Delgado Community College
Purchasing Department
501 City Park Avenue, Bldg. 37
New Orleans, Louisiana 70119
(504) 762-3027

Invitation to Bid

Bid Name:
Service Contract
40006-012 – Asbestos Abatement

Due by & to be opened on:
April 30th, 2026 at 2:00PM CST

Contact Person:
Tracey Sheffield
Purchasing Director
(504) 762-3029

_____
NAME OF COMPANY

_____
ADDRESS

_____
CITY, STATE, ZIP

_____
PHONE NUMBER FAX NUMBER EMAIL

_____
SIGNATURE OF COMPANY REPRESENTATIVE

_____
NAME (PRINTED) & TITLE OF COMPANY REPRESENTATIVE

***** This form must be completed and submitted with your bid***

I. GENERAL INFORMATION

1. Any questions regarding this Invitation to Bid shall be in writing and shall be addressed to Tracey Sheffield at the following address:

Delgado Community College
O'Keefe Administration Building
Purchasing Office
501 City Park Avenue, Building 37
New Orleans, La 70119
Email: tsheff@dcc.edu

Any additional information resulting from such inquiries shall be distributed to all bidders via addenda. The College will not be responsible for any other explanation of the documents.

Sealed bids may be submitted by mail or in person. Faxed or emailed Bids not accepted. Mailed bids and hand carried bids shall go to the address in item #1. If hand carried, do not leave on the counter unattended. Bids are to be delivered directly to the Purchasing Office where they will be time stamped. The bid name and number must be on the outside of the packaging, including any express mail packaging. Please note that express mail or USPS carriers may not deliver directly to 501 City Park Avenue or to the Purchasing Office. The bidder/proposer is solely responsible for ensuring that its courier service provider makes inside deliveries directly in the Purchasing Office. All Bids must be time stamped by the Purchasing Office by the due date and time regardless of delivery method.

3. Each bidder is solely responsible for the accuracy and completeness of its bid. Errors or omissions may be grounds for rejection, or may be interpreted in favor of the College.

4. Each bidder is solely responsible for the timely delivery of its bid. Delgado Community College will not be responsible for any delays in the delivery of bids, whether delayed in the mail, or for any reason whatsoever.

5. Only the issue of a purchase order or a signed acceptance of a proposal constitutes acceptance on the part of the College.

6. Assuming there is no prompt payment discount provision, payment will be made within 30 days from receipt of products in satisfactory condition, or within 30 days from receipt of invoice, whichever is later.

7. Proposer or bidder, contractor, etc. certifies, by signing and submitting a proposal for $25,000 or more, that their company, any subcontractors, or principals are not suspended or debarred by the General Services Administration (GSA) in accordance with the requirements in OMB Circular A-133. (A list of parties who have been suspended or debarred may be viewed via the internet at www.epls.gov .)

II. INSTRUCTIONS & REQUIREMENTS FOR BIDDERS

Delgado Community College is seeking bids to provide asbestos abatement, on an as needed basis, multiple buildings on the following Campuses. There is no minimum guarantee of work for this agreement

City Park Campus 615 City Park Ave New Orleans, LA 70119	West Bank Campus 2600 General Meyer Ave New Orleans, LA 70114	Marine Fire School 13200 Old Gentilly Road New Orleans, LA 70129
River City Site 709 Churchill Parkway Avondale, LA 70094	Sidney Collier Site 3727 Louisa Street New Orleans, LA 70126	

- Additional locations may be added to or removed from the contract.

QUALIFICATIONS

Contractors bidding this contract shall have at least five (5) years' experience as a contractor in the field of Asbestos Abatement, and shall be required to perform the work set forth in the specifications. Each Contractor shall present documentation verifying their experience in Asbestos Abatement. Bidder must complete **Attachment B, References Form** and submit with their bid. References must be from companies where work of a similar size and nature have been performed within the last (5) years. The College requires that all contractors submitting bids be licensed by the Louisiana State Licensing Board for Contractors under Category VII, Hazardous Materials, Specialty Classification Asbestos Removal and Abatement. **A copy of the license must be submitted with the Bid.** Bidders must be registered, active and in good standing with the Louisiana Secretary of State. Proof of LDEQ Certification will be required at the Colleges request.

PRE-BID/JOBSITE VISIT:

A **non-mandatory pre-bid jobsite visit** is scheduled on **Friday, April 17, 2026 at 10:00AM CST** at the City Park Campus. Bidders are to meet in the Facilities Office in Building 10 at Delgado Community College's City Park Campus located at 615 City Park Avenue, New Orleans, LA 70119. Provisions of site inspection are included. Although not required, it is strongly recommended that bidders attend the jobsite visit to ascertain the scope of the work to be performed.

Everyone attending any pre-bid meeting and/or jobsite visit must follow all safety protocol while on Campus, follow all recommended social distancing measures and may be subject to a temperature check or wearing a mask.

ADDENDA:

Any questions arising from the specifications or the pre-bid conference must be addressed in writing to the individual indicated in Section I, General Information, and will be answered via an Addendum. All questions must be submitted no later than **Wednesday, April 22, 2026 by 12:00PM CST**. A final 48-hour period after the issuance of the Addendum will be granted for questions which are directly related only to the answers provided in the Addendum.

Any interpretation, correction or change of the Bidding Documents will be made by addendum. Interpretations, corrections or changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon such interpretations, corrections and changes. The Bidder must acknowledge all issued addenda in the space provided on the Bid Form. Failure to acknowledge addenda will render the bid informal and will cause its rejection.

Bid Documents and Addenda may be downloaded from https://wwwcfprd.doa.louisiana.gov/osp/lapac/dspBid.cfm?search=department&term=39

BID SUBMITTAL:

Bids must be sealed with the **Bidder's name, license number along with the name and number of the bid clearly written on the front of the envelope or package** and are to be delivered to the person and location in Section I, General Information by the date and time stated on the title page. Faxed or emailed bids are not acceptable. If shipping via express mail, all information as listed above must be on the outside of the shipping packaging. Bids received without this information or after the due date and time will be automatically disqualified.

In accordance with R.S. 37:2163A, Contractors' License number in the appropriate classification(s) must appear on the bid envelope submitted on all projects in the amount of $50,000 or more (and $1.00 or more if hazardous materials are involved.

Bids must be submitted on the forms furnished for this purpose and must be filled out in ink or typewritten and signed in ink. Do not erase, correct, or write over any prices or figures necessary for this proposal. If any corrections are necessary, each must be initialed by bidder. Failure to comply with the above requirements will cause your bid to be disqualified.

Effective August 15, 1997, in accordance with L.R.S. 39:1594 (Act 121), the person signing the bid must be:

a) A current corporate officer, partnership member or other individual specifically authorized to submit a bid as reflected in the appropriate records on file with the Secretary of State; or
b) An individual authorized to bind the vendor as reflected by an accompanying corporate resolution, certificate, or affidavit.

By signing the bid, the bidder certifies compliance with the above.

MODIFICATION OR WITHDRAWAL OF BID:

A bid may not be modified, withdrawn, or canceled by the Bidder for a period of thirty (30) calendar days for the period following the time and bid date designated for the receipt of bids, and Bidder so agrees in submitting his bid, except in accordance with R.S. 39:1594,F.

Prior to the time and date designated for receipt of bids, bids submitted early may be modified or withdrawn only by notice to Delgado Community College Purchasing Office at the place and prior to the time designated for receipt of bids.

Withdrawn bids may be resubmitted up to the time designated for the receipt of bids provided that they are then fully in conformance with these Instructions to Bidders.

BIDDER REPRESENTATION:

By signing and submitting a bid, Bidder acknowledges that he/she has visited the site, read and understands the Bidding Documents and his bid is made in accordance therewith.

The Bidder is advised to carefully consider all College physical features and activities and occupancies by faculty, staff and students, and to plan activities so as not to disrupt the normal operations and activities of the College except as expressly permitted by the College in writing. The Bidder shall be especially aware of existing electric, gas, water, telephone and/or other utilities and facilities which may be in the way of or adjacent to the Work, and shall take appropriate action to protect these utilities during the Work.

Every effort has been made to accurately show all pertinent surface and subsurface features accurately. For self-assurance, the Bidder may examine available drawings and documents related to College premises. Such examinations may be made only in the offices of the College Facility Services as part of the Non-Mandatory Pre-Bid Conference.

The Bidder agrees that his/her bid is based solely upon the materials, systems and equipment described in the Bidding Documents as advertised and as modified by addenda. The bid submitted is not based on any verbal instructions contrary to the Bidding Documents and addenda.

INSURANCE:

Bidders are to comply with the insurance requirements as stated in Section V of the bid. The provided **indemnification form** (*see Attachment A*) must be completed and submitted with your bid. Failure to comply with these requirements will result in disqualification of your bid.

The successful bidder will be responsible for ensuring that Delgado receives the required **insurance certificate** after the notice of award (as per terms and conditions) in a timely manner in order to meet the required work expectancy timeframe. No work may commence until a proper certificate is received.

END OF SECTION II

III. TERMS AND CONDITIONS

GENERAL TERMS & CONDITIONS:

- A response to a bid invitation is our only indication of your interest in college business. Failure to respond to six (6) consecutive bid invitations may cause your name to be removed from the bidders' list.

- Bid openings are public and are subject to any in place Executive Order, revised statute or College protocol as it pertains to any safety or illness risks.

- No information will be given out as to opinions concerning the ultimate outcome while consideration of the award is in progress.

- Effective September 1, 1991, in accordance with Act 1029 of the 1991 Regular Legislative Session, Delgado Community College will not be responsible for any sales tax, either state or local.

- Bids submitted are governed and subject to provisions of the laws of the State of Louisiana including but not limited to L.R.S. 39:1551-1736; Purchasing Rules and Regulations; Executive Orders; Standard Terms and Conditions; and Specifications listed in this solicitation

- Delgado Community College reserves the right to reject any and all bids and to waive any informality.

- It shall be distinctly agreed and understood that the price quoted must be a firm price for the duration of the Contract, and not subject to change at time of the shipment of goods or delivery of services.

- All shipping, handling, materials, labor or any other charges necessary to compete this job must be included in amount bid. Items not listed but necessary for completion of the job shall be furnished as part of the bid. Additional costs disclosed later will be at the expense of the vendor.

- All deliveries shall be made FOB Destination to the College unless otherwise specified by the College. All freight charges are to be included in the unit price. The College will not be responsible for freight charges not clearly stated as a part of this bid.

- The College reserves the right to award the above items separately, grouped, or on an all-or-none basis, and to reject any or all bids and to waive any informalities including technicalities in specifications that preclude competition.

- The College shall have the right to reject any or all bids not accompanied by any data required by the Bidding Documents or a bid in any way incomplete or irregular.

- The Bid will be awarded on the basis of the lowest total cost as determined by the College.

- List of distributors: The Vendor signing the bid shall be designated as the Prime Vendor on any contract/agreement resulting from this bid. If additional Vendors are authorized to receive orders or perform work for services covered under this proposal, the Vendor must submit, with bid, a list of those additional authorized distributors or subcontractors.

- Bidder must be a Louisiana licensed contractor who is licensed to perform the work as outlined in the solicitation. The Bidder must be fully qualified under any State or local licensing law for Contractors in effect at the time and at the location of the work before submitting his bid. The Contractor shall be responsible for determining that all of his Sub-bidders or prospective Subcontractors are duly licensed in accordance with law.

- Bidder must be able to provide a project timeline for any work if requested by Delgado Community College

- If item(s) or services bid do not fully comply with specifications, including brand and/or product number or work, bidder must state in what respect the item(s)/services or work deviate. Failure to note exceptions on the bid form will not relieve the successful bidder from supplying the actual products or services requested.

CONTRACT TERM & AGREEMENT:

The term of the agreement will be from July 1, 2026 through June 30, 2027.with the option to renew for up to two (2) twelve (12) month periods if mutually agreeable. Contract extensions may not exceed thirty-six (36) months total.

Escalation Clause; Prior to any renewal term, the contractor may request a price increase for that renewal term based on documented increase costs. The price increase may not be greater than the Consumer Price Index (All Urban Consumers, Current Series) average increase for the prior 12 months. Contractor must have performed the service outlined in the bid for a minimum of (12) consecutive months prior to any agreed increase taking affect. The College reserves the right to approve or disapprove the price increase.

The Form of Agreement between the College and Contractor for the work set forth herein will be the issuance of a Contract. Purchase order numbers will be assigned at the beginning of each term for billing purposes.

ADDITIONAL SITES:

The College reserves the right to add or subtract sites to this contract during the course of the agreement. The College will notify the Vendor/Contractor and the prices charged will be at the same rates, terms and conditions as stated on the Vendor/Contractor's submitted Bid.

PAYMENTS:

Contractor will be paid after work is satisfactorily completed and upon recommendation of the College Representative. **Invoices must be submitted within (10) business days of the completion of the work.**

Payment for services shall be made to the Contractor once a month after receipt by the College of an invoice (or invoices) by which the Bidder certifies, and the College agrees, that all the invoiced work was performed in accordance with the specifications. Invoices will not be paid prior to 30 days from receipt of invoice or completion of services/receipt of project.

All invoices should be submitted to the College's Office of Accounts Payable and clearly indicate the Purchase Order Number assigned by the Delgado Purchasing Office. Invoices must be accompanied by a service ticket(s) or reference the service ticket(s) if the ticket(s) was already submitted to Facilities & Planning. The service ticket must reference who requested the work, why the work was needed, and what work was performed. Lump sum invoices will not be processed. All work must be itemized and include a breakdown per the unit pricing per the bid schedule.

INSURANCE:

Vendor compliance with the attached insurance and indemnification requirements and as specified in the Bid Specifications is mandatory. A completed copy of the ***indemnification agreement*** *(Attachment A)* must be submitted with the bid. Failure to do so will result in immediate disqualification of the bid.

Upon award, a certificate of insurance delineating Delgado Community College as the certificate holder with all endorsements noted must be submitted to the Purchasing Department. Certificates must be received within (10) business days from the notice of award. Failure to provide the above timely will cause the award to be rescinded and the Contract will be awarded to the next low Bidder

Insurance must be in effect at all times for the duration of the Contract.

TERMINATION OF AGREEMENT:

- **Termination of this agreement for cause** – DCC may terminate this agreement for cause based upon the failure of Contractor to comply with the terms and/or conditions of the Agreement, or failure to fulfill its performance obligations pursuant to this agreement, provided that DCC shall give the Contractor written notice specifying the Contractor's failure. If within thirty (30) days after receipt of such notice, the Contractor shall not have corrected such failure or, in the case of failure which cannot be corrected in thirty (30) days, have begun in good faith to correct such failure and thereafter proceeded diligently to complete such correction, then DCC may, at its option, place the Contractor in default and the Agreement shall terminate on the date specified in such notice.

The Contractor may exercise any rights available to it under Louisiana law to terminate for cause upon the failure of DCC to comply with the terms and conditions of this agreement, provided that the Contractor shall give DCC written notice specifying the DCC's failure and a reasonable opportunity for DCC to cure the defect.

- **Termination for non-appropriation of funds** - The continuance of this contract is contingent upon the appropriation of funds to fulfill the requirements of the contract by the legislature. If the legislature fails to appropriate sufficient monies to provide for the continuation of the contract, or if such appropriation is reduced by the veto of the Governor or by any means provided in the appropriations act or Title 39 of the Louisiana Revised Statutes of 1950 to prevent the total appropriation for the year from exceeding revenues for that year, or for any other lawful purpose, and the effect of such reduction is to provide insufficient monies for the continuation of the contract, the contract shall terminate on the date of the beginning of the first fiscal year for which funds are not appropriated.

- **Termination for Convenience** - The College may terminate the Contract at any time by giving thirty (30) days written notice to the Contractor. The Contractor shall be entitled to payment for work performed (monthly charges to be prorated) to the extent work has been performed satisfactorily.
  If, for any reason, the Contractor desires to terminate the Contract, he may do so upon giving written notice of sixty (60) days to the College. Contractor shall perform all work satisfactorily as contracted until the determined termination date

- **Cancellation Conditions -** In any of the following cases, the College shall have the right to immediately cancel the contract agreement due to:
  The interruption of operation in any of the contacted facilities or the College beyond its control; failure of the Contractor to maintain a satisfactory performance bond or adequate insurance coverage; wherever the contractor is guilty of misrepresentation; wherever the contract agreement was obtained by fraud, collusion, conspiracy, or other unlawful means, or the contract agreement conflicts with any statutory and constitutional provision of the State of Louisiana or the United States. In case of default by the Contractor, the College reserves the right to purchase any or all items or services in default on open market, charging the Contractor with any excessive costs. Until these excessive costs are paid to the College, the Contractor shall not do business with the College again.

- **Implementation of Termination -** The Contractor shall terminate all work under the Contract to the extent and on the date specified in the Notice of Termination or reduction of work and until such date shall, continue to perform all work required in the specification and be compensated for such work. In the event of termination or reduction in the scope of work by the College, the College shall pay the Contractor for all work satisfactorily performed up to the effective date of termination or reduction in the scope of work, in accordance with the prices included in Contractor's bid less all partial payments made on account prior to the effective date of termination or reduction in the scope of work. Upon termination as above, the Contract Administrator shall make final determination of the amount due the Contractor for work performed.

INQUIRIES, INTERPRETATION OR CORRECTION TO BIDDING

Any questions arising from either the specifications and/or jobsite visit must be addressed in writing and will be answered via an Addendum.

Any interpretation, correction or change of the Bidding Documents will be made by addendum. Interpretations, corrections or changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon such interpretations, corrections and changes.

DISCRIMINITORY PRACTICES:

Delgado Community College of the State of Louisiana is an equal opportunity employer and looks to its contractors, subcontractors, vendors, and suppliers to take affirmative action to affect this commitment in its operations.

Both the College and the bidder shall abide by the requirements of Title VII of the Civil Rights Act of 1964, and shall not discriminate against employees or applicants due to race, color, religion, sex, handicap or national origin. Furthermore, both parties shall take affirmative action to provide for positive posture in employing and upgrading persons without regard to race, color, religion, sex, handicap, or national origin, and shall take affirmative action as provided in the Vietnam Era Veteran's Readjustment Act of 1974. Both parties shall abide by the requirements of Title VI of the Civil Rights Act of 1964 and the Vocational Rehabilitation Act of 1974 to ensure that services are delivered without discrimination due to race, color national origin or handicap. Both parties shall comply with the requirements of the Americans with Disabilities Act of 1990 which bans discrimination in employment or in delivery of services on the basis of sexual orientation.

SUBCONTRACTORS:

All subcontractors must be identified and approved in writing in advance by the College. Contractor shall promptly pay all laborers, materialmen, subcontractors and suppliers for work performed pursuant to this contract.

It is the Contractor’s responsibility to ensure that his subcontractors are properly licensed and insured and adhere to all rules and responsibilities as outlined in the bid documents.

SUBSTITUTIONS AND EQUIVALENTS:

SERVICES: Any materials, products and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution.

No substitution will be considered unless written request for approval has been submitted by the Contractor and has been received by the College Representative prior to beginning work.

Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute including model numbers, drawings, cuts, performance and test data and any other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment or work that incorporation of the substitute would require shall be included.

It shall be the responsibility of the Contractor to include in his request all changes required to the work if the proposed substitute is used. Approval, if granted, is given contingent upon Contractor being responsible for any costs which may be necessary to modify the space or facilities needed to accommodate the materials and equipment approved.
If the College approves a proposed substitution, such approval will be set forth in writing. Contractor shall not rely upon approvals made in any other manner.

MATERIALS: * *Applicable only if materials are being purchased in addition to the services requested in this Bid.* Any manufacturer's names, trade names, brand names, or catalog numbers used in the specifications for material purchase are for the purpose of describing and establishing general quality levels. Such references are not intended to be restrictive. Bids will be considered for any brand that meets or exceeds the quality of the specifications listed for any item.

Vendor must state the brand/model he or she is bidding on each item. It shall be the sole responsibility of the Vendor to prove equivalency. Vendor shall submit with the bid all illustrations, drawings, descriptive literature, and specifications necessary to determine equivalency. Failure to do so will eliminate your bid from consideration. The decision of the College as to equivalency shall be final.

If a vendor wishes to submit an alternate bid in addition to the brand/model requested, he or she may submit one (1) alternate bid. The alternate bid must be a separate submission, must be clearly marked as an alternate, and must include all applicable forms (i.e., jobsite visit). In addition, a separate, signed cover sheet must be submitted with the alternate.

END OF SECTION III

IV. INSURANCE REQUIREMENTS FOR VENDORS

The Contractor/Vendor shall purchase and maintain for the duration of the contract/work insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor/Vendor, its agents, representatives, employees or subcontractors.

A. MINIMUM SCOPE AND LIMITS OF INSURANCE

1. **Workers Compensation**
   Workers Compensation insurance shall be in compliance with the Workers Compensations law of the State of Louisiana. Employers Liability is included with a minimum limit of $500,000 per accident/per disaster/per employee. If work is to be performed over water and involves maritime exposure, applicable LHWCA, Jones Act, or other maritime law coverage shall be included and the Employers Liability increased to a minimum of $1,000,000.

2. **Commercial General Liability**
   Commercial General Liability insurance, including Personal and Advertising Injury Liability, shall have a minimum limit per occurrence of $1,000,000 and a minimum general aggregate of $2,000,000. The Insurance Services office (ISO) Commercial General Liability occurrence coverage form CG 00 01 (current form approved for use in Louisiana), or equivalent, is to be used in the policy. Claims made form is unacceptable.

3. **Automobile Liability**
   Automobile Liability Insurance shall have a minimum combined single limit per occurrence of $1,000,000. ISO form number CA 00 01 (current form approved for use in Louisiana), or equivalent, is to be used in the policy. This insurance shall include third-party bodily injury and property damage liability for owned, hired and non-owned automobiles.

B. DEDUCTABLES AND SELF-INSURED RETENTIONS

Any deductibles or self-insured retentions must be declared to and accepted by the Agency. The Contractor/Vendor shall be responsible for all deductibles and self- insured retentions.

C. OTHER INSURANCE PROVISIONS

The policies are to contain, or be endorsed to contain the following provisions:

1. General Liability and Automobile Liability Coverage's

a. The Agency, its officers, agents, employees and volunteers shall be named as an additional insured as regards to negligence by the contractor/vendor. ISO Form CG 20 10 (current form approved for use on Louisiana), or equivalent, is to be used when applicable. The coverage shall contain no special limitations on the scope of protection to the Agency.

b. The Contractor's/Vendor's insurance shall be primary as respects to the Agency, its officers, agents, employees and volunteers. Any insurance or self-insurance maintained by the Agency shall be excess and non-contributory of the Contractor's insurance.

c. The Contractor's/Vendor's insurance shall apply separately to each insured against whom claim is made or suit brought, except with respect to the policy limits.

2. Workers Compensation and Employers Liability Coverage

The insurer shall agree to waive all rights of subrogation against the Agency, its officers, agents, employees and volunteers for losses arising from work performed by the Contractor for the Agency.

3. All Coverages

a. Coverage/Vendor shall not be cancelled, suspended, or violated by either party (the Contractor/Vendor or the insurer) or reduced in coverage or in limits except after 30 days written notice has been given to the Agency. Ten-day written notice of cancellation is acceptable for non-payment of premium. Notifications shall comply with the standard cancellation provisions in the Contractor's/Vendor's policy.

b. Neither the acceptance of the completed work nor the payment thereof shall release the Contractor/Vendor from the obligations of the insurance requirements or the indemnification agreement.

c. The insurance companies issuing the policies shall have no recourse against the Agency for payment of premiums or for assessments under any form of the policies.

d. Any failure of the Contractor/Vendor to comply with reporting provisions of the policy shall not affect coverage provided to the Agency, its officers, agents, employees and volunteers.

D. ACCEPTABILITY OF INSURERS

All required insurance shall be provided by a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located. Insurance shall be placed with insurers with an A.M. Best's rating of **A-: VI or higher**. This rating requirement may be waived for workers compensations only.
If at any time an insurer issuing any such policy does not meet the minimum A.M Best rating, the Contractor/Vendor shall obtain a policy with an insurer that meets the A.M Best rating and shall submit another Certificate of Insurance as required in the contract.

E. VERIFICATION OF COVERAGE

Contractor/Vendor shall furnish the Agency with Certificates of Insurance reflecting proof of required coverage. The Certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The Certificates are to be received and approved by the Agency before work commences and upon any contract renewal thereafter.

