NOTICE TO ALL CONTRACTORS

You are hereby notified of the following changes, clarifications and/or modifications to the original Contract Documents, Project Manual, Drawings, Specifications and/or previous Addenda. This Addendum shall supersede the original Contract Documents and previous Addenda wherein it contradicts the same, and shall take precedence over anything to the contrary therein. All other conditions remain unchanged.

This Addendum forms a part of the Contract Documents and modifies the original Contract Documents. Acknowledge receipt of this Addendum in space provided on the Bid Proposal Form. Failure to acknowledge may subject Bidder to disqualification.

A. Deletions, Additions, Changes, Revisions

Drawing Items:
1. Revise:
   a. Detail 1/SHEET AD111, per attached sketch AD1-A1
   b. Detail 1/SHEET AD111, per attached sketch AD1-A2
   c. Detail 2/SHEET AD111 per attached sketch AD1-A3
   d. Sheet AD111 per attached sketch AD1-A4
   e. Detail 1/SHEET A-111 per attached sketch AD1-A5
   f. Detail 2/SHEET A-111 per attached sketch AD1-A6

2. Add:
   a. Detail 11/SHEET A-541: Details, per attached sketch AD1-A7
b. Demolition note to the following sheets (Sheets AD111, S-111 and ED111) – Electrical conduit routing shall be coordinated in the field with District representative. Exterior walls, stair sidewalls, and wall on grid line F are cast concrete walls. All conduit wall penetrations shall be coordinated with District representative and District Haz-mat consultant.

Specification Items:
1. Change:
   a. Delete Section 01140, Work Restrictions; and Replace with new Section 01140, Work Restrictions, in its entirety.
   b. Section 00210 Information Available To Bidders, Paragraph 1.2C.1: Change date from March 18, 2014 to April 30, 2014.
   a. Delete Section 02080, Asbestos Abatement And Disposal; and Replace with new Section 02080, Asbestos Abatement And Disposal, in its entirety.

Miscellaneous Items:
1. Add:
   a. Pre-Bid Meeting Minutes, from mandatory pre-bid meeting on April 16, 2014.

ATTACHMENTS:
The following attachments are part of Addendum #1:
Drawings: AD1-A1, AD1-A2, AD1-A3, AD1-A4, AD1-A5, AD1-A6, AD1-A7
Section 01140, Work Restrictions
Section 02080, Asbestos Abatement And Disposal
Pre-Bid Meeting Minutes

B. If you have any questions regarding this Addendum, please contact:

   Jovan Esprit, Contracts Manager
   Contra Costa Community College District
   500 Court St., Martinez, CA 94553
   Email: jesprit@4cd.edu;
   Facsimile: 925-370-7512;

All other terms and conditions of BID are to remain the same.
ADDENDUM #1

Lionakis
1919 19th Street
Sacramento, CA 95811
Contact: Owen Letcher
Phone: 916-558-1900

Architect of Record: David P. Younger

Division of the State Architect

END OF ADDENDUM #1
1. Electrical conduit routing shall be coordinated in the field with district representative. Exterior wall, stair side wall, and wall on grid line F are cast concrete walls. All wall penetrations shall be coordinated with district representative and district haz mat consultant.

- **Sheet Keynotes**
  1. (E) AC paving to be removed to extent req'd
  2. (E) Conc. paving to be removed to extent indicated
  3. (E) Wall to be sawcut to extent indicated - see struct dwgs
  4. (E) Alumn. storefront door, frame, and threshold system to be removed
  5. (E) Steel handrail to be removed, patch and repair/paint damaged concrete
  6. (E) Conc. canopy to be removed, patch and paint demo area to match adj. wall

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**Project:**
C-526 Gym Annex Building
Elevator

2600 Mission Bell Drive,
San Pablo, CA 94806

**Date:** 04/28/2014
**Project No.:** 011242.01

**Agency:**
Identification Stamp
Div. of the State Architect

**File No. 7-C1**

**Ref Title:**
Demolition Partial First & Second Floor Plans

**Ref Sht:** AD111
**Revision:** Addendum #1
**DWG:** AD1-A4
FIELD CHANGE: SAWCUT OPENING 4'-0" REMOVE CONCRETE WALL
ALIGN SAWCUT & FACE OF OPENING W/ FACE OF PILASTER
CONCRETE WALL & PILASTER TO REMAIN
(E) 2'-0"
15" +/- 12" MIN
NEW STL. HANDRAIL RETURN TO WALL
EDGE OF LANDING
CONCRETE BEAM BELOW
CONCRETE BEAM ABOVE

DETAIL PLAN AT SECOND FLOOR STAIR 1 LANDING
WALL DETAIL AT PILASTER
1 1/2" = 1'-0"

PROJECT:
C-526 GYM ANNEX BUILDING ELEVATOR
2600 MISSION BELL DRIVE,
SAN PABLO, CA 94806
DATE: 04/28/2014
PROJECT NO: 011242.01

FILE #: 7-C1
APPL #: 01-113694

FILE NO. 7-C1
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
01-113694
AC____ FLS____ SS____
DATE____

REF TITLE
DETAILS - MISCELLANEOUS

REF SHT REVISION DWG
A-541 Addendum AD1-A7
#1
SECTION 01140
WORK RESTRICTIONS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. All Contract Documents shall be reviewed for applicable provisions related to the provisions in
this document, and provisions in the General Conditions and other Division 1 Specification
Sections shall apply to this Section without limitation.

1.2 SUMMARY OF WORK RESTRICTION REQUIREMENTS

A. Prior to the start of Work on the project site, Contractor shall familiarize itself with the Work
Restrictions as they relate to all Work required by the Contract Documents.

B. Work Restricted Activity Plan shall include:
   1. Full size drawing (36”x42”) of site plan showing the proposed locations and dimensions of
temporary facilities and Work Restriction Activities including but not limited to all proposed
trailers, equipment and material storage areas within designated staging areas or other areas
proposed by the Contractor for consideration by the District; safe and ADA complaint access
(ingress/egress) for pedestrians and vehicles around the construction areas; proposed haul
routes; all temporary construction and way-finding signage; temporary fenced area(s), noise
barriers, and dust/barricade partitions; and temporary measures to maintain continuous and
uninterrupted code compliant use of all occupied areas. Identify any areas that require
temporary paving for stabilization or prevention of tracking of mud, and for ADA complaint
ingress and egress. Indicate if the use of supplemental or other staging areas might be
desired for consideration by the District. Also see Section 01500 for Temporary Facilities and
Control for additional requirements.

   2. Contractor shall submit four (4) hard copies and email Adobe PDF Format of the initial
submittal of the Work Restricted Activity Plan for review and acceptance by the District,
Architect, and by personnel from the Campus (e.g., Buildings & Grounds, Police Department,
and other representatives). The District shall have a minimum of seven calendar days to
review and provide comments regarding this plan. Contractor shall comply with the requests
of District to modify the plan as necessary consistent with the requirements of the Contract
Documents.

C. Contractor shall construct dust partitions prior to the start of demolition and they must remain
in place until substantial completion.

D. Contractor shall perform and complete all Work Restricted Activities to ensure the following:
   1. The continuous and uninterrupted use of all occupied areas, including but not limited to the
applicable power, data, telephone, waterline, fire alarm system, fire sprinkler system
mechanical, gas, storm, sewage, plumbing, and electrical systems serving these areas.

   2. Protection of students, staff, faculty and personnel in occupied areas and surrounding and
adjacent areas from the hazards and dust associated with construction.

   3. The work areas, roads, parking lots, and streets are to be kept clear, clean, and free of loose
debris, construction materials and partially installed work, which would create a safety
hazard or interfere with subcontractor and personnel duties and traffic. The Contractor shall
sweep the areas clean at the end of each work day and make every effort to keep dust and noise to a minimum at all times.

4. Prior to starting work, the Contractor shall provide a proposed schedule of temporary interruptions or shutdown of any utility or electrical/mechanical systems to the District Representatives. The Contractor shall provide written request (5) working days prior to the desired time for the proposed interruption(s). Work shall be performed at times other than the Campus’s normal hours of operation, or as directed by the District’s Construction Manager. Temporary interruptions shall be completed prior to the start of the next business day at the Campus to maintain continuous and uninterrupted use of Campus facilities.

1.3 SUMMARY OF WORK RESTRICTIONS

A. General: Work Restrictions are comprised of Work Restricted Activities included in the Work Restricted Activity Plan described above. All Work Restricted Activities must be completed within the timelines, work shift times, and the scheduled time period as required by the Contract Documents. Comply with the following:

1. The Work Restricted Activity Plan shall be approved by the District prior to any Work starting on the Project site.

2. Contractor shall have all temporary fencing, signage, ADA compliant pathways and other temporary measures described in Paragraph 1.4 above installed, operational and accepted by the District prior to starting abatement, demolition or other Work as applicable.

B. Time Essential Work Restrictions

1. The Work Restricted Activities that are essential to protect the Campus community, and minimize disruption to the Campus’s daily operations include, but are not limited to: temporary construction fencing, temporary construction barriers, construction and way-finding signage, dust control and safe and ADA complaint access (ingress/egress) for pedestrians and vehicles around the construction areas.

2. Coordination and Time Sensitive Work Restrictions. Work Restricted Activities include the construction and installation of interim utilities; permanent utility/installation and other construction activities related to moving of vital infrastructure to maintain the fully functional infrastructure of the Campus facilities during remodeling activities. Certain activities related to these Work Restrictions, which do not disrupt or impact occupied areas of the facility, may be completed during the normal business hours.

C. Other Project Requirements and Work Restrictions

1. The Contractor will be allowed to park vehicles along the north fence adjacent to the football field and parallel with the old handball courts. The parking spots are labeled “Staff”. These spaces are only available during normal working hours, and they are not available any other time without written permission from the District.

2. Handball Court #3 with no roof will be made available for the Contractor’s use for material storage during the contract duration. Contractor will be required to provide its own security lock during this time period, and Contractor shall restore this court to its original condition prior to Final Completion.

3. Since Stairwell #1 will be used as a path of travel during normal business hours, the Contractor shall performed all contract work (e.g., demolition of existing handrails, installation of new handrails, installation of contrasting stripes; and patch and paint) in said stairwell after normal business hours unless otherwise permitted by the District in writing. The demolition of existing handrails cannot commence until such time the new handrails
have been delivered to the project site, and are ready for installation. Stairwell #1 needs to be maintained as a safe path of travel during the entire construction duration.

