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Print date:  
07/02/13

**Asbestos Abatement Specification for the West Building Fourth Floor**  
Community College of Philadelphia; 1700 Spring Garden St.; Philadelphia. PA 19130

**ASBESTOS ABATEMENT SPECIFICATIONS**

**FOURTH FLOOR RENOVATIONS**

**CCP WEST BUILDING RENOVATIONS**

**PREPARED FOR:**

**COMMUNITY COLLEGE OF PHILADELPHIA**  
1700 SPRING GARDEN STREET  
PHILADELPHIA, PA 19130

**WORK SITE:**

**WEST BUILDING – FOURTH FLOOR**  
COMMUNITY COLLEGE OF PHILADELPHIA  
PHILADELPHIA; PENNSYLVANIA

**PREPARED BY:**

**WESTCHESTER ENVIRONMENTAL LLC**  
307 N WALNUT STREET  
WEST CHESTER, PA 19380

JULY 2013

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**REMOVAL SPECIFICATIONS FOR THE ABATEMENT OF  
ASBESTOS CONTAINING MATERIALS**

**PART 1 - GENERAL**

1.01 STIPULATIONS

- A. The specifications sections "General Conditions", "Special Requirements" and "General Requirements" form a part of this section by reference thereto and shall have the same force and effect as if printed herewith in full.
- B. The procedures specified herein are guidelines for minimum performance. The Contractor is responsible for his own methods of operations and conformance to regulatory codes, rules and guidelines. The Contractor is *required to obtain all permits- licenses and approvals to perform the work*, including any rights to use patented systems.

1.02 SCOPE OF WORK

- A. The scope of work for this project covers the supplying of all labor, tools, material, equipment, services and appurtenances to accomplish the work specified and indicated on the contract drawing. The work shall be performed to the complete satisfaction of the Owner in accordance with the current City of Philadelphia, EPA and OSHA regulations, State Labor and Industry regulations and any other applicable State, Local and Government regulations.
- B. Contractor shall submit an Action Plan which describes specifically how abatement work is to be completed for each abatement phase. At a minimum the work Plan shall address work area preparation, work practices, decon location, estimated completion dates, respiratory protection and disposal; approval of the Action Plan must be obtained through the Owner prior to the start of work. Procedures outlined in the Action Plan must be followed throughout the abatement phase. Any changes in Action Plan must obtain prior approval from the Owner.

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C. The Work under this project shall be completed in Three Phases:

- **Phase A:** Electronics Lab & Instruments Lab – 2199 SF of Vinyl Asbestos Tile and Mastic.
- **Phase B-East:** Chemistry Lab - 2704 SF of Vinyl Asbestos Tile and Mastic & 26 Hood Liners.
- **Phase B-West:** Architecture Labs - 4689 SF of Vinyl Asbestos Tile and Mastic.
- **Phase C:** Chemistry Labs - 2452 SF of Vinyl Asbestos Tile and Mastic.

D. The work under this project includes but is not limited to the following:

**WEST BUILDING:**

Zone, Area, Space, Location	SF/LF Thermal	SF surfacing	SF/LF Roofing	SF/LF Miscellaneous	Condition
<b><u>Phase A:</u></b> Electronics Lab & Instruments Lab – 4 <sup>th</sup> Floor				2199 SF of Vinyl Asbestos Tile and Mastic.	Good
<b><u>Phase B-East:</u></b> Chemistry Lab 4 <sup>th</sup> Floor				2704 SF of Vinyl Asbestos Tile and Mastic & 26 Hood Liners.	Good
<b><u>Phase B-West:</u></b> Architecture Labs 4 <sup>th</sup> Floor				4689 SF of Vinyl Asbestos Tile and Mastic	Good
<b><u>Phase C:</u></b> Chemistry Labs 4 <sup>th</sup> Floor				2452 SF of Vinyl Asbestos Tile and Mastic	Good

**Quantities, lengths, and footage listed herein are for general arrangement and probable estimated linear or square footage only. The contractor is responsible to verify each location and determine actual quantities.**