In addition to the Certificates, Contractor/Vendor shall submit the declarations page and cancellation provision endorsement for each insurance policy. The Agency reserves the right to request complete certified copies of all required insurance policies at any time.

Upon failure of the Contractor/Vendor to furnish, deliver and maintain such insurance as above provided, this contract, at the election of the Agency, may be suspended, discontinued or terminated. Failure of the Contractor/Vendor to purchase and/or maintain any required insurance shall not relieve the Contractor/Vendor form any liability or indemnification under the contract.

F. SUBCONTRACTORS

Contractor/Vendor shall include all subcontractors and as insureds under its policies OR shall be responsible for verifying and maintaining the Certificates provided by each subcontractor. Subcontractors shall be subject to all of the requirements stated herein. The Agency reserves the right to request copies of subcontractor's Certificates at any time.

G. WORKERS COMPENSATION INDEMNITY

In the event the Contractor/Vendor is not required to provide or elects not to provide workers compensation coverage, the parties hereby agree that Contractor/Vendor, its owners, agents and employees will have no cause of action against, and it will not assert a claim against the State of Louisiana, its departments, agencies, agents and employer, whether pursuant to the Louisiana Workers Compensation Act, or otherwise under any

circumstance. The parties also hereby agree that the State of Louisiana, its departments, agencies, agents, and employees shall in no circumstance be, or considered as, the employer or statutory employer of the Contractor/Vendor, its owners, agents and employees. The parties further agree that the Contractor/Vendor is a wholly independent contractor and is exclusively responsible for its employees, owners, and agents. Contractor/Vendor hereby agrees to protect, defend, indemnify and hold the State of Louisiana, its departments, agencies, agents and employees harmless form any such assertion or claim that may arise from the performance of this contract.

H. INDEMNIFICATION/HOLD HARMLESS AGREEMENT

Contractor/Vendor agrees to protect, defend, indemnify, save and hold harmless, the State of Louisiana, all State Departments, Agencies, Boards and Commissions, its officers, agents servants, employees and volunteers, from and against any and all claims, damages, expenses, and liability arising out of injury or death to any person or the damage, loss or destruction of any property which may occur, or in any way grow out of, any act or omission of the Contractor/Vendor, its agents, servants, and employees, or any and all costs, expenses and/or attorney fees incurred by the Contractor/Vendor as a result of any claims, demands, suits or causes of action, except those claims, demands suits, or causes of action arising out of the negligence of the State of Louisiana, all State Departments, Agencies, Boards, Commissions, its officers, agents, servants, employees and volunteers.

Contractor/Vendor agrees to investigate, handle, respond to, provide defense for and defend any such claims, demands, suits, or causes of action at its sole expense and agrees to bear all other costs and expenses related thereto, even if the claims, demands, suits, or causes of action are groundless, false or fraudulent.

END OF SECTION V

V. TECHNICAL SPECIFICATIONS
SECTION 01000

SECTION 01000

GENERAL CONDITIONS

The general conditions of these Specifications, including amendments and additions thereto, apply to each and every heading included in these Specifications with the same force as though repeated in full under each heading respectively.

1.01 SCOPE

Provide Delgado Facility Services with DEQ certified asbestos workers and supervisors for asbestos work. Work to be performed will include maintenance and asbestos abatement projects. The manpower is to be furnished on an as needed basis and is to work under the direction of Facility Services supervision. The Facility Services supervisor will make daily work assignments, inspect work daily, coordinate work with other College personnel and check daily time slips of hours worked to be turned in daily by the contractor. The contractor's supervisor for asbestos abatement projects is to be DEQ certified in asbestos. This individual will act as both a competent person and a contact person and liaison for the work crew with Facility Services supervision.

It is mandatory that all supplemental asbestos manpower hold current DEQ certification, be OSHA trained in asbestos abatement, be medically tested and able to perform asbestos abatement wearing a respirator and protective clothing. Contractor must provide, up front, all medical documents. Contractor will provide fit testing of respirators for contractor employees. The contractor will provide respiratory equipment, decontamination facilities, the necessary tools (hand and power tools) and other personnel equipment as determined by the Assistant Director, Environmental Maintenance.

All work shall meet any required trade standards and shall also meet College Standards. Required insurance suitable for this type of work must be provided and maintained.

All work will be coordinated with the contractor and College Representative prior to the work beginning.

Standard (Non-Urgent Projects):
For all Standard (Non-Urgent) Projects, a written estimate shall be provided by the contractor for each project to the College Representative before work begins. The written estimate shall include separate labor, equipment rental and material costs to complete the project which must match rates as bid in response to these Specifications. The College Representative will approve this written estimate in writing, by fax or email, before the work begins. **The College Representative reserves the right to separately bid out standard projects.**

Urgent Projects:
Urgent Projects are those that are deemed by the College to be any projects where the contractor must be on-site within two (2) hours from the time the College Representative first (1st) contacts the contractor.

For Urgent Projects, the contractor should give a written estimate for the work to be completed to the College Representative, if time permits. However, if time does not permit, an oral estimate by the contractor is acceptable for Urgent Projects **ONLY**. The College Representative may allow work to begin

with only an oral approval to proceed based on information available at the time. However, **all oral estimates** shall be followed up in writing the first (1st) work day after approval to proceed is given by the College Representative.

Estimates for all standard work must be provided within (7) business days from a request for service

1.02 CONTRACT TIME

Contract Time: Will begin on July 1, 2026 and end on June 30th, 2027 with the option to renew for Two (2) consecutive twelve (12) month periods if mutually agreeable. Under no circumstances may the complete contract term exceed (36) thirty-six months.

1.03 NON-MANDATORY SITE INVESTIGATION

Prospective Bidders may visit the site to make measurements, review existing conditions, and if required, review the Building Plans on file in the Facility Services Office if the project warrants same. A thorough understanding of the project per these Technical Specifications and/or accompanying drawings is imperative. Opportunity for the site visit and inspection is provided under Section III "INSTRUCTIONS AND REQUIREMENTS FOR BIDDERS"

1.04 REVIEW OF DOCUMENTS

The Contractor shall carefully study and compare the field conditions, Drawings and Specifications and shall at once report to the College Representative errors, inconsistencies or omissions discovered.

1.05 PROJECT MEETINGS

If called by the College Representative, a Pre-Service Conference between the Contractor, his on-site representative and the College Representative will be held in order to clarify and direct College policy and specific items of concern as pertain to the Contract. Progress meetings will be scheduled at the discretion of the College Representative.

1.06 COORDINATION

Coordinate service schedule with the College Representative so as not to interfere with the ongoing operation of the College. If for any reason, shut down of utilities is required on this project, it is imperative that the College Representative be consulted.

1.07 SUPERVISION

The Contractor shall provide consistent, capable supervision at all times during the work. Site Manager or company representative shall be available during normal working hours of 8:00 am to 4:30 pm.

1.08 SUBSTITUTIONS

Substitutions to specified materials require approval of the College Representative prior to the opening of quotes. Substitutions not approved prior to opening of quotes are subject to rejection and replacement with the specified materials.

1.09 SUBMITTALS

Submit all required shop drawings, brochures and samples for review by the College Representative prior to ordering and/or installing materials. Equipment or material ordered and/or installed without review by the College Representative is subject to rejection.

1.10 CLEANUP

Daily, as it accumulates, remove from the work site, all rubbish, debris and unsalvageable material resulting from the work. Do not permit trash to accumulate. Do not use individual building dumpsters for trash disposal.

1.11 QUALITY ASSURANCE

Use new materials of quality acceptable to the College Representative and meeting all applicable regulations as pertain to this project. Remove and replace all material delivered to site which, in the opinion of the Representative, does not meet specifications and quality.

The College expects quality workmanship and only those who are qualified to perform the tasks in their respective trades are acceptable. The term qualified above is understood to mean "Journeymen" skilled in their respective trades. Correct, at no expense to the College, any work performed which, in the opinion of the College Representative, is found unacceptable or not according to code. Corrections or incomplete work must be rectified within twenty-four (24) hours of notification

1.12 TRAFFIC CONTROL

Coordinate the schedule of delivery vehicles which will interfere with normal campus traffic. When deliveries are made from the street curb, provide sufficient properly attired and equipped flagmen to safely control and maintain the flow of traffic. It is the policy of Delgado Community College to provide full access to all disabled individuals in all areas possible. Because of this commitment, contractors, vendors or servicing agencies are cautioned to ensure that their staff is made aware of this commitment. When parking on the campus of this College, it shall be the responsibility of the contractor, vendor or servicing agency to ensure that no sidewalks or access ways are blocked at any time. If temporary blocking is required, the Contractor, shall assume the responsibility for the safe transit of all disabled persons.

1.13 PROTECTION

Protect adjacent buildings and building elements from damage during site work. Protect the site, including trees, shrubs, vegetation and lawn areas; where damage does occur, restore to original condition replacing damaged vegetation and lawn with equal size and species. Store construction materials with care; distribute the weight to not endanger the building structure.

1.14 SAFETY

Provide sufficient signs continuous barricades to identify the work site and restrict entry. Where necessary, equip barricades with warning lights for night use. Provide measures necessary to ensure and

maintain security at the work site; protect from theft, vandalism, personal injury, and property damage. Erect and maintain temporary enclosures and barriers to prevent unauthorized access to the site. Provide fire protection equipment during the construction period, including not less than two (2) ten (10) pound capacity multipurpose A-B-C dry chemical extinguishers (10A:40BC). Where indicated on the Drawings, provide a temporary fence to isolate the construction site and restrict unauthorized entry. Use chain link fence material, 6'-0 minimum height, on steel or wood posts spaced a 6'-0 maximum and embedded 2'-6 minimum below existing grade; include personnel and/or equipment access gates. Coordinate fence installation with underground utilities - see 1.11; before installation, confirm fence location and layout with the College Representative.

1.15 WARRANTY

Warranty all workmanship and material for a period of one year from date of acceptance. During this period, the College will notify the Contractor of any discrepancy for prompt correction at no expense to the College. At the discretion and initiation of the College Representative, a one-year warranty review meeting with the Contractor will be held to review warranty items which remain incomplete.

1.16 TEMPORARY UTILITIES

The Contractor may use reasonable amounts of the utility services available to the site at no charge from the-College. The College will not provide utility service beyond that existing. Coordinate tie-in and disconnect to the existing utilities with the College Representative. Locate temporary facilities so as not to interfere with the College's use of the Project site and/or surrounding areas. Relocate non-complying facilities at no expense to the College.

1.17 TEMPORARY SANITARY FACILITIES

Existing facilities in the building may be used by construction personnel during work on this project.

1.18 COMPANY & WORKER IDENTIFICATION (MANDATORY)

All persons performing work under this contract must be clearly identifiable as an employee of the Contractor whenever they are on site. All persons must be identifiable by either: uniforms displaying the Contractor’s name and logo and/or badges.

Uniforms and/or badges must be worn and visable at all times while performing and/or inspecting work.

The Contractor must also provide Contractor issued badges for any subcontractors hired by the Contractor to perform work on their behalf as it pertains to the work in this Contract identifying them as such.

1.19 PRICING MODEL

In order to determine the lowest responsive, responsible bidder, bids will be tabulated based on the below model.

Item No:	Description	UOM	0 - 100 SF 0 - 30 LF	101 SF - 1000 SF 31 LF - 100 LF	1001 SF & Above 101 LF & Above
1A	Mobilization: Critical Barriers Only	SF	1%	1%	1%
1B	Mobilation: Full Containment	SF	4%	8%	1%
2	Removal of Vinyl Asbestos Floor Tile and Mastic over concrete or wood deck	SF	4%	8%	1%
3	Removal and Disposal of ACM Ceiling Tiles	SF	2%	2%	1%
4	Removal and disposal of ceiling tiles installed below ACM fireproofing	SF	2%	2%	1%
5	Abatement of spray-on fireproofing and replacement with non-ACM fireproofing	SF	4%	8%	1%
6	Cleanup of ACM materials disturbed by other work	SF	2%	2%	1%
7	Removal of rigid non-firable ACM wall and ceiling material	SF	2%	2%	1%
8	Removal of asbestos containing plaster on metal lath; walls and/or ceilings	SF	2%	4%	1%
9	Removal and disposal of flexible duct connectors fireproofing	LF	1%	1%	1%
10	Glove bag abatement of TSI on 1" to 4" diameter pipe	LF	4%	1%	1%
11	Glove bag abatement of TSI on 5" to 8" diameter pipe	LF	4%	1%	1%
12	Glove bag abatement of TSI on 9" to 12" diameter pipe	LF	2%	1%	1%
13	DEQ "ADVF" application and filing	EA	2%	2%	1%
14	Removal of ACM insulation from boiler tank and/or flue	SF	2%	4%	1%

1.20 SITE SIGN IN

All Contractors employees and/or subcontractors must sign prior to starting work and signing out at the commencement of the work. Sign in for work at the City Park Campus shall be in the Facilities Office in Building 10. Sign in at all other campuses will be at the Campus Police Substation or College designated area. Invoices will not be paid unless there is signatory proof of attendance and completion of work.

SECTION 01013

SUMMARY OF WORK - ASBESTOS ABATEMENT

PART 1 - GENERAL

1.01 SCOPE

A. PROJECT/WORK IDENTIFICATION

1. Title: Abatement of Asbestos Containing Materials

B. CONTRACT DOCUMENTS

1. General: Indicate the work of the Contract and related requirements and conditions that have an impact on the project.

2. Description: Prepared by the Facility Services Department of the College of New Orleans.

3. Related requirements and conditions that are indicated on the Contract Documents include, but are not necessarily limited to the following:

a. Applicable codes and regulations. (SECTION 01092)

b. Notices and permits. (SECTION 01092)

c. Existing site conditions and restrictions on use of the site.

d. Work performed prior to work under this contract.

e. Alterations and coordination with existing work.

f. Work to be performed subsequent to work under this Contract.

g. Requirements for partial College occupancy prior to substantial completion of the Contract Work.

C. RELATED WORK SPECIFIED ELSEWHERE

GENERAL CONDITION.....SECTION 01000
PROJECT COORDINATION.....SECTION 01043
DEFINITIONS AND STANDARDS - ASBESTOS ABATEMENT.....SECTION 01091
CODES AND REGULATIONS.....SECTION 01092
AIR MONITORING - TEST LABORATORY SERVICES.....SECTION 01412
TEMPORARY ENCLOSURES.....SECTION 01526
RESPIRATORY PROTECTION.....SECTION 01562
PROJECT DECONTAMINATION.....SECTION 01711

REMOVAL OF ASBESTOS-CONTAINING MATERIALS.....SECTION 02081
DISPOSAL OF ASBESTOS-CONTAINING WASTE MATERIALS……SECTION 02084
CEMEMTITIOUS SPRAY APPLIED FIREPROOFING.....SECTION 07255
ENCAPSULATION OF ASBESTOS –CONTAINGING MATERIAL....SECTION 09805

1.02 SUMMARY OF WORK

A. GENERAL

Work of the Contract can be summarized by references to the Contract, General Conditions, Technical Specification Sections, and Addenda issued subsequent to the initial printing of this project manual and including but not necessarily limited to printed material referenced by any of these. Work of the Contract is also unavoidably affected or influenced by governing regulations, natural phenomenon including weather conditions and other forces outside the contract documents.

B. THE WORK

The Work includes the removal of asbestos containing materials according to the requirements of the following specification sections in the sequence indicated:

1. General and Administrative Requirements: are set forth in the following specification sections:

SECTION 01043	Project Coordination - Asbestos Abatement
SECTION 01091	Definitions and Standards - Asbestos Abatement

2. Abatement Work: Requirements are set forth in the following specification sections, listed here according to the sequence of the work:

a. SECTION 01092: Codes, Regulations and Standards - Asbestos Abatement: Sets forth governmental regulations and industry standards which are included and incorporated herein by reference and made a part of the specification. This section also sets forth those notices and permits which are known to the College and which either must be applied for and received, or which must be given to governmental agencies before start of work.

b. SECTION 01526: Temporary Enclosures: Details the requirements for the sheet plastic barriers isolating the work area from the balance of the building.

c. SECTION 01410: Test Laboratory Services: describes air monitoring by the College and/or Contractor so that the building beyond the work area will remain uncontaminated. Air monitoring to determine required respiratory protection is the responsibility of the Contractor. Must be completed by a third party (Owner).

d. SECTION 01562: Respiratory Protection: Sets forth the procedures and equipment

required for adequate protection against inhalation of airborne asbestos fibers.

3. Asbestos Removal Work Procedures: are described in the following specification sections:

SECTION 02081	Removal of Asbestos-Containing Materials
SECTION 02084	Disposal of Asbestos-Containing Waste Material

4. Decontamination of the Work Area: After completion of abatement work is described in the following sections:

a. SECTION 01711: Project Decontamination: describes the sequence of cleaning and decontamination procedures to be followed during removal of the sheet plastic barriers isolating a work area.

4. Separate Contracts are being issued for bid to perform work at the site which will follow the work of this Contract. Separate contract work can be summarized as follows:

Replacement of sprayed-on fireproofing.
Replacement of suspended acoustical ceilings.
Replacement of lighting and associated wiring.
New HVAC system including ductwork, diffusers and grills.
New temperature controls reusing existing pneumatic lines.

1.02 SUBMITTALS

A. PROCEDURE

Comply with SECTION 01000.

B. SHOP DRAWINGS

As required by each section.

C. BROCHURES, CUT SHEETS, AND TECHNICAL DATA

Before beginning work:

1. Brochures and Cut Sheets: Submit brochures and technical data sufficient to describe the products proposed for use on this project.

2. Safety Data Sheet (SDS): All products to be less than 1% Asbestos containing or Asbestos free. Maintain one (1) copy of each SDS at the site during the work.

3. Installation Instructions: Submit product manufacturer's written installation and handling instructions. Maintain one (1) copy at the site during the work.

4. Permits, Licenses and Certificates: For the College's records, submit copies of permits, licenses, certificates, 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.

D. SAMPLES

As required by each section.

E. MAINTENANCE INSTRUCTIONS

Submit the manufacturer's written operation and maintenance instructions.

F. PLAN OF ACTION

Prior to the start of each project submit a detailed plan of the procedures proposed for use in complying with the requirements of this specification. 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 plan must be approved by the College Representative prior to commencement of work.

Inspection: Report on inspection carried out as required by this section. Include copies of all photographs, video tapes, etc. Submit in the same manner as product data.

1.03 QUALITY ASSURANCE

A. TESTING LABORATORY

At the College Representative's discretion, the College will arrange and pay for the services of an independent testing laboratory to monitor the work, take material samples, and report on the compliance of installed materials to these specifications.

B. APPLICABLE STANDARDS

Latest edition of the following listed established standards constitutes part of these specification requirements:

1. National Electrical Code (NEC) NFPA No. 70
2. Applicable State and Municipal Codes and Requirements
3. Underwriters' Laboratories (UL)
4. American National Standards Institute (ANSI)

C. LICENSING

The Contractor shall be licensed as required by applicable State and Local laws to perform the work covered by this specification.

D. POTENTIAL ASBESTOS HAZARD

The disturbance or dislocation of asbestos-containing materials may cause asbestos fibers to be released into the building's atmosphere, thereby creating a potential health hazard to workmen and building occupants. 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 which must be followed.

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 continuous measures as necessary to protect all building occupants from the potential hazard of exposure to airborne asbestos. Such measures shall include the procedures and methods described herein, and compliance with regulations of applicable federal, state and local agencies.

1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

Deliver materials to the site in original, unopened packaging clearly marked to identify contents.

Store materials to protect from damage, moisture and exposure to the elements. Follow manufacturer's written storage instructions.

Do not install damaged materials.

1.05 JOB CONDITIONS

A. INSPECTION

Prior to commencement of work, inspect areas in which work will be performed. Prepare a listing of damage to structure, surfaces, equipment or of surrounding properties which could be misconstrued as damage resulting from the work. Photograph or videotape existing conditions as necessary to document conditions. Submit to the College Representative prior to starting work.

B. CONTRACTOR USE OF PREMISES

General: During the entire construction period the Contractor shall have the exclusive use of the premises for construction operations, including full use of the site.

General: The Contractor shall limit his use of the premises to the work indicated, so as to allow for College occupancy and use by the public.

Use of the Site: Confine operations at the site to the areas permitted under the Contract. Portions of the site beyond areas on which work is indicated are not to be disturbed. Conform to site rules and regulations affecting the work while engaged in project construction.

Keep existing driveways and entrances serving the premises clear and available to the College and its employees at all times. Do not use these areas for parking or storage of materials.

Do not unreasonably encumber the site with materials or equipment. Confine stockpiling of materials and location of storage sheds to the areas indicated. If additional storage is necessary obtain and pay for such storage off site.

Lock automotive type vehicles, such as passenger cars and truck and other mechanized or motorized construction equipment, when parked and unattended, so as to prevent unauthorized use. Do not leave such vehicles or equipment unattended with the motor running or the ignition key in place or accessible to unauthorized persons.

Contractor's Use of the Existing Building: Maintain existing building in a safe and weather tight condition throughout the construction period. Repair damage caused by construction operations. Take all precautions necessary to protect the building and its occupants during the construction period.

Keep public areas such as hallways, stairs, elevator lobbies and

toilet rooms free from accumulation of waste, rubbish or construction debris.

Smoking or open fires will not be permitted within the building enclosure or on the premises.

Use of Existing Elevators: The elevator must be available to the College at all times; coordinate elevator usage with the College Representative. Provide protective pads for the elevator cab and other appropriate protective measures for the car and entrance doors and frames. During asbestos abatement activities the car is to be protected as set forth in the Division 1 Section on Temporary Enclosures.

Full College Occupancy: The College will occupy the site and the existing building during the entire period of construction. Cooperate fully with the College or the College Representative during construction operations to minimize conflicts and to facilitate College usage. Perform the work so as not to interfere with the College's operation.

Partial College Occupancy: The College reserves the right to place and install equipment as necessary in areas of the building in which all asbestos abatement and project decontamination procedures have been completed, and to occupy such completed areas prior to substantial completion, provided that such occupancy does not substantially interfere with completion of the work. Such placing of equipment and partial occupancy shall not constitute acceptance of the work or any part of the work.

1.06 STOP WORK

If the College, the College Representative, or the Project Administrator presents a written stop work order immediately and automatically stop all work. Do not recommence work until authorized in writing by the College Representative.

PART 2 - PRODUCTS

2.01 ASBESTOS-CONTAINING MATERIALS

A. The following asbestos-containing materials are known to be present at the worksite:

1. Spray applied fireproofing on floor beams, girders, columns, floor tile and mastic.

B. If any other materials are found, which are suspected of containing asbestos, notify immediately the College Representative.

END OF SECTION

SECTION 01043

PROJECT COORDINATION

PART 1 - GENERAL

1.01 SCOPE

A. DESCRIPTION OF THE WORK

Minimum administrative and supervisory requirements necessary for coordination of work on the project include but are not necessarily limited to the following:

1. Administration and supervision of personnel.

2. Special reports.

3. Notifications to other entities at job site.

4. Progress Meetings.

5. Pre-Construction Conference.

6. Daily Log.

7. Coordination with subcontractors.

8. Special Reports.

9. Contingency Plans.

B. RELATED WORK SPECIFIED ELSEWHERE

GENERAL CONDITION.....SECTION 01000
SUMMARY OF WORK - ASBESTOS ABATEMENT.....SECTION 01013

1.02 SUBMITTALS

Comply with SECTION 01000.

B. SPECIAL DOCUMENTATION AND REPORTS

1. Before beginning work:

Submit the following to the College Representative for review (No work shall begin until these submittals are returned with the College Representative's action stamp indicating that the submittal is returned for unrestricted use or final-but-restricted use):

a. Contingency Plan:

Contingency Plans: for emergency actions.

Telephone Numbers: and location of emergency services.

Notifications: sent to other entities at the work site.

Notifications: sent to emergency service agencies.

Resume: of general superintendent.

b. Safety Data Sheet (SDS): Submit on materials and/or mixtures containing at least 1% hazardous chemical which are proposed for use on this project. Maintain one (1) copy of each MSDS at the site during the work.

c. Accreditation: submit evidence in form of training course certification of accreditation of General Superintendent as an asbestos abatement supervisor.

d. FIT TEST

e. CONTRACTOR LICENSES

1.03 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

A. SUPERVISION

1. Asbestos General Superintendent:

Provide a full-time General Superintendent who is experienced in administration and supervision of asbestos abatement projects including work practices, protective measures for building and personnel, disposal procedures, etc. This person is the Contractor's Representative responsible for compliance with all applicable federal, state and local regulations, particularly those relating to asbestos-containing materials.

