber attached fully functional personal decontamination facility shall be constructed.
- 5.18 Contractor's Services:
- 5.18.1 The Contractor shall supply all labor, materials, services, insurance, permit and equipment necessary to carry out the work in accordance with all applicable federal, state and local regulations and these specifications.
- 5.18.2 The Contractor is responsible for restoring the work area and auxiliary areas utilized during the abatement to conditions equal to or better than the original. Any damage during the abatement activities shall be repaired by the Contractor (e.g., paint peeled off by barrier tape, nail holes, water damage, broken glass, etc.) at no additional cost to the Owner/Representative.

6.0 MATERIALS AND EQUIPMENT:

6.1 General:

- 6.1.1 Deliver all materials in the original packages, containers or bundles bearing the name of the manufacturer and the brand name (where applicable).
- 6.1.2 Store all materials subject to damage, off the ground, away from wet or damp surfaces and under cover, sufficient to prevent damage or contamination. Replacement materials shall be stored outside of the work area until abatement is completed.
- 6.1.3 Damaged, deteriorating or previously used materials shall not be used and shall be removed from the work site and disposed of properly.
- 6.1.4 Polyethylene sheeting for stationary objects shall be a minimum of two (2) layers of six (6) mil. sheeting. All floors shall be covered with two (2) six (6) mil. Layers and shall be removed from the work site and disposed of properly.
- 6.1.5 Method to attaching polyethylene sheeting shall be agreed upon in advance by the Contractor and consultant or his designated representative and selected to minimized damage or equipment and surfaces. Method of attachment may include any combination of duct tape or other waterproof tape, furring strips, spray glue, staples, nails, screws or other effective procedures capable of sealing adjacent sheets of polyethylene under both wet and dry conditions (including the use of amended water).
- 6.1.6 Polyethylene sheeting utilized for worker decontamination enclosure shall be opaque, white or black in color.
- 6.1.7 Special materials required to protect objects in the work area should be detailed (e.g.), plywood over carpeting or hardwood floors to prevent damage from scaffolds and falling material).
- 6.1.8 Disposal bags shall be made of six (6) mil. polyethylene, pre-printed with labels as required by EPA regulation 40 CFR 61.512 (b)(i)(IV) or OSHA requirement 28 CFR 1910.1001(g)(2)(ii).
- 6.1.9 Disposal drums shall be metal or fiberboard with locking ring tops.
- 6.1.10 Stick-on labels, as per EPA or OSHA requirements (see 2.1, 2.7) for disposal drums
- 6.1.11 All disposal bags and disposal drums shall be labeled according to the following and include name/address of building owner.

CAUTION
CONTAINS ASBESTOS FIBERS
AVOID OPENING OR BREAKING CONTAINER
BREATHING ASBESTOS IS HAZARDOUS TO YOUR HEALTH

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 IF HAZARDOUS TO YOUR HEALTH

Provide in accordance with the U.S. Department of Transportation regulation of hazardous waste marking, 49 CFR Parts 171 and 172. Hazardous Substances: Final Rule. Published November 21, 1986 and revised February 17, 1987.