**Please see drawings attached.**

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1.03 CONTROL OF WORK

- A. All work which does not conform to the requirements of the contract, plans and specifications will be considered unacceptable.
- B. Unacceptable work, whether the result of poor workmanship, use of defective materials, damage through carelessness, or any other cause found to exist prior to the final acceptance of the work, shall be corrected immediately and replaced in an acceptable manner.
- D. If the Owner finds the materials furnished, work performed or the finished product not within reasonably close conformity with the plans and specifications and have resulted in an unacceptable finished product, the affected work or material shall be removed and replaced or otherwise corrected by and at the expense of the Contractor.
- E. The term "reasonably close conformity" shall not be construed as waiving the Contractor's responsibility to complete the work in accordance with the plans, contract and specifications. The term shall not be construed as waiving the Owner's right to insist on strict compliance with the requirements of the contract, plans and specifications during the Contractor's prosecution of the work, when in the Owner's opinion and judgment such compliance is essential to provide an acceptable finished work.

1.04 QUALITY ASSURANCE

- A. Consultant:
  - 1) The Owner shall contract for a Quality Assurance Consultant Project Monitor hereafter referred to as 'Consulting Firm" which specializes in performing air sampling, project monitoring and inspections on asbestos abatement projects. The testing laboratory shall as a minimum be accredited by the City of Philadelphia Air Management Services; NIOSH PAT Program (Proficiency Analytical Testing) for PCM asbestos air analysis and NVLAP for asbestos bulk analysis.
  - 2) The Consulting Firm will be responsible for certifying the project was completed in accordance with all federal, state, and City asbestos standards and regulations.
  - 3) The Consulting Firm shall review the Contractors Action Plan

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which describes specifically how work is to be completed for each abatement phase. Approval of the Action Plan must be obtained through the Owner prior to the start of work.

**B. Contractor Experience:**

- 1) The Asbestos Abatement Contractor shall have a minimum of three (3) years experience in the asbestos abatement business. He shall have successfully completed three (3) projects of similar or larger size and dollar value to this project and shall not have defaulted on an asbestos abatement project within the last three (3) years. The Contractor shall be certified by the City of Philadelphia & Pennsylvania Department of Labor and Industry.

**C. Worker Certification:**

- 1) The Contractor shall furnish proof that his employees have had instruction on the dangers of asbestos exposure on respirator use, decontamination and current OSHA and EPA regulations.
- 2) Documentation of workers medical exams, consist of x-rays and pulmonary function shall be submitted and as may be required by current OSHA and EPA regulations and any applicable State and Local Government regulations.
- 3) There must be on site at all times, an EPA Certified Asbestos Abatement Supervisor. The Asbestos Abatement Supervisor shall have successfully completed a 5-day EPA Certified Practices and Procedures Course as per 40 CFR. Part 763, Subpart E. Appendix C-EPA Model Accreditation Plan (must provide a copy of certificate from EPA approved course). All asbestos workers shall have successfully completed a 4-day EPA Certified Practices and Procedures Course as per 40 CFR, Part 763. Subpart E. Appendix C-EPA Model Accreditation Plan. The Contractor must provide copies of certificates from Pennsylvania Department of Labor and Industry for all workers, and supervisors as required by regulation.
- 4) When required by the Pennsylvania Department of Labor and Industry (PDL&I) the Contractor, Abatement Supervisor and Abatement Workers shall be licensed by PDL&I. Each worker/supervisor shall have a current photo identification issued by PDL&I available on request by the Owner when required.

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1.05 POSTING OF REGULATIONS

- A. The Contractor will have at all times in his possession at his office one (1) copy and in view at the job site one (1) copy, current OSHA Regulations 29 CFR 1926.1101 \_ Asbestos and current Environmental Protection Agency 40 CFR Part 61. Subpart M: National Emission Standard for Hazardous Air Pollutants as related to asbestos stripping, emissions, notification work practices and disposal of asbestos waste.