4. In addition to the normal use of the Gym Annex Building during the construction duration, football practice for the College will commence during the summer, and games will commence in September on Saturdays, which will add to the flow of pedestrian traffic in and around the construction site during normal business hours.

5. All electrical, data and signal (e.g., fire alarm) connections to existing systems and testing of the new, or temporary systems, shall be performed after normal business hours. Said activities shall be included in the Contractor’s schedule, and sufficient notice as required elsewhere in these Contract Documents, shall be provided to the District.

6. Concrete saw cutting shall be scheduled for Fridays, Saturdays or after normal business hours unless written approval is provided by the District.

PART 2 - PRODUCTS

2.1 MATERIALS

A. All labor, equipment, materials, and all other requirements shall be provided and will be the sole responsibility of the Contractor for execution of entire work including all Requirements of each Work Restricted Activity.

PART 3 - EXECUTION

3.1 MEANS AND METHODS OF CONSTRUCTION

A. Contractor to provide and shall be responsible for any and all means and methods that will be constructed, implemented and/or maintained on the site for all Work Restricted Activities.

END OF SECTION 01140
SECTION 02080

ASBESTOS ABATEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The General Conditions and Division I General Requirements shall be included in and made part of this Section.

B. Examine all other Sections of the Specifications for requirements therein affecting the work of this Section of the Specifications.

1.2 COMPLIANCE AND INTENT

A. The Contractor is responsible for repair, to the satisfaction of the District, of surfaces not scheduled for demolition that become damaged as a result of the work. All unscheduled repair work shall be at no increase to contract price.

B. Contractor shall coordinate removal with all site requirements related to protection of existing finishes. Water and encapsulants used during abatement work must not migrate beyond established regulated work area barriers. All protection work must be completed prior to the start of abatement work on each floor and any pathways of travel on other floors.

C. This project deals with abatement of asbestos-containing materials (ACMs). It is necessary for the Contractor to coordinate all abatement work with the project drawings and specifications. During all work, provide monitoring and worker protective equipment in accordance with the California Occupational Safety and Health Administration (Cal-OSHA) and as required by this specification. Where there is conflict, the most stringent requirement shall apply.

D. The work covered by this specification includes the handling, removal, and proper disposal of ACMs. All hazardous materials shall be removed and disposed of according to all federal, state and local regulations. The Contractor shall determine if additional hazardous materials will be impacted by the scope of the abatement work. The cleanup of any incidental asbestos found in areas undergoing abatement of asbestos that become separated from the building during the dismantling process are part of the work.

E. The abatement workers shall have received Cal-OSHA accredited training and be certified for asbestos abatement work.

F. Furnish all labor, materials, facilities, equipment, services, employee training, medical monitoring, permits and agreements necessary to perform the work required for asbestos abatement in accordance with this specification.

G. Comply with all federal, state, and local regulations pertaining to asbestos removal, storage, transportation and disposal; employee heath and safety; Contractor certifications; and all licenses, permits, and training.
H. Work on the premises shall be confined to areas designated in the Contract Documents. Materials and equipment shall be stored within areas designated by the District. Should additional space be required, the Contractor shall request permission for additional space and shall adequately safeguard occupants from associated health and safety hazards.

I. Perform all work specified herein with competent persons trained, knowledgeable and qualified in state-of-the-art techniques relating to asbestos abatement, handling, and the subsequent cleaning of contaminated areas.

J. During removal activities, the Contractor shall protect against contamination of soil, water, plant life, sensitive building finishes, adjacent building areas, and shall ensure that there is no airborne release of dusts. The District may collect air samples in the building and in adjacent areas to evaluate the Contractor's performance. Evidence of settled dust or airborne levels of contaminants above background will require the implementation of additional controls at no increase to contract price.

K. It is the Contractor's responsibility to determine the quantities of ACMs that will require removal prior to commencement of the project. The Contractor shall conduct a site visit to determine exact locations of materials that will require abatement. This section provides appropriate protocols for handling and disposal of ACMs. All ACMs shall be removed according to the procedures outlined in this specification. If additional suspect ACMs are discovered during the course of the abatement work, immediately notify the District and/or the District's Environmental Consultant.

L. The work of this section shall be performed by an entity that holds a current, valid asbestos handling license issued by the California State Contractor's Licensing Board (SCLB) and a current valid Certificate of Registration for Asbestos-Related Work issued by the California Department of Industrial Relations-Division of Occupational Safety and Health (Cal-OSHA), unless other specified. Display copies of CSLB license and Cal-OSHA Registration in a visible place at the job-site.

M. ACMs removed during the abatement activities shall be disposed of in an approved manner complying with all applicable federal, state, and local regulations. Appropriate waste manifests or letters of salvage shall be furnished to the District thereby limiting the District's liability for improperly salvaged items. Materials are conveyed to the Contractor "as is," without any warranty, expressed or implied, including but not limited to, any warranty to marketability or fitness for a particular purpose, or any purpose. The District or the District's Environmental Consultant shall approve the non-ACM hazardous waste disposal site(s) prior to disposal for materials that may be disposed of in that manner.

N. All interior asbestos abatement work shall be conducted using a negative pressure enclosure and three stage decontamination units unless otherwise specified. Evidence of the release of asbestos above the background level will necessitate additional controls including but not limited to an enclosure.
1.3 DEFINITIONS

A. The following definitions pertain to work of this section.

1. Abatement: Process of controlling fiber release from ACMs including encapsulation, enclosure, controlled renovation procedures, removal, clean-up and disposal.

2. ACM: Asbestos-containing material

3. Aggressive Sampling: Air sampling either during or following the agitation of the air.


5. Airlock: A system for permitting ingress and egress with minimum air movement between a contaminated area and uncontaminated areas. Typically consists of two curtained or gasketed doorways separated by a distance of at least six feet such that one passes through one doorway into the airlock, allowing the doorway to close off the opening. This airlock must be maintained in uncontaminated condition at all times.

6. Ambient Air Quality: The quality of air (in terms of airborne fiber content) that is present in a given space.

7. Area Monitoring: Sampling of airborne asbestos fiber concentrations within the work area and outside the work area. Sampling shall represent airborne concentrations that may reach the breathing zone.

8. Asbestos Fibers: Refers to asbestos fibers having an aspect ratio of 3:1, and those fibers longer than five (5) microns.

9. Asbestos Permissible Exposure Limit (PEL): A level of airborne fibers specified by OSHA as an occupational exposure standard for asbestos. This level represents the 8-hour time-weighted average of 0.1 fibers per cubic centimeter of air as measured by Phase Contrast Microscopy (PCM) analytical method.

10. Asbestos-Containing Material (ACM): Those manufactured products and construction materials including structural and mechanical building materials, as well as packings and gaskets that contain more than one percent (1.0%) asbestos by weight.

11. Asbestos: Asbestos includes asbestiform varieties of serpentine (chrysotile), riebeckite (crocidolite), cummingtonite-gunerite (amosite), anthophyllite, tremolite, and actinolite. For the purposes of determining worker respiratory protection, both the asbestiform and non-asbestiform of the above minerals, and any chemically treated or altered materials shall be considered as asbestos.

12. Authorized Visitor: Designated employees or consultants for the District and representatives of any federal, state or local regulatory or other agency having jurisdiction over the project.

13. Baseline: Refers to the background levels of asbestos monitored before abatement.
14. Breathing Zone: A hemisphere forward of the shoulders and head with a radius of approximately six to nine inches.

15. Breach: A rift or gap in the critical or secondary barriers that allow egress of air from the containment to outside, or vice versa.

16. Bridging Encapsulant: An encapsulant that forms a discrete layer on the surface of an in-situ asbestos matrix.


18. Chain-of-Custody: A legal concept involving documentation of the physical possession of a sample(s) from the moment it is collected, transported, analyzed, and ultimately stored in an archive.

19. Change Rooms: Refers to the two chambers in the decontamination area used to change into and out of protective clothing.

20. Certified Industrial Hygienist (CIH): A person certified by the American Board of Industrial Hygiene.

21. Clean Room: An uncontaminated area or room that is part of the worker decontamination enclosure system, with provisions for storage of workers’ street clothes and protective equipment.

22. Clearance Level: Clearance level for samples analyzed by PCM will be less than 0.01 fibers per cubic centimeter of air and for TEM will be less than 70 structures per square millimeter (<70 s/mm²). Samples may be collected by aggressive or non-aggressive sampling methods and the minimum air volume shall be 1,200 liters.

23. Competent Person: One who is capable of identifying existing and predictable hazards and who has the authority to take prompt corrective measures to eliminate them.

24. Critical Barrier: A unit of temporary construction that provides the only separation between asbestos work area and an adjacent potential occupied space. This includes the decontamination unit, perimeter walls, ceilings, penetrations and any temporary critical barriers between the work area and the uncontaminated environment.

25. CSLB: Contractors State Licensing Board

26. Decontamination Area: Area which is constructed to provide the means for workers to store clothing, equipment and other articles, and to properly remove contamination upon concluding work activities that result in exposure to these hazardous materials.

27. DOP: Dioctylphthalate, the challenge aerosol used to perform on-site leak testing of HEPA filtration equipment.

28. DOT: Federal Department of Transportation.

29. DOSH: Division of Occupational Safety & Health (see also Cal-OSHA)

30. Decontamination Unit: Refers to system of airlocks used to decontaminate personnel, waste bags, equipment, etc. when exiting the work area. A decontamination unit shall be set up for each containment area.
31. Demolition: The wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

32. Disposal Bag: Minimum six (6) mil thick leak-tight plastic bags used for transporting asbestos waste from a work area to disposal or shipping container. Each disposal bag must have required labels according to Title 8 CCR 1529 (Cal-OSHA asbestos rule), 5194 (HAZCOM). RACM waste must be additionally labeled according to 49 CFR 171-179 (USDOT), and 40 CFR 61 Subpart M (NESHAP). Hazardous waste disposal bags must be labeled with generator’s name, address, site location, generator number, and the following information:

```
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD
AVOID BREATHING AIRBORNE ASBESTOS
RQ WASTE ASBESTOS, 9 NA 2212 PG III
(Class 9 placard)
HAZARDOUS WASTE
STATE AND FEDERAL LAW
PROHIBITS IMPROPER DISPOSAL
IF FOUND, CONTACT THE NEAREST
POLICE OR PUBLIC SAFETY
AUTHORITY OR THE CALIFORNIA
DEPARTMENT OF TOXIC SUBSTANCES CONTROL
```

33. District: Contra Costa Community College District

34. District's Environmental Consultant: Environmental Consulting firm and its representatives retained to provide compliance oversight and monitoring for the Contractor’s asbestos abatement work activities.