2. Experience and Training: The General Superintendent shall have completed a course at the EPA Training Center or equivalent certificate course in asbestos abatement procedures, and have had a minimum of two (2) years on-the-job training in asbestos abatement procedures.

3. Competent Person: The General Superintendent is the Competent Person as required by OSHA in 29 CFR 1926.

4. Accreditation: The General Superintendent shall be accredited as an Asbestos Abatement Supervisor in accordance with the AHERA regulation 40 CFR Part 763,

Subpart E, Appendix C. He must be an accredited Supervisor of Asbestos Abatement Projects by the Louisiana Department of Environmental Quality as required under 40 CFR 763.90 and 40 CFR 763 (Model Accreditation Plan).

B. MEETINGS

1. Progress Meetings:

General: In addition to specific coordination and pre-installation meetings for each element of work, and other regular project meetings held for other purposes, the College Representative will hold general progress meetings as required. These meetings will be scheduled, where possible, at time of preparation of payment request. Require each entity then involved in planning, coordination or performance of work to be properly represented at each meeting.

2. Pre-Construction Conference: An initial "Pre-Construction Conference" will be convened by the College Representative prior to start of any work. Meet at project site, or as otherwise directed with General Superintendent, College Representative, Project Administrator, and other entities concerned with the asbestos abatement work.

   Provide 72 hours advance notice to all participants prior to convening Pre-Construction Conference.

   This is an organizational meeting, to review responsibilities and personnel assignments and to locate the containment and decontamination areas and temporary facilities including power, light, water, etc.

1.04 DAILY LOG

Maintain within the Decontamination Unit a daily log documenting the dates and time of but not limited to, the following items:

1. Meetings: purpose, attendees, brief discussion.

2. Visitations: authorized and unauthorized.

3. Personnel: by name, entering and leaving the work area.

4. Special or unusual events: i.e. barrier breeching, equipment failures, accidents.

5. Air monitoring tests and test results.

6. Documentation of Contractor's completion of the following:

   a. Inspection of work area preparation prior to start of removal and daily thereafter.
   b. Removal of any sheet plastic barriers.
   c. Contractor's inspections prior to spray back, lock back, encapsulation, enclosure

or any other operation that will conceal the condition of asbestos-containing materials or the substrate from which such materials have been removed.

d. Removal of waste materials from work area.

e. Decontamination of equipment (list items).

f. Contractor's final inspection/final air test analysis.

Provide two (2) copies of this log to College Representative on a daily basis.

Submit copies of this log at final closeout of project as a project closeout submittal.

1.05 SPECIAL REPORTS

A. GENERAL

Except as otherwise indicated, submit special reports directly to the College Representative within one day of occurrence requiring special report, with copy to the Contractor and other affected by occurrence.

B. REPORTS

1. Reporting Unusual Events: When an event of unusual and significant nature occurs at site (examples: failure of pressure differential system, rupture of temporary enclosures), prepare and submit a special report listing chain of events, persons participating, response by Contractor's personnel, evaluation of results of effects, and similar pertinent information. When such events are known or predictable in advance, advise the College in advance at the earliest possible date.

2. Reporting Accidents: Prepare and submit reports of significant accidents, at site and anywhere else work is in progress. Record and document data and actions; comply with industry standards. For this purpose, a significant accident is defined to include events where personal injury is sustained, property loss of substance is sustained, or where the event posed a significant threat of loss or personal injury.

3. Report Discovered Conditions: When an unusual condition of the building is discovered during the work (e.g. leaks, termites, corrosion) prepare and submit a special report indicating condition discovered within eight (8) hours.

1.06 SPECIAL DOCUMENTATION

A. CONTINGENCY PLAN

Prepare a contingency plan for emergencies including fire, accident, power failure, pressure differential system failure, supplied air system failure, or any other event that may require modification or abridgement of decontamination or work area isolation procedures. Include in plan specific procedures for decontamination or work area isolation. Note that nothing in this specification should impede safe exit or impede adequate medical attention in the event of an

emergency.

B. STAFF NAMES

Submit a list of the Contractor's principal staff assignments, including the Superintendent and other personnel in attendance at the site; identify individuals, their duties and responsibilities; list their addresses and telephone numbers.

C. POST

Post copies of the list and contingency plan in the project meeting room, the temporary field office, and each temporary telephone.

D. NOTIFICATIONS

1. 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.

2. 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 firefighting equipment, and other information needed by agencies providing emergency services.

3. 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.

END OF SECTION

SECTION 01091

DEFINITIONS AND STANDARDS - ASBESTOS ABATEMENT

PART 1 - GENERAL

1.01 SCOPE

A. DESCRIPTION OF THE WORK

This Article is provided to help the user of these Specifications understand the format, language, implied requirements, and similar conventions. None of the explanations shall be interpreted to modify the substance of Contract requirements.

B. RELATED WORK SPECIFIED ELSEWHERE

GENERAL CONDITION.....SECTION 01000
SUMMARY OF WORK - ASBESTOS ABATEMENT.....SECTION 01013

1.02 SUMMARY

General Explanation: A substantial amount of specification language constitutes definitions for terms found in other contract documents. Certain terms used in Contract Documents are defined in this article.

1.03 DEFINITIONS

General: Definitions contained in this Article are not necessarily complete, but are general to the extent that they are not defined more explicitly elsewhere in the Contract Documents.

Directed: Terms such as "directed", "requested", "authorized", "selected", "approved", "required", and "permitted" mean "directed by the College Representative", "requested by the "College Representative", and similar phrases. However, no implied meaning shall be interpreted to extend the College Representative's responsibility into the Contractor's area of construction supervision.

Approve: The term "approved," where used in conjunction with the College Representative's action on the Contractor's submittals, applications, and requests, is limited to the responsibilities and duties of the College Representative stated in General Conditions. Such approval shall not release the Contractor from responsibility to fulfill Contract Document requirements, unless otherwise provided in the Contract Documents.

Regulation: The term "Regulations" includes laws, statutes, ordinances and lawful orders issued by authorities having jurisdiction, as well as rules, conventions and agreements within

the construction industry that control performance of the Work, whether they are lawfully imposed by authorities having jurisdiction or not.

Furnish: The term "furnish" is used to mean "supply and deliver to the project site, ready for unloading, unpacking, assembly, installation, and similar operations."

Install: The term "install" is used to describe operations at project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations."

Provide: The term "provide" means "to furnish and install, complete and ready for the intended use."

Installer: An "Installer" is an entity engaged by the Contractor, either as an employee, subcontractor of sub-subcontractor for performance of a particular construction activity, including installation, erection, application and similar operations. Installers are required to be experienced in the operation they are engaged to perform.

The term "experienced," when used with the term "Installer" means having a minimum of five (5) previous Projects similar in size and scope to this project, and familiar with the precautions required, and has complied with requirements of the authority having jurisdiction.

Project Site is the space available to the Contractor for performance of the work, either exclusively or in conjunction with others performing other construction as part of the project. The extent of the project site is shown on the Drawings, and may or may not be identical with the description of the land upon which the project is to be built.

Testing Laboratories: A "testing laboratory" is an independent entity engaged to perform specific inspections or tests, either at the project site or elsewhere, and to report on, and, if required, to interpret, results of those inspections or tests.

College Representative: This is the entity described as the "Architect" in AIA Document A201 "General Conditions of the Contract for Construction," or is the entity described as "Engineer" in Engineers Joint Contract Document Committee (EJCDC) Document 1910-8 "Standard General Conditions of the Construction Contract." All references to Architect or Engineer in the Contract Documents in all cases refer to the College Representative. The College Representative will represent the College during construction and until final payment is due. The College Representative will advise and consult with the College. The College's instructions to the Contractor will be forwarded through the College Representative.

The College Representative is the employee of the College identified, either on the title page of these documents or otherwise, to the Contractor as the entity who will represent the College during construction and until final payment is due. The College's instructions to the contractor will be expressed by the College Representative.

Project Administrator: This is the entity described as the "Project Representative" in AIA Document A201 "General Conditions of the Contract for Construction," or is the entity described as "Engineer" in Engineers Joint Contract Document committee (EJCDC) Document 1910-8 "Standard General Conditions of the construction Contract." The Project Administrator is a full time representative of the College at the job site with authority to stop the work upon verbal order if requirements of the Contract Documents are not met, or if in the sole judgement of the Project Administrator, College Representative, College, the interests of the College, safety of any person or the College's property are jeopardized by the work.

General Superintendent: This is the Contractor's Representative at the work site. This person will generally be the Competent Person required by OSHA in 29 CFR 1926.

1.04 DEFINITIONS RELATIVE TO ASBESTOS ABATEMENT

Accredited or Accreditation (when referring to a person or laboratory): A person or laboratory accredited in accordance with section 206 of Title II of the Toxic Substances Control Act (TSCA).

Aerosol: A system consisting of particles, solid, or liquid, suspended in air.

Air Cell: Insulation normally used on pipes and duct work that is comprised of corrugated cardboard which is frequently comprised of asbestos combined with cellulose or refractory binders.

Air Monitoring: The process of measuring the fiber content of a specific volume of air.

Amended Water: Water to which a surfactant has been added to decrease the surface tension to 35 or less dynes.
Asbestos: The asbestiform varieties of serpentinite (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.

Asbestos-Containing Material (ACM): Any material containing more than 1% by weight of asbestos of any type or mixture of types.

Asbestos-Containing Building Material (ACBM): Surfacing ACM, thermal system insulation ACM, or miscellaneous ACM that is found in or on interior structural members or other parts of a building.

Asbestos-Containing Waste Material: Any material which is or is suspected of being or any material contaminated with an asbestos-containing material which is to be removed from a work area for disposal.

Asbestos Debris: Pieces of 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.

Authorized Visitor: The College, the College Representative, testing lab personnel, emergency personnel or a representative of any federal, state and local regulatory or other agency having authority over the project.

Barrier: Any surface that seals off the work area to inhibit the movement of fibers.

Breathing Zone: A hemisphere forward of the shoulders with a radius of approximately 6 to 9 inches.

Ceiling Concentration: The concentration of an airborne substance that shall not be exceeded.

Certified Industrial Hygienist (C.I.H.): An industrial hygienist certified in Comprehensive Practice by the American Board of Industrial Hygiene.

Demolition: The wrecking or taking out of any building component, system finish or assembly of a facility together with any related handling operations.

Disposal Bag: A properly labeled 6 mil thick leak-tight plastic bags used for transporting asbestos waste from work and to disposal site.

Encapsulant: A material that surrounds or embeds asbestos fibers in an adhesive matrix, to prevent release of fibers.

> Bridging encapsulant: an encapsulant that forms a discrete layer on the surface of an in situ asbestos matrix.
>
> Penetrating encapsulant: an encapsulant that is absorbed by the in situ asbestos matrix without leaving a discrete surface layer.
>
> Removal encapsulant: a penetrating encapsulant specifically designed to minimize fiber release during removal of asbestos-containing materials rather than for in situ encapsulation.

Encapsulation: Treatment of asbestos-containing materials, with an encapsulant.

Enclosure: The construction of an air-tight, impermeable, permanent barrier around asbestos-containing material to control the release of asbestos fibers into the air.

Filter: A media component used in respirators to remove solid or liquid particles from the inspired air.

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.

Glove bag: A sack (typically constructed of 6 mil transparent polyethylene or polyvinylchloride plastic) with inward projecting long sleeve gloves, which are designed to enclose an object from which an asbestos-containing material is to be removed.

HEPA Filter: A High Efficiency Particulate (HEPA) filter capable of trapping and retaining 99.97% of asbestos fibers greater than 0.3 microns in diameter.

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.

High-Efficiency Particulate Air Filter: (HEPA) refers to a filtering system capable of trapping and retaining 99.97% of all monodispersed particles 0.3 um in diameter or larger.

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.

Negative Pressure Ventilation System: A pressure differential and ventilation system.

Personal Monitoring: Sampling of the asbestos fiber concentrations within the breathing zone of an employee.

Pressure Differential and Ventilation System: A local exhaust system, utilizing HEPA filtration capable of maintaining a pressure differential with 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.

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.

Repair: Returning damaged ACBM to an undamaged condition or to an intact state so as to prevent fiber release.

Respirator: A device designed to protect the wearer from the inhalation of harmful atmospheres.

Surfactant: A chemical wetting agent added to water to improve penetration, thus reducing the quantity of water required for a given operation or area.

Time Weighted Average (TWA): The average concentration of a contaminant in air during a specific time period.

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.

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.

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 INDUSTRY STANDARDS

Applicability of Standards: Except where Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into Contract Documents. Such standards are made a part of the Contract Documents by reference. Individual Sections indicate which codes and standards the Contractor must keep available at the Project Site for reference.

Referenced industry standards take precedence over standards that are no referenced but recognized in the construction industry as applicable.

Unreferenced industry standards are not directly applicable to the work, except as a general requirement of whether the work complies with recognized construction industry standards.

Publication Dates: Where compliance with an industry standard is required, comply with standard in effect as of date of Contract Documents.

Conflicting Requirements: Where compliance with two or more standards is specified, and they establish different or conflicting requirements for minimum quantities or quality levels, the most stringent requirement will be enforced, unless the Contract Documents indicate otherwise. Refer requirements that are different, but apparently equal, and uncertainties as to which quality level is more stringent to the College Representative for a decision before proceeding.

Minimum Quantities or Quality Levels: In every instance the quantity or quality level shown or specified shall be the minimum to be provided or performed. The actual installation may comply exactly, within specified tolerances, with the minimum quantity or quality specified, or it may exceed that minimum within reasonable limits. In complying with these requirements, indicated numeric values are minimum or maximum values, as noted, or appropriate for the context of the requirements. Refer instances of uncertainty to the College Representative for decision before proceeding.

Copies of Standards: Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to that entity's construction activity. Copies of applicable standards are not bound with the Contract Documents.

Where copies of standards are needed for performance of a required construction activity, the Contractor shall obtain copies directly from the publication source.

Although copies of standards needed for enforcement of requirements may be part of required submittals, the College's Representative reserves the right to require the Contractor to submit additional copies as necessary for enforcement of requirements.

Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. Where acronyms or abbreviations are used in the Specifications or other Contract Documents they mean the recognized name of the trade association, standards generating organization, authority having jurisdiction or other entity applicable to the context of the text provision. Refer to the "Encyclopedia of Associations," published by Gale Research Co., available in most libraries.

END OF SECTION

SECTION 01092

CODES AND REGULATIONS - ASBESTOS ABATEMENT

PART 1 - GENERAL

1.01 SCOPE

A. DESCRIPTION OF THE WORK

This section sets forth governmental regulations and industry standards which are included and incorporated herein by reference and made a part of the specification. This section also sets forth those notices and permits which are known to the College and which either must be applied for and received, or which must be given to governmental agencies before start of work.

Requirements include

1. Adherence to work practices and procedures set forth in applicable codes, regulations and standards.

2. Obtaining permits, licenses, inspections, releases and similar documentation, as well as payments, statements and similar requirements associated with codes, regulations, and standards. A recorded copy is required on site (ADVF/Manifest).

B. RELATED WORK SPECIFIED ELSEWHERE

GENERAL CONDITION.....SECTION 01000

1.02 CODES AND REGULATIONS

A. GENERAL

Except to the extent that more explicit or more stringent requirements are written directly into the Contract Documents, all applicable codes, regulations, and standards have the same force and effect (and are made a part of the contract documents by reference) as if copied directly into the contract documents, or as if published copies are bound herewith.

B. CONTRACTOR RESPONSIBILITY

The Contractor shall assume full responsibility and liability for the compliance with all applicable Federal, State, and local regulations pertaining to work practices, hauling, disposal, and protection of workers, visitors to the site, and persons occupying areas adjacent to the site.

The Contractor is responsible for providing medical examinations and maintaining medical records of personnel as required by the applicable Federal, State, and local regulations. The Contractor shall hold the College and College's Representative harmless for failure to comply with any applicable work, hauling, disposal, safety, health or other regulation on the part of himself, his employees, or his subcontractors.

C. FEDERAL REQUIREMENTS

Federal requirements which 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. Occupational Exposure to Asbestos, Tremolite,
Anthophyllite, and Actinolite; Final Rules
Title 29, Part 1910, Section 1001 and
Part 1926, Section 58 of the
Code of Federal Regulations

b. Respiratory Protection
Title 29, Part 1910, Section 134 of the
Code of Federal Regulations

c. Construction Industry
Title 29, Part 1926, of the
Code of Federal Regulations

d. Access to Employee Exposure and Medical Records
Title 29, Part 1910, Section 2 of the
Code of Federal Regulations

e. Hazard Communication
Title 29, Part 1910, Section 1200 of the
Code of Federal Regulations

f. Specifications for Accident Prevention Signs and Tags
Title 29, Part 1910, Section 145 of the
Code of Federal Regulations

2. DOT: U.S. Department of Transportation, including but not limited to:
Hazardous Substances
Title 29, Part 171 and 172 of the
Code of Federal Regulations

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

D. STATE REQUIREMENTS

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

Louisiana Department of Environmental Quality LESHAP Unit

a. Subpart F - Emission standards for Asbestos

b. Subpart N - Asbestos Abatement Entity Certification

1.03 STANDARDS

A. GENERAL

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.

B. 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. The Contractor shall hold the College and College's Representative harmless for failure to comply with any applicable standard on the part of himself, his employees, or his subcontractors.

C. STANDARDS

Standards which apply to asbestos abatement work or hauling and disposal of asbestos waste materials include but are not limited to the following:

1. American National Standards Institute (ANSI)
   P.O. Box 4313
   Baton Rouge, LA 70821-4313
   (225)219-3051

a. Fundamentals Governing the Design and Operation of Local Exhaust System Publication Z9.2-79

b. Practices for Respiratory Protection Publication Z88.2-80

2. 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 E 849-82

1.04 NOTICES

A. LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY (LADEQ)

Note: The notification to LADEQ (AAC-2 FORM) satisfies the USEPA NESHAP notification requirement.

1. Send written notification as required by USEPA National Emission Standards for Hazardous Air Pollutants (NESHAPS) Asbestos Regulations (40 CFR 61, Subpart M) to the regional Asbestos NESHAPS Contact at least 10 days prior to beginning any work on asbestos-containing materials.

2. Send notification to the following address:

   LADEQ
   LESHAP Unit
   P.O. Box 44066
   Baton Rouge, LA 70804
   504/342-1201

3. Include the following information in the notification sent to the NESHAPS contact:

a. Name and address of owner or operator.

b. Description of the facility being demolished or renovated, including the size, age, and prior use of the facility.

c. Estimate of the approximate amount of friable asbestos material present in the facility in terms of linear feet of pipe, and surface area on other facility components. For facilities in which the amount of friable asbestos materials less than 80 linear meters (260 linear feet) on pipes and less than 15 square meters (160 square feet) on other facility components, explain techniques of estimation.

d. Location of the facility being demolished or renovated.

e. Scheduled starting and completion dates of demolition or renovation.

f. Nature of planned demolition or renovation and method(s) to be used.

g. Procedures to be used to comply with the requirements of USEPA National Emission Standards for Hazardous Air Pollutants (NESHAPS) Asbestos Regulations (40 CFR 61 Subpart M).

h. Name and location of the waste disposal site where the friable asbestos waste material will be deposited.

1.05 PERMITS

Louisiana Department of Environmental Quality (LADEQ)

Obtain ADVF (S) required for transport and disposal.

1.06 LICENSES

Licenses: Maintain current license with Asbestos and Lead Abatement endorsement by the Louisiana Contractor Licensing Board.

1.07 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 standards. Maintain one (1) copy of each at job site. Keep on file in Contractor's office one (1) copy of each.

Maintain two (2) copies of applicable federal, state and local regulations above. Post one copy of each at the job site. Keep on file in Contractor's office one copy of each.

1.08 SUBMITTALS

Permits, Licenses, and Certificates: For the College'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.

Before Start of Work submit the following to the College's Representative for review:

NOTE: No work shall begin until these submittals are returned with College's Representative's action stamp indicating that the submittal is returned for unrestricted use or final-but-restricted use.

1. State and Local Regulations: Submit copies of codes and regulations applicable to the work.

2. Notices: Submit notices required by federal, state and local regulations together with proof of timely transmittal to agency requiring the notice.

3. Permits: Submit copies of current valid permits required by state and local regulations.

4. Licenses: Submit copies of all State and local licenses and permits necessary to carry out the work of this contract.

END OF SECTION

SECTION 01410

TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.01 SCOPE

A. RELATED DOCUMENTS

GENERAL CONDITIONS.....SECTION 01000

B. DESCRIPTION OF WORK

1. Selection and Payment: The College shall select and pay for the services of an independent Testing Laboratory to perform inspection and tests of materials and construction as hereinafter specified and/or as specified in other section of the plans and specifications.

2. Cooperation of Contractor: The Contractor shall cooperate with the Laboratory and:

   make available, without cost, samples of all materials to be tested in accordance with applicable standards specifications.

   Furnish such nominal labor and sheltered work space as is necessary to obtain samples at the Project.

   Advise the Laboratory of the identity of material sources and instruct the suppliers to allow tests or inspection by the Laboratory.

   Notify the Laboratory sufficient in advance of operations to allow for completion of initial tests and assignment of inspection personnel.

3. Rejection of Materials: The Laboratory shall notify the Contractor or his authorized representative, of any material which are not in full conformance with the Specifications, and the College Representative shall be informed of such.

4. Test Methods: Tests and inspection shall be conducted in accordance with requirements of these specifications or, if not herein specified, in accordance with the latest standards of ASTM or other designated recognized authorities.

5. Test Reports: The Laboratory shall promptly submit written reports of each test and inspection made to the College, its designated consultants, the Contractor, supplier of the material being tested, and to such other parties the College may specify.

6. Additional Tests: The College reserves the right to require additional tests to those specified.

7. Failed Tests: The cost of those tests which report failed or noncompliant, materials or methods will be borne by the Contractor. The College will deduct such costs from the Contract via Change Order.

END OF SECTION

SECTION 01412

TESTING LABORATORY SERVICES - AIR MONITORING

PART 1 - GENERAL

1.01 SCOPE

A. DESCRIPTION OF THE WORK

This section describes air monitoring carried out by a third-party firm Air Monitoring Contractor to verify the building beyond the work area and the outside environment remains uncontaminated. This section also sets forth airborne fiber levels both inside and outside the work area as action levels, and describes the action required by the Air Monitoring Contractor if an action level is met or exceeded.

Air monitoring required by OSHA is work of the Air Monitoring Contractor and is not covered in this section.

B. RELATED WORK SPECIFIED ELSEWHERE

GENERAL CONDITIONS.....SECTION 01000
SUMMARY OF WORK - ASBESTOS ABATEMENT.....SECTION 01013
DEFINITIONS AND STANDARDS - ASBESTOS ABATEMENT.....SECTION 01091
CODES AND REGULATIONS - ASBESTOS ABATEMENT.....SECTION 01092
WORKER PROTECTION - ASBESTOS ABATEMENT.....SECTION 01560
RESPIRATORY PROTECTION.....SECTION 01562
PROJECT DECONTAMINATION.....SECTION 01711
WORK AREA CLEARANCE - ASBESTOS ABATEMENT.....SECTION 01714

NOTE: Air monitoring during work area clearance is described in Section 01714: Work Area Clearance.

1.02 AIR MONITORING

A. GENERAL

The Air Monitoring Contractor will be conducting air monitoring throughout the course of the project.

B. WORK AREA ISOLATION The purpose of the Contractor's air monitoring 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 envelop with airborne asbestos fibers.

Should any of the above occur, immediately cease asbestos abatement activities until the fault is corrected. Do not recommence work until so authorized by the College Representative.

C. WORK AREA AIRBORNE FIBER COUNT

The Air Monitoring Contractor will monitor airborne fiber counts in the Work Area. The purpose of this air monitoring will be to detect airborne asbestos concentrations which may challenge the ability of the Work Area isolation procedures to protect the balance of the building or outside of the building from contamination by airborne fibers.

D. WORK AREA CLEARANCE

To determine if the elevated airborne fiber counts encountered during abatement operations have been reduced to an acceptable level, the Air Monitoring Contractor will sample and analyze air per Section 01714 Work Area Clearance.

1.03 AIRBORNE FIBER COUNTS (STOP ACTION LEVELS)

A. 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 all work, leave Pressure Differential System (Negative Air System) in operation and notify College Representative. After correcting cause of high fiber level, do not recommence work for 24 yours unless otherwise so authorized, in writing, by the College Representative.