1.06 REGULATORY SUBMITTALS (CONTRACTOR'S RESPONSIBILITY)

- A. The Contractor is required to notify the building occupants and the following agencies in writing ten (10) days prior to starting work for notification and instructions concerning proper disposal of asbestos waste material.
- 1) United States Environmental Protection Agency - Region III  
Asbestos - NESHAP Coordinator (3AT33)  
841 Chestnut Building  
Philadelphia. PA 19106
  - 2) Pennsylvania Department of Environmental Protection  
Bureau of Air Quality Control  
Regional Manager
  - 3) Pennsylvania Department of Labor and Industry  
Asbestos Occupation Accreditations & Certification  
Bureau of Occupational and Industrial Safety  
Room 155E Labor and Industry Building  
Seventh & Forster Streets  
Harrisburg. Pennsylvania 17120
  - 4) City of Philadelphia, appropriate notification must also be made.  
Obtain permits as required by local regulations.
  - 5) EPA. DEP approved asbestos landfill proposed to be used by the Contractor for RACM. Submit completed WSR for RACM at projects end (see 3.07. F).

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1.07 AIR TESTING AND MONITORING

- A. Air sampling of the work areas and surrounding environment will be conducted during the performance of this contract by the Consulting Firm so as to ensure abatement procedures are in compliance with all codes, regulations, ordinances and this specification.
- B. The Contractor shall fully cooperate with the Consulting Firm and all others responsible for testing and inspecting the work.
- C. Air testing and analyses shall be in accordance with City of Philadelphia Asbestos Control Regulations, current EPA and requirements of Section 29 CFR 1926.1101 of the current OSHA Regulations, as a minimum. Analysis shall be performed by Phase Contrast Microscopy per NIOSH 7400 Method and/or Transmission Electron Microscopy (TEM) per EPA Level I analytical procedures.
- E. Air tests taken prior to start of work (background) and at completion (pre-clearance) will be analyzed by PCM-Phase Contrast Microscopy. Final (clearance) testing shall be by TEM-Transmission Electron Microscopy.
- F. The Consulting Firm shall give verbal notification to the Owner of the results of each test within twenty-four (24) hours of the time the samples were delivered to the laboratory. The Consulting Firm shall confirm the results in writing within three (3) days thereafter.
- F. Prompt reports are necessary so that, if required, modifications to work methods and/or practices may be implemented as soon as possible.
- G. Representatives of the Consulting Firm shall have access to the work area at all times. The Contractor shall provide facilities for such access in order that the Consulting Firm may properly perform its function.
- H. Sampling equipment and personnel will be provided by the Consulting Firm.
- I. Air sampling shall be performed in each work area prior to commencement of the work at that location. The highest fiber count reading during pre-clearance cleanup monitoring shall be lower than the background readings established by pre-job monitoring or 0.01 f/cc, whichever is lower.

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SCHEDULE NOTES:

1. Consecutive daily air samples will be collected during abatement to yield a minimum of eight (8) hours of sampling time for each active work area.
2. Exterior work area(s) samples shall be collected daily at decon clean room entrance, load out exit, discharge of HEPA exhaust units, and area(s) adjacent to work area(s) that are occupied or will be re-occupied.
3. Aggressive air sampling must be conducted when work area is prepared as a negative pressure enclosure.
  - K. Work area clearance testing shall be completed before work site protective barriers are removed.
  - L. The Contractor is responsible for performing the thirty (30) minute excursion air sampling per OSHA regulations.
  - M. The Contractor is responsible for performing 8 hour TWA personal air samples in the employees breathing zone per OSHA regulations.

1.08 AIR FILTERING - (FOR GUIDELINE PURPOSES ONLY)

- A. An approved negative pressure machine may be used in the active work area using HEPA equipped air movement units.
- B. Air may be drawn from clean areas through the decontamination and active work areas. HEPA filtered and exhausted through air movement units to the containment exterior. Replace filters in accordance with manufacturer's instructions and to meet the needs of this specification.
- C. Air movement should be sufficient quantity to ensure a minimum of four (4) air changes per hour.

Example: Active work area = 50' x 50' x 20' H = 50,000 cu. ft.

For four air changes per hour = 4 AC/HR x 50,000 CF/AC = 200,000 cu.ft./hr.

