

# **ANCHORAGE PIONEER HOME**

## **Dish Room Remodel**

**923 West 11<sup>th</sup> Avenue  
Anchorage, Alaska 99501**

## **SPECIFICATIONS**

**January 31, 2024**

**ANCHORAGE PIONEER HOME BUILDING**  
**Dish Room Remodel**

**January 31, 2024**

**SPECIFICATIONS INDEX**

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## PART 1 - GENERAL

### 1.1 WORK COVERED BY CONTRACT DOCUMENTS

- A. Work covered by the contract documents is located on the fifth floor of the Anchorage Pioneer Home.
- B. The DEPARTMENT is acting for the State of Alaska.
- C. The work in this project includes renovation and remodel of the existing Dish Washing area in the Anchorage Pioneer Home. The project is located on the 5<sup>th</sup> floor of the five-story building and will be implemented while the Home and the kitchen fully occupied and operational. Provisions will be made and schedule/phases have been considered in these documents for the continuation of washing dishes for the facility while the project is underway. It is a contract requirement that the CONTRACTOR has a functional 3-compartment sink in place and fully operational before the existing dishwasher is decommissioned and taken out of service.
- D. The work effort includes removal of existing wall finishes, inspection and replacement of gypsum board from the east wall of the room and the walls of the cart washing room. The removal and replacement of the finish flooring throughout the Dish Room. The work also includes the removal of the existing dish washing equipment and replacement with a new machine and associated mechanical and plumbing support. Two hand wash sinks are being retained and existing wall FRP is to remain except where specifically noted for replacement. Where specifically noted, new wall protection to be provided. It is expected that when the finish flooring is removed there will be some damage to the built-up fill that provides the floor slopes to drains. Patching and repair of the flooring sub-straight is a required part of the project.
  - 1. There is one Additive Alternate that requires the replacement of the finish floor in the Storage Room. Base bid leaves the existing storage room flooring and FRP in place.

### 1.2 CONTRACT METHOD

- A. Construct the Work under a single lump sum contract.

### 1.3 BASIC BID

- A. That portion of the Work described within these documents (taken as a whole) as the Basic Bid scope, as well as one additive alternate. Basic Bid work includes all work shown on the plans and specifications.
- B. Project will be constructed under a general construction contract.

### 1.4 WORKS BY OTHERS

- A. Cooperate with other Contractors and the DEPARTMENT to minimize conflict with construction operation.

### 1.5 HAZARDOUS MATERIALS

- A. All light fixtures to be removed shall be treated as positive for containing PCBs unless proven otherwise.
- B. CONTRACTOR to be aware that other hazardous materials have been identified within the facility.

### 1.6 WORK INSIDE FACILITY

- A. There may be required work through the fifth floor slab into the fourth floor. Every effort shall be taken to avoid that from happening, but it may be necessary. In the event fourth floor work is required, comply with the following requirements. Work within the fifth floor shall remain contained with all openings between the CONTRACTOR'S work area and the operating Pioneer Home secured. Once a fourth floor guest room has been released for CONTRACTOR activity, every effort is encouraged to expedite completion.

- B. CONTRACTOR shall not under any circumstances leave tools or equipment unattended while working on the fourth floor unless secured in a guest room or a locked tool storage box. CONTRACTOR will be liable for any damages to persons and/or property resulting from unattended tools or equipment.
- C. No firearms or ammunition allowed on the grounds, to include locked vehicles.
- D. The use of powder-actuated tools must be approved by the project manager. Request for such tools must be submitted to the Maintenance Supervisor in writing three (3) working days in advance.

1.7 SHUTOFFS / DISRUPTIONS TO SERVICE

- A. Work with the Maintenance Supervisor to schedule disruption for a time, which minimizes impact on facility operations. Provide the Home written notification of any disruption to service at least 24 hours in advance of scheduled disruption or shutoff.
- B. Plan work to minimize down time. Work with DEPARTMENT to schedule disruption for a time that minimizes impact on residents' daily schedule.
- C. Provide written work plan and schedule for disruptions to service that exceed one hour.
- D. Contractor must provide protection as stated in Municipal Fire Codes and Safety Codes while working on the fire protection system.

1.8 CONTRACTOR'S USE OF PREMISES

- A. Coordinate use of the premises under direction of DEPARTMENT.
- B. Assume full responsibility for protection and safekeeping of products under this Contract.
- C. Assume full responsibility for the protection of the existing facility and contents, from damage due to construction operations.

1.9 USING AGENCY OCCUPANCY

- A. The Pioneer Home will continue operations during entire construction period. Cooperate with the Home in scheduling operations to minimize conflict and to facilitate the residents' daily schedules.
- B. CONTRACTOR shall provide Material Safety Data Sheets for all products that may produce unpleasant odors.

1.10 COORDINATION

- A. Coordinate Work of the various elements of the plans to assure efficient and orderly sequence of installation of construction elements, with provisions for accommodating items installed later.
- B. In finished areas except as otherwise shown, conceal pipes, ducts, and wiring in the construction.
- C. Execute cutting and patching to integrate elements of Work, provide openings for penetrations of existing surfaces. Seal penetrations through floors, walls, partitions, and ceilings.

1.11 PARKING / STAGING

- A. CONTRACTOR to coordinate staging area with Facility Maintenance Supervisor.
- B. CONTRACTOR may use established facility parking.
- C. CONTRACTOR will be responsible for all additional required storage/staging and parking off site at no charge to the Department.

PART 2 - PRODUCTS NOT USED

PART 3 - EXECUTION NOT USED

END OF SECTION

## PART 1 - GENERAL

### 1.1 SUMMARY:

- A. Related sections:
  - 1. Section 02 26 00 Hazardous Materials Assessment
  - 2. Section 02 41 19 Selective Demolition
  - 3. Section 02 82 33 Removal and Disposal of Asbestos Containing Materials
  - 4. Section 02 83 33 Removal and Disposal of Materials Containing Lead
  - 5. Section 02 84 18 Removal and Disposal of Chemical Hazards
- B. Notification of Potential Hazards: Asbestos, lead and other potentially hazardous materials are present in the building that may impact the work of all trades. Regulated air contaminants, including asbestos and lead, are also present in settled and concealed dust in and on architectural, structural, mechanical and electrical components or systems throughout the building. All trades shall coordinate with other trades and conduct their work to prevent worker exposure or site contamination. Refer to Specification Divisions 0, 1 and 2 for specific information concerning disturbing, removing and disposing of these materials and the installation of new materials or components. This notification is provided in accordance with EPA and OSHA requirements.