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 College Representative. After correcting cause of high fiber levels, do not recommence work for 24 hours unless otherwise so authorized, in writing, by the College Representative.

B. OUTSIDE WORK AREA

If any air sample taken outside of the Work Area exceeds the base line established below, immediately and automatically stop all work except corrective action. 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 as set forth in Section 01526: Temporary Enclosures 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 Section 01711: Decontamination Procedures.

3. Require that respiratory protection as set forth in Section 01562: Respiratory Protection, be worn in affected area until area is cleared for reoccupancy in accordance with Section 01714: Work Area Clearance.

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.

   If the exit from the clean room of the personnel decontamination unit enters the affected area, establish a decontamination facility consisting of a Shower Room and Changing Room at entry point to affected area.

   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 in Section 01714: Work Area Clearance.

If the high reading was the result of other causes, initiate corrective action as determined by the College Representative.

C. FIBER COUNTED

1. General: The following procedure will be used to resolve disputes regarding fiber types when a project has been stopped because of excessive airborne fiber counts.

   Fiber Counted: The following procedure will be used to resolve any disputes regarding fiber types when a project has been stopped due to excessive airborne fiber counts.

   "Airborne Fibers" referred to above include all fibers regardless of composition as counted in the NIOSH 7400 Procedure. If work has stopped due to high airborne fiber counts, air samples will be secured in the same area by the Contractor for analysis by electron microscopy.

   "Airborne Fibers" counted in samples analyzed by Scanning or Transmission Electron microscopy shall be only asbestos fibers, but of any diameter and length. Subsequent to analysis by electron microscopy the number of "Airborne Fibers" shall be determined by

multiplying the number of fibers, regardless of composition, counted by the NIOSH Method 7400 procedure by a number equal to asbestos fibers counted divided by all fiber counted in the electron microscopy analysis.

Effect on Contract Sum: If Electron microscopy is used to arrive at the basis for determining "Airborne Fiber" counts in accordance with the above paragraph, and if the average of airborne asbestos fibers in all samples taken exceeds 0.5 fibers per cubic centimeter, or if any one sample exceeds 2.0 fibers per cubic centimeter, then the cost of such analysis will be borne by the Contractor, at no additional cost to the College.

2. Large Fibers: "Airborne Fibers" referred to above include all fibers regardless of composition as counted by phase contrast microscopy (PCM), unless additional analysis by transmission or scanning electron microscopy demonstrates to the satisfaction of the College's Representative that non-asbestos fibers are being counted. "Airborne Fibers" counted in samples analyzed by scanning or transmission electron microscopy shall be asbestos fibers, greater than 5 microns in length and greater than 0.25 microns in diameter. For purposes of stop action levels, subsequent to analysis by electron microscopy, the number of "Airborne Fibers" shall be determined by multiplying the number of fibers, regardless of composition, counted by PCM by a number equal to asbestos fibers counted divided by all fibers counted in the electron microscopy analysis.

D. Small Structures: "Airborne Fibers" referred to above include asbestos structures (fibers, bundles, clusters or matrices) of any diameter and any length greater than 0.5 microns.

1.04 ANALYTICAL METHODS

The following methods will be used by the Air Monitoring Contractor in analyzing filters used to collect air samples. Sampling rates may be varied from printed standards to allow for high volume sampling.

Phase Contrast Microscopy (PCM) will be performed using the NIOSH 7400 method. This analysis will be carried out at the job site.

Transmission Electron Microscopy will be performed using the analysis method set forth in the AHERA regulation 40 CFR Part 763 Appendix A.

1.05 AIR SAMPLES

A. GENERAL

B. SAMPLE CASSETTES Samples will be collected on 25 mm. cassettes as follows:

1. PCM: 0.8 micrometer mixed cellulose ester.

6. TEM: 0.45 micrometer mixed cellulose ester or 0.40 micrometer polycarbonate, with 5.0-micron mixed cellulose ester backing filter.

C. SAMPLE VOLUMES

The number and volume of air samples taken by the Contractor will be in accordance with the following schedule. Sample volumes given may vary depending upon the analytical method used.

D. BEFORE START OF WORK

The Air Monitoring Contractor will secure the following Air Samples to establish a base line before start of work. (The estimated minimum number of work areas is one.)

Location Sampled	Number of Samples	Detection Limit Fibers/cc.	Minimum Volume (Liters)	Rate LPM
Each Work Area	1	0.01	3000	2-12
Outside Building	1	0.01	3000	2-12
Outside Work Area	1	0.01	1000	2-12

1. NOTES:

a. Sampling sensitivity in the table below refers to:
i. Detection limit for PCM analysis as set forth in the analytical method used.
ii. Analytical Sensitivity for TEM analysis as set forth in the analytical method used or the AHERA regulation.

Location Sampled	Number of Samples	Analysis Method	Sampling Sensitivity Fibers/cc.	Minimum Volume (Liters)	Rate LPM
Each Work Area	1	PCM	0.01	1.200	1-10
Each Work Area	1	hold for TEM	0.005	1,300	1-10
Outside Each Work Area	5	PCM	0.01	1,200	1-10
Outside Each Work Area	1	hold for TEM	0.005	1,300	1-10
Outside Building	5	PCM	0.01	1,200	1-10
Outside Building	1	hold for TEM	0.005	1,300	1-10

b. Base Line: An action level expressed in fibers per cubic centimeter which is ten percent greater than the largest of the following:

i. Average of the samples collected on cellulose ester filters outside each work area.

ii. 0.01 fibers per cubic centimeter.

E. DAILY

From start of work of Section 01526: Temporary Enclosures through the work of Section 01711: Project Decontamination, the Air Monitoring Contractor will take the following samples on a daily basis.

Location Sampled	Number of Samples	Analysis Method	Sampling Sensitivity Fibers/cc.	Minimum Volume (Liters)	Rate LPM
Each Work Area	1	PCM	0.01	1.200	1-10
Each Work Area	1	hold for TEM	0.005	1,300	1-10
Outside Each Work Area	5	PCM	0.01	1,200	1-10
Outside Each Work Area	1	hold for TEM	0.005	1,300	1-10
Outside Building	5	PCM	0.01	1,200	1-10
Outside Building	1	hold for TEM	0.005	1,300	1-10

Samples collected for TEM analysis will be held without analysis. These samples will be analyzed under the conditions and terms set forth in "Fibers Counted" and "effect on Contract Sum".

If airborne fiber counts exceed allowed limits, additional samples will be taken as necessary to monitor fiber levels.

1.06 LABORATORY TESTING

The services of a testing laboratory will be employed by the Air Monitoring Contractor to perform laboratory analysis of the air samples. All analysis will be conducted in a current PAT proficient (interim AHERA accredited) laboratory.

A complete record certified by the testing laboratory, of all air monitoring tests and results will be furnished to the College and the Contractor.

Written Reports of all air monitoring tests will be posted at the job site on a daily basis.

END OF SECTION

SECTION 01526

REGULATED AREAS/TEMPORARY ENCLOSURES

PART 1 - GENERAL

1.01 SCOPE

A. DESCRIPTION OF THE WORK

1. General: Provide the materials, labor, equipment and supervision necessary and reasonably incidental to the establishment of areas regulated and controlled as required by the Work.

   This section provides language for specifying a controlled area which can be the regulated area for a general

2. Barriers:

a. Install barriers to completely isolate the Work Area from other portions of the buildings and the outside, to prevent contamination of the buildings with airborne asbestos fibers, and to prevent damage to the existing buildings from water and high humidity resulting from asbestos removal operations.

b. Install necessary critical barriers inside buildings for the removal of asbestos-containing materials identified by these documents.

B. RELATED WORK SPECIFIED ELSEWHERE

GENERAL CONDITION.....SECTION 01000
SUMMARY OF WORK - ASBESTOS ABATEMENT.....SECTION 01013
DEFINITIONS AND STANDARDS - ASBESTOS ABATEMENT.....SECTION 01091
CODES AND REGULATIONS - ASBESTOS ABATEMENT.....SECTION 01092
PROJECT DECONTAMINATION.....SECTION 01711
WORK AREA CLEARANCE - ASBESTOS ABATEMENT.....SECTION 01714

1.02 SUBMITTALS

A. PROCEDURE

Comply with SECTION 01000.

B. SHOP DRAWINGS: None required.

C. BROCHURES, CUT SHEETS, AND TECHNICAL DATA

Before beginning work:

1. Brochures and Cut Sheets: Submit brochures and technical data sufficient to describe the products proposed for use on this project.

2. Material Safety Data Sheet (MSDS): Submit on substances and mixtures containing at least 1% hazardous chemical which are proposed for use on this project. Maintain one (1) copy of each MSDS at the site during the work.

3. Installation Instructions: Submit product manufacturer's written installation and handling instructions. Maintain one (1) copy at the site during the work.

4. Color Chart: None required.

5. Contingency Plan: Submit Contingency Plans for safe evacuation of the work area in case of fire or injury.

D. SAMPLES

Submit samples of signs to be used.

E. MAINTENANCE INSTRUCTIONS

Submit the manufacturer's written operation and maintenance instructions - as applicable.

1.03 SAFETY

Prior to start of work, review work and emergency procedures with College Representative and Campus Safety Officer.

1.04 QUALITY ASSURANCE

A. GENERAL

Comply with SECTION 01000.

B. APPLICABLE STANDARDS

Latest edition of the following listed established standards constitutes part of these specification requirements:

1. National Electrical Code (NEC) NFPA No. 70
2. Applicable State and Municipal Codes and Requirements
3. Underwriters' Laboratories (UL)
4. American National Standards Institute (ANSI)

C. TESTING LABORATORY

At the College Representative's discretion, the College will arrange and pay for the services of an independent testing laboratory to monitor the work, take material samples, and report on the compliance of installed materials to these specifications.

D. LICENSING

The Contractor shall be licensed as required by applicable State and Local laws to perform the work covered by this specification.

E. CODES AND REGULATIONS

See Section 01092: Codes and Regulations - Asbestos Abatement.

1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING

Deliver materials to the site in original, Delgado unopened packaging clearly marked to identify contents.

Store materials to protect from damage, moisture and exposure to the elements. Follow manufacturer's written storage instructions.

Do not install damaged materials.

1.06 WARRANTY

Comply with SECTION 01000.

PART 2 - PRODUCTS

2.01 MATERIALS

A. POLYETHYLENE AND ACCESSORIES

1. General: Use fire retardant materials meeting NFPA 701, Small Scale Fire Test for Flame-Resistant Textiles and Films.

2. Polyethylene Sheet: Provide flame-resistant polyethylene film that conforms to requirements set forth by the NFPA 701. Provide largest size possible to minimize seams, 4.0 or 6.0 mils thick, frosted or black as indicated.

3. Reinforced Polyethylene Sheet: Provide reinforced (nylon reinforced or woven polyethylene) flame resistant polyethylene film that conforms to requirements set forth by the NFPA 701. Provide largest size possible to minimize seams, 4.0 or 6.0 mils thick, frosted or black as indicated.

   NOTE: Use at locations where the plastic sheet constitutes the only barrier between the work area and the building exterior.

4. Spray Plastic: The use of strippable coatings in this work is not permitted.

5. Duct Tape: Provide duct tape in 2" or 3" widths as indicated, with an adhesive formulated to aggressively stick to sheet polyethylene.

6. Spray Cement: Provide spray adhesive in aerosol cans specifically formulated to stick tenaciously to sheet polyethylene.

PART 3 - EXECUTION

3.01 SEQUENCE OF WORK

Carry out Work of this section sequentially; complete each activity before proceeding to the next.

3.02 GENERAL

1. 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.

   2. 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 areas 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 Section 01711: Project Decontamination. Perform all such required cleaning or decontamination at no additional cost to the College.

3. Position all tools, scaffolding, staging, etc. necessary for the work in the area to be isolated prior to erection of the plastic sheeting temporary enclosure.

4. Remove all uncontaminated removable furniture, equipment, and/or supplies from the work area before commencing work, or completely cover with two (2) 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 broached.

5. 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 or equipment.

6. Lockout power to Work Area by switching off all breakers serving power or lighting circuits in Work Area. Label breakers with tape over breaker with notation "DANGER - WORK ON THIS CIRCUIT IN PROGRESS". Lock panel and have all keys under control of Contractor's Superintendent or College Representative.

7. Lockout power to circuits running through Work Area wherever possible by switching off all circuit breakers and/or removing fuses serving these circuits. Label breakers with tape over breaker with notation "DANGER - WORK ON THIS CIRCUIT IN PROGRESS". Lock panel and have all keys under control of Contractor's Superintendent or the College Representative.

   If circuits cannot be shut down, label at intervals 4'-0" on center with tags reading, "DANGER LIVE ELECTRIC CIRCUIT ELECTROCUTION HAZARD". In a similar manner, label circuits in hidden locations which may be affected by the work.

8. Inspection Windows: Install inspection windows in locations shown on the plans or as directed by the College Representative. Fabricate from 1/4" acrylic or polycarbonate sheet with a 24" x 24" viewing area.

   Install window with top at 6'-6" above floor height in a manner that provides Delgado unobstructed vision from outside to inside of the Work Area.

   Protect window from damage from scratching, dirt or coatings used during the work. Provide a sufficient number of windows for observation of all portions of the Work Area visible from adjacent areas.

   Cover inspection windows which open into uncontrolled area with a removable plywood hatch secured by lock and key. Provide keys to the College Representative for all such locks.

3.03 EMERGENCY EXITS

A. GENERAL

Provide emergency exits and emergency exit lighting consistent with the approved Contingency plan and emergency procedures.

B. 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 lighted EXIT sign at each exit.

4. Provide battery-operated emergency lighting that switches on automatically in the event of a power failure.

3.04 CONTROL ACCESS

A. ISOLATION

1. Isolate the Work Area to prevent entry by building occupants into Work Area or surrounding controlled areas. Accomplish isolation by the following:

2. Submit to College Representative a list of doors and other openings that must be secured to isolate Work Area. Include on list notation if door or opening is in an indicated exit route.

3. After receiving written authorization from the College Representative lock all doors into Work Area, or, if doors cannot be locked, chain shut. Cover any 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.

4. After receiving written authorization from the College Representative construct 8'-0" (minimum) partitions or closures across any opening into Work Area.

5. Modify elevator controls to prevent elevators from stopping at doors in Work Areas. This work is to be performed by a qualified elevator technician.

6. Replace passage sets on doors required for exiting form Work Area with temporary locksets for duration of the project. Use entry type locksets that are key lockable from one side and always operable from inside. Install locksets with key side in stair tower and escape side toward Work Area. Provide one key to College and maintain one key in clean room of decontamination unit. After meeting Contractor, release criteria set forth in Section 01714: Work Area Clearance reinstall original passage sets and adjust for proper operation.

B. LOCK ACCESS

1. Arrange Work Area so that the only access into Work Area is through lockable doors to personnel and equipment decontamination units.

2. 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.

3. 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 form inside. After meeting contractor release criteria set forth in Section 01714: Work Area Clearance reinstall original locks, passage sets and locksets and adjust for proper operation.

4. Provide one key for each door to the College Representative and maintain one key in clean room of decontamination unit (2 total).

5. Permit Access to the work area only through the Decontamination Unit. All other means of access shall be closed off and sealed and warning signs displayed on the clean side of the sealed access.

C. 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 4 mil in thickness so that the work procedures are not visible to building occupants where this visual barrier in locations approved by the College Representative.

D. PHYSICAL BARRIER

Where the area adjacent to the work area is accessible to the public, construct a solid barrier on the public side of the sheeting to protect the sheeting. Construct barrier with nominal 2" x 4" wood or metal studs 16" on center, securely anchored to prevent movement, covered with minimum 1/4-inch-thick hardboard, 1/2" gypsum wall board, or 1/2" Plywood.

E. SIGNS :Provide Warning Signs at each visual and physical barrier reading as follows in both English and Spanish:

LEGEND	**NOTATION**
KEEP OUT	3" Scans Serif Gothic or Block
BEYOND THIS POINT	1" Scans Serif Gothic or Block
ASBESTOS ABATEMENT WORK	1" Scans Serif Gothic or Block
IN PROGRESS	1" Scans Serif Gothic or Block
BREATHING ASBESTOS DUST MAY BE HAZARDOUS TO YOUR HEALTH	14 Point Gothic

3.05 ALTERNATE METHODS OF ENCLOSURE

Alternate methods of containing the work area may be submitted to the College Representative for approval in accordance with procedures set forth in Section 01000. Do not proceed with any such method(s) without prior written approval of the College Representative.

3.06 RESPIRATORY AND WORKER PROTECTION

Before proceeding beyond this point in providing Temporary Enclosures:

1. Provide worker protection per Section 01560: Worker Protection.

2. Provide respiratory protection per Section 01562: Respiratory Protection.

3.07 CRITICAL BARRIERS

A. GENERAL

1. Completely separate the work area from other portions of the building and the outside by sheet plastic barriers at least 4 mil in thickness, or by sealing with duct tape.

2. Individually seal all 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 4 mil in thickness, taped securely in place with duct tape. Maintain seal until all work including Project Decontamination (Section 01711) is completed. Take care in sealing off lighting fixtures to avoid melting or burning of sheeting.

3. Provide sheet plastic barriers at least 4 mil in thickness as required to completely seal openings from the work area into adjacent areas. Seal the perimeter of all sheet plastic barriers with duct tape or spray cement.

B. SUPPORT

1. Mechanically support sheet plastic independently of duct tape or spray cement seals so that seals do not support the weight of the plastic.

Following are acceptable methods of supporting sheet plastic barriers:

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' on centers.

b. Nylon or polypropylene rope minimum 1/4" in diameter suspended between supports securely fastened on either side of opening at maximum 1' below ceiling. Tighten rope so that it has 2" maximum dip. Drape plastic over rope from outside work area so that a 2' 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.

2. Clean Housing and Ducts Of all overspray materials prior to erection of the Critical Barrier Polyethylene sheeting.

Alternative support methods may be used if approved in writing by the College Representative.

3.08 PRIMARY BARRIER

A. PREPARATION

1. Clean all contaminated furniture, equipment, and or supplies with a HEPA filtered vacuum cleaner or by wet cleaning, as specified in Section 01712, prior to being moved

or covered. All equipment furniture, etc. is to be deemed contaminated unless specifically declared as uncontaminated on the drawings or in writing by the College Representative.

2. Clean all Surfaces in Work Area with a HEPA filtered vacuum or by wet wiping prior to the installation of any sheet plastic.

3. Cover Floor of work area with 2 individual layers of clear polyethylene sheeting, 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 which could be stepped on causing the wall attachment to be pulled loose. Both spray-glue and duct tape all seams in floor covering. Locate seams in top layer six feet (6') from, or at right angles to seams in bottom layer. Install sheeting so that top layer can be removed independently of bottom layer.

B. ISOLATION

1. Enclose Work Areas with two (2) layers of plastic sheeting on floor and one (1) layer on walls, or as otherwise directed on the contract drawings or in writing by the College Representative.

2. Remove all Electrical and Mechanical items, such as lighting fixtures, clocks, diffusers, registers, escutcheon plates, etc., which cover any part of the surface to be worked on with this work.

3. Remove all General Construction items such as cabinets, casework, doors and window trim, moldings, ceilings, trim, etc., which cover the surface of the work as required to prevent interference with the work. Clean, decontaminate and reinstall all such materials, upon completion of all removal work with materials, finishes, and workmanship to match existing installations before start of work.

4. Cover all Walls in work area including "Critical Barrier" sheet plastic barriers with one layer of polyethylene sheeting, at least 4 mil in thickness, mechanically supported and sealed with duct tape or spray-glue in the same manner as "Critical Barrier" sheet plastic barriers. Tape all joints including the joining with the floor covering with duct tape or as otherwise indicated on the contract documents or in writing by the College Representative.

C. ELEVATOR

Coat walls, floor and ceiling of elevator in same manner as Work Area. Arrange entry to Work Area so that elevator door is in a positively pressurized space outside the clean room of the decontamination unit. At completion of work clean elevator as set forth in Section 01711: Project Decontamination. Refer to Section 01013: Summary of the Work for additional

requirements for protection of elevator.

D. STAIRS AND RAMPS

1. Do not cover stairs or ramps with unsecured sheet plastic. Where stairs or ramps are covered with plastic, provide 3/4" exterior grade plywood treads securely held in place, over plastic. Do not cover rungs or rails with any type of protective materials.

2. Cover Carpeting of work area with 2 individual layers of clear polyethylene sheeting, 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 which could be stepped on causing the wall attachment to be pulled loose. Both spray-glue and duct tape all seams in floor covering. Locate seams in top layer six feet (6') from, or at right angles to, seams in bottom layer. Install sheeting so that top layer can be removed independently of bottom layer.

3. Cover Sheet Plastic in areas where scaffolding is to be used with a single layer of 1/2" CDX plywood or 1/4" tempered hardboard. Wrap edges and corners of each sheet with duct tape. At completion of abatement work wrap plywood or hardboard with 2 layers of 6 mil polyethylene and move to next work area or dispose of as an asbestos contaminated waste material in accordance with Section 02084 of this specification.

3.09 SECONDARY BARRIER

Secondary Layer of plastic as a drop cloth to protect the primary layer from debris generated by the asbestos abatement work is specified in the appropriate work sections.

3.10 EXTENSION OF WORK AREA

Extension of Work Area: If the enclosure barrier is breached in any manner that could allow the passage of asbestos debris or airborne fibers, then add affected area to the work area, enclose it as required by this Section of the specification and decontaminate it as described in Section 01711.

3.11 EXTERIOR ENCLOSURES

Construct exterior enclosures as a Critical Barrier as necessary to completely enclose the work. Fabricate from reinforced polyethylene sheeting and 2" x wood framework. Attach to existing building components or brace as necessary for lateral stability. Construct walls to meet all state and local regulations for construction of temporary buildings. Construct to resist a wind of 30 MPH, slope ceiling to permit drainage of rain water.

3.12 PROTECTION

Protect the completed installation from damage after installation and prior to completion of the other work in the area.

3.13 CLEAN-UP

Comply with SECTION 01000.
Remove excess and/or spilled material. Do not wash out or discard excess material, solvents, thinners, etc. on College property; legally dispose of such material off College property.

3.14 ACCEPTANCE

Comply with SECTION 01000.

END OF SECTION

SECTION 01560

WORKER PROTECTION - ASBESTOS ABATEMENT

PART 1 - GENERAL

1.01 SCOPE

A. DESCRIPTION OF THE WORK

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

B. RELATED WORK SPECIFIED ELSEWHERE

GENERAL CONDITION.....SECTION 01000
RESPIRATOR PROTECTION.....SECTION 01562

1.02 SUBMITTALS

A. PROCEDURE

Comply with SECTION 01000.

B. SHOP DRAWINGS

None required.

C. BROCHURES, CUT SHEETS, AND TECHNICAL DATA

Before beginning work:

1. Brochures and Cut Sheets: Submit brochures and technical data sufficient to describe the products proposed for use on this project.

2. Safety Data Sheet (SDS): Submit on substances and mixtures containing at least 1% hazardous chemical which are proposed for use on this project. Maintain one (1) copy of each SDS at the site during the work.

D. CERTIFICATION

1. Before Start of Work: Submit the following to the College Representative for review. Do not start work until these submittals are returned with College Representative's

action stamp indicating that the submittal is returned for unrestricted use.

2. AHERA Accreditation: Submit copies of certificates from an EPA-approved AHERA Abatement Workers course for each worker as evidence that each Asbestos Abatement Worker is accredited as required by the AHERA Regulation 40 CFR 763 Appendix C to Subpart I, April 30, 1987.

3. State and Local License: Submit evidence that all workers have been trained, certified and accredited as required by state or local code or regulation.

4. Certificate Worker Acknowledgement: Submit an original signed copy of the Certificate of Worker's Acknowledgement found at the end of this section, for each worker who is to be at the job site or enter the Work Area.

1.03 QUALITY ASSURANCE

A. GENERAL

Comply with SECTION 01000.

B. APPLICABLE STANDARDS

Latest edition of the following listed established standards constitutes part of these specification requirements:

1. National Electrical Code (NEC) NFPA No. 70
2. Applicable State and Municipal Codes and Requirements
3. Underwriters' Laboratories (UL)
4. American National Standards Institute (ANSI)

C. TESTING LABORATORY

At the College Representative's discretion, the College will arrange and pay for the services of an independent testing laboratory to monitor the work, take material samples, and report on the compliance of installed materials to these specifications.

D. LICENSING

The Contractor shall be licensed as required by applicable State and Local laws to perform the work covered by this specification.