In cubic feet per minute = 200,000 CF/HR: 60 min. 1 hr. = 3,333 cu. ft./minute



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This active work area would require a combination of air movement/HEPA units, i.e. 2,500 CFM and 1,500 CFM

- D. The exhaust system must be sufficient to maintain a minimum pressure differential of -0.02 inches of water relative to unsealed, adjacent area.
- E. The exhaust system(s) will run twenty-four (24) hours/day until final clearance is obtained and will be maintained in accordance with ANSI Z9.2 and the manufacturer's directions.
- F. To ensure continuous operation, the Contractor shall have a spare negative exhaust unit available.

1.09 ALTERNATIVE AIR FILTERING METHODS

- A. Other approved air filtering methods may be utilized at the Contractor's discretion, with the stipulation that designated regulatory agencies provide documented approval to the Owner. It shall be the responsibility of the Contractor to submit all documentation required to the appropriate regulatory agency for their review and approval.

1.10 PLACEMENT OF WARNING SIGNS AND LABELS

- A. The Contractor shall furnish and place warning signs at all approaches to asbestos control areas containing concentrations of airborne asbestos fibers. Locate warning signs at such a distance that personnel may read the warning sign and take the necessary protective action required before entering the area. Warning signs shall be in place for the duration of the work. The Contractor shall furnish and attach caution labels to all disposal containers holding asbestos materials, scrap waste\_ debris and other products contaminated with asbestos.
- B. Warning Signs: Provide warning signs conforming to 29 CFR 1926.1101 with the following legend:

**DANGER  
ASBESTOS  
CANCER AND LUNG DISEASE HAZARD  
AUTHORIZED PERSONNEL ONLY  
RESPIRATORS AND PROTECTIVE CLOTHING ARE  
REQUIRED IN THIS AREA**

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- C. Caution Labels: Attach label to the outside of all disposal bags and containers which hold asbestos contaminated materials and are to be removed from the site. Caution labels shall be printed in letters of sufficient size and contrast so as to be readily visible and legible and shall display the following legend:

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

- D. Identification Labels: Attach label to the outside of all disposal bags and containers which hold asbestos contaminated materials and are to be transported off facility site. Identification labels shall display the following legend:

Waste Generator Name: \_\_\_\_\_ Fill  
Out \_\_\_\_\_  
Generator Location: \_\_\_\_\_ Fill  
Out \_\_\_\_\_

- E. Transportation marking shall conform to 49 CFR 171 and 172 and shall be provided on all containers with more than one pound of friable asbestos. Transportation marking shall display the following legend:

**R Q HAZARDOUS SUBSTANCE**  
**SOLID, NOS**  
**ORM-E, NA 9188**  
**(ASBESTOS)**

END OF SECTION

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**PART 2 - PRODUCTS**

**2.01 EQUIPMENT AND MATERIALS**

A. The list of required materials will include, but is not necessarily limited to the following:

- 1) Respirators: Provide respiratory protection in accordance with OSHA Regulation 29 CFR 1926.1101 and appendices ANSI 288.2-1980. Respiratory protection regardless of negative exposure assessments. There shall be NO EXCEPTION to this requirement. As minimum protection, negative pressure air purifying respirators shall be worn. Contractor shall select the appropriate respirator based on an initial exposure assessment or exposure monitoring results. No employee or visitor shall enter any area without this protection until clearance has been obtained. Employees or visitors shall wear a respirator. Respirators shall be NIOSH approved. Ensure proper filters are worn using a HEPA as a minimum.
- 2) Protective Clothing:
  - a) Disposable Clothing - such as "Tyvek" by DuPont. Clothing shall consist of coverall head cover and foot cover. Gloves will be worn for hand cover as needed.
- 3) Wetting Agents - The asbestos material will be sprayed with water containing an additive to enhance penetration. The additive or wetting agent will be polyoxyethylene at a concentration of one (1) ounce per five (5) gallons of water or as otherwise specified by manufacturer. A fine spray of this solution must be applied to prevent fiber disturbance preceding the removal of the asbestos material. The asbestos will be sufficiently saturated to prevent emission of airborne fibers in excess of the exposure limits prescribed in the current OSHA standards referenced in these specifications. **DRY REMOVAL WILL NOT BE ALLOWED EXCEPT WITH WRITTEN APPROVAL FROM EPA or BECAUSE OF FREEZING WORK AREA TEMPERATURES.**
- 4) Polyethylene sheeting: Six (6) mils. for protection of floors, walls, doors, windows, fixed equipment, HVAC supply and return openings, and critical barriers.
- 5) Clear Polyethylene bags (with warning labels) six (6) mils