35. Encapsulant: A liquid material that can be applied to ACMs that controls the possible release of asbestos fibers from the material either by creating a membrane over the surface (bridging) or by penetrating into the material and binding its components together (penetrating encapsulant).

36. Encapsulation: A specified procedure necessary to coat ACMs or asbestos contaminated surfaces with an encapsulant to control the possible release of asbestos fibers into the ambient air.

37. Enclosure: The construction of an airtight, impermeable, permanent barrier surrounding the ACM to prevent the release of asbestos fibers into the air.

38. Equipment Decontamination Enclosure System: A decontamination enclosure system for materials and equipment, typically in a designated area of the work area, and including a washroom, a holding area, and an uncontaminated area.

39. Equipment Room: A contaminated area or room that is part of the worker decontamination enclosure system, with provisions for storage of contaminated clothing and equipment. The equipment room shall be kept clean from asbestos-containing debris at all times.
40. Excursion Limit: A California Code of Regulations (Title 8 CCR 1529) requirement that ensures no employee exposed to airborne concentrations of asbestos in excess of 1.0 fibers per cubic centimeter of air as averaged over a sampling period of thirty (30) minutes.

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

42. Fixed Object: A unit of equipment or furniture in the work area that cannot be removed from the work area.

43. Friable Asbestos-Containing 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.

44. Foreman: An individual who typically fulfills the duties of "competent person" as defined by Title 8 CCR 1529. This individual must supply documentation of a passing grade in a Cal-OSHA accredited course in Asbestos Contractor/Supervisor training. The foreman must be on-site during all abatement work.

45. Glove Bag: A polyethylene bag with two inward projecting long sleeve gloves, designed to enclose an object from which an ACM is to be removed. Bags shall be seamless at bottom, have a minimum thickness of 6 mil, and shall be labeled appropriately.

46. Glove Bag Technique: A method for removing ACM from heating, ventilation and air conditioning (HVAC) ducts, piping runs, valves, joints, elbows, and other non-planar surfaces. The glove bag is constructed and installed in such a manner that it surrounds the object or material to be removed and contains all asbestos fibers released during the process. Secondary containment shall be provided for all glove bag work unless otherwise noted.

47. Gross or Full Abatement: Designated rooms, spaces, or areas of the project that have been totally sealed, contained in polyethylene, equipped with decontamination enclosure systems, and placed under negative pressure.

48. HEPA: High Efficiency Particulate Air filter capable of filtering out airborne particulate 0.3 microns or greater in diameter at 99.97 percent efficiency.

49. Manifest: The document authorized by both Federal and State authorities for tracking the movement of ACMs.

50. Movable Object: A unit of equipment or furniture in the work area that can be removed from the work area (e.g., smoke detectors, lights, etc.)

51. 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.

52. Negative Pressure: Air pressure lower than surrounding areas, generally caused by exhausting air from a sealed space (work area).

54. **NIOSH**: National Institute for Occupational Safety and Health: Sets test standards, analytical methods, and certifies performance of various respirator designs (research institute within Federal OSHA).

55. **NIST**: National Institute of Standards and Technology: Administers the NVLAP Program.


57. **NVLAP**: National Voluntary Laboratory Accreditation Program – evaluates and certifies laboratories doing PLM and TEM analyses.

58. **Passive Sampling**: Refers to air sampling with no air agitation.

59. **Permissible Exposure Limits (PEL)**: A level of airborne fibers specified by OSHA as an occupational exposure standard for asbestos. This level represents the 8-hour time-weighted average of 0.1 fibers per cubic centimeter of air and 30 minute excursion limit of 1.0 fibers per cubic centimeter of air as measured by Phase Contrast Microscopy (PCM) analytical method.

60. **Phase Contrast Microscopy (PCM)**: Technique using a light microscope equipped to provide enhanced contrast between the fibers and the background. Filters are cleared with a chemical solution and viewed through the microscope at a magnification of approximately 400X. This method does not distinguish between fiber types and only counts those fibers longer than 5 microns and wider than approximately 0.25 microns. Because of these limitations, fiber counts by PCM typically provide only an index of the total concentration of airborne asbestos in the environment monitored.

61. **Polarized Light Microscopy (PLM)**: An optical microscope technique used to identify asbestos content and distinguish between different types of asbestos fibers by their shape and unique optical properties.

62. **Powered Air Purifying Respirator (PAPR)**: A full facepiece respirator that has the breathing air powered to the wearer after it has been purified through a filter.

63. **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.

64. **Remodel**: Replacement or improvement of an existing building or potion thereof where exposure to airborne asbestos may result. Remodel includes, but is not limited to, installation of materials, demolition, cutting, patching, and removal of building materials.

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

66. **Shower Room**: A room between the clean room and the equipment room in the work decontamination enclosure system. This room contains hot and cold or warm running water and soap suitably arranged for complete showering during decontamination. The shower room comprises an airlock between contaminated and clean areas.
67. **Surfactant:** A chemical wetting agent added to water to improve penetration, this reducing the quantity of water required for a given operation or area.

68. **Transmission Electron Microscopy (TEM):** Asbestos structure analysis for a specified volume of air. TEM is a technique that focuses an electron beam onto a thin sample. As the beam transmits through certain areas of the sample, an image resulting from varying densities of the sample is projected onto a fluorescent screen. TEM is the state-of-the-art analytical method for identifying asbestos fibers collected in air samples in non-industrial settings. TEM microscopes equipped with selected area electron diffraction (SAED) capabilities also can provide information on the crystal structure of an individual particle.

69. **TSI – Thermal Systems Insulation**

70. **Visible Emissions:** Any emission containing particulate material that is visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.

71. **Visual Inspection:** A visual inspection by District’s Environmental Consultant, of the work area under adequate lighting to ensure that the work area is free of visible PCB material, debris, and dust.

72. **Washroom:** A room between the work area and the holding area in the equipment decontamination enclosure system equipped with water for decontamination of equipment and sealed waste containers. The washroom or shower room comprises one airlock.

73. **Water Filtration:** Refers to water filtration to as small a particulate size as technically feasible, but not more than 5 microns.

74. **Wet Cleaning:** The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, HEPA vacuuming, or other cleaning utensils dampened with amended water and afterward thoroughly decontaminated or disposed of as asbestos contaminated waste.

75. **Work Area:** The area where asbestos removal is performed and that is defined or isolated to prevent the spread of asbestos fibers, dust or debris, and entry by unauthorized personnel. Work area is a regulated area as defined by Title 8 CCR 1529.

### 1.4 SCOPE OF WORK

**B.** Provide the removal of ACMs as specified in this section. Reference all other sections of the Specifications and other documents included in the contract documents for information and requirements that affect the work of this Section.

**C.** Table 1 attached provides estimated quantities of ACMs requiring removal or will likely be impacted by the required work. A 10% variance of quantity of actual ACM shown in the Table and estimated ACM is not considered a changed condition. The Contractor is responsible for field verifying quantities of ACMs and difficulty in abating the same.

**D.** The following material shall be disposed of as regulated asbestos-containing material (RACM): Drywall with asbestos containing finishing compounds.
E. Any dust or debris generated from cutting, drilling, and removal or installation of attachments to existing ACMs including but not limited to drywall or interior skim coat on concrete shall be disposed as an RACM.

F. Remove paint/coating on interior perimeter concrete walls completely to the concrete substrate. Coordinate the configuration of removal areas required for elevator door penetration and wall attachments with other contract documents.

1.5 REFERENCES

The publications listed below form a part of this specification by reference. The publications are referred to in the text by basic designation only. If there is a conflict between any of the listed regulations or standards, then the most stringent or restrictive shall apply.

A. American National Standards Institute (ANSI) and American Society for Testing and Materials (ASTM)

2. ANSI Z87.1, 2003, Occupational and Educational Eye and Face Protection
3. ANSI Z88.2 1992, Respiratory Protection
4. ANSI Z89.1, 1986, Requirements for Protective Headgear for Industrial Workers
5. ANSI Z41, 1999, Personal Protection – Protective Footwear
6. ANSI Z88.6, 1984, Respiratory Protection – Respiratory Use Physical Qualifications for Personnel
9. ASTM D 1331, Solutions of Surface-Active Agents
10. ASTM D 2794, 1993 Resistance of Coatings to the Effects of Rapid Deformation (Impact)
15. ASTM E849, 1986 Safety and Health Requirement Relating to Occupational Exposure to Asbestos

B. California Assembly Bills (CAB)
1. CAB 040, Yearly Registration of Contractors

C. California Code of Regulations (CCR)
   1. Title 8 CCR 5208, General Industry – Asbestos
   2. CCR CARS, Carcinogen and Asbestos Registration Sections 340-344.53, 341.6 Amended, and 341.9 Amended Through 341.14
   3. CCR ESO, Electrical Safety Orders, Chapter 4, Subchapter 5
   4. CCR 1523, Illumination
   5. CCR 1529, Asbestos in the Construction Industry
   6. CCR 1531, Construction Respiratory Protective Equipment
   7. CCR 3203, Injury and Illness Prevention Program
   8. CCR 3204, Access to Employee Exposure and Medical Records
   9. CCR 3220, Emergency Action Plan
   10. CCR 3221, Fire Prevention Plan
   11. CCR 5144, Respiratory Protection Equipment Standard
   12. CCR 5194, Hazard Communication Standard
   13. CCR 6003, Accident Prevention Signs
   14. Title 22, Division 4, Minimum Standards for Management of Hazardous and Extremely Hazardous Waste

D. California Health Services (CHS) Titles 22 and 23, California Administrative Code Disposal Requirements
   1. CHS 25123, Section 25123
   2. CHS 25124, Section 25124
   3. CHS 25143, Section 25143
   4. CHS 25163, Section 25163
   5. CHS 66508, Section 66508
   6. CHS 66510, Section 66510
   7. CHS DIV 4, Division 4, Commencing with Section 66000, "Disposal"