### 1.2 DEFINITIONS:

- A. "Airborne Contaminants" are those contaminants listed in 29 CFR 1926.55 and 8 AAC 61.1100 that have the potential to become airborne due to various work activities being performed by the Contractor. Additionally, airborne contaminants include those fumes and odors that may be objectionable to personnel in Occupied Areas of the facility even though they are not listed in the reference regulations. Airborne contaminants may be broadly categorized as Pre-Existing or Activity Generated. Contaminant producing activities include, but are not limited to:
  - 1. Demolition, removal, installation and disposal of walls, floors, ceilings, steel, and other architectural or structural materials.
  - 2. Disturbance or removal of existing settled and concealed dusts.
  - 3. Demolition, relocation, installation and disposal of plumbing, mechanical and electrical systems and equipment.
  - 4. Finish operations such as sanding, preparation, painting, and application of special surface coatings.
  - 5. Any construction activity, which can generate aerosols, dust, smoke, or fumes.
  - 6. Temporary heat sources.
  - 7. Other on-site work operations not described above.
- B. "Pre-Existing Contaminants" are those contaminants that are present in the facility prior to the start of any work. These contaminants, including asbestos and lead, assumed to be present in settled and concealed dust throughout the building in areas not subject to routine cleaning, including the roof and inside and on top of architectural, mechanical, electrical and structural elements. The dust generally contains several common components including, but not limited to asbestos, cellulose, cotton, fiberglass, lead, silica and other Particulates Not Otherwise Regulated. Representative dusts throughout the facility have been examined by an EPA Certified Building Inspector and determined not to be "asbestos debris" from adjacent "Asbestos-Containing Building Materials" (ACBM). Based on similar sampling from similar buildings, the inspector also determined that the dusts are unlikely to contain more than one percent (1%) asbestos by weight, and therefore are not an asbestos-containing material (ACM). Reference 40 CFR 763.83 for asbestos, and 29 CFR 1926.1153 for silica. Refer to Section 02 26 00, Hazardous Materials Assessment. Dust and debris related to adjacent damaged asbestos containing materials are addressed in Section 02 82 33, Removal and Disposal of Asbestos Containing Materials.

- C. "Activity Generated Contaminants" are those contaminants generated by the various demolition or construction related activities of the Contractor. Examples of typical Activity Generated Contaminants include wood dust (cellulose), cement dust (silica), gypsum dust (particulates not otherwise regulated), paint fumes, and welding fumes. A complete list of regulated air contaminants is available in 29 CFR 1926.55 and 8 AAC 61.1100.
- D. "Work Areas": Areas of demolition, renovation, construction, adjacent staging and storage areas, and passage areas for workers, supplies, and waste. This may include but is not limited to attic spaces, spaces above ceilings, crawl spaces, mechanical and electrical spaces, confined spaces and other spaces not normally accessed or occupied.
- E. "Occupied Areas": Areas as determined by Owner's Representative and as shown on contract drawings. Typically these include areas adjacent to Work Areas or containment areas, either occupied or used for passage, as well as areas connected to construction area by mechanical system air intake, exhaust, and ductwork. Contaminant control procedures may be relaxed during periods when the building is not occupied as allowed by the Contractor's approved work plan.
- F. "Critical Clean Areas": Areas inside or outside the Work Area with equipment or occupants that cannot tolerate airborne contamination, and are to be maintained under positive pressure by High-Efficiency, Particulate, Air (HEPA) filtered equipment relative to the surrounding air. These areas will be described or shown in contract documents or drawings.
- G. "Contractor" is defined to include all trades and all subcontractors performing work on the work site.
- H. "Negative Initial Determination" is a determination made either through air monitoring or other objective data that indicates worker exposure to regulated airborne contaminants are below or expected to be below the regulated limits.

### 1.3 AIRBORNE CONTAMINANT CONTROL

- A. There is no requirement to remove Pre-Existing Contaminants from the facility. The Contractor may remove Pre-Existing Contaminants from their work areas if they determine that to be a more cost effective means of completing the work.
- B. The Contractors shall establish and maintain control over the generation and containment of all potential airborne contaminants so that workers, facilities, staff, programs, equipment, and operations are not adversely affected, including adverse affects on air monitoring. Construction activities that disturb existing materials or create airborne contaminants must be conducted in Work Areas specifically constructed, ventilated, and/or equipped to prevent the movement of contaminants into Occupied or Critical Clean Areas.
- C. The Contractor shall establish and maintain control over Activity Generated Contaminants within the Work Area to prevent abnormally high levels of airborne contaminants from settling on architectural, mechanical, electrical or structural components within the work areas, or interference with monitoring conducted for other work. The Contractor shall be required to clean all surfaces within a work area where abnormally high levels of Activity Generated Contaminants are deposited.
- D. The Contractor shall ensure that all workers are aware of the Occupied and Critical Clean Areas, the potential air contaminants present and the means and methods established in the work plan to control those contaminants.
- E. The Contractor shall ensure workers have the proper protective equipment needed for the job being performed.

### 1.4 TRAINING

- A. The Contractor shall ensure that all workers/trades performing work on the project site are trained in accordance with OSHA standards for hazard communication (29 CFR 1910.1200) and proper protective equipment (29 CFR 1926), as well as engineering controls and work methods required to prevent exposure to regulated air contaminants that might be generated or encountered as a results of their work, including 29 CFR 1926.1153.

1.5 RESPONSIBILITY:

- A. Owner's Responsibilities
  - 1. The Owner shall identify in contract documents Occupied Areas and Critical Clean Areas prior to allowing the Contractor to begin work. The Contractor shall be notified of all changes to these areas as work progresses.
- B. Contractor's Responsibilities:
  - 1. Preparing proposed work plans and procedures for control of airborne contaminants during demolition and construction.
  - 2. Identifying and implementing specific means and methods of achieving and maintaining control of airborne contaminants.
  - 3. Controlling the generation and spread of airborne contaminants from the Contractor's Work Areas.
  - 4. Cleaning and decontaminating all areas contaminated as the result of their operation. The Owner has the right to review and approve of any and all clean-up and decontamination procedures, chemicals, and processes.
  - 5. Notifying Owner's Representative a minimum of 48 hours prior to starting construction activities that might be expected to produce excess levels of airborne contaminants in Work Area so that precautions may be taken.