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minimum for disposal. All asbestos that is removed shall be double bagged.

- 6) Tape: High quality vinyl or fabric duct tape. Paper masking tape will not be permitted.
  - 7) Negative Pressure Filtration Equipment: Air movement and filtering equipment equipped with HEPA filters rated at 99.97% removal down to 0.3 microns, and of sufficient capacity to provide a minimum of four (4) air changes per hour for each active work area.
  - 8) Airless Spray Equipment: Electric airless spray equipment for saturating and mist fiber control. Low pressure (500 psi) equipment must be available on-site and utilized as required.
  - 9) Vacuum: HEPA rated for surface cleaning and house-keeping. Hand operated and power tools such as, but not limited to, saws, corers, abrasive wheels and drills should be provided with local exhaust ventilation systems with HEPA filters.
  - 10) Hand Tools: Brooms, plastic shovels, scrapers, brushes, etc., in sufficient quantity to ensure the appropriate level of housekeeping.
  - 11) Water Filtration System: Shower and contaminated water filtration system.
  - 12) GFI Equipment: All electrical connections in the work area must be through "ground fault" protected outlets/circuits.
  - 13) Penetrating Encapsulant: Penetrating encapsulants to be used on this project are International Cellulose Corporation SK-13 Asbestos Encapsulant, International Protective Coatings Corporation Serpiflex Shield, Fiberlock Technology ABC Asbestos Binding Compound Concentrate, and others listed as acceptable in the Environmental Protection Agency - Battelle Laboratory Encapsulant Study. or approved equal.
  - 14) Bridging Encapsulant: Bridging encapsulants to be used on this project are American Coatings Corporation Cable Coating 2B, Decadex Laboratories Firecheck, Fiberlock Technology ABC Asbestos Binding Compound Concentrate, or approved equal.
- B. The Contractor will have at all times in his possession at the job site

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Material Safety Data Sheets (MSDS) for wetting agents, encapsulants, solvents, strippers, and an other potentially hazardous materials.

2.02 PERSONNEL PROTECTIONS

- A. Personnel protection is required for laborers, mechanics, supervision and visitors at the work site during the set-up and abatement operations.
- B. Each worker shall be supplied with a minimum of two (2) complete protective work clothes and respirator filter changes per day for the complete duration of the project. Hard hats should be available as appropriate which meet ANSI Z-89.1 standards. Safety toe footwear is to be worn underneath the disposable shoe covers and must meet the requirements and specifications in ANSI Z-41.1. Eye wear and face protection must meet the standards and specifications of ANSI 287.1.
- C. In addition to sets of protective work clothes for workers, the Contractor shall have on hand two (2) additional sets of disposable work clothes, per day and respirators for personnel who are authorized to inspect the work site. Hard hats should be available as appropriate which meet ANSI Z-41.1. Eye wear and face protection must meet the standards and specifications of ANSI Z-87.1.
- D. Respirators approved for asbestos use and protective work clothes will be worn by laborers and mechanics as a minimum during set-up operations (plastic draping, light-fixture dropping or removal, etc.).
- E. Appropriate respirators will be worn by all personnel in the active work area.
- F. Upon leaving the active work area, filters will be discarded, cartridges removed and respirators cleaned in disinfectant solution and clean water rinse.
- G. Clean respirators will be stored in plastic bags when not in use.
- H. Respirators will be inspected daily for broken, missing, or deteriorated parts.