E. California Health and Safety Code (CHSC)
   1. CHSC 20, Division 20, Commencing with Section 24200

F. California Labor Code (CLC)
   1. CLC DIVISION 5, Part 1, commencing with 6300

G. California Propositions (CP)
   1. CP 65, Proposition 65

H. California State Board of Equalization (CSBE)
   1. CSBE ETU, Excise Tax Unit

I. California State License Board (CSLB)
1. CSLB CBPC, California Business and Professional Code Sections 7058.5 and 7058.7, "Certification"

J. Code of Federal Regulations (CFR)
1. 29 CFR 1910.134, Respiratory Protection
2. 29 CFR 1910.141, Sanitation
3. 29 CFR 1910.145, Accident Prevention Signs and Tags
4. 29 CFR 1926.21, Safety Training and Education
5. 29 CFR 1926.55, Gases, Vapors, Fumes, Dusts, and Mists
6. 29 CFR 1926.65, Hazardous Waste Operations and Emergency Response
7. 29 CFR 1926.59, Hazard Communication
8. 29 CFR 1910.1000, Air Contaminants
9. 29 CFR 1926.1101, Asbestos
11. 40 CFR 61-SUBPART M, National Emission Standard for Asbestos
13. 40 CFR 745, Lead; Requirements for Lead-Based Paint Activities
14. 40 CFR 763, Asbestos Containing Material in Schools

K. State and Local Regulations
1. Regulation 11, Rule 2, Bay Area Air Quality Management District (BAAQMD)

L. Underwriters Laboratories, Inc. (UL)
1. UL 586-96, 1996 Test Performance of High-Efficiency Particulate Air Filter Units

1.6 SUBMITTALS PRIOR TO START OF WORK

A. The reviews by the District or District’s Environmental Consultant are intended to be only for general conformance with the requirements. The District or District’s Environmental Consultant assumes no responsibility for permits, licenses, notices, materials and methods, equipment or temporary construction required to execute the work described in this Section of the Specification or in other Sections of the Specification or in other documents included in the contract documents.

B. Before commencing work involving the abatement of asbestos, submit the following for review by the District or District’s Environmental Consultant:
1. Provide a detailed asbestos abatement work plan that follows Attachment A – Asbestos Abatement Work Plan Outline.
2. Provide an asbestos site safety plan prior to project initiation. The site safety plan shall deal with, at a minimum: site safety and health hazards; fiber release incidents; control of water leakage or discharge within and/or from the work area; medical emergency; asbestos handling procedures; fall protection; electrical safety; Contractor’s internal administrative and inspection procedures; earthquakes and/or fire emergency procedures; protocol for responding to
Complaints or questions from interested parties; 24-hour emergency telephone numbers for company officers with authority to respond to emergencies.

3. Competent Person (as defined by Title 8 CCR 1529): Demonstrate education and specialized training with successful completion of examination of a Cal-OSHA accredited asbestos training course.

4. Workers: Demonstrate education and specialized training with successful completion of a Cal-OSHA accredited asbestos training course. All workers that will likely disturb existing ACMs during work and removal or installation of components shall submit evidence of current Class III training.

5. Submit current certificates (less than 11 months) signed by each employee and trainer that the employee has received proper training in the handling of materials that contain asbestos. Include documentation showing that the worker understands the following; health implications and risks involved (including the illnesses possible from exposure to airborne asbestos fibers), the use and limits of the respiratory equipment to be used, and the results of monitoring of airborne quantities of asbestos concerning health and respiratory equipment.

6. Proof of Respirator Fit Testing: Provide proof of respirator fit testing. Fit testing records must be less than eleven (11) months old and document testing on the type of respiratory protective equipment used for this project. Fit testing records must be signed by the Competent Person.

7. Foreman Training: Submit evidence that the foreman to be used on the job fulfills the qualifications detailed in this specification and has experience in similar jobs.

8. Medical Examinations: Submit evidence signed by a physician that each employee used on the job has received an appropriate medical examination as detailed in Title 8 CCR 1529. The submitted document must be less than eleven (11) months old.

9. Written Notification to Fire and Police Departments: Provide documentation showing notification to local fire and police departments of the abatement three (3) days before commencement.

10. Rental Equipment: When rental equipment is to be used in the abatement areas or to transport hazardous waste, the Contractor shall provide written notification regarding intended use of the rental equipment to the rental agency before use, with copies to the District’s Environmental Consultant.

11. Certificates of Compliance: Submit manufacturer's certification that vacuums, ventilation equipment, and other equipment required to contain airborne asbestos fibers conform to ANSI Z9.2. Submit results of onsite DOP testing of all HEPA-filtered ventilation equipment.

12. Submit uniform hazardous waste manifests prepared, signed and dated by an agent of the landfill. The manifest must certify the amount of hazardous materials delivered to the landfill. The manifest must be provided to the District or District’s Environmental Consultant within ten working days after delivery.

13. Satisfactory proof that written notification and subsequent updates have been provided to the Bay Area Air Quality Management District BAAQMD), in accordance with Regulation 11, Rule 2, Cal-OSHA, and Title 40 CFR Part 61.
Subparts A&M, National Emission Standards for hazardous Air Pollutant, U.S. EPA.

14. Licenses: Submit copies of state and local licenses, evidence of Cal-OSHA registration and permits necessary to carry out the work of this contract.

15. Notification of Other Contractors: If other contractors are working at the job site, before beginning any work the Contractor must inform all other contractors in writing regarding the location, nature, and requirements of the work areas.

16. Material Safety Data Sheets/Specification Sheets: The Contractor shall submit Material Safety Data and Specification Sheets for all chemicals, encapsulants, etc. to be used for this project.

1.7 SUBMITTALS AT THE COMPLETION OF THE PROJECT

A. Upon completion of on-site work, Contractor shall provide a detailed project summary that will include each of the items listed below. The project Summary shall be submitted and approved by the District prior to acceptance of final pay request and shall include the following:

1. Copies of the Security and Safety Logs showing names of persons entering the workspace. The logs shall include date and time of entry and exit, supervisor's record of any accident (detailed description of accident).

2. Chain of custody documentation and laboratory reports for all analyses performed.

3. Emergency evacuations and any other safety or health incident.

4. Submit uniform hazardous and non-hazardous waste manifests prepared, signed and dated by an agent of the landfill. The manifest must certify the amount of hazardous materials delivered to the landfill. The manifest must be provided to the District or District's Environmental Consultant within ten working days after delivery.

5. Personal air sample results.

6. Pressure differential strip chart readings for each differential recording device on the site.

7. Project Summary:
   a. Abatement contractor’s name and address, certification number ( CSLB), registration number (DOSH) and Tax ID number.
   b. Hazardous waste hauler certifications (DHS, DOT).
   c. Name, address and registration number of hazardous waste hauler.
   d. Laboratory performing analyses (NVLAP).
   e. Contract number and name of project.
   f. Specific inventory (including locations and approximate quantities) of the hazardous materials which were removed or handled.
   g. Number of employees working on the project.
   h. Dates of commencement and completion of on-site work.
i. Work method employed (i.e., glove bag, mini-containment, full containment with negative air and decontamination enclosure system, etc.)

j. Name, location, telephone number and EPA registration of waste disposal site(s) used.

k. DOP testing results.

1.8 CONTRACTOR MONITORING

A. The District or District’s Environmental Consultant reserves the right to perform air sampling in selected areas during the course of the project. District or District’s Environmental Consultant reserves the right to stop work within in an area if in the course of performing monitoring, the District or District’s Environmental Consultant observes instances of substantial non-conformance with the this Section or other Sections of the Specification presenting health hazards to workers, the general public or the surrounding areas. Work shall not resume until the corrective measures have been enforced. Instances of substantial non-conformance shall include, but not be limited to, the following:

1. Activities or misconduct imperiling worker's safety and health.
2. Airborne fiber concentrations as measured by PCM outside of the containment area exceeding background or 0.01f/cc whichever is greater. Airborne concentrations as measured by TEM outside of the containment area exceeding background or 70 S/mm², whichever is greater.
3. Loss of negative pressurization for more than two minutes.
4. Breaches in containment resulting in potential release of asbestos to non-work areas.

B. The District’s Environmental Consultant may perform air sampling inside and outside the hazardous materials work area during all phases of the work. The Contractor shall cooperate fully with the District’s Environmental Consultant and ensure the cooperation of his workers during collection of air samples and work area inspections.

C. When visual inspections or air monitoring are specified, the Contractor shall notify the District or District’s Environmental Consultant in writing 24 hours in advance of the day and time when the Contractor will be ready for such inspections or monitoring. Such requests shall be initiated by the Contractor's Competent Person or Foreman indicating that the work area has been previously inspected and is ready for inspection/testing.

D. Air monitoring generated by the District or District’s Environmental Consultant shall not be used by the Contractor to represent compliance with regulatory agency requirements for monitoring of workers exposure to airborne asbestos, nor shall any other activity on the part of the District or District’s Environmental Consultant be construed to meet the Contractor’s compliance with applicable health and safety regulations.
PART 2 - PRODUCTS

2.1 SIGNS AND LABELS:

A. Provide labeling in accordance with State and Federal EPA requirements. Provide the required signs, labels, warnings, placards or posted instructions for containers used to transport hazardous material to the landfill.

B. Location of Caution Signs and Labels: Provide bilingual caution signs at all approaches to work areas in languages used by the Contractor's employees. Locate signs at such a distance that personnel may read the sign and take the necessary protective steps required before entering the area. Provide labels and affix to all asbestos-containing materials, scrap, waste, debris, and other products contaminated with hazardous materials.

C. Warning Sign Format: Vertical format conforming to Title 8 CCR 1529:

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

D. Warning Label Format: Provide labels that comply with Title 8 CCR 1529 of sufficient size to be clearly legible, displaying the following legend:

2.2 ENCAPSULANTS

A. Encapsulants shall be U.L. Listed, in full-scale E-119 fire test.

B. Average depth of penetration shall meet manufacturer's recommendations.

C. Dry mil thickness of bridging encapsulating systems (if used) shall be as indicated in the specific treatment instructions included in this specification, and as recommended by the manufacturer.