1.6 SUBMITTALS:

- A. Submittals Required: Submit the following documentation to the Owner for approval. The submittal shall be coordinated with all the Contractor's subcontractors and trades and be submitted as one submittal for all work covered by this section. WORK SHALL NOT PROCEED UNTIL THE SUBMITTAL PACKAGE IS APPROVED, AND THE PRE-CONSTRUCTION MEETING HAS BEEN HELD.
  - 1. Shop Drawings: Make all shop drawings accurately and to a scale sufficiently large to show all pertinent features of the work. Shop Drawings shall show:
    - a. Boundaries of each Work Area, Occupied Areas and Critical Clean Areas.
    - b. Location of barriers, negative pressure areas, positive pressure areas, and exhaust fan units (if required).
    - c. Locations of windows, louvers, ducts and other penetrations into Occupied Areas and/or Critical Clean Areas that need to be protected from airborne contamination.
    - d. Disposal Routes.
    - e. Locations of contaminant producing operations like painting or sanding which could be moved away from Occupied Areas.
  - 2. Work Plan: The Work Plan shall be prepared for this specific job in the form of checklists and shall include:
    - a. Work area set-up and protection procedures during occupied times.
    - b. Work area set-up and protection procedures during periods of limited occupancy (vacation and holidays).
    - c. Work procedures to minimize generation of airborne contaminants, including a written exposure control plan.
    - d. Worker protection procedures.
    - e. Daily cleanup procedures and activities.

- f. Procedures to follow if air contaminants enter Occupied or Critical Clean Areas.
    - g. Exposure assessment procedures if a "negative initial determination" has not been completed (note that negative initial determinations are not allowed related to silica exposure). A record of "negative initial determinations" shall be maintained by the Contractor and be available on the job site for review by the Owner or regulatory agencies.
  - 3. Safety Data Sheets (SDSs): The Contractor shall maintain on the job site, at a location approved by the owner, SDSs for each encapsulant, surfactant, solvent, detergent, and other material proposed to be used.
- B. Monitoring Results: The Contractor shall submit copies of all air monitoring and testing results to the Owner within 24 hours of receipt of results.

#### 1.7 WORKER PROTECTION:

- A. The Contractor shall review the SDS's for the substances that will be used, data provided by these specifications, proposed means and methods, manufacturers data and other available data to determine the potential for worker exposure.
- B. Conduct air monitoring of worker exposures as necessary to show that workers are not being exposed above the permissible exposure limits established by 29 CFR 1926 and 8 AAC 61.1100 (negative initial determination). Not all contaminants or substances will require exposure monitoring. All sampling by the Contractor shall be at their own cost.
- C. In lieu of worker exposure monitoring, the Contractor may rely on objective data from recognized trade groups, manufacturer or previous exposure monitoring data that establish that worker exposure above the permissible exposure limits is not probable under conditions "closely resembling" the processes, types of materials, control methods, work practices and environmental conditions in the current job.

PART 2 - PRODUCTS                      Not Used

#### PART 3 - EXECUTION

##### 3.1 WORK PRACTICES:

- A. General: All construction/demolition work shall be isolated, either by enclosures, and/or work practices and equipment to prevent worker exposures above the permissible exposure limit(s), and prevent the migration of contaminants (dust, fumes, smoke, etc.) into Occupied Areas and Critical Clean Areas of the facility. Exposures to occupants shall be maintained at least 10 times lower than the permissible exposure limit(s) for airborne contaminants. Conduct disturbance of concrete, brick, stone, mortar, etc. in accordance with 29 CFR 1926.1153 related to crystalline silica. If the Contractor's work practices are not effective in controlling airborne contaminants, as evidenced by dust, fumes, smoke, odors, etc. in Occupied or Critical Clean Areas, the Contractor shall provide a sealed barrier at the perimeter of the work area and exhaust the work area to maintain a negative pressure and/or provide a filtered positive pressure to Critical Clean and Occupied areas to keep airborne contaminants out. Maintain a positive pressure of 0.05 inches of water column relative to the air outside the Critical Clean Areas, with a minimum 100 feet per minute velocity through cracks, openings, etc.
- B. Direct exhaust from fume or smoke producing equipment away from building air intakes, windows and other penetrations into Occupied and Critical Clean Areas.



- C. The Contractor shall provide "walk-off" mats, at all connections between Work Areas and Occupied Areas, vacuumed or changed daily when there is traffic between the Work Area and the Occupied Areas.
- D. Enclosures, where used, shall be dust tight and withstand air pressure.
- E. Prohibited Materials: The use or application of the following materials is prohibited:
  - 1. All cleaners and aerosol products not submitted and approved by the Owner.
  - 2. All flammable or chlorinated hydrocarbon solvents, unless approved by the Owner.
- F. Any dust or debris tracked outside of Work Areas into Occupied Areas shall be cleaned up immediately. Contractor shall have the necessary manpower and equipment (dust and wet mops, HEPA vacuums, buckets and clean wiping rags) to keep adjacent Occupied Areas clean at all times.
- G. Dry Sweeping is prohibited. All vacuums used for cleaning shall be equipped with HEPA filters.
- H. Traffic between Work Areas and Occupied Areas shall be kept to a minimum. Keep doors between such areas closed at all times. Transport refuse through Occupied Areas in covered containers.
- I. Notify the Owner's Representative immediately of any release of airborne contaminants into Occupied Areas.

### 3.2 ENFORCEMENT:

- A. The Contractor shall periodically inspect Occupied Areas at the perimeter of the work area and Critical Clean Areas to verify that airborne contaminants have not spread into those areas.
- B. Failure to properly maintain airborne contaminant control in Work Areas, Occupied or Critical Clean Areas will result in issuance of a written warning. If the problem is not corrected immediately, the Owner will have cause to stop work.
- C. Failure of the Contractor to correct deficiencies in controlling airborne contaminants will result in corrective action taken by the Owner and deduction of all costs from the Contract.

### 3.3 WORK STOPPAGE:

- A. The Contractor shall stop work and notify the Owner whenever their work has caused visible dust, smoke, fumes or objectionable odors in Occupied or Critical Clean Areas.
- B. When such work stoppage occurs, the area shall be restored to its original condition by the Contractor at no expense to the Owner. The Contractor is responsible for removing dust, fumes and debris that were generated as a result of their work.