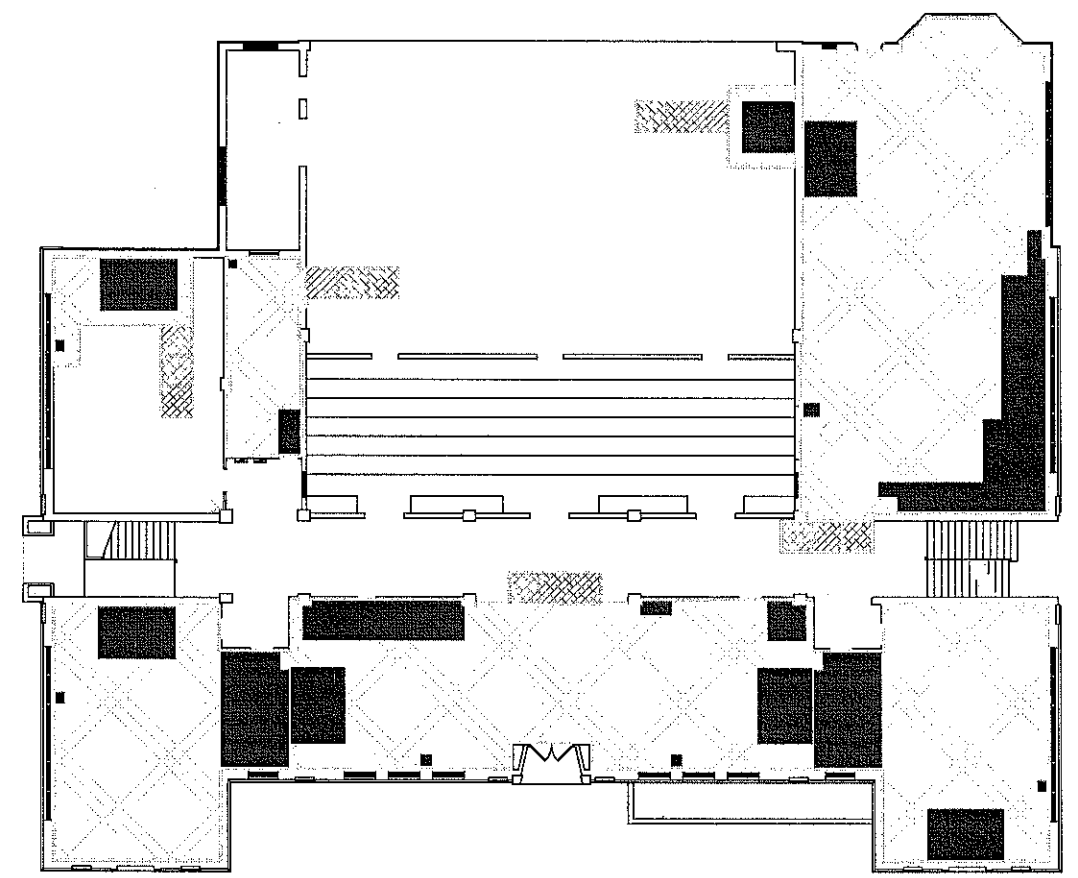
***RQ HAZARDOUS SUBSTANCE SOLID, NOS
FORM-E, NA 9188
(ASBESTOS)***

- 6.2 Surfactant (wetting agent): Shall be a 50/50 mixture of polyoxyethylene ether and polyoxyethylene ester, or equivalent, mixed in a concentration of one (1) fluid ounce to five (5) gallons of water or as specified by manufacturer. (An equivalent surfactant shall be understood to be a material with a surface tension of 29 dynes/cm as tested in its properly mixed concentration, using ASTM method D1331-565- "Surfaces and inter-facial tension of Solutions of Surface Active Agents"). Where work area temperature may cause freezing of the amended water solution, the addition of ethylene glycol in amounts sufficient to prevent freezing is permitted.
- 6.3 Sealants: Any sealant used must be approved by the United States Environmental Protection Agency, Office of Toxic Substances and the American Society of Testing and Materials (ASTM) Committee, E06.21, 06E on Encapsulation of Building Materials.
- 6.4 Substitutions:
- 6.4.1 Approval required: The contract is based on the materials, equipment and method. The Owner/representative will consider proposals for substitutions of materials, equipment or methods, only when such proposals are accompanied by full and complete technical data and all other information required by the Owner/Representative to evaluate the proposed substitution. The Owner/ Representative have specifically approved the substitution.
- 6.4.2 "Or-Equal": Where the phrase "or equal" or "or equal as approved by the Owner/Representative" occurs in the contract document, the Contractor shall not assume that materials, equipment or methods will be approved for this work by the Owner/Representative; their decision shall be final.
- 6.5 Polyethylene: All plastic sheeting shall be nominal six (6) mil. thick and of sufficient size to enclose the area with a minimum number of seams.
- 6.6 Barrier Securing Materials: All tape shall be a high quality duct tape. All spray-on adhesive, glue and other barriers or securing material shall also be high quality products.
- 6.7 Lumber: Lumber utilized for construction on the work site shall be selected by the Contractor; however, all materials will be of appropriate size to provide safety to all personnel and free of all contaminants.
- 6.8 Hand Tools: All hand tools shall be furnished by the Contractor and shall be properly used by all personnel.
- 6.9 Glove bags: Only glove bags specifically designed and approved for use in New Jersey asbestos removal projects shall be used.
- 6.10 Disposal Containers:
- 6.10.1 Waste Bags: All waste bags shall be six (6) mil. thick, properly labeled, and meet all applicable standards.
- 6.10.2 Fiber or Metal Container Drums: All fiber or metal container drums shall be (30) gallon capacity and meet all applicable standards.