E. WORKER TRAINING

1. AHERA Accreditation: All workers are to be accredited as Abatement Workers as

required by the AHERA regulation 40 CFR 763 Appendix C to Subpart E, April 30, 1987.

2. State and Local License: All workers are to be trained, certified and accredited as required by state or local code or regulation.

3. Train, in accordance with 29 CFR 1926, all workers in the dangers inherent in handling asbestos and breathing asbestos dust and in proper work procedures and personal and area protective measures. Include but do not limit the topics covered in the course to the following:

a. Methods of recognizing asbestos

b. Health effects associated with asbestos

c. Relationship between smoking and asbestos in producing lung cancer

d. Nature of operations that could result in exposure to asbestos

e. Importance of and instruction in the use of necessary protective controls, practices and procedures to minimize exposure including:

Engineering controls
Work Practices
Respirators
Housekeeping procedures
Hygiene facilities
Protective clothing
Decontamination procedures
Emergency procedures
Waste disposal procedures

f. Purpose, proper use, fitting, instructions, and limitations of respirators as required by 29 CFR 1910.134.

g. Appropriate work practices for the work

h. Requirements of medical surveillance program

i. Review of 29 CFR 1926

j. Pressure Differential Systems

k. Work Practices including hands on or on-job training

4. Training Program: Submit a course outline of the worker training course. Include date and time course was given, name and title of teacher.

5. Report from Medical Examination: Conducted within last 12 months as part of compliance with OSHA medical surveillance requirements for each worker who is to enter the Work Area. Submit, at a minimum, for each worker the following:

a. Name and Social Security Number

b. Physicians Written Opinion from examining physician including at a minimum the following:

   i. Whether worker has any detected medical conditions that would place the worker at an increased risk of material health impairment from exposure to asbestos.

   ii. Any recommended limitations on the worker or on the use of personal protective equipment such as respirators.

   iii. Statement that the worker has been informed by the physician of the results of the medical examination and of any medical conditions that may result from asbestos exposure.

c. Copy of information that was provided to physician in compliance with 29 CFR 1926

d. Statement that worker is able to wear and use the type of respiratory protection proposed for the project, and is able to work safely in an environment capable of producing heat stress in the worker.

6. Notarized Certifications: Submit certification signed by an officer of the abatement contracting firm and notarized that exposure measurements, medical surveillance, and worker training records are being kept in conformance with 29 CFR 1926.

1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

Deliver materials to the site in original, unopened packaging clearly marked to identify contents.

Store materials to protect from damage, moisture and exposure to the elements. Follow manufacturer's written storage instructions.

Do not install damaged materials.

1.06 WARRANTY

Comply with SECTION 01000.

PART 2 - PRODUCTS

2.01 MATERIALS

A. PROTECTIVE CLOTHING

1. Coveralls: Provide disposable full-body coveralls and disposable head covers, and require that they be worn by all workers in the Work Area. Provide a sufficient number for all required changes, for all workers in the Work Area.

2. Cold Weather Gear: Provide each worker with an insulated jacket, pants, gloves, and hat. Require that cold weather gear be removed in Equipment Room of Personnel Decontamination Unit. Dispose of cold weather gear as asbestos waste at completion of all work.

3. Boots: Provide work boots with non-skid soles, and where required by OSHA, foot protectives, for all workers. Provide boots at no cost to workers. Paint uppers of all 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.

4. Hard Hats: Provide head protectives (hard hats) as required by OSHA for all workers, and provide 4 spares for use by College Representative and Project Administrator. Label hats with same warning labels as used on disposal bags. Require hard hats 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 the Work Area at the end of the work.

5. Goggles: Provide eye protectives (goggles) as required by OSHA for all 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.

6 Gloves: Provide work gloves to all workers and require that they be work 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.

B. ADDITIONAL PROTECTIVE EQUIPMENT

Respirators, disposable coveralls, head covers, and footwear covers shall be provided by the Contractor for the College Representative, Project Administrator, and other authorized representatives who may inspect the job site. Provide two (2) respirators and six (6) complete coveralls and, where applicable, six (6) respirator filter changes per day.

PART 3 - EXECUTION

3.01 GENERAL

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.

Each time Work Area is entered remove all 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.

3.02 DECONTAMINATION PROCEDURES

1. Type C Supplied Air or Powered Air-Purifying Respirators: Require that all workers use the following decontamination procedure as a minimum requirement whenever leaving the Work Area:

a. When exiting area, remove disposable coveralls, disposable head covers, and disposable footwear covers or boots in the equipment room.

b. 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:

   i. Thoroughly wet body including hair and face. If using Powered Air-Purifying Respirator (PAPR) hold blower unit above head to keep canisters dry.

   ii. 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.

   iii. 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.

iv. Carefully wash facepiece of respirator inside and out.

v. 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.

vi. Shower completely with soap and water.

vii. Rinse thoroughly.

viii. Rinse shower room walls and floor prior to exit.

ix. Proceed from shower to Changing Room and change into street clothes or into new disposable work items.

2. Air Purifying-Negative Pressure Respirators: Require that all workers use the following decontamination procedure as a minimum requirement whenever leaving the Work Area with a half or full-face cartridge type respirator:

a. When exiting area, remove disposable coveralls, disposable headcovers, and disposable footwear covers or boots in the Equipment Room.

b. Still wearing respirators, proceed to showers. Showering is mandatory. Care must be taken to follow reasonable procedures in removing the respirator and filters to avoid asbestos fibers while showering. The following procedure is required as a minimum:

i. Thoroughly wet body from neck down.

ii. Wet hair as thoroughly as possible without wetting the respirator filter if using an air purifying type respirator.

iii. Take a deep breath, hold it and/or exhale slowly, complete wetting of hair, thoroughly wetting face, respirator and filter (air purifying respirator). While still holding breath, remove respirator and hold it away from face before starting to breath.

iv. Dispose of wet filters from air purifying respirator.

v. Carefully wash facepiece of respirator inside and out.

vi. Shower completely with soap and water.

vii. Rinse thoroughly.

viii. Rinse shower room walls and floor prior to exit.

ix. Proceed from shower to Changing Room and change into street clothes or into new disposable work items.

3. Remote Shower: The procedures above are to be used if the decontamination facility is used as a remote shower. If a worker cannot gain direct access to the Equipment Room require that he enter Decontamination Unit and proceed directly through Shower Room to Equipment Room. Decontamination procedure is then completed as required above.

4. 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, then dress in street clothes before entering the non-Work Areas of the building.

3.04 CERTIFICATE OF WORKER'S ACKNOWLEDGEMENT

Following this section is a Certificate of Worker Training. After each worker has been included in the Contractor's Respiratory Protection Program, completed the training program and medical examination, secure a fully executed copy of this form.

3.05 INSTALLATION

Install per manufacturers written instructions.

3.06 PROTECTION

Protect the completed installation from damage after installation and prior to completion of the other work in the area.

3.07 CLEAN-UP

Comply with SECTION 01000.

Remove excess and/or spilled material. Do not wash out or discard excess material, solvents, thinners, etc. on College property; legally dispose of such material off College property.

Remove marks, fingerprints, smudges, stains, dirt, and grease from visible surfaces.

3.08 ACCEPTANCE

Comply with SECTION 01000.

END OF SECTION

CERTIFICATE OF WORKER'S ACKNOWLEDGEMENT

PROJECT NAME _____ DATE _____

PROJECT ADDRESS _____

CONTRACTOR'S NAME _____

WORKING WITH ASBESTOS CAN BE DANGEROUS. INHALING ASBESTOS FIBERS HAS BEEN LINKED WITH VARIOUS TYPES OF CANCER. IF YOU SMOKE AND INHALE ASBESTOS FIBERS THE CHANCE THAT YOU WILL DEVELOP LUNG CANCER IS GREATER THAN THAT OF THE NON-SMOKING PUBLIC.

Your employer's Contract with the College for the above project requires that: You be supplied with the proper respirator and trained in its use. You be trained in safe work practices and in the use of the equipment found on the job. You receive a medical examination. These things are to have been done at no cost to you.

RESPIRATORY PROTECTION: You must have been trained in the proper use of respirators and informed of the type respirator to be used on the above referenced project. You must be given a copy of the written respiratory protection manual issued by your employer. You must be equipped at no cost with the respirator to be used on the above project.

TRAINING COURSE: You must have been trained in the dangers inherent in handling asbestos and breathing asbestos dust and in proper work procedures and personal and area protective measures. The topics covered in the course must have included the following:

- Physical characteristics of asbestos
- Health hazards associated with asbestos
- Respiratory protection
- Use of protective equipment
- Pressure Differential Systems
- Work practices including hands on or on-job training
- Personal Decontamination procedures
- Air monitoring, personal and area

MEDICAL EXAMINATION: Your must have had a medical examination within the past 12 months at no cost to you. this examination must have included: health history and pulmonary function tests and may have included an evaluation of a chest x-ray.

By signing this document, you are acknowledging only that the Owner of the building you are about to work in has advised you of your rights to training and protection relative to your employer the Contractor.

Signature _____ Social Security No. _____

Printed Name _____ Witness _____

SECTION 01562

RESPIRATORY PROTECTION

PART 1 - GENERAL

1.01 SCOPE

A. DESCRIPTION OF THE WORK

Instruct and train each worker involved in asbestos abatement or maintenance and repair of friable asbestos-containing materials in proper respiratory use and require that each worker always wear a respirator, properly fitted on the face in the Work Area from the start of any operation which may cause airborne asbestos fibers until the Work Area is completely decontaminated. Use respiratory protection appropriate for the fiber level encountered in the work place or as required for other toxic or oxygen-deficient situations encountered.

B. RELATED WORK SPECIFIED ELSEWHERE

GENERAL CONDITION.....SECTION 01000
TESTING LABORATORY SERVICES - AIR MONITORING.....SECTION 01412
WORKER PROTECTION - ASBESTOS ABATEMENT.....SECTION 01560

1.02 SUBMITTALS

A. PROCEDURE

Comply with SECTION 01000.

B. SHOP DRAWINGS

None required.

C. ROCHURES, CUT SHEETS, AND TECHNICAL DATA

Before beginning work:

1. Brochures and Cut Sheets: Submit brochures and technical data sufficient to describe the products proposed for use on this project - including NIOSH and MSHA Certifications for each component in an assembly and/or for entire assembly.

2. Safety Data Sheet (SDS): Submit on substances and mixtures containing at least 1% hazardous chemical which are proposed for use on this project. Maintain one (1) copy of each SDS at the site during the work.

3. System Diagram: When a Type "C" supplied air respiratory system is required by the work, submit drawing showing assembly of components into a complete supplied air respiratory system. Include diagram showing location of compressor, filter banks, backup air supply tanks, hose line connections in Work Area(s), routing of air lines to Work Area(s) from compressor.

4. Operating Instruction: Submit complete operating and maintenance instructions for all components and systems as a whole. Submittal is to be in bound manual form suitable for field use.

5. Respiratory Protection Program: Submit Contractor's written respiratory protection program manual as required by OSHA 1926.58.

6. Respiratory Protection Schedule: Submit level of respiratory protection intended for each operation required by the project. Submit this information on the "Respiratory Protection Schedule" on the form included at the end of this Section.

7. Historic Airborne Fiber Data: Submit airborne asbestos fiber count data from an independent air monitoring firm to substantiate selection of respiratory protection proposed. Data submitted shall include at least the following for each procedure required by the work.
    - Date of measurements
    - Operation monitored
    - Sampling and analytical methods used and evidence of their accuracy
    - Number, duration, and results of samples taken

8. Resume Information: Submit resume and information on training for individual monitoring the operation of supplied air respiratory systems. Submit training certifications where applicable.

D. MAINTENANCE INSTRUCTIONS

Submit the manufacturer's written operation and maintenance instructions for each equipment item.

1.03 QUALITY ASSURANCE

A. GENERAL

Comply with SECTION 01000.

B. APPLICABLE STANDARDS

Except to the extent that more stringent requirements are written directly into the Contract Documents, the following regulations and standards have the same force and effect (and are made a part of the Contract Documents by reference) as if copied directly into the Contract Documents, or as if published copies were bound herewith. Where there is a conflict in requirements set forth in these regulations and standards, meet the more stringent requirement.

1. National Electrical Code (NEC) NFPA No. 70

2. Applicable State and Municipal Codes and Requirements

3. Underwriters' Laboratories (UL)

4. American National Standards Institute (ANSI)

5. OSHA: U.S. Department of Labor Occupational Safety and Health Administration, Safety and Health Standards 29 CFR 1910, Section 1001 and Section 1910.134. 29 CFR 1926.58.

6. CGA: Compressed Gas Association, Inc., New York, Pamphlet G-7, "Compressed Air for Human Respiration", and Specification G-7.1 "Commodity Specification for Air".

7. CSA: Canadian Standard Association, Rexdal, Ontario, Standard Z180.1-1978, "Compressed Breathing Air".

8. ANSI: American National Standard Practices for Respiratory Protection, ANSI Z88.2-1980.

9. NIOSH: National Institute for Occupational Safety and Health.

10. MSHA: Mine Safety and Health Administration.

C. TESTING LABORATORY

At the College Representative's discretion, the College will arrange and pay for the services of an independent testing laboratory to monitor the work, take material samples, and report on the compliance of installed materials to these specifications.

D. LICENSING

The Contractor shall be licensed as required by applicable State and Local laws to perform the work covered by this specification.

E. AIR QUALITY FOR SUPPLIED AIR RESPIRATORY SYSTEMS

Provide air used for breathing in Type "C" supplied air respiratory systems that meets or exceeds standards set for C.G.A. type 1 (Gaseous Air) Grade H or CSA Z180.1 which ever presents the more stringent quality standard.

F. ALLOWABLE CONTAMINANTS: Supply air that has an asbestos concentration no greater than outside ambient conditions.

The following table sets forth the quantity of any given contaminant allowed according to the referenced standards:

CONTAMINANT	CGA Type 1 (Gaseous Air)			CSA Z180.1
	Grade D	Grade E	Grade H	
Carbon Monoxide, PPM/v	20	10	5	5
Carbon Dioxide, PPM/v	1000	500	500	500
Condensed Hydrocarbons, mg./cu. meter	5	5		1
Gaseous Hydrocarbons, as methane, PPM/v			10	25
Water Vapor - PPM/v dewpoint	(1) -50F	(1) -50F	(1) -50F	27 -63F
Objectionable Odors	None	None	None	None
Nitrogen Dioxide, PPM/v	-	-	0.5	0.2
Nitrous Oxide, PPM/v	-	-	-	5
Sulfur Dioxide, PPM/v	-	-	0.5	-
Halogenated solvents, PPM/v	-	-	1	-
Other gaseous contaminants	-	-	-	(2)
Inorganic particulates, mg./cu. meter	-	-	-	1

-Indicates that the standard shows no limiting characteristics.

(1) The CGA standards do not call out a specific moisture limit when the ambient temperature is above freezing. However, since a moisture content no greater than a

-50 Degrees Fahrenheit dewpoint (66 PPM/v) is necessary for carbon monoxide elimination, the CO limits could not be met unless the air were dried to a -50 Degrees Fahrenheit dewpoint or better.

(2) Maximum allowable content of tricholotrifluorethane, dichlorodifluoromethane, and chlorodifluoromethane is 2 PPM/v for each. Unlisted contaminants shall not exceed one-tenth of the Threshold Limit Values (TLV's) for Chemical Substances in Workroom air adopted by the American Conference of Governmental Industrial Hygienists (ACGIH).

1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

Deliver materials to the site in original, unopened packaging clearly marked to identify contents. Deliver replacement parts, etc., not otherwise labeled by NIOSH or MSHA to job site in manufacturer's containers.
Store materials to protect from damage, moisture and exposure to the elements. Follow manufacturer's written storage instructions. Do not install damaged materials.

PART 2 - PRODUCTS

2.01 RESPIRATORS

A. AIR PURIFYING RESPIRATORS

1. Limitation: Use only where measurable quantities of airborne asbestos are not detectable.

2. Respirator Bodies: Provide half face or full-face type respirators. Equip full face respirators with a nose cup or other anti-fogging device as would be appropriate for use in air temperatures less than 32 Degrees Fahrenheit.

3. 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 codes 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.

4. Non-permitted respirators: Do not use single use, disposable or quarter face respirators.

B. SUPPLIED AIR RESPIRATOR SYSTEMS

1. General: Provide equipment capable of producing air of the quality and volume required by the above reference standards applied to the job site conditions and crew size. Comply with provisions of this specification if more stringent than the governing standard.

2. Face Piece and Hose: Provide full face piece and hose by same manufacturer that has been certified by NIOSH/MSHA as an approved Type "C" respirator assembly operating in pressure demand mode with a positive pressure face-piece.

3. Auxiliary backup system: In atmospheres which contain sufficient oxygen (greater than or equal to 19.5% oxygen) provide a pressure-demand full face piece supplied air respirator equipped with and emergency back-up HEPA filter.

4. Escape air supply: In atmospheres which are oxygen deficient (less than 19.5% oxygen) provide a pressure-demand full face piece supplied air respirator incorporating an auxiliary self-contained breathing apparatus (SCBA) which automatically maintains an uninterrupted air supply in pressure demand mode with a positive pressure face piece.

5. Backup air supply: Provide a reservoir of compressed air located outside the Work Area which will automatically maintain a continuous uninterruptable source of air automatically available to each connected face piece and hose assembly in the event of compressor shut-down, contamination of air delivered by compressor, power loss or other failure. Provide sufficient capacity in the back-up air supply to allow a minimum escape time of one-half hour times the number of connections available to the Work Area. Air requirement at each connection is the air requirement of the respirators in use plus the air requirement of an average-sized adult male engages in moderately strenuous activity.

6. Warning device: Provide a warning device that will operate independently of the building's power supply. Locate so that alarm is clearly audible above the noise level produced by equipment and work procedures in use, in all parts of the Work Area and at the compressor. Connect alarm to warn of:

a. Compressor shut down or other fault requiring use of backup air supply

b. Carbon Monoxide (CO) levels in excess of 5 PPS/V

7. Carbon Monoxide (CO) Monitor: Continuously monitor and record on a strip chart recorder Carbon Monoxide (CO) levels. Place monitors in the air line between compressor and back-up air supply and between backup air supply and workers. Connect monitors so that they also sound an alarm as specified under "Warning Devices".

8. Compressor Shut Down: Interconnect monitors, alarms and compressor so that compressor is automatically shut down and the alarms sounded if any of the following occur:

a. Carbon Monoxide (CO) concentrations exceed 5 PPM/v in the air line between the filter bank and backup air supply

b. Compressor temperature exceeds normal operating range

9. Compressor Motor: Provide a compressor driven by an electric motor. Do not use gas of diesel engines to drive compressor. Insure that electrical supply available at the work site is adequate to energize motor.

10. Compressor Location: Locate compressor outside of building in location that will not impede access to the building, and that will not cause a nuisance by virtue of noise or fumes to occupied portions of the building.

11. Air Intake: Locate air intake remotely from any source of automobile exhaust or any exhaust from engines, motors, auxiliary generator or buildings.

12. After-Cooler: Provide an after-cooler at entry to filter system which is capable of reducing temperatures to outside ambient air temperatures.

13. Self-Contained Breathing Apparatus (SCBA): Configure system to permit the recharging of 1/2 hour 2260 PSI SCBA cylinders.

PART 3 - EXECUTION

3.01 GENERAL

Respiratory Protection Program: Comply with ANSI Z88.2 - 1980 "Practices for Respiratory Protection" and OSHA 29 CFR 1910 and 1926.

Require that respiratory protection be used at all times that there is any possibility of disturbance of asbestos-containing materials whether intentional or accidental.

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 Section 01714.
Regardless of Airborne Fiber Levels: Require that the minimum level of respiratory protection used be half-face air-purifying respirators with high efficiency filters.

Do not allow the use of single-use, disposable, or quarter-face respirators for any purpose.

3.02 FIT TESTING

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.

On a Weekly Basis, check the fit of each worker's respirator by having irritant smoke blown onto the respirator from a smoke tube.

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 test in accordance with the manufacturer's instructions of ANSI Z88.2 (1980).

3.03 TYPE OF RESPIRATORY PROTECTION REQUIRED

Provide Respiratory Protection as indicated in paragraph below. Where paragraph below does not apply, determine the proper level of protection by dividing the expected or actual airborne fiber count in the Work Area by the "protection factors" given below. The level of respiratory protection which 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.

Type "C" Supplied-air respirators: Full face piece pressure demand supplied air respirators are to be used by all workers engaged in the removal, or demolition of pipes, structures, or equipment covered or insulated with asbestos, or in the removal or demolition of asbestos insulation or coverings, or any other activity which results in or may result in airborne asbestos fibers.

3.04 PERMISSIBLE EXPOSURE LIMIT (PEL)

Fibers: For the 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.

Electron Microscopy: If Electron Microscopy is used to determine airborne fiber levels, only asbestos fibers will be enumerated, but fibers of any size detected by the testing of Work Area Clearance will be counted.

8-Hour Time Weighted Average (TWA) of asbestos fibers to which any worker may be exposed shall not exceed the following: Time Weighted Average (TWA) - 0.1 fibers/cubic centimeter

3.05 RESPIRATORY PROTECTION FACTOR

Respirator Type	Protection Factor
Air purifying: Negative pressure respirator High efficiency filter Half face piece	10
Air purifying: Negative pressure respirator High efficiency filter Full face piece	50
Powered Air Purifying (PAPR): Positive pressure respirator High efficiency filter Half or Full-face piece	50
Type C supplied air: Positive pressure respirator Pressure demand or other positive pressure mode Half face piece	1,000

Respirator Type	Protection Factor
Type C supplied air: Positive pressure respirator Pressure demand or other positive pressure mode Full face piece	2,000
Type C supplied air: Positive pressure respirator pressure demand or other positive pressure mode Full face piece equipped with an auxiliary positive pressure Self-contained breathing apparatus (SCBA)	10,000
Self-contained breathing apparatus (SCBA): Positive Pressure respirator	10,000

Pressure demand or other
positive pressure mode
Full facepiece

3.06 AIR PURIFYING RESPIRATORS

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 work day. 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.

Powered air purifying - half or full-face mask: Supply a sufficient quantity of high efficiency respiratory 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 batter pack during washing. Provide an extra battery pack for each respirator so that one can be charging while one is in use.

3.07 TYPE "C" RESPIRATOR

Air Systems Monitor: Continuously monitor the air system operation including compressor operation, filter system operation, backup air capacity and all 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 which will take him away from monitoring the air system.

3.08 ACCEPTANCE

Comply with SECTION 01000.

Demonstrate repeated successful operation to the College Representative.

END OF SECTION

SECTION 01711

PROJECT DECONTAMINATION

PART 1 - GENERAL

1.01 SCOPE

A. DESCRIPTION OF THE WORK

Provide the materials, labor, equipment and supervision necessary and reasonably incidental to the decontamination of the Work Area following asbestos abatement. This includes but is not limited to the following:

1. Decontamination of air in the Work Area which has been, or may have been contaminated by the elevated airborne asbestos fiber levels generated during abatement activities, or which may previously have had elevated fiber levels due to friable asbestos containing materials in the space.

2. Cleaning, decontamination, and removal of temporary facilities installed prior to abatement work, including scaffolding.

3. Cleaning and decontamination of all surfaces (ceiling, walls, floor) of the Work Area, including furniture and equipment.

B. RELATED WORK SPECIFIED ELSEWHERE

GENERAL CONDITION.....SECTION 01000
SUMMARY OF WORK - ASBESTOS ABATEMENT.....SECTION 01013
PRIMARY AND CRITICAL BARRIERS.....SECTION 01526
WORK AREA CLEARANCE.....SECTION 01714
REMOVAL OF ASBESTOS-CONTAINING MATERIAL.....SECTION 02081
DISPOSAL OF ASBESTOS-CONTAINING WASTE MATERIALS....SECTION 02084

1. Removal of Gross Debris: Is integral with the performance of abatement work and as such is specified in Section 02081: Removal of Asbestos Containing Materials.

2. Work Area Clearance: Air testing and other requirements which must be met before release of the Air Monitoring Contractor and re-occupancy of the work area are specified in Section 01714: Work Area Clearance.

1.02 SUBMITTALS

A. PROCEDURE

Comply with SECTION 01000.

B. SHOP DRAWINGS

None required.

C. BROCHURES, CUT SHEETS, AND TECHNICAL DATA

Before beginning work:

1. Brochures and Cut Sheets: Submit brochures and technical data sufficient to describe the products proposed for use on this project.