END OF SECTION

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PART 3 - EXECUTION

3.01 AREA PREPARATION

- A. Movable furniture blinds and equipment will be removed from area of work by the Using Agency.
- B. Heating and ventilating system servicing the areas of work must be shut down prior to starting any work. Notify the Institution prior to starting any work in order that they may arrange to have the heating and ventilating system shut down.
- C. The Contractor shall isolate the work area for the duration of the work by installing critical barriers completely sealing off all openings in the work area, including, but not limited to, heating, ventilation ducts, doorways, corridors, windows, roof ventilator openings, and wall vents, with plastic sheeting taped securely in place with six (6) mils plastic sheeting.
- D. The Contractor shall build decontamination chamber(s) if required to be connected to each active work area for entrance to or exit from the active work area. When required a separate material load out unit shall be constructed.
- E. The Contractor shall cover all fixtures, fixed demountable partitions, lighting, fixed items and equipment in the work area with plastic sheeting taped securely in place.
- F. Duct tape, staples, wood strips and other methods will be used appropriately to attach vertical plastic barriers to walls and to floors. All edges of plastic material shall overlap the adjoining sheet a minimum of twelve inches. All joints (vertical and horizontal) to be continuously sealed with duct tape.
- G. Upon completion of area isolation, the Contractor shall remove, where practical, all detachable electrical heating and ventilation equipment, Wipe and vacuum, clean and remove from active work area.

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3.04 METHOD OF REMOVAL

- A. Remove and dispose of all asbestos-containing materials (ACM) in accordance with the methods and procedures outlined in the City of Philadelphia Asbestos Control regulations, United States Department of Labor, Occupational Safety and Health Administration (OSHA) Asbestos Regulations, Codes of Federal Regulations Title 29. Part 1926. Section 1926.1101. **For non friable Floor Tiles, the removal is to be carried out either by Dry Ice or Heat Machines. All Mastic will be removed by non friable methods using odorless chemical mastic removers.**
- B. Dry removal will not be allowed.
- C. Hood liners are to be removed without any breakages and in a non-friable manner.
- D. Work of this section shall be performed in the following manner:
- 1) Eliminate air flow into containment area by isolating all supply and return air ducts from mechanical system. Turn off electrical power.
  - 2) Install six (6) mil polyethylene critical barriers over all doors, wall openings, ceiling openings, electrical outlets, etc. Secure with duct tape on all sides.
  - 3) Connect required number of negative air units in the work area.
  - 4) All air from negative air units shall be exhausted outside the building.
  - 5) Isolation barriers separating occupied areas and work areas shall be framed and covered with 1/2 inch plywood and two (2) layers of six (6) mil polyethylene.
  - 6) Duct HEPA filter unit through door. Locate unit to prevent dead air pockets.
  - 7) Install triple air curtain, six (6) mil polyethylene (typical), over door opening into decontamination unit or load out unit.

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3.05 HOUSEKEEPING

- A. Throughout the work period, the Contractor shall maintain the building and site in a standard of cleanliness as specified throughout these specifications.
- B. Contaminated disposable clothing, respirator filters and other debris will be bagged\_ properly labeled and sealed at the end of each work day.
- C. All asbestos generated by removal, encapsulation or repair will be bagged, properly labeled, and sealed at the end of each work day.
- D. Respirators will be thoroughly cleaned at the end of each work day and stored for the next day's use.
- E. Retain all stored items in an orderly arrangement allowing maximum access, not impeding traffic, and providing the required protection of materials.
- F. Do not allow the accumulation of scrap, debris, waste material, and other items not required for completion of this work.
- G. At least weekly, and more often if necessary, completely remove all scrap, debris and waste material from the job site.
- H. Unless otherwise noted or directed, materials resulting from demolition operations shall be the property of the Contractor, shall not be used in the work and shall be promptly removed from the site.
- I. Daily and more often if necessary, inspect the work areas and adjoining spaces, and pick up all scrap, debris and waste material. Remove all such items to the place designated for their storage.
- J. Provide adequate storage for all items awaiting removal from the job site, observing all requirements for fire protection and protection of the ecology.
- K. Maintain the site in a neat and orderly condition at all times.
- L. Compressed air is not to be used for cleaning purposes.