D. Performance Requirements: Classification - penetrating encapsulant; spray applied and brushable. Product shall be tested and listed by EPA and possess the following characteristics:
   2. Fire classification - UL Class A approved in the specific or similar assembly to its intended application.
   3. Product shall be tested and rated non-toxic and non-irritating under the Federal Hazardous Substances Control Act and contain no methylene chloride.
   4. Material shall be tinted sufficiently to provide a readable contrast to background color to which it is applied.
2.3 PLASTIC SHEETING:
   A. Use fire-retardant (FR) polyethylene (poly) film.
      1. Thickness - 6-mil, minimum, NO EXCEPTIONS.
      2. Flame Resistance/Flame Spread Rate <25.
      3. Conforms to NFPA #701 and Tested in accordance with ASTM E-84.

2.4 TAPE, ADHESIVE, SEALANTS:
   A. Tape, 2" or wider, shall be capable of sealing joints of adjacent sheet of polyethylene
      and shall attach polyethylene sheet to finished or unfinished surfaces or similar
      materials. Tape shall be capable of adhering under dry and wet conditions, including
      use of amended water. Taping to critical or sensitive surfaces shall be completed
      using preservation sealing tape.
   B. Spray adhesive for sealing polyethylene to polyethylene shall contain no methylene
      chloride or methyl chloroform (1,1,1-trichloroethane) compounds.
   C. Fire resistant sealants shall be compatible with concrete, metals, wood, etc. Sealant
      shall prevent fire, smoke, water and toxic fumes from penetrating. Sealant shall
      have a flame spread, smoke and fuel contribution of zero, and shall be ASTM and
      UL rated for 3 hours for standard method of fire test for fire stop systems.

2.5 STRIP CHART RECORDER(S):
   A. Where interior work areas are required, each shall have a minimum differential
      pressure of 0.025 inches water gage at all times. Fluctuations below 0.025 inches of
      water column are unacceptable and may require temporary cessation of work until
      conditions are corrected.
   B. Data recorder(s) shall be used to document the level of pressure difference between
      the containment space and all other spaces as deemed necessary by the District or
      District’s Environmental Consultant. Defective or non-operating instrumentation may
      require temporary cessation of work until instrumentation is repaired or replaced.
   C. The data recorder will be checked a minimum of four times per day by a person
      familiar with the operation. Each check shall be documented on the circular chart
      with a time and date notation and the initials of the person performing the check. A
      copy of the circular chart shall be submitted daily to the District or District’s
      Environmental Consultant.
   D. Differential air pressure systems shall be in accordance with Appendix J of EPA’s
      “Guidance for Controlling Asbestos-Containing Materials in Buildings, EPA 560/5-85-
      024. The Differential pressure system shall be continuously monitored by the
      Contractor using a recording instrument connected to an appropriate strip chart
      recorder. The recording instrument shall be connected to an audible alarm that will
      activate at a pressure differential of -0.025 inches water gauge air pressure.
2.6 VACUUM EQUIPMENT:

A. All vacuum equipment used in the work area shall use HEPA filtration systems and be of the wet-dry type. The Contractor shall provide on-site independent DOP testing to document the effectiveness of the vacuum units. The test results shall be signed by the individual performing the testing. Repeat DOP testing every thirty (30) days after initial testing. Provide documentation to the District or District’s Environmental Consultant with 24 hours of DOP testing.

2.7 LOCAL EXHAUST SYSTEM:

A. Where containments are required, sufficient High Efficiency Particulate Absolute (HEPA) ventilation units shall be used to maintain the negative pressure in each interior work area at 0.025 inches of water column and a minimum of four (4) air changes per hour.

B. The ventilation system shall remain in operation 24 hours a day until the work area has passed the specified clearance criteria. HEPA filtered air which is exhausted to maintain negative pressure shall be exhausted from the building at locations approved by the District or District’s Environmental Consultant. Exhausted air shall not be near or adjacent to other building intake vents or louvers or at entrances to buildings. Other HEPA units shall operate within the enclosure to circulate air and control fiber counts.

C. The Contractor shall provide on-site independent DOP testing to document the effectiveness of the air filtration units. The test results shall be signed by the individual performing the testing. Repeat testing if the unit or the air filtration units have been repaired or replaced. Repeat DOP testing after thirty (30) days after initial testing. Provide documentation to the District or District’s Environmental Consultant with 24 hours of DOP testing.

2.8 RESERVE EQUIPMENT:

A. Contractor shall have the following equipment on site: two reserve, functioning and DOP-tested HEPA Filter Vacuum Cleaning Units, two reserve and DOP-tested HEPA area filtration units for every four containments. Contractor shall also have sufficient polyethylene (poly), respirators, protective equipment, tape, tools, decontamination enclosure systems for each work area.

B. Provide authorized visitors requiring access to the work area with suitable protective clothing, headgear, eye protection, as described in this specification, whenever the visitor must enter the work area. The Contractor shall have available and maintain at all times a minimum of three (3) suits and other suitable protective equipment for this purpose. All protective equipment shall be new and for the exclusive use of visitors.

C. The Contractor shall document that each visitor has been trained and fit-tested prior to entering an abatement area.
2.9 SCAFFOLDING:

A. Scaffolding, as required to do the specified work, shall meet all applicable safety regulations and DOSH standards. A non-slip surface shall be furnished on all scaffold surfaces subject to foot traffic. Contractor must comply with District’s and General Contractor’s Fall Protection Requirements. Scaffolding shall be adequately protected to prevent contamination of planking and framing.

2.10 TRANSPORTATION EQUIPMENT:

A. Transportation equipment, as required, shall be lockable and suitable for loading, temporary storage, transit and unloading of contaminated waste without exposure to persons or property. Any vehicle used to transport asbestos waste shall be properly registered with all applicable controlling agencies.

2.11 CONNECTIONS TO WATER SUPPLY:

A. Contractor shall assure that all connections to the site’s water system shall include backflow protection. Valves shall be temperature and pressure rated for operation of the temperatures and pressures encountered. After use, connections and fittings shall be removed without damage or alteration to existing water piping and equipment. Leaking or dripping valves shall be piped to the nearest drain or located over an existing sink or grade where water shall not damage existing finishes or equipment.

B. Employ heavy-duty abrasion-resistant hoses with a pressure rating greater than the maximum pressure of the water distribution system in each work area. Provide fittings as required to allow for connection to existing wall hydrants or spouts.

2.12 WATER HEATER:

A. The hot water supply must be adequate to allow for 15 minutes of continuous usage while maintaining a water temperature of 85°F. At minimum provide UL rated 40-gallon electric water heater to supply hot water for the decontamination unit shower. Provide relief valve compatible with water heater operation; pipe relief valve down to drip pan on floor with type L copper. Drip pans shall consist of a 24 inch X 24 inch X 6 inch deep pan, made of 19 gauge galvanized steel with handles. Drip pan shall be securely fastened to the water heater with bailing wire or similar material. Wiring of the water heater shall comply with NEMA, NEC and UL standards.

2.13 OTHER TOOLS AND EQUIPMENT:

A. The Contractor shall provide other suitable tools for the stripping, removal and disposal activities.

B. Prohibited Equipment: The following equipment is prohibited from use on this project unless accepted in writing by the District or District’s Environmental Consultant:

1. High or low pressure water blasting equipment for hosing of work areas.
2. Bead blasting or other uncontained abrasive blasting methods.
3. Vacuum-powered removal or collection equipment located outside the asbestos work area, such as a “Vacu-Loader”.

4. Gasoline, propane, diesel or other fuel powered equipment inside the building, unless previously approved in writing by the District or District’s Environmental Consultant.

5. Equipment that creates excessive noise or vibration that would affect the safety of the building or generate complaints from neighboring building occupants. No equipment shall exceed an A-weighted sound level of 85 dB as measured at 3 ft. from the radiating source without written permission of the District or District’s Environmental Consultant.


7. Flammable solvents with a flash point below 140 degrees F or materials containing ethylene glycol ether, methylene chloride, ethyl chloroform (1,1,1-trichloroethane), or other hazardous substances.

8. Non-fire retardant polyethylene sheeting.

9. Polyurethane spray foam for application in fire-rated assemblies, including but not limited to penetrations into stairwells, mechanical rooms, electrical closets, rated floor-to-floor assemblies, etc.

PART 3 - EXECUTION

3.1 INITIAL AREA ISOLATION

A. The District or District’s Environmental Consultant reserves the right to inspect and approve all containment setups before any abatement is undertaken.

B. If a containment area is breached (failure of polyethylene seals, visible dust emission, fiber counts above background level, etc.), the Contractor shall take immediate action to control the breach and clean the area to the satisfaction of the District or District’s Environmental Consultant.

C. If sample results indicate that conditions have exceeded the baseline or clearance criteria, as determined by the District or District’s Environmental Consultant, all work shall cease. Work shall not recommence until the condition(s) causing the increase have been corrected.

D. Verify that all electrical power, gas, sewage, water, phone lines, fire life safety lines and sprinkler systems to the work area have been shut down and disconnected so that there is no possibility of reactivation and electrical shock.

E. Provide all connections for temporary utilities in the work area needed throughout abatement. Temporary electrical power shall be according to OSHA and the National Electrical Code for Wet Environments.

F. Contractor shall conform to the District's lockout requirements, and secure the work area at all times. Area entrances and exits shall be secured by the Contractor throughout the abatement phase. Unauthorized visitors are strictly prohibited. Only the Contractor, District or District’s designative representatives are permitted at the job site. Contractor shall ensure that all doors, gates, windows, and potential
entrances to the work areas and the designated waste location areas are secured and locked at the end of each workday.

G. Contractor shall store all materials, equipment, and supplies for the project inside the building or in areas designated by the District and in accordance with District’s requirements.

H. As required, establish designated limits for the abatement work area with continuous barriers. Provide signs around the perimeter of all the interior works areas according to EPA and Cal-OSHA.

I. Contractor shall store all materials, equipment, and supplies for the project inside the building or in areas designated by the District.

J. Contractor shall provide temporary sanitary services of adequate capacity to handle the maximum estimated crew size plus an additional twenty percent. Contractor shall maintain the temporary facilities throughout the duration of the project.