2. Safety Data Sheet (SDS): Submit on substances and mixtures containing at least 1% hazardous chemical which are proposed for use on this project. Maintain one (1) copy of each SDS at the site during the work.

3. Installation Instructions: None required.

4. Color Chart: None required.

5. Submit test report from an independent testing laboratory on the fire resistance rating of the assembly of the spray back fireproofing on the lock back encapsulant used.

D. SAMPLES

None required.

1.03 QUALITY ASSURANCE

A. GENERAL

Comply with SECTION 01000.

B. APPLICABLE STANDARDS

Latest edition of the following listed established standards constitutes part of these specification requirements:

1. National Electrical Code (NEC) NFPA No. 70
2. Applicable State and Municipal Codes and Requirements
3. Underwriters' Laboratories (UL)
4. American National Standards Institute (ANSI)

C. TESTING LABORATORY

At the College Representative's discretion, the College will arrange and pay for the services of an independent testing laboratory to monitor the work, take material samples, and report on the compliance of installed materials to these specifications.

D. LICENSING

The Contractor shall be licensed as required by applicable State and Local laws to perform the work covered by this specification.

E. WORK AREA CLEARANCE

Air testing and other requirements which must be met before release of Contractor and reoccupancy of the Work Area are specified in Section 01714: Work Area Clearance.

1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

Deliver materials to the site in original, unopened packaging clearly marked to identify contents.

Store materials to protect from damage, moisture and exposure to the elements. Follow manufacturer's written storage instructions.

Do not install damaged materials.

1.05 WARRANTY

Comply with SECTION 01000.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

3.01 GENERAL

A. FRIABLE ACM

If the asbestos abatement work is on damaged or friable materials the work is a four-step procedure with two cleanings of the Primary Barrier plastic prior to its removal and two cleanings 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.

B. NON-FRIABLE ACM

If the asbestos abatement work is on undamaged and non-friable materials 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.

C. AIR FILTRATION

In both cases operation of the pressure differential system is used to remove airborne fibers generated by the abatement work.

3.02 PREVIOUS WORK

During completion of the asbestos abatement work specified in other sections, the Secondary Barrier of polyethylene sheeting will have been removed and disposed of along with any gross debris generated by the asbestos abatement work.

3.03 EXISTING WORK

Work of this section 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.

3.04 CLEANING

A. FIRST CLEANING

1. Carry out a first cleaning of all surfaces of the Work Area by use of damp-cleaning and mopping, and/or a High Efficiency Particulate Air (HEPA) filtered vacuum. (Note: A HEPA vacuum will 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.

2. Remove all filters in Air Handling System(s) and dispose of as asbestos containing waste in accordance with requirements of Section 02084: Disposal of Asbestos-Containing Waste Materials.

3. 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 the Work Areas during this period. Maintain Pressure Differential System in operation for the entire 96 air change period.

B. SECOND CLEANING

1. Carry out a second cleaning of all surfaces in the Work Area in the same manner as the first cleaning.

2. Encapsulation of Substrate: Perform encapsulation of substrate or installation of spray-applied finishes or fireproofing, where required, at this time. Maintain Pressure Differential system in operation during encapsulation work.

Perform work only after meeting the following requirements:

a. Surfaces to be covered have met the requirements for a visual inspection in this section.

b. Airborne fiber counts in the Work Area are at or below 0.01 fibers per cubic centimeter as measured by phase contrast microscopy.

3. Removal of Primary Barriers:

Immediately following the second cleaning of the Primary plastic, remove all Primary Barrier sheeting and Material Decontamination Unit, if there is one, leaving only:

a. Critical Barrier: Which forms the sole barrier between the Work Area and other portions of the building or the outside.

b. Critical Barrier Sheeting: Over lighting fixtures and clocks, ventilation openings, doorways, convectors, speakers, and other openings.

c. Decontamination Unit: For personnel, in operating condition.

d. Pressure Differential System: Maintain in continuous operation.

C. THIRD CLEANING

1. Carry out a third 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 water marks or other damage to surfaces.

2. Air Monitoring Contractor's Visual Inspection and Testing: At the completion of the above cleaning, visually inspect all surfaces; reclean if 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 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.

   Cover carpeting in the Work Area with 6 mil polyethylene during Contractor's testing procedures. Seal plastic to baseboards with duct tape.

3. Cleaning Carpeting: At the completion of cleaning of all surfaces except carpeting, HEPA vacuum carpeting designated to remain in Work Areas using a floor cleaning attachment adjusted so to that rubber skirting is in contact with carpet surface. Use a passive (non-power brush type) floor attachment with rubber floor seals and adjustable above-floor height. Completely clean carpeting in one direction with each pass of the floor attachment overlapping the previous pass by one-half the attachment width. At the completion of one such cleaning, vacuum clean in the same manner in a direction at right angles to the initial cleaning.

4. 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 the Work Area during this period. Maintain pressure differential system in operation for the entire 96 air change period.

D. FINAL CLEANING

1. Carry out a final cleaning of all surfaces in the Work Area in the same manner as the previous cleaning.

2. Air Monitoring Contractor's Visual Inspection and 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 final cleaning. Continue this process until no debris dust or other material is found while sweeping of all surfaces with forced air equipment.

3. 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 the Work Area during this period. Maintain Pressure Differential System in operation for the entire 96 air change period.

3.05 VISUAL INSPECTION

1. 96 Air Changes After Final Cleaning Perform a Complete Visual Inspection of the entire Work Area including: all surfaces, ceiling, walls, floor, decontamination unit, all 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 the College Representative.

2. 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.

3. Lifts: Provide ladders, scaffolding, and lifts as required to provide access to all surfaces in the area to be subjected to visual inspection. Access is to allow touching of all surfaces.

3.06 FINAL AIR SAMPLING

A. PHASE CONTRAST MICROSCOPY (PCM)

1. After the Work Area is found to be visually clean, air samples will be taken and analyzed in accordance with the procedure for Phase Contrast Microscopy set forth in Section 01714: Work Area Clearance.

2. If Release Criteria are not met, repeat Final Cleaning and continue decontamination procedure from that point.

3. If Release Criteria are met continue with the air testing by Transmission Electron Microscopy.

   If Release Criteria are met, proceed to work of Article on "Removal of Work Area Isolation".

B. TRANSMISSION ELECTRON MICROSCOPY (TEM)

1. After the work area is found to be visually clean and PCM air sampling completed, TEM air samples will be collected and analyzed in accordance with the procedure for Transmission Electron Microscopy set forth in Section 01714: Work Area Clearance.

2. If Release Criteria are not met, repeat Final Cleaning and continue Decontamination procedure from that point.

3. If Release Criteria are met, proceed to work of Article on "Removal of Work Area Isolation".

C. FINAL AIR SAMPLING PCM (SMALL AREAS)

1. Criteria: PCM without TEM sampling will be used to clear Work Areas where the asbestos-containing materials involved in the work are below the following size limitations.

a. Less than or equal to 160 square feet or 260 linear feet.

b. Less than or equal to 1,500 square feet or 500 linear feet.

c. Less than or equal to 3,000 square feet or 1,000 linear feet.

2. Phase Contrast Microscopy (PCM): After the work area is found to be visually clean, air samples will be taken and analyzed in accordance with the procedure for Phase Contrast Microscopy set forth in Section 01714: Work Area Clearance:

3. If Release Criteria are not met, repeat Final Cleaning and continue Decontamination Procedure from that point.

4. If Release Criteria are met, proceed to work of this Section on Removal of Work Area Isolation.

3.06 LOCKDOWN

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 REMOVAL OF WORK AREA ISOLATION

After all requirements of this section and Section 01714: Work Area Clearance have been met:

1. Shut down and remove the Pressure Differential System. Seal HEPA filtered fan units, HEPA vacuums and similar equipment with 6 mil polyethylene sheet and duct tape to form a tight seal at intake end before being moved from Work Area.

2. Remove Personnel Decontamination Unit.

3. 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 College Representative, are found then the entire area affected shall be decontaminated.

4. Remove all equipment, materials, debris from the work site.

5. Dispose of all asbestos-containing waste material as specified in Section 02084: Disposal of Asbestos-Containing Waste Material.

3.08 SUBSTANTIAL COMPLETION OF ABATEMENT WORK

Asbestos Abatement Work is Substantially Complete upon meeting the requirements of this section and Section 01714: Work Area Clearance, including submission of:

1. Remove all equipment, materials, debris from the work site.

2. Disposal of all asbestos containing waste material as specified in Section 02084.

3. Repair or replace all finishes damaged during the course of asbestos abatement work.

4. Certificate of Visual Inspection.

5. Receipts documenting proper disposal as required by Section 02084: Disposal of Asbestos-Containing Waste Material.

6. Punch list detailing repairs to be made and incomplete items.

3.09 ACCEPTANCE

A. GENERAL

Comply with SECTION 01000.

B. CERTIFICATE OF VISUAL INSPECTION

Following this section is a "Certificate of Visual Inspection". This certification is to be completed by the Contractor and certified by the College Representative (both the Contractor and College Representative will be present for visual inspection). Submit completed Certificated with Application of Final Payment. Final Payment will not be made until this Certification is executed.

END OF SECTION

SECTION 01714

WORK AREA CLEARANCE - ASBESTOS ABATEMENT

PART 1 - GENERAL

1.01 SCOPE

A. DESCRIPTION OF THE WORK

Provide the materials, labor, equipment and supervision necessary and reasonably incidental to the clearance of the work area as required by these Specifications.

This Section sets forth required post-abatement airborne asbestos concentrations in the Work Area and describes testing procedures for a third party to measure these levels.

B. RELATED WORK SPECIFIED ELSEWHERE

GENERAL CONDITION.....SECTION 01000
SUMMARY OF WORK.....SECTION 01013
PROJECT COORDINATION.....SECTION 01043
DEFINITIONS AND STANDARDS - ASBESTOS ABATEMENT.....SECTION 01091
CODES AND REGULATIONS - ASBESTOS ABATEMENT.....SECTION 01092
AIR MONITORING - TEST LABORATORY SERVICES.....SECTION 01412
TEMPORARY ENCLOSURES.....SECTION 01526
WORKER PROTECTION - ASBESTOS ABATEMENT.....SECTION 01560
RESPIRATORY PROTECTION.....SECTION 01562
PROJECT DECONTAMINATION.....SECTION 01711

C. AIR MONITORING CONTRACTOR RELEASE CRITERIA

1. The Work is complete when the work area is visually clean and airborne fiber levels have been reduced to the level specified below.

2. Work of this Section will not begin until the visual inspection described in Section 01711: Project Decontamination is complete and has been certified by the College Representative.

3. Work Area Clearance: Upon meeting the TEM Clearance requirements of this Section, the work of Section 01711: Project Decontamination can continue.

D. AIR MONITORING

1. Purpose: To determine if the elevated airborne fiber counts encountered during abatement operations have been reduced to the specified level, the Air Monitoring Contractor will secure samples and analyze them according to the following procedures.

2. Fibers Counted: "Fibers" referred to in this section shall be either all fibers regardless of composition as counted in the NIOSH Method 7400, or OSHA Reference Method Procedures.

3. Procedures:

a. Aggressive sampling procedures as described below will be followed.

b. PCM samples will be secured as indicated below. If the area meets the clearance criteria TEM sampling will proceed.

c. Aggressive sampling procedures will be repeated.

d. TEM samples will be secured and analyzed as indicated below.

E. AGGRESSIVE SAMPLING

Take air samples using aggressive sampling techniques as follows:

1. Before sampling pumps are started, sweep the exhaust from forced air equipment (leaf blower with at least 1 horsepower electric motor) against all walls, ceilings, floors, ledges and other surfaces in the room; continue for 5 minutes per 10,000 cubic feet of room volume.

2. Mount one nominal 2000 SCFH per 10,000 cubic feet of room volume in a central location directed to create maximum turbulence; operate unit for the entire period of sample collection.

3. Collect air samples in areas subject to normal air circulation away from room corners, obstructed locations, and sites near windows, doors of vents.

4. After air sampling pumps have been shut off, shut fans off.

F. SCHEDULE OF AIR SAMPLES

1. General: The number and volume of air samples taken and analytical methods used by the Air Monitoring Contractor shall be in accordance with the following schedule.

Sample volumes given may vary depending upon the analytical instruments used.

G. PHASE CONTRAST MICROSCOPY

1. In Each Homogeneous Work Area after completion of all cleaning work, take a minimum of 7 samples and analyze as follows:

Location Sampled	Number of Samples	Detection Limit Fibers/cc	Minimum Volume (Liters)	Rate LPM
Each Work Area	5	0.01	1,200	1-10
or Each Room of Work Area	1 (5 min)	0.01	1,200	1-10
Work Area Blank	1	0.01	0	open for 30 seconds
Laboratory Blank	1	0.01	0	Do Not Open

2. Collect Samples on 25 mm. cassettes using 0.8 mixed cellulose ester filter media in a cassette with a conductive extension cowl.

3. Analysis: Measure asbestos fibers on each filter using the NIOSH Method 7400 protocol.

4. Fibers: Include all fibers regardless of composition as counted by the phase contrast microscopy method used.

5. Split Sample: Split the sample from one Work Area sample and analyze both halves separately for duplicate analysis.

6. The services of a testing laboratory will be employed by the Contractor to perform laboratory analysis of the air samples. A microscope and technician will be set up at the job site, or samples will be sent daily by overnight mail, so that verbal reports on air samples can be obtained within 24 hours.

7. A complete record, certified by the testing laboratory, of all air monitoring tests and results will be furnished to the College and the Abatement Contractor.

8. Release Criteria: Decontamination of the work site is complete if the average fiber concentration of the work area is not statistically larger than the average of outside

samples for each homogeneous work area. If the average of the work area samples is statistically larger than the average of the outside samples then the decontamination is incomplete and the cleaning procedures of Section 01711: Project Decontamination shall be repeated.

H. TRANSMISSION ELECTRON MICROSCOPY

1. In each homogeneous work area after completion of all cleaning work, take a minimum of 12 samples and analyze as follows:

Location Sampled	Number of Samples	Analytical Sensitivity Fibers/cc.	Recommended Volume (Liters)	Rate LPM
Each Work Area	5	0.005	1,300 - 1,800	1-10
Outside Each Work Area	5	0.005	1,300 - 1,800	1-10
Work Area Blank	1	0.005	0	Open for 30 Seconds
Outside Blank	1	0.005	0	Open for 30 Seconds
Laboratory Blank	1	0.005	0	Do Not Open

2. Analysis: Measure asbestos fibers on each filter using the Level 1 analysis per EPA Provisional Method and Update.

3. Asbestos Structures referred to in this Section include asbestos fibers, bundles, clusters or matrices, as defined by method of analysis.

4. Analysis Schedule: Send samples for analysis by Transmission electron Microscopy; have verbal results available 48 hours after receipt of sample by the laboratory.

5. Analysis Report: A complete record, certified by the testing laboratory, of all Transmission Electron Microscopy results shall be furnished to the College and the Abatement Contractor.

6. Release Criteria: Decontamination of the work site is complete if the average fiber concentration of the work area is not statistically larger than the average of outside samples for each homogeneous work area. If the average of the work area samples is statistically larger than the average of the outside samples then the decontamination is

incomplete and the cleaning procedures of Section 01711: Project Decontamination shall be repeated.

1.02 SUBMITTALS

A. PROCEDURE

Comply with SECTION 01000.

C. BROCHURES, CUT SHEETS, AND TECHNICAL DATA

Before beginning work:

1. Brochures and Cut Sheets: Submit brochures and technical data sufficient to describe the equipment and products proposed for use on this project.

2. Material Safety Data Sheet (MSD): Submit on substances and mixtures containing at least 1% hazardous chemical which are proposed for use on this project. Maintain one (1) copy of each MSDS at the site during the work.

1.03 QUALITY ASSURANCE

A. GENERAL

Comply with SECTION 01000.

B. APPLICABLE STANDARDS

Latest edition of the following listed established standards constitutes part of these specification requirements:

1. National Electrical Code (NEC) NFPA No. 70
2. Applicable State and Municipal Codes and Requirements
3. Underwriters' Laboratories (UL)
4. American National Standards Institute (ANSI)

C. TESTING LABORATORY

At the College Representative's discretion, the College will arrange and pay for the services of an independent testing laboratory to monitor the work, take material samples, and report on the compliance of installed materials to these specifications.

D. LICENSING

The Contractor shall be licensed as required by applicable State and Local laws to perform the work covered by this specification.

1.04 WARRANTY

Comply with SECTION 01000.

END OF SECTION

SECTION 02081

REMOVAL OF ASBESTOS-CONTAINING MATERIALS

PART 1 - GENERAL

1.01 SCOPE

A. DESCRIPTION OF THE WORK

Provide the materials, labor, equipment and supervision necessary and reasonably incidental to the removal of asbestos-containing material (ACM) identified on the Drawings.

B. RELATED WORK SPECIFIED ELSEWHERE

GENERAL CONDITION.....SECTION 01000
SUMMARY OF WORK - ASBESTOS ABATEMENT.....SECTION 01013
PROJECT COORDINATION.....SECTION 01043
DEFINITIONS AND STANDARDS - ASBESTOS ABATEMENT.....SECTION 01091
CODES AND REGULATIONS - ASBESTOS ABATEMENT.....SECTION 01092
AIR MONITORING - TEST LABORATORY SERVICES.....SECTION 01410
TEMPORARY ENCLOSURES.....SECTION 01526
WORKER PROTECTION - ASBESTOS ABATEMENT.....SECTION 01560
RESPIRATORY PROTECTION.....SECTION 01562
PROJECT DECONTAMINATION.....SECTION 01711
WORK AREA CLEARANCE - ASBESTOS ABATEMENT.....SECTION 01714
DISPOSAL OF ASBESTOS-CONTAINING WASTE MATERIAL.....SECTION 02084

1.02 SUBMITTALS

A. PROCEDURE

Comply with SECTION 01000.

B. SHOP DRAWINGS

None required.

C. BROCHURES, CUT SHEETS, AND TECHNICAL DATA

Before beginning work:

1. Brochures and Cut Sheets: Submit brochures and technical data sufficient to describe the products proposed for use on this project.

2. Material Safety Data Sheet (MSDS): Submit on substances and mixtures containing at least 1% hazardous chemical which are proposed for use on this project. Maintain one (1) copy of each MSDS at the site during the work.

a. Surfactant: Submit product data, use instructions and recommendations from manufacturer of surfactant intended for use. Include data substantiating that material complies with requirements.

b. Removal Encapsulant: Submit product data, use instructions and recommendations from manufacturer of surfactant intended for use. Include data substantiating that material complies with requirements.

3. Installation Instructions: Submit product manufacturer's written installation and handling instructions. Maintain one (1) copy at the site during the work.

4. NESHAPS Certification: Submit certification from manufacturer of surfactant or removal encapsulant that, to the extent required by this specification, the material, if used in accordance with manufacturer's instructions, will wet asbestos containing materials to which it is applied as required by the National Emission Standard for Hazardous Pollutants (NESHAPS) Asbestos Regulations (40 CFR 61, Subpart M).

1.03 QUALITY ASSURANCE

A. GENERAL

Comply with SECTION 01000.

B. APPLICABLE STANDARDS

Latest edition of the following listed established standards constitutes part of these specification requirements:

1. National Electrical Code (NEC) NFPA No. 70
2. Applicable State and Municipal Codes and Requirements
3. Underwriters' Laboratories (UL)
4. American National Standards Institute (ANSI)

C. TESTING LABORATORY

At the College Representative's discretion, the College will arrange and pay for the services of an independent testing laboratory to monitor the work, take material samples, and report on the compliance of installed materials to these specifications.

D. LICENSING

The Abatement Contractor shall be licensed as required by applicable State and Local laws to perform the work covered by this specification.

1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

Deliver materials to the site in original, unopened packaging clearly marked to identify contents.

Store materials to protect from damage, moisture and exposure to the elements. Follow manufacturer's written storage instructions.

Do not install damaged materials.

1.05 WARRANTY

Comply with SECTION 01000.

PART 2 - PRODUCTS

2.01 MATERIALS

A. 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 materials 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 50% polyoxyethylene ester and 50% polyoxyethylene ether mixed with five

gallons of water.

B. POLYETHYLENE SHEET

1. A single polyethylene film in the largest sheet size possible to minimize seams, 6.0 mils thick as indicated, clear, frosted, or black as indicated.

2. Provide flame resistant polyethylene film that conforms to requirements set forth by the National Fire Protection Associated Standard 701, Small Scale Fire Test for Flame-resistant Textiles and Films. Provide largest size possible to minimize seams, 4.0 or 6.0 mils thick as indicated, frosted or black as indicated.

C. DUCT TAPE

Provide duct tape in 2" or 3" widths as indicated, with an adhesive which is formulated to aggressively stick to sheet polyethylene.

D. SPRAY CEMENT

Provide spray adhesive in aerosol cans which is specifically formulated to stick tenaciously to sheet polyethylene.

E. DISPOSAL BAGS

Provide 6 mil thick leak-tight polyethylene bags labeled with two 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

F. FIBERBOARD DRUMS

Provide heavy duty leak tight fiberboard drums with tight sealing locking metal tops.

G. PAPER BOARD BOXES

Provide heavy duty corrugated paper board boxes coated with plastic or wax to retard deterioration from moisture. Provide in sizes that will easily fit in disposal bags.

H. FELT

Standard felt approximately 1/16" thick and 36" to 72" in width.

PART 3 - EXECUTION

3.01 GENERAL

Use work procedures that results in an 8-hour Time Weighted Average (TWA) airborne fiber count less than that indicated in Section 01412 - Air Monitoring - Test Laboratory Services. If airborne fiber counts exceed this level immediately mist the area with amended water to lower fiber counts and revise work procedures to maintain airborne levels within the required limit.

3.02 EQUIPMENT

WORKER PROTECTION

Before beginning work with any material for which a Material Safety Data Sheet has been submitted provide workers with the required protective equipment. Require that appropriate protective equipment be used at all times.

3.03 SECONDARY BARRIER

Secondary Barrier: Over the Primary Barrier, install as a drop cloth a clear 6 mil sheet plastic in all areas where asbestos removal work is to be carried out. Completely cover floor with sheet plastic. Where the work is within 10'-0" of a wall extend the Secondary Barrier up wall to ceiling. Support sheet plastic on wall with duct tape, seal top of Secondary plastic to Primary Barrier with duct tape so that debris is unable to get behind it. Provide cross strips of duct tape at wall support as necessary to support sheet plastic and prevent its falling during removal operations.

Install Secondary Barrier at the beginning of each work shift. Install only sufficient plastic for work of that shift.

Remove Secondary Barrier at end of each work shift or as work in an area is completed. Fold plastic toward center of sheet and pack in disposal bags. Keep material on sheet continuously wet until bagged.

Install Walkways of black 6 mil plastic between active removal areas and decontamination units to protect Primary Layer from tracked material. Install walkways at the beginning of, and remove at the end of, each work shift.

3.04 WET REMOVAL

A. GENERAL

1. This method is preferred; alternative methods (Dry Removal) require prior approval of the College Representative.

2. Thoroughly wet to satisfaction of the College Representative asbestos-containing materials to be removed prior to stripping and/or tooling 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 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.

3. If a removal encapsulant is used, apply in strict accordance with manufacturer's written instructions. Perforated outer covering of any installation which has been painted and/or jacketed in order to allow penetration of amended water or removal encapsulant, or where necessary, carefully strip away while simultaneously spraying amended water or removal encapsulant on the installation to minimize dispersal of asbestos fiber into the air.

4. Mist Work Area continuously with amended water whenever necessary to reduce airborne fiber levels

5. Remove Saturated Asbestos-Containing Material in small sections from all areas. Do not allow material to dry out. As it is removed, simultaneously pack material while still wet into disposal bags. Twist neck of bags, bend over and seal with minimum three wraps to duct tape. Clean outside and move to washdown station adjacent to material decontamination unit.

6. Evacuate air from disposal bags with HEPA filtered vacuum cleaner before sealing.

7. Do not wet materials in the vicinity of active electrical equipment.

B. WET REMOVAL PROCEDURES

1. SPRAY APPLIED FIREPROOFING

a. Spray asbestos-containing fireproofing or architectural acoustic finish with a fine mist of amended water or removal encapsulant.

CAUTION: Do not over-saturate to cause excess dripping.

c. Scrape materials from substrate. Remove materials in manageable quantities and control the descent to staging or floor below. If over 20', use drop chute to contain material during descent.

d. If using amended water, spray mist surface continuously during work process.