### 3.4 WORK COMPLETION:

- A. Provide thorough cleaning of finished surfaces that become exposed to dust or other airborne contaminants. Cleaning of Pre-Existing contaminants is not required.
- B. Removal of construction barriers and airborne contaminant control equipment shall be performed in a manner to minimize disturbance of airborne contaminants into occupied spaces. HEPA vacuum and clean all finished surfaces free of dust after the removal of barriers and equipment.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. The Hazardous Materials Assessment for the proposed construction is included with these Contract Documents.

1.2 USE OF INFORMATION

- A. The Hazardous Materials Assessment is provided for the Contractor's information and use in the planning and performance of work in areas containing hazardous or potentially hazardous materials as outlined in Paragraph 1.3.
  - 1. The information provided in the Hazardous Materials Assessment is based on samples collected in various locations of the building. Thus, the Owner and/or its Representative cannot guarantee or warrant that actual conditions encountered might not vary from the information presented in these reports.
  - 2. The data reported in the Hazardous Materials Assessment is accurate to the best of the Owner's and it's Representative's knowledge. The requirements contained in these specifications and in the relevant state and federal regulations pertaining to the performance of work in areas containing hazardous or potentially hazardous materials provide guidance for the contractor for performance of work in these areas. The Owner and its Representative disclaim all responsibility for the Contractor's erroneous conclusions regarding the information presented in these reports; the requirements contained in these specifications; and the requirements of applicable state and federal regulations pertaining to performance of work in these areas.
  - 3. The Contractor shall be responsible for obtaining additional information if Contractor deems it necessary to carry out the work.
- B. It is highly recommended that the contractor visit the site to acquaint themselves with existing conditions.
- C. Attached Hazardous Materials Assessment

1.3 HAZARDOUS MATERIALS NOTIFICATION:

- A. Notification of Potential Hazards: Asbestos, lead and other potentially hazardous materials are present in the building that may impact the work of all trades. Regulated air contaminants, including asbestos and lead, are also present in settled and concealed dust in and on architectural, structural, mechanical and electrical components or systems throughout the building. All trades shall coordinate with other trades and conduct their work to prevent worker exposure or site contamination. Refer to Specification Divisions 0, 1 and 2 for specific information concerning disturbing, removing and disposing of these materials and the installation of new materials or components. This notification is provided in accordance with EPA and OSHA requirements.

PART 2 - PRODUCTS  
Not Used

PART 3 - EXECUTION  
Not Used

# HAZARDOUS MATERIALS ASSESSMENT

**ANCHORAGE PIONEER HOME  
DISH ROOM REMODEL**

**ANCHORAGE, ALASKA**

**Surveyed  
August 28 & 31, 2020  
September 30, 2020  
March 6, 2023  
April 26, 2023**

**Report Date  
January 31, 2024**

**EHS, ALASKA, INC.**  
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**HAZARDOUS MATERIALS ASSESSMENT**  
**ANCHORAGE PIONEER HOME – DISH ROOM REMODEL**

**ANCHORAGE, ALASKA**

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## HAZARDOUS MATERIALS ASSESSMENT ANCHORAGE PIONEER HOME – DISH ROOM REMODEL ANCHORAGE, ALASKA

### OVERVIEW

Part of the 5th Floor of the Anchorage Pioneer Home, located in Anchorage, Alaska, was surveyed for the presence of asbestos-containing materials (ACM), and other potentially hazardous materials as a part of the design services for the Anchorage Pioneer Home – Dish Room Remodel Project at the facility for the Anchorage Pioneer Home. The survey also provided a “good faith” inspection for hazardous materials that may be disturbed during the construction. The proposed work includes the disturbance, demolition, removal and disposal of lead-containing paints and/or lead-containing materials that is incidental to the renovation and remodeling project. Due to the similar construction, this report also includes sample data from the 4th floor renovation project from 2020, and the 3rd floor renovation project from 2023. Mr. Robert French, P.E. of EHS-Alaska, Inc. (EHS-Alaska) conducted the inspection in April 2023. Mr. Brandon W. Hill, and Mr. Robert A. French, P.E. conducted the previous inspections in January 2023, August 2020 and September 2020.

### A. GENERALIZED REQUIREMENTS FOR HAZARDOUS MATERIALS

Potentially hazardous materials have been identified in the 5th Floor work areas that will be affected by the proposed renovations. Those materials include asbestos, lead, polychlorinated bi-phenyls (PCBs), mercury, and radioactive materials. Not all materials were tested for potentially hazardous components, other potentially hazardous materials, including those exterior to the building, such as contamination from underground fuel tanks may be present, but are not part of this report.

Buildings or portions of buildings that were constructed prior to 1978 which are residences, or contain day care facilities, kindergarten classes or other activities frequently visited by children under 6 years of age are classified as *child occupied facilities*. All work classified as “renovations” or disturbing more than 6 square feet of lead-based painted surfaces per room for interior activities or more than 20 square feet for exterior activities in child occupied facilities must comply with the requirements of 40 CFR 745. This building is not classified as a *child occupied facility* and therefore the requirements of 40 CFR 745 are not applicable.

Only the materials that will be directly affected by this project are required to be removed. The quantities and types of materials are incorporated into the design documents for this renovation. The removal and disposal of potentially hazardous materials are highly regulated, and it is anticipated that removal and disposal of asbestos, lead and chemical hazards will be conducted by a subcontractor to the general contractor who is qualified for such removal. It is anticipated that the general contractor and other trades will be able to conduct their work using engineering controls and work practices to control worker exposure and to keep airborne contaminants out of occupied areas of the building. Refer to Section 01 35 45, Airborne Contaminant Control.

Settled and concealed dusts in areas not subject to routine cleaning are present throughout the building, including the roof, and inside and on top of architectural, mechanical, electrical, and structural elements, and those dusts are assumed to contain regulated air contaminants. This should not be read to imply that there is an existing hazard to building occupants (normal occupants of the building as opposed to construction workers working in the affected areas). However, depending on the specific work items involved and on the means and methods employed when working in the affected areas, construction workers could be exposed to regulated air contaminants from those dusts in excess of the OSHA Permissible Exposure Limits (PELs).

The settled and concealed dusts were examined by an EPA Certified Building Inspector but were not sampled. The inspector determined that the dusts are not “asbestos debris” from an asbestos-containing building material (ACBM). Based on similar sampling from similar buildings, the inspector also determined that the dusts are unlikely to contain more than one percent (1%) asbestos by weight, and therefore are not an asbestos-containing material (ACM). Reference 40 CFR 763.83.