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3.06 FINAL DECONTAMINATION OF WORK AREA

- A. Following careful double bagging of all removed asbestos material by the Contractor, he shall label bags as required.
- B. Bags shall be wiped with clean damp cloths prior to transportation to approved disposal site.
- C. With critical barriers in place, the negative pressure system operating, the Contractor shall carry out the first cleaning. Use each surface of a cleaning cloth one time and then dispose of as contaminated waste.
- D. Continue this cleaning until there is no visible debris from removed material or residue on plastic sheeting.
- E. Pressure washing techniques of any kind are strictly prohibited.
- F. Pre-Encapsulation Inspection of substrate is performed by Consulting Firm to ensure removal and cleaning of the substrate is adequate. The Contractor may accompany this inspection. If during the inspection, the Substrate or plastic sheeting isn't cleaned to the satisfaction of the Consulting Firm; additional recleaning will be required to meet the satisfaction of the Consulting Firm.
- G. Encapsulate substrate and all remaining plastic sheeting within the work area. A colored encapsulant may be used on non-finished surfaces.
- H. NOTE: Final barriers are not to be removed until work is completed.
- I. With critical barriers in place, negative pressure system operating, and immovable objects covered with plastic sheeting, perform a second cleaning as was done in the first cleaning. Wet mop any hard floor surfaces. HEPA vacuum carpeted area surfaces. Hard surfaced flooring such as concrete, terrazzo, VAT and ceramic tile, shall be wet mopped, allowed to dry, and damp mopped a second time with clean mop heads. All mop heads and cleaning cloths are to be discarded in the same manner as asbestos waste.
- J. All surfaces are to be left visually clean.
- K. Perform visual inspection of work area.

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- L. If pre-clearance criteria are met, proceed with air testing for final clearance by PCM or Transmission Electron Microscopy (TEM).
- M. If pre-clearance criteria are not met, repeat final cleaning until acceptable levels have been achieved before proceeding with final clearance testing by TEM. Costs associated with additional cleaning and testing shall be borne by the Contractor.
- N. After air testing clearance criteria has been met, critical barriers and negative air pressure system can be removed.

3.07 DISPOSAL OF ASBESTOS WASTE

- A. All RACM and miscellaneous ACM debris will be transported to the predesignated disposal site in accordance with the guidelines of the U.S. Environmental Protection Agency Title 40 Part 61 Subpart M and all local agencies' regulations. Ensure all waste bags/leak tight container have facilities name address, and contact person as required by NESHAP. Drums are to be used to transport bagged ACM's as required by regulation(s).
- B. EPA NESHAP Category I & II nonfriable ACM may be disposed of as C&D waste as allowed by regulation. If nonfriable materials become friable they must then be disposed of as regulated ACM waste in an approved landfill.
- C. Workers loading/unloading the asbestos materials and machinery operators will wear respirators and disposable work clothing when handling material at the project and disposal site. Asbestos warning signs shall be posted on vehicle as required by regulation.
- D. The bags may be dumped from the drums into the burial site. If drums are used to transport the ACM bags, the bags may be dumped from the drums into the burial site. The drums may be reused. However, if a bag is broken or damaged, the entire drum should be buried.
- E. The landfill area used for dumping shall be certified to receive and buy materials contaminated by asbestos.
- F. Obtain completed Waste Shipment Record (WSR) for all RACM. WSR must also indicate amount of waste in cubic yards. Submit signed WSR with final report/Project Close-out.

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3.08 INSPECTIONS

- A. All work procedures detailed in this specification will be strictly adhered to and meet or exceed all current City of Philadelphia, EPA, OSHA, DEP and PDL&I regulations.
- B. All work shall meet with the approval of the Owner. Work which does not meet with the approval shall be determined to be unsatisfactory.