If using removal encapsulant follow manufacturer's written instructions.

e. Remove residue remaining on scratch coat after scraping using stiff nylon bristled hand brush.

NOTE: Use high pressure washer only with written authorization of the College Representative.

f. If a removal encapsulant is used remove residue completely before encapsulant dries. If substrate dries before complete removal of residue re-wet with amended water or removal encapsulant.

2. PIPE INSULATION

a. Spray with a mist of amended water or removal encapsulant. Allow amended water or removal encapsulant to saturate material to substrate.

b. If a removal encapsulant is used, use in strict accordance with manufacturer's instructions.

c. Cut bands holding preformed pipe insulation, slit jackets at seams, remove and hand-place in a disposal bag.

Do not drop to floor.

d. Remove any residue on pipe or fitting with stiff bristle nylon hand brush.

e. In locations where pipe fitting insulation is removed from pipe with straight runs insulated with fibrous glass or other non-asbestos-containing fibrous material, remove fibrous material 6" from the point where it contacts the asbestos-containing insulation.

D. FIREPROOFING OR ARCHITECTURAL FINISH ON WIRE LATH

a. Spray asbestos-containing fireproofing or architectural acoustic finish with a fine mist of amended water or removal encapsulant.

b. Allow time for amended water or removal encapsulant to saturate material completely.

CAUTION: Do not over-saturate to cause excess dripping.

c. If surface of material has been painted or otherwise coated, cut small holes as required and apply amended water or removal encapsulant from above.

d. Cut wire lath into 2' x 6' sections and cut hang wires.

e. Roll or fold up complete with Asbestos-Containing Material and hand place in container.

Do not drop on floor.

f. After removal of lath and Asbestos-Containing Material remove any overspray on decking and structure above using stiff nylon bristled brush.

NOTE: Use high pressure washer only with written authorization from the College Representative.

g. Use one of the following methods for containing waste.

i. Deposit material in corrugated paper board box. When box is full duct tape closed and place in disposal bag.

ii. Wrap material in felt and place in fiberboard drum lined with two disposal bags. Use caution to ensure that all edges of wire lath that could cut plastic are covered with felt.

iii. Place material directly in a steel drum. Seal drums when full with leak tight seal. Drum is to be leak tight in any orientation.

3.05 DRY REMOVAL

A. GENERAL

1. Dry Removal of Asbestos-Containing Materials is required in the following areas where wetting may create a hazard for workers or damage equipment or finishes.

2. EPA Authorization: Do not begin dry removal work until authorized in writing by the EPA NESHAP coordinator and the College Representative.

B. LOCAL VENTILATION AND COLLECTION SYSTEM

Provide local ventilation and collection systems as described below for each area where amosite or dry Asbestos-Containing Material is being removed or otherwise disturbed:

Provide HEPA filtered fan units in addition to those required by section 01513, in the vicinity of the work. Arrange so that the units exhaust into the Work Area oriented in a direction away from the work. Extend a 12" diameter flexible non-collapsing duct from the intake end to a point no more than 4'-0" from any scraping or wire brushing activity.
Locate intake of duct so that air flow is horizontally and slightly downward into intake. Replace primary filters on HEPA filtered fan units at an interval of no greater than 30 minutes. Allow no more than one scraping or wire brushing activity per fan unit.

Where removal operation will generate considerable amounts of debris, attach a job-built 4' x 4' flared end piece on intake end of duct. Support end piece horizontally at a point 4'-0" below the work, so that airflow is downward into intake.

C. DRY REMOVAL PROCEDURE

1. Isolate dry removal area from balance of Work Area by a Critical Barrier as described in Section 01526: Temporary Enclosures and a pressure differential between the dry removal area and the Work Area.

2. PIPE INSULATION

HEPA vacuum surface of pipe insulation. Cut bands holding preformed pipe insulation, slit jackets at seams while holding HEPA vacuum under cut, remove and hand-place in a disposal bag.

Remove job-molded fitting insulation in chunks, using nozzle of HEPA vacuum to collect debris generated, and hand-place in a disposal bag. Do not drop to floor. Remove any residue on pipe or fitting with wire brush. Brushing toward the nozzle of a HEPA vacuum. In locations where pipe fitting insulation is removed from pipe with straight runs insulated with fibrous glass or other non-asbestos-containing fibrous material, remove fibrous material 6" from the point where it contacts the asbestos-containing insulation. Use a two-worker crew for work, with one worker removing material and one worker holding the nozzle of the HEPA vacuum in the location of disturbance.

3. MATERIAL SPRAYED ON WIRE LATH

Hold the nozzle from an operating HEPA filtered vacuum cleaner in the immediate vicinity of and below the work while cutting the wire lath or otherwise disturbing the Asbestos-Containing Material. Use a two-worker crew for cutting, with one worker cutting and one worker holding the HEPA vacuum nozzle.

4. Active Electrical Equipment: Do not wet materials in the vicinity of active electrical equipment. Dry remove any Asbestos-Containing Materials in the vicinity of active electrical equipment.

a. Restrict Access: Maintain existing access restrictions to areas with active electrical equipment. Allow access to area only to qualified tradespersons with prior experience in the installation and repair of involved equipment.

b. Warning Signs: Post warning signs at the entry point to active electrical equipment as required by OSHA or other applicable regulation.

c. Personnel: Work on active electrical equipment is to be performed by qualified tradespersons with prior experience in the installation or repair of the involved equipment. Restrict access to electrical equipment.

d. Electrical Isolation: Cover exposed conductors with a minimum 1/8" thick neoprene blanket draped over the conductor and surrounding area.

e. Protective Equipment: Provide workers working on or in the vicinity of active electrical with appropriate protective equipment including insulating gloves, boots, and non-conductive tools.

f. Work Procedures: perform removal work using "Localized Control of Material Release" and "Local Ventilation and Collection System" procedures described below.

5. Hot Equipment: Do not wet materials on hot piping or equipment. Dry remove any Asbestos-Containing Materials on hot equipment.

a. Restrict Access: Maintain any existing access restrictions to areas with hot equipment. Provide railing or other barriers to prevent accidental contact with hot equipment. Allow access to area only to qualified tradespersons with prior experience with the type of equipment involved.

b. Warning Signs: Post warning signs at hot equipment as required by OSHA or other applicable regulation.

c. Personnel: Work on hot equipment is to be performed by qualified tradespersons with prior experience with the type of equipment involved. Restrict access to electrical equipment.

d. Re-insulation: Re-insulate equipment immediately following visual inspection. Do not allow more than 8 linear feet of piping to be exposed at any time.

e. Protective Equipment: Provide workers working on or in the vicinity of hot equipment with appropriate protective equipment including insulating gloves, boots, and coveralls.

f. Work Procedures: Perform removal work using "Localized Control of Materials Release" and "Local Ventilation and Collection System" procedures described below.

3.06 PROTECTION

Protect the completed work from damage after installation and prior to completion of the other work in the area.

3.07 CLEAN-UP

Comply with SECTION's 01000, 01711, and 01714.

Remove excess and/or spilled material. Do not wash out or discard excess material, solvents, thinners, etc. on College property; legally dispose of such material off College property.

Remove marks, fingerprints, smudges, stains, dirt, and grease from visible surfaces.

3.08 ACCEPTANCE

Comply with SECTION 01000.

END OF SECTION

SECTION 02084

DISPOSAL OF ASBESTOS-CONTAINING MATERIAL

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

General provision of Contract, including General Conditions and Division 1-Specifications, apply to work of this section.

1.02 DISPOSAL

A. Contractor shall file all required notices and ADVF from LADEQ LESHAP office.

B. Label asbestos-containing/contaminated waste in accordance with EPA 40 CFR 61.150.

C. Dispose of packaged, labeled friable asbestos-containing material in accordance with 40 CFR 61.150 and any other applicable regulations.

1.03 SUBMITTALS

Submit copies of all manifests and landfill receipts to the College Representative.

PART 2 – PRODUCTS

Not used.

PART 3 – EXECUTION

3.01 GENERAL

A. Carefully load containerized waste on sealed trucks or other appropriate vehicles for transport. Exercise care before and during transport, to ensure that no unauthorized persons have access to the material.

B. Do not store disposal bagged material outside of the work area. Take bags from the work area directly to a sealed truck or dumpster.

C. Do not transport disposal bagged materials on open trucks. Double bagged material may be transported on open trucks if they are first loaded in sealed drums. Label drums with same warning labels as bags. Uncontaminated drums may be reused.

D. Advise the landfill operator at least twenty-four hours in advance of transport of the quantity of material to be delivered.

E. At the burial site, sealed plastic bags may be carefully dumped from the truck.

F. Return completed ADVFs to the College Representative.

END OF SECTION

SECTION 02085

RESILIENT FLOORING REMOVAL - RESILIENT FLOORS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Work described by this section relates to work practices as currently set forth in "Recommended Work Practices for the Removal of Resilient Floor Coverings," revised August, 1995, published by:

(1) Resilient Floor Covering Institute
966 Hungerford Drive
Suite 12-B
Rockville, MD 20850

(2) Armstrong World Industries, Inc.
P.O. Box 3001
Lancaster, PA 17604

1.02 SUMMARY

A. This Section includes work practices for removal of resilient floor covering materials which are "intact," and are likely to remain intact during the removal, and can be removed under a negative exposure assessment in compliance with the OSHA standard by appropriately trained workers using the Recommended Work Practices.

1. "Disposal of Regulated Asbestos-Containing Material" for disposal of friable asbestos-containing waste. Resilient floor covering materials should be disposed of in accordance with any applicable state and local regulations.

1.03 DEFINITIONS

A. Compliant Work Practices: Work practices for the removal of flooring material which OSHA has determined will consistently result in exposures below the TWA and excursion limit established by 29 CFR 1926.1101. Recommended Work Practices described in this Section have been recognized by OSHA as Compliant Work Practices.

B. Recommended Work Practices: "Recommended Work Practices for the Removal of Resilient Floor Coverings," revised August, 1995, published by the Resilient Floor Covering Institute (RFCI) and Armstrong World Industries, Inc.

C. Friable: Material that when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

D. Intact: means that ACM has not crumbled, been pulverized, or otherwise deteriorated so that the asbestos is no longer likely to be bound with its matrix. The incidental breakage of flooring materials, or slicing of sheet vinyl floor covering with a sharp-edged instrument, during removal operations conducted in accordance with the Recommended Work Practices does not mean that the materials are not removed in an intact condition. Intact resilient floor covering materials will be rendered friable if subjected to sanding, sawing or other aggressive operations.

E. Competent Person: An individual with the training and experience required by OSHA for a Competent Person involved in removal of intact flooring material using compliant work practices (12 hours of training). The competent person will supervise the work of this section, and is responsible for the health and safety of workers at the flooring material removal job site. The competent person must have authority to stop work, and take corrective action.

F. Initial Exposure Assessment: An inspection made by a Competent Person of the job site prior to the start of removal operations for the purpose of determining if the requirements of a negative exposure assessment are met.

G. Negative Exposure Assessment: Based on data in the rulemaking record, OSHA has determined that worker exposures will consistently be below the TWA and excursion limit during removal of intact flooring material when compliant work practices are used. As such, a Competent Person may make a negative exposure assessment when:

1. Recommended Work Practices will be used.
2. Workers are properly trained.
3. The resilient flooring is intact and is likely to remain intact throughout the removal process.

1.04 WORKER PROTECTION

A. Worker Training: Workers using the Recommended Work Practices for the intact removal of resilient floor covering materials must have completed an 8-hour training program as required by the OSHA regulation 29 CFR 1926.1101(k) and the Compliance Directive CPL 2-2.63 Appendix D, covering asbestos subjects as well as training in the Recommended Work Practices. Workers with this amount of training only are not permitted to continue working if the material becomes non-intact.

B. Competent Person: Engage a person experienced in the use of the Recommended Work Practices who has completed an 8-hour worker training program and additional 4 hours of training as required by the OSHA regulation 29 CFR 1926.1101(k) and the Compliance Directive CPL 2-2.63 Appendix D, for a Competent Person involved in removal of intact

flooring material using compliant work practices. Competent Persons with this amount of training only are not permitted to continue working if the material becomes non-intact.

C. Medical Surveillance: Workers who engage in the removal of asbestos-containing flooring materials for more than 30 days per year (one hour or more per day) must receive medical surveillance. This requires a medical examination within 10 working days following the 30th day of exposure.

D. Prohibitions in work area: Require that workers NOT eat, drink, smoke, chew tobacco or gum, or apply cosmetics in the Work Area.

E. Certificate of Worker Acknowledgment: Have each worker who is at the job site or who will enter the work area, fill out and sign a copy of the Certificate of Worker's Acknowledgment found at the end of this section.

1.05 QUALITY ASSURANCE

A. Notifications: Before the start of Work notify the following of the presence and location of ACM and of the planned removal activity:

1. Employees performing the work.
2. Employers of employees working in the area (not separated from the work area by either a wall, closed door or window or other impermeable barrier).
3. The College Representative.

B. Regulatory Compliance: Comply with provisions of the following:

1. OSHA Construction Standard for Asbestos 29 CFR 1926.1101
2. OSHA Compliance Directive CPL 2-2.63 November 3, 1995, Inspection Procedures for Occupational Exposures to Asbestos Final Rule 29 CFR Parts 1910.1001, 1926.1101, and 1915.1001.
3. OSHA 29 CFR 1926.2 through 35
4. Applicable state and local regulations.

C. Non-Intact Material: If the resilient flooring materials become non-intact during the work, stop work until the job can be evaluated by a competent person. Do not resume work until:

1. The job can be evaluated and supervised by a competent person who has completed a training course meeting the criteria of EPA’s Model Accreditation Plan for supervisors.

2. The work will be carried out by workers who have completed training meeting the criteria of the EPA’s Model Accreditation Plan for asbestos abatement workers.

3. The work will be carried out in accordance with worker and area protection specified in Section 02087.

4. Work procedures are approved by the College Representative.

1.06 SUBMITTALS

A. Negative Exposure Assessment: Before starting any work submit a Negative Exposure Assessment certified by a Competent Person to the College Representative. If a Negative Exposure Assessment cannot be made, report the reasons and any corrective action that would result in a Negative Exposure Assessment. The certification must be signed and dated by a Competent Person and be based on an Initial Assessment of the work of this contract. A copy of the negative exposure assessment should be retained by the employer of the Competent Person. The certification must include:

1. The name and signature of the Competent Person making the Assessment.
2. Certification that the Competent Person has been trained as required by OSHA for work on intact resilient flooring.
3. A description of the work including:

    a. Name and address of facility where the work is to occur.
    b. Description of location within the facility where work is to occur.

4. Certification that:

    a. Recommended Work Practices will be used.
    b. Workers will be properly trained as required by OSHA for work on intact resilient flooring.
    c. The resilient flooring is intact and is likely to remain intact throughout the removal process.

5. Complete and submit to the Owner the job form from “Using Compliant Work Practices to Remove Resilient Floor Covering” published by the Resilient Floor Covering Institute (RFCI) and Armstrong World Industries, Inc. This form is to be signed by a Competent Person. Retain a copy of the form

3. Certificate of Worker Acknowledgment: Submit an original signed copy of the Certificate of Worker's Acknowledgment found at the end of this section, for each worker who is to be at the job site or who will enter the work area.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Wetting Materials: For wetting prior to disturbance of asbestos-containing sheet flooring or asphaltic adhesive, use liquid dishwashing detergent that contains anionic, nonionic, and amphoteric surfactants.

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:

   a. Procter & Gamble Ivory Liquid
   Cincinnati, Ohio 45202

B. Waste Bag: Large size heavy-duty impermeable trash bag made from 6 mil (0.15 mm) thick polyethylene. Identify with a label stating

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

C. Waste Container: Closed leak-tight container. Identify with a label stating

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

D. Scrapers: Broad stiff-bladed wall or floor scrapers. Heavy-duty short or long handled scraper.

E. Cutting Sand: No. 1 sandblasting sand (clean, sharp, coarse cutting sand).

F. Terrazzo Floor Machine: Terrazzo or low-speed floor machine fitted with a floor plate attachment.

G. Removal Solution: Solution used to remove adhesive residue. e.g. Mop on, mop off, no machine scrub - wax stripping solution.

H. Floor Pad: Black floor scrubbing pad.

I. HEPA Filter Vacuum Cleaners: Use wet/dry tank-type vacuum cleaner equipped with a filter and metal floor attachment (no brush).

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:

a.	Nilfisk of America, Inc. 225 Great Valley Parkway Malvern, PA 19355 (800) 645-3475	HEPA-Filtered Vacuums
b.	Minuteman International, Inc. 111 South Rohlwing Road Addison, IL 60101 (708) 627-6900	Minuteman HEPA Vacuums
c.	Pullman-Holt (White) Corporation PO Box 16647 Tampa, FL 33617 (813) 645-3475	HEPA-Filtered Vacuums

J. Miscellaneous Equipment: Provide as needed the following equipment: utility or hook knife, ground fault circuit interrupter, hand sprayer, hammer or mallet, commercial-type, hand-held, hot-air gun or radiant heat source, hand-held rubbing stones, slip resistant shoes or boots, chisel, heavy gloves, duct tape, safety glasses.

K. Use a Ground Fault Circuit Interrupter (GFCI) for any electrical connections in a wet environment.

PART 3 - EXECUTION

3.01 GENERAL

A. Assume an asbestos content: Unless indicated in the contract documents that a flooring material is a non-asbestos product, assume it contains asbestos and treat it in the manner prescribed by the following procedures which are based on the "Recommended Work Practices for the Removal of Resilient Floor Coverings," published by the Resilient Floor Covering Institute and Armstrong World Industries. Do not sand, dry sweep, dry scrape, drill, saw, bead blast, or mechanically chip or pulverize existing resilient flooring, backing lining felt or asphaltic “cut back” adhesives.

B. Before beginning removal of any resilient flooring materials complete the following:

1. Negative Exposure Assessment: Before starting any work require that a Competent Person make an Initial Exposure Assessment of the resilient flooring to be removed. Begin work only if the Competent Person makes a Negative Exposure Assessment. Based on data in the rulemaking record, OSHA has determined that worker exposures will consistently be below the TWA and excursion limit during removal of intact flooring material when compliant work practices are used. As such, a Competent Person may make a negative exposure assessment when:

a. Recommended Work Practices will be used.
b. Workers are properly trained.
c. The resilient flooring is intact and is likely to remain intact throughout the removal process.

If a Negative Exposure Assessment cannot be made, report the reasons and any corrective action that would result in a Negative Exposure Assessment.

2. Notifications: Before the start of Work notify the following of the presence and location of ACM and of the planned removal activity:

a. Employees performing the work.
b. Employers of employees working in the area (not separated from the work area by either a wall, closed door or window or other impermeable barrier).
c. The building owner.

3. Demarcation: The work area must be demarcated or access must be limited to workers performing the removal. Post warning signs that read:

"DANGER ASBESTOS CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY"

4. Preparation: Prior to beginning the removal of resilient floor covering complete the following:

a. Remove appliances and furniture from the work area.
b. Remove binding strips or other restrictive molding from doorways, walls, etc.
c. Mix a detergent solution (16 ounces (0.473 liters) of liquid dishwashing detergent to 1 gallon (3.79 liters) of water) and pour into a garden sprayer.
d. Clean the entire floor using a wet/dry vacuum cleaner equipped with a HEPA filtration system with disposable bag and metal floor attachment (no brush). Do not dry sweep; do not create dust.
e. Precaution: Resilient flooring becomes slippery when wet with a detergent solution. Use caution to contain the solution in the immediate work area. Stand on a sheet of plywood or non-slip surface while working on wet surfaces.
f. After vacuuming, used HEPA filters and cleaner bags should be removed according to manufacturer's instructions and place in a waste bag or waste container.

C. Dispose of Category I non-friable waste in accordance with State and Local Regulations.

3.02 REMOVAL OF RESILIENT TILE FLOOR COVERING

A. Use the following procedure to remove resilient tile floor covering:

1. Begin removal in an area that receives the minimum foot traffic.
2. Floor tiles must be wetted (misted with a garden sprayer) before actual removal begins, unless heat will be used to remove tiles.
3. Start removal by carefully wedging a wall scraper in the seam of two adjoining tiles and gradually forcing the edge of one of the tiles up and away from the floor. Continue to force the balance of the tile up by working the scraper beneath the tile. Exert both a forward pressure and a twisting action on the blade to promote release of the tile from the adhesive and the floor.
4. When the first tile is removed place it, without breaking it further into smaller pieces, in a waste bag or waste container.(3)
5. After the first tile is removed and accessibility to other tiles is improved, force the wall scraper under the exposed edge of another tile. Continue to exert a prying twisting force to the scraper as it is moved under the tile until the tile releases from the floor. Again, dispose of the tile, and succeeding tiles, by placing in a waste bag or waste container without additional breaking.
6. Force the scraper through tightly-adhered areas by striking the scraper handle with a hammer using blows of moderate force while maintaining the scraper at a 25 to 30-degree angle to the floor. The resilient floor covering manufacturers' work practices recommend use of safety goggles during this work.
7. Continue to wet (mist) the tiles throughout the procedure
8. It should be the goal to remove individual tiles as a complete unit, although breakage of tiles is unavoidable.
9. If the procedure above is inadequate to loosen tiles use heat to soften adhesive, or alternatively, without first prying up floor tiles using a scraper, thoroughly heat the tile(s) with a hot air gun or radiant heat source until the heat penetrates through the tile and softens the adhesive, and remove tiles by hand or by using a scraper. The resilient floor covering manufacturers work practices recommend when using hot air gun or radiant heat source, tiles and adhesive be carefully handled to avoid burns, and that heated tiles and adhesive be handled only with suitable glove protection for hands. Caution: Over-heating resilient tile might produce harmful vapors, and a respirator with organic cartridges might be needed.
10. Deposit tiles in a waste bag or leak-tight container. Do not attempt to break tiles after they are in bag.

END OF SECTION

CERTIFICATE OF WORKER'S ACKNOWLEDGMENT

PROJECT NAME_____ DATE_____

PROJECT ADDRESS_____

CONTRACTOR'S NAME_____

WORKING WITH ASBESTOS CAN BE DANGEROUS. INHALING ASBESTOS FIBERS HAS BEEN LINKED WITH VARIOUS TYPES OF CANCER. IF YOU SMOKE AND INHALE ASBESTOS FIBERS THE CHANCE THAT YOU WILL DEVELOP LUNG CANCER IS GREATER THAN THAT OF THE NON-SMOKING PUBLIC.

Your employer's contract with the Owner for the above project requires that: You are trained in safe work practices and in the use of the equipment found on the job. If you do OSHA Class II work (such as removing asbestos-containing resilient flooring) you may be required to receive a medical examination. These things are to have been done at no cost to you.

TRAINING COURSE: You must have completed an 8-hour training course that covers asbestos subjects as well as use of the Manufacturer's Recommended Work Practices (Compliant Work Practices) for removing resilient flooring. This training is adequate for the removal of intact resilient flooring. If this is the only training you have had then you are not allowed to remove resilient flooring that is not intact, or has become non-intact (as defined by OSHA) during removal.

MEDICAL EXAMINATION: Removal of asbestos-containing resilient flooring is OSHA Class II work. If you perform OSHA Class I, II and III work (including removal of resilient flooring) for more than one hour per day (considering the entire time spent on the removal operation including cleanup) for 30 or more days per year, then a medical examination must be made available to you by your employer at no cost to you., within 10 working days following the thirtieth day of such work. This examination must include: health history, pulmonary function tests and may include an evaluation of a chest x-ray.

YOUR TRAINING ALLOWS YOU TO REMOVE ONLY INTACT RESILIENT FLOORING THAT REMAINS INTACT DURING REMOVAL. IF YOU ENCOUNTER NON-INTACT RESILIENT FLOORING OR IF THE FLOORING BECOMES NOT-INTACT (AS DEFINED BY OSHA) DURING REMOVAL THEN STOP WORK AND REPORT TO YOUR SUPERVISOR.

By signing this document, you are acknowledging only that the Owner of the building you are about to work in has advised you of your rights to training and protection relative to your employer.

Signature _____ Social Security No_____

Printed Name _____ Witness_____

SECTION 02087

RESILIENT FLOORING REMOVAL-AGGRESSIVE REMOVAL

PART 1 - GENERAL

1.01 SUBMITTALS

Before Start of Work: Submit the following to the College Representative for review. Do not start work until these submittals are approved by the Owner's Representative.

A. Wetting Materials: Submit product data, use instructions and recommendations from manufacturer of wetting material (surfactant and/or removal encapsulant) intended for use. Include data substantiating that material complies with requirements.