K. The Contractor shall be responsible for identifying all HVAC components (if applicable) that lead into or out of the work areas. All components shall be disconnected and sealed airtight for the duration of the abatement work. All openings shall be sealed with two (2) layers of 6 mil polyethylene secured with duct tape, as applicable.

L. Pre-clean the work area and fixed objects in the work area using HEPA filtered vacuums and/or wet cleaning methods. Protect fixed objects with protective barriers (as appropriate) and cover with 6 mil poly sealed with tape.

3.2 CONTAINMENT SET-UP PROCEDURES

A. Contractor shall construct a full negative pressure containment for the removal of asbestos-containing materials including but not limited to paint with coating on interior concrete perimeter walls. Install critical barriers consisting of one layer of 6-mil poly on windows and doors. Cover floor and wall surfaces with 6-mil poly sealed with tape (as appropriate). Enclosure removal area with 6 mil poly and support as appropriate. Protect containment barriers from physical damage with a suitable material such as ½” plywood to a height of 7’ above the floor. The work area(s) shall be placed under negative pressure as outlined in this specification throughout the abatement work period.

B. Any disturbance of ACMs must be performed within a regulated area. If dust or debris is generated from asbestos related activity, work must be performed in a mini-enclosure with negative pressure or critical barrier containment.

C. To permit the inspector to view the majority of the work area, the Contractor shall provide easily accessible viewing ports from the clean space into each abatement area. Viewing ports must be a minimum of 2’ x 2’, clear-see-through plastic with no scratches, tape or glue marks.

D. Pressure differential data recorders are required to monitor the pressure differential in the work area. The recorders must be calibrated prior to arriving on site and shall
be recalibrated monthly throughout the project. Recalibration shall be performed by qualified technicians following the procedures outlined by the manufacturers. Provide documentation of calibration before beginning work and monthly there after.

E. A three-chambered decontamination unit shall be required during the abatement work conducted in full containment. The unit shall be located immediately outside the contained area. A pre-fabricated unit is acceptable. Chambers shall be arranged as follows: (1) a clean/change room shall be the first chamber entered from outside the work area, (2) a shower shall be located between the clean/change room and the dirty/change room, and (3) a dirty/change room shall be the last chamber before entering the work area.

1. The clean/change room of the worker decontamination unit shall be of sufficient size to accommodate the work crew and their belongings. It shall include a respirator storage area and be fully equipped with reserve equipment and materials such as clean suits, towels, soap, tape, and respirator filters.

2. Worker decontamination unit walls shall be a minimum of two layers of 6-mil fire retardant poly and floors shall be constructed with a minimum of three layers of fire retardant poly. All entry and exit doorways shall consist of at least two sheets of overlapping, fire resistant poly. At no time shall the flapped doors be taped open in order to expedite material or personnel load-out.

F. All water from the shower and bag wash area shall be filtered to the technically feasible limit but not more than five (5) microns before disposal. In addition, the Contractor shall comply with all current local, state and federal codes relating to waste water release. All water connections must be verified leak for leaks and turned-off at the conclusion of each shift. All shower water shall be drained from the shower pan at the end of each shift.

G. A two-chamber decontamination unit may be allowed, unless noted elsewhere, during the abatement work conducted in critical barrier containments. The unit shall be located immediately outside the contained area and shall contain a wash down area. A pre-fabricated unit is acceptable.

H. Contractor shall construct an equipment decontamination enclosure system consisting of a washroom, holding area and clean room separated by airlocks.

I. Approved fire extinguishers (Class ABC, multi-purpose, dry chemical type, rated: 4A; 60BC) shall be readily available to workers (maximum travel distance of 50 feet) inside and adjacent to work area(s). Personnel and emergency exits shall be clearly indicated on the inside of the containment area. The emergency exit plan shall be approved by the District's Environmental Consultant prior to the set up of any work areas.
3.3 PERSONNEL PROTECTION

A. Informed Workers:

1. All workers shall be informed of the hazards of ACMs and any other hazardous materials exposure. Workers shall also be instructed in the use and fitting of respirators, protective clothing, decontamination procedures, and all other aspects associated with the abatement work.

B. Personal Hygiene Practices:

1. The Contractor shall enforce and follow good personal hygiene practices during the abatement of ACMs. These practices will include but not be limited to the following: no eating, drinking, smoking or applying cosmetics in the work area. The Contractor shall provide a clean space, separated from the work area, for these activities.

2. Workers shall remove street clothes in the clean room and put on a respirator and clean protective clothing before entering the work area. Upon exiting the work area, remove gross contamination from clothing before leaving the work area; proceed to the change room and remove clothing except respirators; proceed to the shower; clean the outside of the respirator with soap and water while showering; remove respirator and thoroughly wash. Following showering, proceed directly to the clean room and dress in street clothes. Do not wear disposable clothing outside the decontamination enclosure system.

3. If data gathered by the District or District’s Environmental Consultant in areas adjacent to the work areas shows exposure to airborne asbestos or other hazardous materials exceeding Cal-OSHA criteria, that area will become regulated and workers must wear protective clothing and approved respirators and must have a shower facility provided to them.

C. Respirators:

1. Establish a respiratory protection program as outlined by ANSI and required by Cal-OSHA. Select respirators from those approved by the National Institute for Occupational Safety and Health (NIOSH). Respirators selected must be approved by the Competent Person. Submit program for review a minimum of five (5) working days prior to the commencement of abatement activities.

2. Provide workers with approved and personally-issued respirators with replaceable filters. Provide sufficient quantity of filters approved by NIOSH for use in asbestos environments so that workers can change filters as required by the manufacturer.

3. At a minimum, provide each employee with the following respiratory protection for each work phase:
   a. Pre-cleaning, containment set-up, and containment removal work: NIOSH-approved, half-face respirators with HEPA cartridges.
   b. Asbestos abatement of concrete paint/coating by aggressive methods: full-face powered-air purifying respirators (PAPRs) with HEPA cartridges and organic vapor cartridges (as necessary).
c. Asbestos abatement of paint/coating by non-aggressive or manual methods and Class III work: half-face respirators with HEPA cartridges and organic vapor cartridges (as necessary).

4. At all times, respiratory protection selected shall, at a minimum, meet the requirements of the Table 1 below.

Table 1 – Respiratory Protection

<table>
<thead>
<tr>
<th>Airborne Concentration of Asbestos</th>
<th>Required Respirator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not in excess of 1.0 f/cc (10 X PEL)</td>
<td>Half-mask air purifying respirator other than a disposable respirator, equipped with high efficiency filters</td>
</tr>
<tr>
<td>Not in excess of 5.0 f/cc (50 X PEL)</td>
<td>Full facepiece air purifying respirator equipped with high efficiency filters</td>
</tr>
<tr>
<td>Not in excess of 10 f/cc (100 X PEL)</td>
<td>Any powered air purifying respirator equipped with high efficiency filters or any supplied air respirator operated in continuous flow mode</td>
</tr>
<tr>
<td>Not in excess of 100 f/cc (1,000 X PEL)</td>
<td>Full facepiece supplied air respirator operated in pressure demand mode</td>
</tr>
<tr>
<td>Greater than 100 f/cc or unknown concentration</td>
<td>Full facepiece supplied air respirator operated in pressure demand mode, equipped with an auxiliary positive pressure self-contained breathing apparatus</td>
</tr>
</tbody>
</table>

5. Provide Type C continuous flow or pressure-demand, supplied-air respirators if the average airborne concentration of asbestos exceeds 100 times the permissible exposure limit; i.e., 8-hour time-weighted average (TWA) and ceiling limit. Use the respirators presented in Title 8 CCR 1529 that afford adequate protection at such upper concentrations of airborne asbestos. When Type C Respirators are required provide the following:

a. The air supply system shall provide Grade D breathing air that conforms to OSHA and ANSI Commodity Specification for Air.

b. Compressed Air System for Type C Respirators shall be high pressure, with a compressor capable of satisfying the respirator manufacturer's recommendations. The compressed air system shall have compressor failure alarm, high temperature alarm, and a carbon monoxide alarm. It also shall have suitable in-line air purifying absorbent beds and filters to assure Grade D breathing air.

c. Use of Belt: Type C respirators shall be worn with belt to minimize possibility of dislodging face mask when hose is snagged in the work area.

D. Protective Clothing:

1. Provide personnel exposed to asbestos fibers with fire retardant disposable protective whole body clothing, head coverings, gloves, and foot coverings. Provide appropriate gloves to protect workers hands from exposure to hazardous materials. Make sleeves secure at the wrists and make foot coverings secure at the ankles with tape. Ensure that all personnel entering
and leaving the work area follow this procedure. Suits shall be of adequate size to accommodate the largest employee. Foot covers may be part of the coveralls. Non-disposable footwear shall be left in the work area until it is decontaminated or disposed of at the completion of the job.

2. Protective clothing will be worn inside the work area after the area passes pre-abatement inspection and shall remain in use until the area passes final clearance inspection.

E. Eye Protection: Provide safety glasses or goggles to personnel removing or handling asbestos-containing materials and waste.

F. Shower Requirements: Contractor shall assure that all certified employees and visitors use protective equipment and the shower or wash down facility following each entry into the containment area after the start of the asbestos abatement.

G. Emergency Precautions and Procedures:
   1. Establish emergency and fire exits from the work area. Display necessary signage at exits and paths to exits with representative visual aids. A diagram of all emergency and fire exits shall be posted in a conspicuous area proximate to the entrance to each work area.

   2. The Contractor’s supervisor/competent person shall be trained and certified in first aid and CPR, and be prepared to administer first aid to injured personnel after decontamination. Seriously injured personnel shall be treated immediately or evacuated without delay for decontamination. When an injury occurs, the Contractor shall implement fiber reduction techniques until the injured person has been removed from the work area.

   3. In the event of a loss of negative pressure to the work area, work shall stop immediately and entrances to the work area sealed tight. The Contractor shall also institute fiber reduction controls until negative pressure is re-established to acceptable levels.

3.4 ASBESTOS REMOVAL (GROSS REMOVAL TECHNIQUE)

A. The Contractor shall abate all ACMs identified in this specification and/or that require disturbance to complete work specified in other specification sections. Paint/coating shall be completely removed in area of specified perimeter wall penetration and any required attachments.