- 6.11 Sprayers and Pumps: Sprayers with pumps capable of providing five hundred (500) pounds per square inch (psi) at the nozzle tip at a flow rate of two (2) gallons per minute shall be used for spraying amended water.
- 6.12 Squeegees and Dustpans: The Contractor shall provide rubber dustpans and squeegees for cleanup.
- 6.13 Brushes: Brushes utilized for removing loose asbestos containing material shall have nylon or fiber bristles, not metal. NO DRY SWEEPING IS PERMITTED WITHIN THE CONTAINMENT.
- 6.14 HEPA air filtration: The Contractor shall have available HEPA filtering equipped air filtering equipment capable of filtering asbestos fibers to 0.3 um at least 99.97 percent efficiency and of sufficient quantity and capacity to cause a complete air change or total filtration within the work area at least once every fifteen (15) minutes. Nothing in this specification shall be recommended or construed to limit the maximum exhaust capacity from the work area. The exhaust capacity from the work area shall be sufficient to establish a complete air change in the containment every 15 minutes (four complete changes per hour).

END OF DOCUMENT

- ABATEMENT NOTES**
1. Abatement method: Full Containment.
 2. Top layer of concrete slab shall be abated in select areas, removing all identified ACM lightweight concrete.
 3. Abatement Contractor shall not chop structural concrete.
 4. Following abatement, edges of chopped ACM concrete shall be sealed.
 5. Abatement waste route and waste container location to be coordinated with G.C.



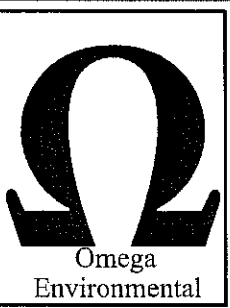
NOT TO SCALE

LEGEND

	ACM Concrete Abatement Areas
	Waste Route
	Attached Decon
	Work Area (Inside Full Containment)

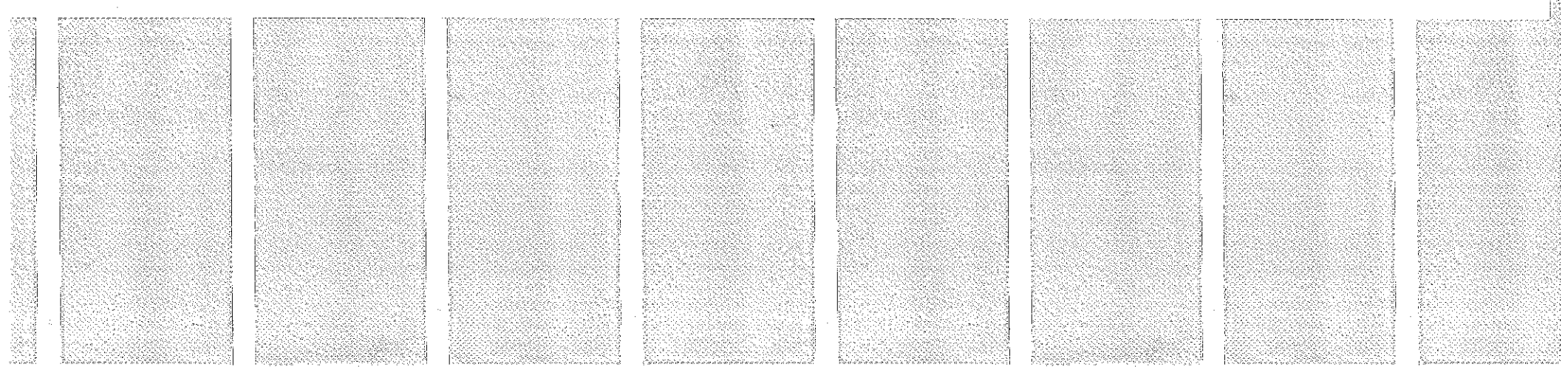
QUANTITIES

Material Description	Quantities	Number of Locations
ACM Light Weight Concrete	1,187 square feet	21
Twenty one (21) Locations on this floor total		