NOTE: Asbestos-containing debris was noted from damaged gypsum wall board systems in the rooms, wall chases and above the suspended ceiling system, and it is likely that those dusts and debris may contain more than one percent (1%) asbestos by weight, and therefore would be classified as an asbestos-containing material (ACM). Reference 40 CFR 763.83.

"Awareness training" (typically 2 hours) and possibly respiratory protection will be required for all Contractor Personnel who will be disturbing the dusts. The extent of the training and protective measures will depend upon the airborne concentrations measured during air monitoring of the contractors work force, which depends on the means and methods employed to control the dusts. The air monitoring may be discontinued following a "negative exposure assessment" showing that worker exposures are below the OSHA permissible exposure limits for the type of work and means and methods employed. Previous air monitoring from similar jobs with similar conditions may be used as historical data to establish a "negative exposure assessment".

## **B. BUILDING DESCRIPTION**

Anchorage Pioneer Home was built in 2 phases, starting in 1974, with drawings for Phase II issued in 1975. There were subtle differences in materials and typical guest room layouts between the two phases, but both were designed by the same Architect. The Pioneer Home had a 3 story addition to the North in the mid 1980's (not investigated by this survey) and various upgrades and repairs through the years. This survey only covered in detail the portion of the 5th floor which is scheduled for the major part of the planned renovation. Other portions on the lower floors which have minor work scheduled for piping installation were assumed to have similar materials likely to be affected by this project.

The Kitchen and Dish Room area was constructed during both Phase I and Phase II, and shared many of the materials with the finishes on the other, guest room floors. The entire Kitchen and Dish Room areas that are part of this project were originally finished with an asbestos-containing sheet vinyl floor, and gypsum wall board with asbestos-containing joint compound. Many finishes were replaced by a Kitchen and Dish Room renovation in 2002, and it is assumed that remnants of the asbestos-containing backing of the sheet vinyl flooring exist underneath the newer non-asbestos flooring. Similarly, the original gypsum wall board with asbestos-containing joint compound is assumed to be present in original locations, but typically covered with an additional layer of non-asbestos gypsum wall board.

The interior partitions were a mixture of gypsum wall board and brick. The guest rooms were built in pairs that share a common bathroom. The walls between the pairs, and the corridor walls were typically of brick, with other walls being of gypsum wall board. The gypsum wallboard was covered with "Marlite", a pre-finished pressed hardboard at the "wet side" of the bathrooms, which was typically covered with a Fiber Reinforced Plastic (FRP) paneling around the tub and toilet areas at an unknown later date.

Much of the structure was of poured in place concrete columns and beams with pre-cast, post tensioned concrete floor/ceiling panels. The roofs were typically of pre-cast, post tensioned concrete angled roof panels. The exterior was typically of brick, with "window curtain wall systems" that included cement asbestos board insulated panels below and between the windows.

Corridor and guest room ceilings in the original construction were typically the exposed pre-cast concrete floor/ceiling panels. Corridor & guest room ceilings in the Phase II addition were typically of 2' x 2' lay-in acoustic ceiling tiles in the guest rooms and 2' x 4' acoustic ceiling tiles in the corridors. Bathrooms and storerooms, etc., had gypsum wallboard ceilings with asbestos-containing joint compound.

Guest bedrooms of the 4th floor, underneath the Kitchen and Dish Room area were renovated in 2022, but some asbestos-containing materials remain in those areas which were not affected by the renovation. Refer to the discussions of the asbestos-containing materials in Part D below. Floor finishes were mainly of carpet in the guest rooms and corridors. The asbestos-containing sheet vinyl remains in the Men's and Women's Restrooms, Janitor Room, Laundry Room and Clean Room.

The building was heated by a hydronic heating system combined with fin-tube heaters and various fan coil units supplying ventilation and heating. The heating and domestic water piping was typically insulated with fiberglass, with "hard and chalky" insulation on valves and fittings which was found to not contain asbestos.

Similarly, the roof drain piping had “hard and chalky” insulation at the elbows and joints which was found to not contain asbestos.

## **C. SAMPLING AND ANALYSIS**

### **1. Asbestos-Containing Materials**

The survey included sampling of suspect ACM materials that had not been sampled in prior asbestos surveys, or samples of materials where previous sampling had been inconsistent. Previous sampling of some materials was conducted, but without complete information on the material descriptions or locations. Refer to data from the Anchorage Pioneer Home offices for information on previous sampling which is not included in this report. Additional testing of materials pertinent to the project was conducted and is included in this report.

The samples were analyzed for the presence of asbestos by polarized light microscopy (PLM), the method of analysis recommended by the U.S. Environmental Protection Agency (EPA) to determine the composition of suspected asbestos-containing materials (EPA method 600/M4-82-020). Only materials containing more than 1% total asbestos were classified as “asbestos-containing” based on EPA and the Occupational Safety and Health Administration (OSHA) criteria. Samples that were analyzed to have less than 10% asbestos were “point-counted” by the laboratory for more accuracy. Samples that are listed as having a “Trace by Point Count” had asbestos fibers found in the material, but the fibers were not present at the counting grids. Table 1 in Part D below contains a summary list of the asbestos bulk samples and the applicable results.

The Bulk Asbestos samples were analyzed for asbestos content by International Asbestos Testing Laboratories (IATL), Mt. Laurel, New Jersey, a National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory.

EPA regulations under 40 CFR 763 requires the use of Polarized Light Microscopy (PLM) to determine whether or not a material contains asbestos. While PLM analysis does a good job for most materials, it does have some limitations, both in the size of the fibers that are visible under a standard optical microscope, and because the organic matrix that the fibers are bound within can obscure the fibers. At the discretion of the building inspector and the client, some types of samples may be analyzed or re-analyzed by what is called TEM NOB, or Transmission Electron Microscopy for Non-Friable Organically Bound materials. TEM NOB is the definitive method for determining if asbestos is present, but TEM NOB use is not required by the EPA. TEM NOB analysis was not done for this project.

Field survey data sheets and laboratory reports of the bulk samples are included in Appendix A. Drawings showing sample locations are included as Appendix C.