B. The Contractor shall continuously apply wetting agent throughout the removal process. The wetting agent shall be applied with a low-pressure fine spray to minimize fiber releases. The materials shall be thoroughly saturated so that there is no detectable fiber release. All ACM shall be immediately packaged in leak-tight containers following removal.

C. Minimize removal activities of ACMs that generate airborne particulate. After completion of removal work, surfaces from which asbestos has been removed shall be wet cleaned to remove all visible material and residue.
D. All abrasive blast media including water and debris shall be maintained inside the regulated area if blast methods of removal area selected.

E. Wet clean the exterior surfaces of waste containers in the equipment decontamination enclosure system prior to removal from the work area. Ensure that workers do enter from uncontaminated areas into contaminated areas in the equipment decontamination enclosure system. The Contractor shall transport asbestos-containing waste bags to the waste debris box at designated hours approved by the District or District’s Environmental Consultant. RACM shall be packaged in a minimum of two (2) 6-mil polyethylene bags. Bags shall be properly labeled for RACM disposal including site-specific generator labels. Non-friable waste shall be packaged in clear, leaktight containers and properly labeled while stored on-site.

F. Asbestos-containing debris and contaminated water shall be cleaned from the work area at the end of each work shift. The Contractor shall clean the work area using wet methods and HEPA vacuum equipment.

3.5 REGULATED AREA MONITORING

A. Prior to each work shift and continuously throughout the project, each containment and decontamination enclosure system shall be inspected and repaired as needed.

B. Ambient asbestos fiber levels outside each work area shall not exceed 0.01 f/cc (PCM) or 70 s/mm² (TEM) or background whichever is greater. If the asbestos fiber concentrations outside work areas exceed those levels shown above, then abatement must stop and operations be reviewed and modified until the fiber count can be reduced to within the acceptable limits.

3.6 AIR MONITORING

A. The purpose of any air monitoring that may be conducted by the District or District’s Environmental Consultant will be to detect possible release of fibers or dusts (asbestos or lead) emanating from the work areas.

B. All PCM air sample analysis shall comply with NIOSH Method 7400. All TEM analysis shall be consistent with modified-AHERA protocols or NIOSH 7402.

C. The District or District’s Environmental Consultant reserves the right to perform and / or observe final clearance inspection and sampling.

D. The method of analysis for pre-abatement and clearance air samples shall be via Phase Contrast Microscopy (PCM). The method of analysis for in-progress asbestos air samples shall be PCM and TEM at the option of the District or District’s Environmental Consultant.

E. The Contractor shall be responsible for all personal air sampling. These samples shall be taken each shift and for each distinct crew operation, and shall be used to verify adequacy of fiber control and respiratory protection. Personal breathing zone air sampling shall be in accordance with the Cal-OSHA asbestos standard. A minimum of 25% of the workforce shall be monitored during each shift. All sample
results shall be available on-site within 24-hours of sample collection. If two consecutive shifts of non-compliant or overloaded samples are noted, the contractor shall hire a CAC/CSST at their own expense to assist in compliance with the specifications.

3.7 CLEARANCE INSPECTIONS

A. The District or District's Environmental Consultant reserves the right to conduct visual inspections. Contractor shall notify the District or District's Environmental Consultant when the decontamination process in each containment area is complete. Evidence of debris will require additional clean up by the Contractor. Contractor shall be responsible for re-cleaning all areas found to be deficient.

B. If the District or District's Environmental Consultant determines that the work area is sufficiently clean, the Contractor may proceed. If the District or District's Environmental Consultant determines that certain areas require additional cleaning, the Contractor shall re-clean the work area and request a second inspection of the recleaned area. All costs incurred by the District or District’s Environmental Consultant for inspections required after the second inspection will be charged to the Contractor.

C. Once the initial visual is passed, the Contractor shall remove all but the containment critical barriers.

D. Following the visual inspection, the Contractor shall provide a coating of non-diluted encapsulant in the work area. The Contractor shall allow the encapsulant to dry for the period specified by the manufacturer.

E. Asbestos Clearance Testing: Following encapsulation and drying time, the Contractor shall conduct air clearance sampling. Clearance air sampling shall not take place until all encapsulant is dry. The District or District’s Environmental Consultant reserves the right to approve the initiation of clearance sampling.

3.8 ASBESTOS CLEARANCE CRITERIA:

A. The clearance level per containment shall be less than 0.01 fibers per cubic centimeter via phase contrast microscopy (PCM) or less than 70 structures per square millimeter via transmission electron microscopy (TEM). Aggressive air sampling shall be used for clearance purposes. Multiple samples shall be collected in large containment areas.

B. If air samples do not pass the required clearance criteria, the area shall be recleaned and new samples shall be collected by the District or District’s Environmental Consultant. The Contractor shall be responsible for all costs associated with resampling and re-analyses. This amount will be deducted by the District from the Contractor's final payment.

C. The District or District's Environmental Consultant shall notify the Contractor in writing of acceptable asbestos fiber concentrations. The Contractor shall then remove all the remaining barriers in the work area.
3.9 ASBESTOS DISPOSAL

A. It is the responsibility of the Contractor to determine current waste handling, labeling, transportation, and disposal regulations for the work site and for each waste disposal landfill. The Contractor must comply fully with these Specifications, local, state, and federal regulations and provide documentation of the same.

B. Ensure that polyethylene bags are sealed air-tight. All bags shall be wet cleaned prior to removing them from the equipment decontamination enclosure system.

C. Ensure all disposal containers are properly labeled according to 8 CCR 1529, 5194 (HAZCOM), 49 CFR 171-179 (USDOT), 40 CFR 61 Subpart M (NESHAP), and any local regulations and state regulations as required by this specification.

D. Filter all wastewater to the technically feasible limit, but not more than five (5) microns before disposal. Comply with all current local, state and federal codes relating to waste water release.

E. Asbestos-containing waste that is properly labeled and double-bagged may be temporarily stored in areas approved by the District. Areas must be made secure before storing the waste. Waste is not to remain in temporary storage area for longer than four (4) days before final load-out of materials.

F. All friable asbestos waste shall be double-wrapped prior to transport from the site.

G. All vehicles used to transport hazardous waste must be registered with the Department of Toxic Substances Control and Department of Transportation and maintain proper registration and with vehicle at all times.

H. Trucks must have an enclosed cargo area with a storage compartment that is fully lined with a minimum of one (1) layer of 6-mil polyethylene on the walls and two (2) layers on the floor. The driver of the vehicle must stop the vehicle in a safe location at least once during each two hours or one hundred miles of travel whichever is less and inspect the contents of the shipment. At the time of inspection if any form of binding is found to be loose the driver shall immediately take action to remedy the situation for safe transportation.

I. All vehicles and containers used to transport waste are subject to inspection and approval of District prior to departure from site.

J. Contractor shall not throw bags into the truck in a way that may cause the bags to burst open.

K. Contractor shall provide at minimum one (1) day advance notification to the District when signatures are required on manifest(s). The Contractor shall ensure that the Hazardous Waste Manifest is correctly filled out. The Contractor shall give the appropriate copies to the District and shall also instruct the District in writing that they must send the appropriate copy to the Department of Toxic Substances Control.

L. If a debris box is used, the Contractor shall make all necessary arrangement with the District including obtaining all appropriate permits.
M. Contractor is responsible for all coordination with the waste disposal site and with the waste hauling company.

N. Debris box for hazardous waste shall be fully lined with a double layer of polyethylene sheeting and must be locked at all times when unattended.

O. Debris box shall be constructed with minimum 20-gauge steel with no windows or openings other than the door. The door of the container shall have a secure cover on the locking device with access to the lock only at the key-hole. Once the debris box is filled and the manifest is signed, Contractor must transport the debris box off the job site.

P. Disposal shall be in a District approved landfill that meets EPA requirements.
### TABLE I
**ESTIMATED QUANTITIES**
**ASBESTOS-CONTAINING MATERIALS**

<table>
<thead>
<tr>
<th>Material Description</th>
<th>Material Location</th>
<th>Waste Category</th>
<th>Asbestos Type</th>
<th>Estimated Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paint/Coating on Interior Perimeter Concrete Walls</td>
<td>Perimeter Concrete Walls at West Entry</td>
<td>RACM</td>
<td>0.25%</td>
<td>350 sf*</td>
</tr>
<tr>
<td>Drywall with Joint Compound</td>
<td>Throughout Building</td>
<td>RACM</td>
<td>Drywall: ND Joint Compound: 2% CH</td>
<td>10 – 20 sf*</td>
</tr>
<tr>
<td>Tan HVAC Mastic</td>
<td>Above Ceiling HVAC Duct on Fiberglass Insulation</td>
<td>Cat. II</td>
<td>25% CH</td>
<td>No impact Expected</td>
</tr>
<tr>
<td>Pipe Fitting Insulation</td>
<td>Above Ceilings – 1st and 2nd Floors</td>
<td>RACM</td>
<td>Assumed</td>
<td>No Impact Expected</td>
</tr>
</tbody>
</table>

NA = Not Applicable, CH = Chrysotile, RACM = Regulated asbestos containing material (friable), Cat. I = Non-friable (note ACM must be reclassified as a RACM if rendered friable during removal), Cat. II = Category II Non-friable (note ACM must be reclassified as a RACM if rendered friable during removal), O.D. = Outside Diameter, sf = square feet, lf = linear feet, *Estimated quantity of paint/coating and drywall removal required or likely impacted.

END OF SECTION 02080
ATTACHMENT A
ASBESTOS ABATEMENT WORK PLAN OUTLINE

In accordance with the contract documents, the Contractor is required to prepare a written, site-specific Asbestos Abatement Work Plan, and submit to the District for approval prior to start of work. This plan is required for the contractor to meet Cal-OSHA requirements as well as the contract documents, and shall describe work procedures and control methods that will protect the District’s facilities and the environment.