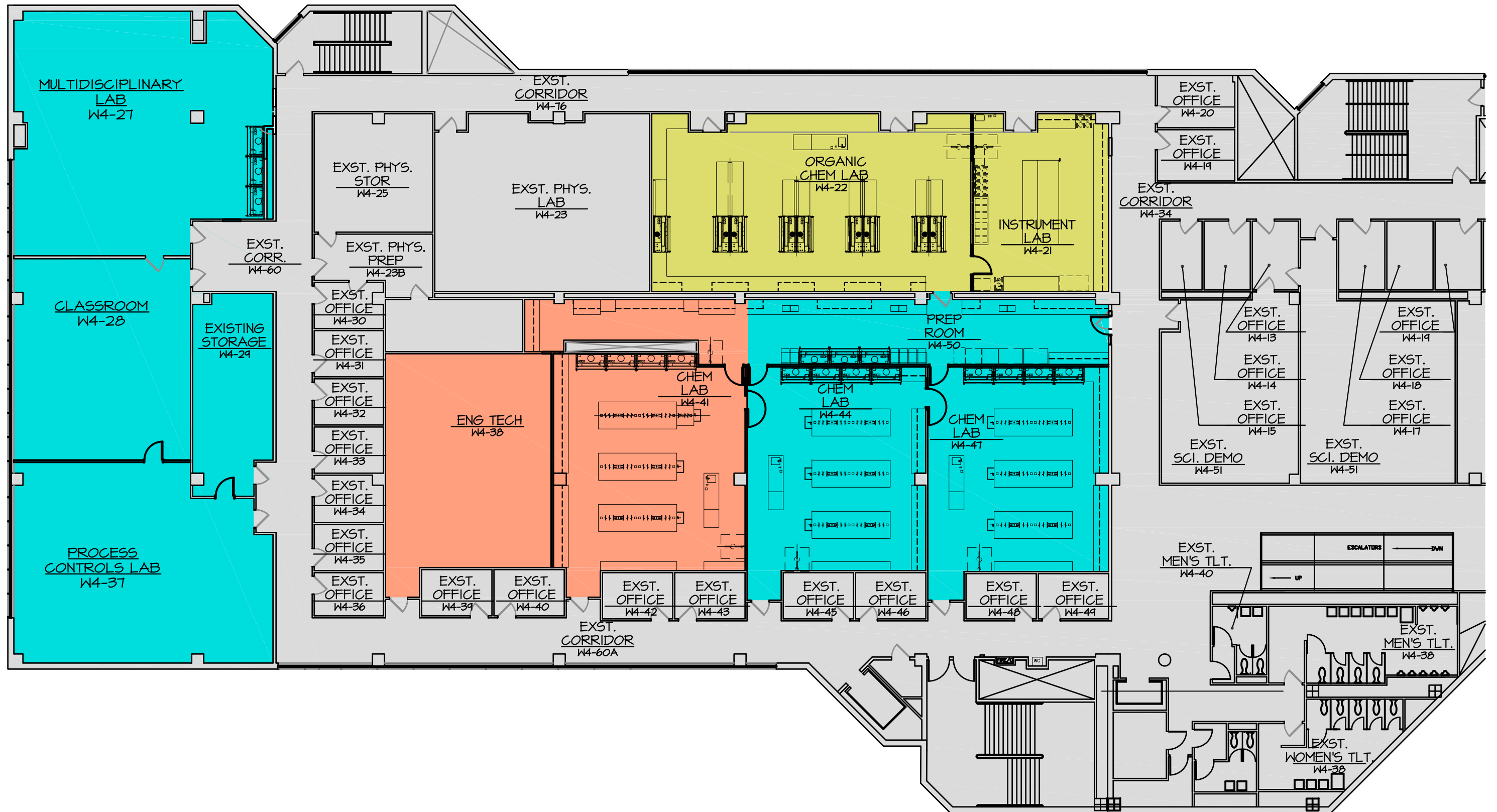
END OF SECTION











# REVISED PHASING DIAGRAM - OVERALL

FOURTH FLOOR RENOVATIONS

CCP West Building Renovations | UCI Architects | 15 APRIL 2013 | 1/16" = 1'-0"

- EXISTING
- PHASE A
- PHASE B
- PHASE C