### **2. Lead-Containing Materials**

Nearly all surfaces in the building were coated with paint and most surfaces had been repainted. EHS-Alaska tested representative paints throughout the affected areas of the building using a Heuresis Pb200i X-Ray Fluorescence (XRF) lead paint analyzer (Serial # 1770 with software version 4.0-21). The lead testing conducted was not a Lead-Based Paint Inspection or Screening as defined by HUD or EPA regulations, but was done to test surfaces that may be representative of those likely to be affected by this project. If surfaces and materials other than those tested are identified, the Contractor shall test and treat appropriately. Refer to the Lead Analyzer Test Results Table in Appendix B that identifies the surfaces tested, and the results. The Lead Test Locations are shown in Appendix C.

EPA and the Department of Housing and Urban Development (HUD) have defined lead-based paint as any paint or other surface coating that contains lead equal to or in excess of 1.0 milligram per square centimeter (mg/cm<sup>2</sup>) or 0.5 percent by weight. XRF results are classified as positive (lead is present at 1.0 mg/cm<sup>2</sup> or greater), negative (less than 1.0 mg/cm<sup>2</sup> of lead was present) or inconclusive (the XRF could not make a conclusive positive or negative determination). Tests that were invalid due to operator error are shown as void tests.

A Performance Characteristic Sheet (PCS) for the Heuresis Pb200i is available upon request. This PCS data provides supplemental information to be used in conjunction with Chapter 7 of the "HUD Guidelines". Performance parameters provided in the PCS are applicable when operating the instrument using the manufacturer's instructions and the procedures described in Chapter 7 of the "HUD Guidelines". The instrument was operated in accordance with manufacturer's instructions and Chapter 7 of the HUD Guidelines. No substrate correction is required for this instrument. There is no inconclusive classification for this instrument when using the 1.0 mg/cm<sup>2</sup> threshold.

## D. SURVEY RESULTS

### 1. Asbestos-Containing Materials

The following Table 1A lists the samples taken in April 2023 in the Dish Room area of the 5th Floor, and the results of the laboratory analysis. Asbestos field survey data sheets and laboratory reports are included as Appendix A. Refer to Appendix C for sample locations.

**TABLE 1A**

<b>SAMPLE NUMBER</b>	<b>MATERIAL</b>	<b>LOCATION</b>	<b>ASBESTOS CONTENT</b>
PH 423-A01	White sealant, between duct and GWB	East wall of Dishwasher Room, center of the furred out wall. Photo 36	None Detected
PH 423-A02	Cream mastic to FRP with Joint compound, maybe some GWB	East wall of Dishwasher Room, north end of the furred out wall. Photo 37	None Detected, Both Layers
PH 423-A03	Gray, non-skid welded floor, cream mastic, with joint compound and maybe GWB	East wall of Dishwasher Room, north end of the furred out wall at the self coving. Photo 38	None Detected Three Layers
PH 423-A04	Gray, non-skid welded floor, clear-ish contact cement, with brick	North wall of Dishwasher corridor, opposite cart wash. Photo 42	None Detected Three Layers
PH 423-A05	Off-white FRP with Cream mastic & GWB	Southeast corner of Dishwasher room, under sheet metal plate cover of water booster heater exhaust. Photo 50 & 51	None Detected Three Layers
PH 423-A06	Gypsum wall board and Joint compound	At top of external corner of cart wash room, Unknown date. Photo 52	None Detected, Both Layers
PH 423-A07	Gray, non-skid welded floor, cream mastic, with joint compound and GWB	Added wall in clean dish area, strange alcove. Photo 68-71	None Detected Three Layers
PH 423-A08	Hard fitting insulation on roof drain pipe	Above wash sink in Kitchen, Photo 75	None Detected
PH 423-A09	Gypsum wall board, marlite and cream mastic	Kitchen southwest alcove at enclosure around roof drain drop. Photo 87 & 88	None Detected, Four Layers
PH 423-A10	Joint compound, with marlite mastic.	Kitchen southwest alcove at enclosure around roof drain drop. Photo 87 & 88	None Detected, Both Layers
PH 423-A11	2 layers of FRP with cream and darker brown mastics	Kitchen at east wall under wash sink. Photo 91 & 92	None Detected Three Layers
PH 423-A12	Joint compound and cream FRP mastic	Added wall of Storage Room, in Kitchen. Photo 93	None Detected, Both Layers



<b>SAMPLE NUMBER</b>	<b>MATERIAL</b>	<b>LOCATION</b>	<b>ASBESTOS CONTENT</b>
PH 423-A13	Cream FRP mastic, try to ignore the dirt	At base of column enclosure in Storage Room. Photo 105 & 106	None Detected
PH 423-A14	Joint compound	At bottom of beam in Dishwasher corridor. On metal corner bead. Photo 108	None Detected
PH 423-A15	Joint compound and gypsum wall board	At ceiling of cart wash room. Photo 109	None Detected Three Layers
The testing method used (polarized light microscopy [PLM]) is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation should be made by quantitative transmission electron microscopy (TEM).			

The following Table 1B lists the samples taken in January 2023 in the guest rooms of the 3rd floor, and the results of the laboratory analysis. Note, some of these materials may have been removed by the previous project, but are included here to illustrate similar materials from the eras of construction. Asbestos field survey data sheets and laboratory reports are included as Appendix A. Refer to Appendix C for sample locations.

**TABLE 1B**

<b>SAMPLE NUMBER</b>	<b>MATERIAL</b>	<b>LOCATION</b>	<b>ASBESTOS CONTENT</b>
PH123-A01	Gypsum wall board, joint compound, and white sealant	3rd Floor, Room 310, at outlet on common wall. Photo 23 to 25	None Detected, three layers
PH123-A02	LCT-1, 2' x 2' drop edge ceiling tile with 1.5" directional fissures, & 1/16" random holes.	3rd Floor, Room 308, at soffit by wall. Photo 49 & 50.	None Detected
<b>PH123-A03</b>	<b>Gray-green ceiling grid "L" channel Mastic.</b>	<b>3rd Floor, Room 308, at soffit by wall. Photo 50 &amp; 51</b>	<b>1.2% chrysotile</b>
PH123-A04	4" tan cove base with cream cove base mastic.	3rd Floor, Room 308, on Brick wall. Photo 53	None Detected both layers
PH123-A05	Yellow carpet mastic	3rd Floor, Room 308, in closet. Photo 54	None Detected
PH123-A06	Gypsum wall board, joint compound,	3rd Floor, Room 307 at outlet. Photo 62	None Detected both layers
PH123-A07	4" green cove base with tan and brown cove base mastic. Some gypsum board	3rd Floor, Room 306, at removed cove by entry. Photo 73 & 78	None Detected four layers
PH123-A08	Joint compound and tape.	3rd Floor, Room 306, at removed tape by corner near windows. Photo 87	None Detected
PH123-A09	LCT-2. 2' x 2' drop edge ceiling tile with fewer 1" minus directional fissures with random 1/32" holes.	3rd Floor, Room 305, in bedroom area. Photo 97	None Detected
PH123-A10	LCT-3. 2' x 2' drop edge ceiling tile with no fissures, 1/32" to 1/4" random rough edge holes.	3rd Floor, Room 304, at added soffit. Photo 104 & 106	None Detected