B. NESHAP Compliance Documentation: Submit manufacturer's documentation for removal encapsulants proposed for use that, to the extent required by this specification, the material, if used in accordance with manufacturer's instructions, will comply with the wetting requirements of National Emission Standard for Hazardous Pollutants (NESHAP) Asbestos Regulations (40 CFR 61, Subpart M).

C. Safety Data Sheet (SDS): Submit the Safety Data Sheet, or equivalent, in accordance with the OSHA Hazard Communication Standard (29CFR 1910.1200) for all material proposed for use on the work. Include a separate attachment for each sheet indicating the specific worker protective equipment proposed for use with the material indicated.

D. Adhesive Removal Solvent: Submit product data, use instructions and recommendations from manufacturer of adhesive removal solvent intended for use. Include data substantiating that material complies with requirements.

PART 2 - PRODUCTS

A. Wetting Materials: For wetting prior to disturbance of asbestos-containing materials use:

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.

or

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 50% polyoxyethylene ester and 50% polyoxyethylene ether mixed with five gallons of water.

B. Tile Adhesive Removal Solvent: Provide a slow-drying solvent intended to remove tile adhesive. Provide material that is not flammable, does not create combustible vapors and has no significant inhalation hazard.

Provide materials that have less than 250 g/l of volatile organic solvents (VOCs).

C. Polyethylene Sheet: A single polyethylene film in the largest sheet size possible to minimize seams, 6.0 mils thick as indicated, clear, frosted, or black as indicated.

D. Duct Tape: Provide duct tape in 2" or 3" widths as indicated, with an adhesive formulated for use on sheet polyethylene.

E. Spray Cement: Provide, in aerosol cans, spray adhesive which is formulated for use on sheet polyethylene. Provide materials that do not contain methylene chloride.

F. Disposal Bags: Provide 6 mil thick leak-tight polyethylene bags labeled as required by Section 02084 Disposal of Asbestos-Containing Waste Material.

G. Fiberboard Drums: Provide heavy duty leak-tight fiberboard drums with tight sealing locking metal tops.

H. Steel Drums: Provide leak-tight steel drums with tight-sealing locking metal tops.

I. Injection Molded Plastic Drums: Provide leak-tight injection-molded plastic drums with tight sealing locking tops.

J. 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.

K. Polyethylene Boxes: Provide heavy-duty polyethylene boxes. Provide leak-tight boxes or boxes in sizes that will easily fit in disposal bags.

L. Manual Spades: Hand operated scraper/chisels with long handles and replaceable blades for removal of resilient flooring.

M. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products which may be incorporated in the Work include, but are not limited to, the following:

1.	Crain Cutter Co., Inc. 156 So. Milpitas Blvd. Milpitas, CA 95035 408-946-6100	Various manual scrapers/strippers
2.	Beno J. Gundlach Company P.O. Box 544 Belleville, IL 62222 618-233-1781	Various manual scrapers/strippers
3.	Roofing Equipment, Inc. 11075 East 47th Avenue Denver, CO 80239 303-371-7667	Taylor Tools "Spud Bar" and other manual scrapers/strippers
4.	Red Devil, Inc. 2400 Vauxhall Road Union, NJ 07083-1933 201-688-6900 or 800-4-A-DEVIL	"The Slam Scraper"

PART 3 - EXECUTION

A. Preparation: Prior to beginning the removal of any resilient floor covering complete the following:

Remove appliances and furniture from the work area.

B. Seal Floor Penetrations: Before using wet methods to remove resilient flooring, seal openings, and penetrations in the floor to prevent water leakage.

C. STEP ONE - Removal of Resilient Tile Floor Covering: Remove resilient tile floor covering using the following procedure:

1. General: Remove binding strips or other restrictive molding from doorways, walls, etc. clean and dispose of as non-asbestos waste. Dispose of any materials that have glue or floor mastic on them as asbestos-containing waste.

2. Wet Floor: Wet floor with amended water or removal encapsulant, so that entire surface is wet. Do not allow to puddle or run off to other areas. If a removal encapsulant is used, use in strict accordance with manufacturer's instructions. Cover with sheet polyethylene to allow humidity to release tile from floor. Allow time for humidity and water or removal encapsulant to loosen tiles prior to removal.

Keep floor continuously wet throughout removal operation.

Remove tiles using a manual spade. Continuously mist floor in area where abatement crew is working with amended water or removal encapsulant. Wet any debris generated as necessary to keep continuously wet. Keep floor where tile has been removed continuously wet until after completion of heavy adhesive residue removal.

3. Debris and Waste: Pick up whole tiles, stack, place in boxes or wrap in felt, and place in labeled disposal bags. At the Contractor's option tiles may be placed directly into durable leak-tight containers.

   Shovel broken tiles and debris into cardboard boxes that are placed in a disposal bag, or place directly in steel leak-tight drums.

   Place bagged waste in a second disposal bag during decontamination and dispose of waste as required by Section 02084 Disposal of Asbestos-Containing Waste Material.

D. STEP TWO - Removal of Heavy Residue of Adhesive: Remove the heavy residue of adhesive left after removal of resilient tile flooring using the following procedure:

   1. Dampen Floor: Dampen floor by misting with amended water or removal encapsulant, so that entire surface is wet. Do not allow to puddle or run off to other areas.

   2. If a removal encapsulant is used, use in strict accordance with manufacturer's instructions.

      Keep floor continuously damp throughout removal operation.

2. Adhesive Removal: Begin removal at a point farthest from the entrance to the work area. Work of this step may proceed concurrently with work of removal of tile.

   Wet scrape heavy residue of adhesive backing using a stiff-bladed wall or floor scraper removing ridges and any loose adhesives until only a thin smooth film remains. Continuously mist floor in area where abatement crew is working with amended water or removal encapsulant. Wet any debris generated as necessary to keep continuously wet.

   Pick up scrapings and debris and deposit in a disposal bag or closed impermeable container and dispose of as required by Section 02084 Disposal of Asbestos-Containing Waste Material.

   Wet vacuum standing water with HEPA wet/dry vacuum.

   Mop floor with amended water or removal encapsulant to remove all debris and residue.

Continue the above steps until the adhesive is sufficiently reduced in thickness that it can be effectively removed with and adhesive removal solvent.

E. STEP THREE - Removal of Adhesive Residue: After removal of resilient flooring and any heavy residue of adhesive, mastic, or backing material, in the previous step, remove all residue of adhesive from the floor using the following procedure:

Allow floor to dry after completion of the wet removal procedures used in previous steps.

Begin removal at a point farthest from the entrance to the work area.

Remove adhesive residue by use of an adhesive removal solvent.

F. ADHESIVE SOLVENT

1. Adhesive: Remove adhesive residue by using adhesive removal solvents. Use solvents in accordance with manufacturers' instructions. Saturate adhesive with removal solvent and allows adhesive to soften. Remove by scraping, wet sanding, or wet scrub with floor cleaning machine with abrasive pad. Provide worker protection as required by material safety data sheet (MSDS) for any material used.

   Mop floor with removal solvent as required by manufacturer's directions as required to completely remove all residue of adhesive.

2. Clean Floor after completion of removal of asbestos-containing materials by wet mopping with amended water. Mop three times allowing a drying time between each mopping.

3. Encapsulate all surfaces with one coat of an encapsulant.

4. Dispose of all rags, plastic sheet, etc. in accordance with requirements of Section 02084 "Disposal of Asbestos-Containing Waste Material".

5. Decontaminate Equipment: After the completion of all work, decontaminate all equipment and machinery used for work of this section. Accomplish decontamination as required by the section on Project Decontamination.

END OF SECTION

SECTION 07255

CEMENTITIOUS SPRAY APPLIED FIREPROOFING

PART 1 - GENERAL

1.01 SCOPE

A. DESCRIPTION OF THE WORK

1. Provide the materials, labor, equipment and supervision necessary and reasonably incidental to the complete and proper installation of all cementitious spray applied fire protection and related work as shown on the Drawings or where specified herein, and in accordance with all applicable requirements of the Contract Documents.

2. The material and installation shall conform to the applicable requirements of the governing building code and the requirements of all authorities having jurisdiction.

B. RELATED WORK SPECIFIED ELSEWHERE

GENERAL CONDITION.....SECTION 01000
REMOVAL OF ASBESTOS-CONTAINING MATERIAL.....SECTION 02081
WORK AREA CLEARANCE - ASBESTOS ABATEMENT.....SECTION 01714

1.02 SUBMITTALS

A. PROCEDURE

Comply with SECTION 01000.

B. SHOP DRAWINGS

None required

C. BROCHURES, CUT SHEETS, AND TECHNICAL DATA

Before beginning work:

1. Brochures and Cut Sheets: Submit brochures and technical data sufficient to describe the products proposed for use on this project.

2. Safety Data Sheet (SDS): Submit on substances and mixtures containing at least 1% hazardous chemical which are proposed for use on this project. Maintain one (1) copy of each SDS at the site during the work.

3. Installation Instructions: Submit product manufacturer's written installation and handling instructions. Maintain one (1) copy at the site during the work.

4. Certify applied material is asbestos free.

E. MAINTENANCE INSTRUCTIONS

Submit the manufacturer's written maintenance instructions.

1.03 QUALITY ASSURANCE

A. GENERAL

Comply with SECTION 01000.

B. APPLICABLE STANDARDS

Latest edition of the following listed established standards constitutes part of these specification requirements:

1. National Electrical Code (NEC) NFPA No. 70
2. Applicable State and Municipal Codes and Requirements
3. Underwriters' Laboratories (UL)
4. American National Standards Institute (ANSI)
5. American Society of Testing Materials (ASTM) - as applicable.

C. TESTING LABORATORY

At the College Representative's discretion, the College will arrange and pay for the services of an independent testing laboratory to monitor the work, take material samples, and report on the compliance of installed materials to these specifications.

D. LICENSING

The Contractor shall be licensed as required by applicable State and Local laws to perform the work covered by this specification.

E. MANUFACTURER APPROVAL

Application of fireproofing shall be performed by a company acceptable to the fireproofing material manufacturer.

1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

Deliver materials to the site in original, unopened packaging clearly marked to identify contents.

Packaging shall bear the UL labels for fire hazard and fire-resistance classifications.

Store materials to protect from damage, moisture and exposure to the elements. Follow manufacturer's written storage instructions.

Do not install damaged materials.

1.05 JOB CONDITIONS

A. WEATHER LIMITATIONS

When the prevailing outdoor temperature at the building is less than 40° F (4° C), a minimum substrate and ambient temperature of 40° F (4° C) shall be maintained for 24 hours before, during and 24 hours after application of sprayed fire protection. If necessary for job progress, provide enclosures with heat to maintain temperatures.

B. ENVIRONMENTAL LIMITATIONS

Provide ventilation to allow proper drying of the sprayed fire protection during and subsequent to its application.

In enclosed areas, ventilation shall not be less than four (4) complete air changes per hour.

1.06 WARRANTY

Comply with SECTION 01000.

Submit manufacturer's written warranty.

PART 2 - PRODUCTS

2.01 GENERAL

The completed installation shall provide three (3) hour protection for the steel floor beams per current UL and ASTM test standards.

2.02 MATERIALS

A. Use factory-blended, cementitious fireproofing, applied per manufacturer's written installation instructions.

B. The sprayed fireproofing material shall have been tested and reported by Underwriters' Laboratories, Inc. in accordance with the procedure of ASTM E119.

C. Sprayed fireproofing material and application shall meet requirements of U.S. OSHA regulation 29 C.F.R. section 1926.58, which regulated the use of asbestos in construction and shall be free of mineral wool.

D. Mixing water shall be clean, fresh and suitable for domestic consumption and free from such amounts of mineral or organic substances as would affect the set of the fireproofing material.

E. The fireproofing product shall be tested in accordance with ASTM Standard G-21-75, and shall show resistance to mold growth when inoculated with aspergillus niger, and mixed spore cultures (Tappi T487-M54 and ASTM G-21-80). Mold inhibitor shall be added by the manufacturer.

2.02 APPROVED MANUFACTURERS

Cafco 800; ISOLATEK International/Cafco; Stanhope, NJ.

Monokote Type 6/CBF; W.R. Grace & Co. - Conn.; Construction Products Division, Cambridge, Mass.

Retro-Guard, Type R6 or R6-1; W.R. Grace & Co. - Conn.; Construction Products Division, Cambridge, Mass.

PART 3 - EXECUTION

3.01 GENERAL

The application of sprayed fire protection shall not commence until certification has been received by the General Contractor that surfaces to receive sprayed fire protection have been inspected by the applicator and are acceptable to receive sprayed fire protection.

Identify all unsuitable substrates to the General Contractor.

The replacement fireproofing shall dry to a blue color.

Sprayed fire protection shall not be applied to steel floor decks prior to the completion of concrete work on the deck.

The application of sprayed fire protection to the underside of roof deck shall not commence until the roofing is completely installed and tight, all penthouses are complete, all mechanical units have been placed, and after construction roof traffic has ceased.

3.02 EQUIPMENT

As required to mix and spray apply the fireproofing material in accordance with the

manufacturer's written application instructions.

3.03 INSPECTION

All surfaces to receive sprayed fireproofing shall be free of oil, grease, paints/primers, loose mill scale, dirt or other foreign substances which may impair proper adhesion of the fireproofing to the substrate.

Lock down agents on structural steel and decking shall be tested and reported by Underwriters Laboratories. The report shall indicate approval for the specific lock down and its use on the maximum uninterrupted span of the structural steel or metal deck surface. All lock down agents applied on structural steel shall bear the appropriate Underwriters Laboratories Inc. label indicating compliance.

Clips, hangers, support sleeves and other attachments required to penetrate the fireproofing shall be in place.

3.04 PREPARATION

All surfaces to receive fire protection shall be free of oil, grease, loose mill scale, dirt, paints/primers (other than those listed and tested) or other foreign materials which would impair satisfactory bonding to the surface. Any cleaning of surfaces to receive sprayed fire protection shall be the responsibility of the General Contractor or Steel Erector, as outlined in the structural steel or steel deck section.

Provide masking, drop cloths or other suitable coverings to prevent overspray from coming in contract with surfaces not intended to be sprayed.

Application of sprayed fireproofing shall not begin until the Contractor has inspected the surfaces to receive fireproofing, to determine if surfaces are acceptable to receive the fireproofing material. Where a primer is specified and mechanical attachments are required to obtain the fire-resistance rating, the Contractor shall install such attachments before the fireproofing is begun.

A. Prior to application of fireproofing, clips, hangers, support sleeves and other attachments required to penetrate the fireproofing shall be in place.

B. Ducts, piping, equipment or other suspended matter which would interfere with application of fireproofing materials shall not be positioned until fireproofing work is complete.

C. Prior to application of the fireproofing to the underside of roof decks, all roofing applications shall be completed. All roof traffic shall be prohibited upon commencement of the fireproofing application and until the fireproofing material is cured and fully dried.

D. Prior to application of the fireproofing to the underside of steel decking, concrete work

above shall be complete.

E. A discontinuous textured spray of W.R. Grace & Co.-Conn. SPATTERKOTE shall be applied to all cellular steel floor units with flat plate on the bottom before application of MONOKOTE Type MK-6/ED. See manufacturer's application instructions of SPATTERKOTE for more information.

Spray applied fireproofing is slippery when wet. The Contractor shall post cautionary SLIPPERY WHEN WET signs. Signs shall be posted in all areas in contact with wet fireproofing material. In addition, the Contractor shall erect barriers to prevent entry by non-fireproofing workers into the fireproofing spray and mixer areas or other areas exposed to wet fireproofing material.

3.05 COORDINATION

Clips, hangers, supports, sleeves and other attachments to the substrate are to be placed by others prior to the application of sprayed fire protection materials.

The installation of ducts, piping, conduit or other suspended equipment shall not take place until the application of sprayed fire protection is complete in an area.

When roof traffic is anticipated, as in the case of periodic maintenance, roofing pavers should be installed as a walkway to distribute loads.

3.06 APPLICATION

Install per manufacturers written instructions including prime. Report conflicts between plans and specifications and manufacturer's written instructions prior to or during the Pre-Bid Conference.

Apply to meet appropriate UL fire resistance design and manufacturer's written recommendations.

3.07 REPAIR

All patching of and repair to sprayed fire protection, due to damage by other trades, shall be performed under this section.

Patching and repairing shall be done using the same material as originally applied.

3.08 PROTECTION

Protect the completed installation from damage after installation and prior to completion of the other work in the area.

3.09 CLEAN-UP

Comply with SECTION 01000.

Remove excess and/or spilled material. Do not wash out or discard excess material, solvents, thinners, etc. on College property; legally dispose of such material off College property.

Remove marks, fingerprints, smudges, stains, dirt, and grease from visible surfaces.

Remove equipment and clean all surfaces not to be sprayed to the extent previously agreed to by applicator and General Contractor.

3.10 ACCEPTANCE

Comply with SECTION 01000.

END OF SECTION

SECTION 09805

ENCAPSULATION OF ASBESTOS-CONTAINING MATERIALS

PART 1 – GENERAL

1.012 DESCRIPTION OF WORK

The extent of encapsulation work will be specified by the College Representative for each project and as herein specified.

1.02 SUBMITTALS

A. PRODUCT DATA

Submit manufacturer's technical information including label analysis and application instructions for each material proposed for use.

B. INSTALLATION INSTRUCTIONS

Submit manufacturer's installation instructions with specific project requirements noted.

C. PERFORMANCE WARRANTY

Submit manufacturer's performance guarantee.

D. SAFETY DATA SHEET

Submit the Safety Data Sheet, or equivalent, in accordance with the OSHA Hazard Communication Standard (29CFR 1910.1200) for each surfactant and encapsulating material proposed for use on the work. Include a separate attachment for each sheet indicating the specific worker protective equipment proposed for use with the material indicated.

1.03 DELIVERY AND STORAGE

Deliver materials to the job site in original, new and unopened packages and containers bearing the manufacturer's name and label, and following information:

Name or title to material.
Manufacturer's stock number and date of manufacture
Manufacturer's name
Thinning Instructions

Application Instructions

Deliver materials together with a copy of the OSHA Material Safety Data Sheet for the material.

1.04 JOB CONDITIONS

Apply encapsulating materials only when environmental conditions in the work area are as required by the manufacturer's instructions.

1.05 QUALITY ASSURANCE

Submit written Performance Warranty, executed by the manufacturer and co-signed by the contractor, agreeing to repair/replace spray-on work which has cracked, fallen from substrate, or otherwise deteriorated to a condition where it would not perform effectively for its intended purposes due substantially to defective materials or workmanship and not due to abuse by occupants, improper maintenance, non-foreseeable ambient exposures or other causes beyond anticipated conditions and manufacturer's/contractor's control.

PART 2 – PRODUCTS

2.01 Provide penetrating or bridging type encapsulants specifically designed for application to asbestos-containing material or substrates.

2.02 Use only materials that have a flame spread index of less than 25, when dry, when tested in accordance with ASTM E-84.

PART 3 – EXECUTION

3.01 Do Not Commence Application of encapsulating materials until all removal work within the work area has been completed.

3.02 WORKER PROTECTION

A. Before beginning work with any material for which a Material Safety Data Sheet has been submitted provide workers with the required protective equipment. Require that appropriate protective equipment be used at all times.

In addition to protective breathing equipment required by OSHA requirements or by this specification, use painting pre-filters on respirators to protect the dust filters when organic solvent based encapsulant is in use.

3.03 Comply with all manufacturer's instructions for particular conditions of installation in each case. Consult with manufacturer's technical representative for conditions not covered. Encapsulate all surfaces in full compliance with manufacturer's procedures.

3.04 At completion of Encapsulation and before removal of work area enclosures and negative pressure system decontaminate space in accordance with requirements of section 01711 and 01714.

3.05 At completion of work submit manufacturer's record of inspection of completed work and Manufacturer's Performance Guarantee executed by both manufacturer and Contractor.

END OF SECTION

VI. BID FORM

Service Contract No: 40006-012 Asbestos Abatement

Price is to be stated per square or linear foot for each category and is to include all labor, materials, supplies, disposal fees, supervision etc. to perform a complete job. Bid Form must be completed in its entirety and signed. Incomplete Bid Forms will result in disqualification of the Bid submittal.

Item No:	Description	UOM	0 - 100 SF 0 - 30 LF	101 SF - 1000 SF 31 LF - 100 LF	1001 SF & Above 101 LF & Above
1A	Mobilization: Critical Barriers Only	SF			
1B	Mobilation: Full Containment	SF			
2	Removal of Vinyl Asbestos Floor Tile and Mastic over concrete or wood deck	SF			
3	Removal and Disposal of ACM Ceiling Tiles	SF			
4	Removal and disposal of ceiling tiles installed below ACM fireproofing	SF			
5	Abatement of spray-on fireproofing and replacement with non-ACM fireproofing	SF			
6	Cleanup of ACM materials disturbed by other work	SF			
7	Removal of rigid non-firable ACM wall and ceiling material	SF			
8	Removal of asbestos containing plaster on metal lath; walls and/or ceilings	SF			
9	Removal and disposal of flexible duct connectors fireproofing	LF			
10	Glove bag abatement of TSI on 1" to 4" diameter pipe	LF			
11	Glove bag abatement of TSI on 5" to 8" diameter pipe	LF			
12	Glove bag abatement of TSI on 9" to 12" diameter pipe	LF			
13	DEQ "ADVF" application and filing	EA			
14	Removal of ACM insulation from boiler tank and/or flue	SF			

Materials:

If materials are required to complete any work requested by the College which are outside the scope of the Technical Specifications, the contractor shall prepare a list of these materials along with pricing for approval by the College Representative. If these materials are incidentals (total value less than $50), or are items which will not be required on a repetitive basis and their total cost is less than the competitive thresholds specified in the most current Executive Order for Small Purchase Procedures, the College may choose to purchase the items from the contractor at the quoted prices.

If the items not specifically listed in the ITB exceed the Executive Order's competitive threshold, the required competition must be secured by the College.

Contractor is responsible to supply all necessary tools and for the transportation of personnel and equipment required to complete any project.

Addendum No: _____ **Dated:** _____	**Addendum No:** _____ **Dated:**		
Addendum No: _____ **Dated:** _____			

Bidder declares and represents that he; a) has carefully examined the Bidding Documents, b) has a clear understanding of the Bidding Documents, c) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents, d) has personally inspected and is familiar with the project site, and hereby proposes to provide all labor, materials, tools, appliances and facilities as required to perform, in a workmanlike manner, all work and services under this contract, all in accordance with the Bidding Documents as prepared by the College Purchasing Office and Facility Services.

By signing below, the Bidder agrees that he/she complies with all bid requirements, instructions, specifications, terms and conditions and special conditions as stated in the bid.

Signature _____

Title _____

Company _____

Bid must be submitted on this form

ATTACHMENT A: INDEMNICIATION AGREEMENT

_____ ***{Contractor/Vendor/Lessee}*** agrees to protect, defend, indemnify, save and hold harmless the State of Louisiana, all State departments, Agencies, Boards and Commissions, its officers, agents, servants, employees, and volunteers, from and against any and all claims, demands, expense and liability arising out of injury or death to any person or the damage, loss or destruction of any property which may occur or in any way grow out of any act or omission of _____ ***{Contractor/Vendor/Lessee}*** its agents, servants, and employees, or any and all costs, expense and/or attorney fees incurred by _____ ***{Contractor/Vendor/Lessee}*** as a result of any claims, demands, suits and/or causes of action except those claims, demands, suits and/or causes of action arising out of the negligence of the State of Louisiana, all State Departments, Agencies, Boards, Commissions, its officers, agents, servants, employees and volunteers. _____ ***{Contractors/Vendor/Lessee}*** agrees to investigate, handle, respond to, provide defense for and defend any such claims, demands, suits, or causes of action at its sole expense and agrees to bear all other costs and expenses related thereto, even if the claims, demands, suites, or causes of action are groundless, false or fraudulent.

Accepted by: _____

Company Name

_____

Signature

_____

Title

_____

Date Accepted

Is certificate of insurance attached? _____YES_____NO

*****This form must be completed and submitted with your bid***

ATTACHMENT B: REFERENCE FORM

(Company Name)	(Facility Type)
(Address)	(Phone Number)
(Contract Administrator)	

(Company Name)	(Facility Type)
(Address)	(Phone Number)
(Contract Administrator)	

(Company Name)	(Facility Type)
(Address)	(Phone Number)
(Contract Administrator)	

Form must be completed and submitted with the bid

END OF BID DOCUMENTS