I. Location of Work:
The work to be completed under this work plan will be completed at:

(Building name)
(Location within building)

Previous asbestos inspections or surveys have found that ACMs are present at the following locations:

(List all materials and locations to assure the District and the Contractor are aware of all hazardous materials locations)

II. Description of Work:
Describe the anticipated work scope

III. Schedule:

<table>
<thead>
<tr>
<th>Phase/Task</th>
<th>Anticipated Date(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobilization</td>
<td></td>
</tr>
<tr>
<td>Set-up of work area(s), containments</td>
<td></td>
</tr>
<tr>
<td>Abatement</td>
<td></td>
</tr>
<tr>
<td>Final Cleaning</td>
<td></td>
</tr>
<tr>
<td>Visual Inspection</td>
<td></td>
</tr>
<tr>
<td>Final Clearance (visual and air sampling)</td>
<td></td>
</tr>
<tr>
<td>Teardown</td>
<td></td>
</tr>
<tr>
<td>Demobilization</td>
<td></td>
</tr>
</tbody>
</table>

IV. Equipment and Materials
List all equipment and materials to be used, such as the following:

- HEPA Vacuums
- Scrapers
- Power saws
- Pry bars
- Cutting shears
- Other hand tools
- Encapsulants/sealants
- Gloves
- Respiratory protection
- Fall Protection
- Gas/Diesel Powered Equipment

    Negative air filtration units
    Manometers
    Shower facilities
    Airless sprayers/compressors
    Cleaning detergents
    Solvents (must be approved by District)
    Roller/brushes
    Disposable coveralls
    Eye & foot protection
    Scaffolds/Ladders

V. Crew
List all workers and supervisors with emergency contact names and phone numbers.

**Clearly identify the supervisor and competent person who have authority for all safety and health.**

VI. Control Measures and Work Practices

*Describe in a narrative format specific work procedures, exposure/contamination controls, and engineering controls. This description should include, but not be limited to, the following:*

- OSHA Class I, II, III and IV work
- Negative pressure enclosure
- Respiratory protection
- Mini-containments
- List other procedures
- Wet methods
- Glovebag removal
- HEPA vacuums
- Solvent removal of mastic

VII. Respiratory Protection and Protective Clothing/Personal Protective Equipment

*List all respiratory protection including types and manufacturers which are anticipated for this project. Identify the phases of the project for which respirators will be required or likely to be required. List all personal protective equipment anticipated to be used on the project.*

VIII. Decontamination/Hygiene Facilities

*Identify the types and locations of decontamination or hygiene facilities to be used on this project. Specify use of disposable towels, soap, hot and cold water, and other supplies. Specify the required use of the facilities, including use of the facilities prior to eating, drinking, smoking and before leaving the project site. Describe handling or treatment of asbestos-contaminated solid waste and wastewater.*

IX. Air Monitoring Data

*Identify general worker air monitoring protocols to be followed on this project, including worker category classifications, frequency of monitoring, anticipated laboratory to be used for analysis, pump calibration techniques, etc. Identify the competent person responsible for conducting personal air monitoring and proposed consultant if air sampling requirements are not meet from two consecutive shifts.*

X. Containment Diagram

*Include a diagram (hand written is acceptable) of the containment(s) showing the containment perimeter in relation to the surrounding areas, locations of negative air machines and exhaust locations, direction of airflow, and decontamination areas.*

XI. Waste
Describe how all waste on this project will be packaged, labeled, stored, transported, manifested and disposed.

XII. Preparation of Asbestos Abatement Work Plan

Date Prepared and Prepared By (signature, name and title)
MEETING MINUTES

PROJECT NAME: Gym Annex Elevator
Contra Costa College

DISTRICT PROJECT NUMBER: C-526

DSA #: 01-113694

Meeting: MANDATORY C-526 GYM ANNEX ELEVATOR PRE-BID MEETING
Date: April 16, 2014
Time: 10:00 am
Location: Contra Costa College
Building and Grounds Department Conference Room
2600 Mission Bell Drive, San Pablo, CA

I. INTRODUCTIONS AND SIGN IN
   • Introduction of Project Team Members in Attendance:
     Ron Johnson  Construction Management Services, Critical Solutions, Inc.
     John Leary  Construction Management Services, Critical Solutions, Inc.
     Jovan Esprit  Contracts Manager, Contra Costa Community College District
     Bruce King  Buildings & Grounds Manager, Contra Costa College
     Ken Pilgrim  Abatement – RGA Environmental
   • Self-introduction of potential bidders.
   • Sign-in sheet was circulated, and collected by Jovan Esprit. It will be posted to the District’s webpage by the end of the day.

II. WELCOME AND INTRODUCTORY REMARKS
   • Ron Johnson
     a. Important Note: An on-site job walk/field presentation follows the meeting. Attendance at this pre-bid meeting and job walk is mandatory. At completion of the field presentation, attendees must obtain a Certification of Site Visit (Section 00450), signed by the District. This completed and signed form must be submitted with bid.

III. PROJECT DESCRIPTION
   • Ron Johnson
     a. Project involves adding an exterior modular elevator to the Gym Annex building. Included will be abatement, demolition, structural, electrical, and architectural finishes, along with ADA work on the existing pathway leading up to the building.
   • Ken Pilgrim
     a. Job will require abatement of some hazardous materials.
     b. Scope if fairly limited:
        1. Interior walls – paint and coating on concrete walls contain ACMs and lead materials.
        2. As-needed removal of asbestos skim coat.
     c. Review carefully the 2 hazmat specification sections.

IV. PROJECT WORK RESTRICTIONS (SEE SECTION 01140)
   • Ron Johnson
a. Building will be occupied by students and faculty during construction.
b. Public Safety is vitally important at all times.
c. Careful coordination will be needed in order to maintain fire/life safety system.
d. Partitions to be erected to mitigate noise and dust.
e. A very limited staging area is available.
f. Bidders are encouraged to carefully review Division 0 & 1, specifically Section 01140, Work Restrictions.

V. BID PHASE COMMUNICATIONS & CORRESPONDENCE:
• Jovan Esprit
  a. All project-related questions/RFIs must be submitted in writing (email is preferable) to:
     Jovan Esprit, Contracts Manager
     Contra Costa Community College District
     500 Court St., Martinez, CA 94553
     Email: jesprit@4cd.edu
     Facsimile: 925-370-6517
  b. Deadline for receipt of RFIs is April 23, 2014, prior to 5:00pm.
• Ron Johnson
  a. Review drawings and specifications early, and send in RFIs as soon as possible.
  b. RFIs submitted after April 23, 2014; will not receive a response.

VI. ADDENDA UPDATE:
• Ron Johnson
  a. Addendum 1 is currently in progress.

VII. BID PHASE SCHEDULE MILESTONES
• Last day for RFI: Wednesday, April 23, 2014, prior to 5:00 pm
• Last Addendum Issued: Wednesday, April 30, 2014
• Bid Opening: Wednesday, May 7, 2014, prior to 2:00 pm
• Award of Contract: Thursday, May 29, 2014
• Notice to Proceed June 2, 2014 (approximate)

VIII. BID OPENING:
• Jovan Esprit
  a. Bids will be received at the Contra Costa Community College District Office (not the location of today’s meeting) at 500 Court St, Martinez, CA by Wednesday, May 7, 2014, prior to 2:00 PM.
  b. Jovan will be on hand at the reception counter in the building lobby, starting at 1:00pm, to receive and time-stamp all bids.
  c. Any bid received after the bid opening time will be rejected.

IX. BID PACKAGE:
• Jovan Esprit
  a. Review your bid package carefully before submitting it. Be sure to include all required documentation:
     1. Completed Bid Proposal Form (Section 00300), to include bidder’s name and signature.
     2. An active CLSB license number, as required in the bid documents.
     3. Acknowledgement of any addenda issued.
     4. Listing of actively-licensed subcontractors, including license numbers.
5. Bid Bond – 10% of bid Amount.
6. Statement of Bidder’s Qualifications (Section 00400), signed by an authorized officer of the Bidder.
7. Non-Collusion Affidavit, fully executed.
8. Completed and signed Certification of Site Visit (Section 00450).
9. Other documents as required by the Contract Documents.

X. CONTRACT DURATION
- Ron Johnson
  a. Review carefully, Section 00600, Construction Agreement.
  b. 150 Calendar Days to Substantial Completion (SC).
  c. 45 Calendar Days between SC and Final Completion.
  d. Take note of Liquidated Damages.

XI. SUBSTITUTION REQUESTS
- Ron Johnson
  a. Must comply with Contract Documents.
  b. See Section 00700, General Conditions, Article 3.11.1 for more information.

XII. SITE JOB WALK/ FIELD PRESENTATION
- Ron Johnson
  a. General location of new elevator identified on outside of building.
  b. Existing double-door to be changed to a single door.
  c. Saw cutting of concrete will be needed.
  d. Walkway adjacent to entrance will have to be re-worked to meet ADA requirements.
  e. Staging area – revised fencing plan will provide more staging room than is currently indicated on the original plans.
  f. No exterior abatement necessary – all abatement, ACM and lead based paint is on the interior walls.
  g. Parking will be allowed along the fence adjacent to the track/field, where labeled “STAFF”, during normal work hours, but not during off-hours, weekends.
  h. Handball Court #3 space will be made available to the Contractor for storage. Area has no roof. Contractor should be mindful of securing their property.
  i. See Section 001500, for availability of power and water.
  j. Since building will be occupied throughout construction, Contractor is required to construct a floor-to-ceiling partition on first floor. The floor-to-ceiling partition/dust barrier on the second floor shall allow for a 44” access to the top of the stairs.
  k. Any partitions on the stairways shall be constructed in a manner to eliminate dust from occupied areas and not create a safety hazard to people using the stairway.
  l. Blue metal bench, inside building near front door on first floor, will be removed by Campus prior to construction.
  m. Brown metal bench, on exterior of building in the planned construction work area, will be removed by Campus prior to construction.
  n. Power exists in the wall adjacent to the new elevator; existing signs accessibility controls, and emergency lighting fixtures to be salvaged and re-installed.
  o. Saw cutting and demo can be performed during regular work hours.
  p. Flooring and ceiling areas inside the dust partitions adjacent to walls to be demolished will need to be removed and replaced.
  q. Handrails on stairs to be removed, and replaced with new wrap-around handrails; patching and painting will be needed.
• Ken Pilgrim
  a. Interior walls – abatement will be necessary.
  b. Second-floor – carpet is directly on concrete.
  c. Assume the drywall in the Electrical Room contains some asbestos – Ken will verify and add to addendum.

• Bruce King
  a. Temporary power will be available via the Electrical Room – See Section 01500.
  b. Access was provided to the Electrical Room to inspect panels, and determine options for routing of conduit. Core drilling will be necessary.