<b>SAMPLE NUMBER</b>	<b>MATERIAL</b>	<b>LOCATION</b>	<b>ASBESTOS CONTENT</b>
PH123-A11	LCT-2. 2' x 2' drop edge ceiling tile with fewer 1" minus directional fissures with random 1/32" holes.	3rd Floor, Room 302, in bedroom area. Photo 115	None Detected
PH123-A12	Cream, self coving, fused seam vinyl flooring, no backing, sticky clear mastic, brown remnant mastic & joint compound.	3rd Floor, Room 338 bathing suite. Behind doorway. Photo 149	None Detected four layers
PH123-A13	LCT-4. 2' x 2' drop edge ceiling tile with sandy texture. No holes or fissures	3rd Floor, Room 338 bathing suite. In Bath area. Photo 150	None Detected
PH123-A14	Joint compound from bathroom remodel (lab called it grout)	3rd Floor, Room 337.1 Bath. At J box in Ceramic tile wainscot. Photo 151	None Detected
PH123-A15	Brown epoxy grit floor	3rd Floor, Room 337.1 Bath. Behind door. Photo 152	None Detected
PH123-A16	Heavy thick Texture and paint from bathroom remodel (lab indicated that the layers were not separable)	3rd Floor, Room 337.1 Bath. At wall above exhaust grille. Photo 153	None Detected
PH123-A17	Hard Fitting insulation	3rd Floor, Room 338 bathing suite. Through hole in wall under sink to chase. Photo 154	None Detected
PH123-A18	Lighter texture and gypsum wall board	3rd Floor, Room 338 bathing suite. At hole in wall under sink to chase. Photo 154	None Detected both layers
PH123-A19	Lighter texture and gypsum wall board	3rd Floor, Room 338 bathing suite. At J box in main bath area. Photo 158	None Detected both layers
PH123-A20	4" black cove base with cream and brown mastic. GWB Paper	3rd Floor, Room 337, behind door where cove base removed. Photo 166	None Detected four layers
PH123-A21	LCT-1, 2' x 2' drop edge ceiling tile with 1.5" directional fissures, & 1/16" random holes.	3rd Floor, Room 337, at main room. Photo 165	None Detected
<b>PH123-A22</b>	<b>Cream 1/4" chip sheet vinyl with tan mastic, stuck to black rubber transition strip.</b>	<b>3rd Floor, Room 336.1 Bath, at threshold. Photo 176</b>	<b>20% chrysotile in SV, None in black rubber, 1.1% chrysotile in mastic</b>
PH123-A23	Black paint or black mastic	3rd Floor, Room 336, under carpet at threshold. Photo 176	None Detected
PH123-A24	Greenish sacking on concrete	3rd Floor, Room 336 at column in closet. Photo 177	None Detected
<b>PH123-A25</b>	<b>Marlite and tan mastic.</b>	<b>3rd Floor, Room 336.1 at J box near toilet. Photo 178</b>	<b>1.3% chrysotile in mastic, None in Marlite</b>

<b>SAMPLE NUMBER</b>	<b>MATERIAL</b>	<b>LOCATION</b>	<b>ASBESTOS CONTENT</b>
PH123-A26	Black sink undercoating	3rd Floor, Room 349. At stainless steel sink. Photo 185	1.4% chrysotile
PH123-A27	Silver coated heat shield at light	3rd Floor, Room 332.1 At light in bathroom. Photo 204	30% chrysotile
PH123-A28	Joint compound	3rd Floor, Room 332.1 At J Box for light switch. Photo 205	1.2% chrysotile
PH123-A29	Marlite and tan mastic. Lab also analyzed gypsum wall board	3rd Floor, Room 332.1 at J box near toilet. Photo 178	None Detected, three layers
PH123-A30	White paint and patch or sacking on concrete (lab indicated that the layers were not separable)	3rd Floor, Room 327 at column in closet. Photo 216	None Detected
PH123-A31	Yellow carpet mastic	3rd Floor, Room 348 at center of main floor. Carpet removed. Photo 227	None Detected
PH123-A32	LCT-5. 2' x 2' flat ceiling tile with random 3/8" and smaller fissures in circular "Galaxy" pattern	3rd Floor, Room 348 in entry hall. Photo 228	None Detected
PH123-A33	LCT-2. 2' x 2' drop edge ceiling tile with fewer 1" minus directional fissures with random 1/32" holes.	3rd Floor, Room 348 in entry hall. Photo 228	None Detected
PH123-A34	Brown epoxy grit floor	3rd Floor, Room 323.1 Bath, behind door. Photo 247	None Detected
PH123-A35	Lighter texture and gypsum wall board	3rd Floor, Room 324 bathing suite, at Light switch in hallway. Photo 248	None Detected both layers
PH123-A36	Lighter texture and gypsum wall board	3rd Floor, Room 324 bathing suite. At J box in main room. Photo 250	None Detected both layers
PH123-A37	LCT-4. 2' x 2' drop edge ceiling tile with sandy texture. No holes or fissures	3rd Floor, Room 324 bathing suite. In Hall area. Photo 251	None Detected
PH123-A38	Cream, self coving, fused seam vinyl flooring, no backing, sticky clear mastic, brown remnant mastic	3rd Floor, Room 324 bathing suite. Behind door. Photo 249	None Detected, three layers
PH123-A39	LCT-2. 2' x 2' drop edge ceiling tile with fewer 1" minus directional fissures with random 1/32" holes.	3rd Floor, Room 349 in entry hall. Photo 314	None Detected
The testing method used (polarized light microscopy [PLM]) is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation should be made by quantitative transmission electron microscopy (TEM).			