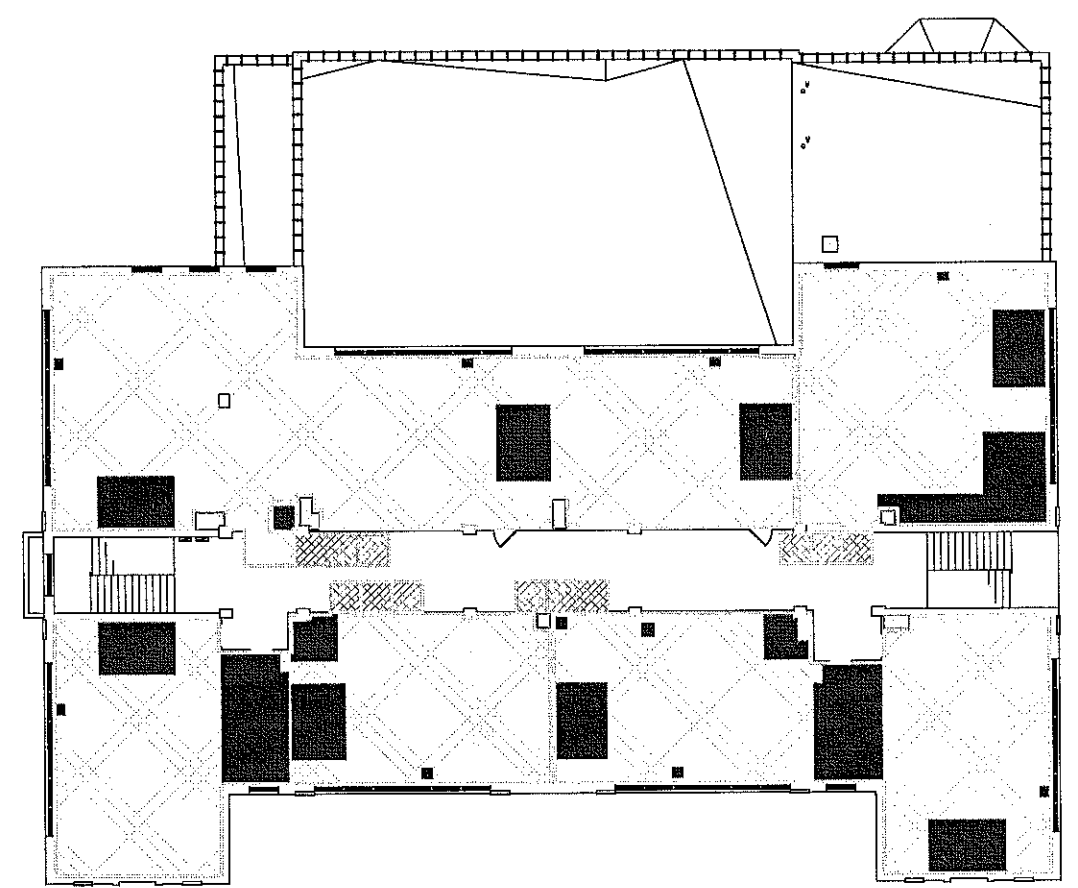


RENOVATION BUILDING #2 SUB-8 ABATEMENT PLAN

Dwg. Title: Central Five Jefferson School Bldg. 2 SUB-8 Plan, 1st Floor	
Client: Town of Union Board of Education	
Location: Hilton Ave. & Burkley Place, Union, NJ	
Date: 1/25/2012	
280 Huyler Street S. Hackensack, NJ 07606 Tel: (201) 489-8700 Fax: (201) 342-5412	Project #: 12-10018B Drawn By: Eric Gelhaus Drawing #: 1 of 2



- ABATEMENT NOTES**
1. Abatement method: Full Containment.
 2. Top layer of concrete slab shall be abated in select areas, removing all identified ACM lightweight concrete.
 3. Abatement Contractor shall not chop structural concrete.
 4. Following abatement, edges of chopped ACM concrete shall be sealed.
 5. Abatement waste route and waste container location to be coordinated with G.C.



NOT TO SCALE

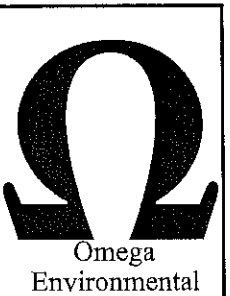
LEGEND

	ACM Concrete Abatement Areas
	Waste Route
	Attached Decon
	Work Area (Inside Full Containment)

QUANTITIES

Material Description	Quantities	Number of Locations
ACM Light Weight Concrete	1,108 square feet	24

Twenty one (21) Locations on this floor total



RENOVATION BUILDING #2 SUB-8 ABATEMENT PLAN

Dwg. Title: Central Five Jefferson School Bldg. 2 SUB-8 Plan, 2nd Floor	
Client: Town of Union Board of Education	
Location: Hilton Ave. & Burkley Place, Union, NJ	
Date: 1/25/2012	
280 Huyler Street S. Hackensack, NJ 07606 Tel: (201) 489-8700 Fax: (201) 342-5412	Project #: 12-10018B Drawn By: Eric Gelhaus Drawing #: 2 of 2