The following Table 1C lists the samples taken in August 2020, and the results of the laboratory analysis. Note, some of these materials may have been removed by the previous project, but are included here to illustrate similar materials from the eras of construction. Asbestos field survey data sheets and laboratory reports are included as Appendix A. Refer to Appendix C for sample locations.

**TABLE 1C**

<b>SAMPLE NUMBER</b>	<b>MATERIAL</b>	<b>LOCATION</b>	<b>ASBESTOS CONTENT</b>
<b>PH820-A01</b>	<b>Cement Board sandwich panel</b>	<b>Orig. Rm 410, under window, behind the fin tube enclosure. Photos 167-169</b>	<b>2.6% chrysotile, 1.4% crocidolite</b>
PH820-A02	Joint compound	Orig. Rm 410, At edge of hallway to room. Previous damage. Photo 170	None Detected
PH820-A03	Joint compound, white and brown cove base mastics	Orig. Rm 410, at corner of wall between bathroom and sink area. Photo 171 & 172	None Detected both layers
PH820-A04	Hard Fitting Insulation	Orig. Rm 409.1, inside Sink Chase. Photo 174	None Detected
PH820-A05	Glob smeared on wall stud. Likely Joint compound, possibly HF insul.	Orig. Rm 409.1, inside Sink Chase. Photo 174	None Detected
PH820-A06	Yellow and green carpet mastic	Orig. Rm 410, near closet & dividing wall, Photo 175	None Detected
PH820-A07	Hard Fitting Insulation	Orig. Rm 409.1, in Tub Chase. Photo 189 & 190	None Detected
PH820-A08	Light yellow Marlite Mastic & white faced Marlite	Orig. Rm 409.1, at Tub Wall. Photo 191	None Detected both layers
PH820-A09	Gypsum wall board	Orig. Rm 409.1, at Tub Wall. Photo 192	None Detected
<b>PH820-A10</b>	<b>SV-1 Sheet Vinyl. 3/8" Cream, gray &amp; tan chip SV, with tan mastic &amp; gb paper</b>	<b>Orig. Rm 409.1, at Tub Wall. Photo 191 &amp; 192</b>	<b>60% chrysotile, None Detected in mastic or brown paper</b>
PH820-A11	Paint with possible sacking, on concrete ceiling above drop ceiling.	Orig. Rm 410, Just inside entrance to bedroom. Photo 193	None Detected
<b>PH820-A12</b>	<b>Tan ceiling grid mastic</b>	<b>Orig. Rm 410, West wall by closet. Photo 194 &amp; 195</b>	<b>1.2% chrysotile</b>
<b>PH820-A13</b>	<b>Asbestos Heat shield in original incandescent light fixture</b>	<b>Orig. Rm 409, in Bedroom Portion. Wires assumed to have ACM insul. Photo 203</b>	<b>80% chrysotile</b>
PH820-A14	LCT-1, 2x2 Galaxy Pattern lay in ceiling tile	Orig. Rm 410, in Bedroom. Photo 207	None Detected
PH820-A15	LCT-2, 2x2 drop beveled edge Galaxy pattern lay-in ceiling tile	Orig. Rm 409.1, at ceiling of bathroom. Photo 208	None Detected
PH820-A16	LCT-3, 2x2 drop beveled edge medium directional fissures with 1/16" holes. Appears to be oldest ceiling tile.	Orig. Rm 409.1, at ceiling of bathroom. Photo 208 & 209	None Detected

<b>SAMPLE NUMBER</b>	<b>MATERIAL</b>	<b>LOCATION</b>	<b>ASBESTOS CONTENT</b>
PH820-A17	LCT-3, 2x2 drop beveled edge medium directional fissures with 1/16" holes. Appears to be oldest ceiling tile.	Orig. Rm 409, at ceiling of Bedroom. Photo 210	None Detected
<b>PH820-A18</b>	<b>Dark Gray-Green ceiling grid mastic</b>	<b>Ph. 2. Rm 407, West wall. Photo 232</b>	<b>1.4% chrysotile</b>
<b>PH820-A19</b>	<b>Brown Mirror Mastic and gb paper</b>	<b>Ph. 2. Rm 407, at sink area. Photo 233</b>	<b>1.8% chrysotile</b>
<b>PH820-A20</b>	<b>Tan "liquid nails" type adhesive at Metal Trim at ceiling on concrete</b>	<b>Ph. 2. Rm 407, near window in Alcove. Photo 235</b>	<b>1.2% chrysotile</b>
PH820-A21	Cream colored, soft sealant at top of gyp bd joint to concrete ceiling	Ph. 2. Rm 407, west wall of Bedroom. Photo 236	None Detected
<b>PH820-A22</b>	<b>Light brown mastic between Marlite and Green board GWB</b>	<b>Ph. 2. Rm 407.1. At Tub/toilet wall. Photo 237</b>	<b>1.8% chrysotile</b>
PH820-A23	Joint compound and green board GWB	Ph. 2. Rm 407.1. At Tub/toilet wall. Photo 238	None Detected both layers
PH820-A24	Hard fitting insulation	Ph. 2. Rm 407.1. In Sink Chase. Photo 240	None Detected
PH820-A25	Likely hard fitting insulation glob on floor of chase.	Ph. 2. Rm 407.1. In Tub/toilet wall. Photo 243	None Detected
PH820-A26	Gray-greenish sacking on concrete column	Ph. 2. Rm 407, Column in Closet. Photo 247	None Detected
PH820-A27	Gray-greenish sacking on concrete column	Ph. 2. Rm 436, Column in Closet. Photo 264	None Detected
PH820-A28	Hard fitting insulation	Ph. 2. Rm 436.1, In Tub chase. Loose on floor of chase. Photo 168	None Detected
<b>PH820-A29</b>	<b>Light brown mastic between Marlite and Green board GWB</b>	<b>Ph. 2. Rm 436.1, At Tub/toilet wall. Photo 270</b>	<b>1.8% chrysotile</b>
PH820-A30	Green Board GWB	Ph. 2. Rm 436.1, At Tub/toilet wall. Photo 269	None Detected
<b>PH820-A31</b>	<b>Black Sink Undercoating</b>	<b>Ph. 2. Rm 449. At stainless steel sink in Office. Photo 293</b>	<b>1.6% chrysotile</b>
PH820-A32	LCT-3, 2x2 drop beveled edge medium directional fissures with 1/16" holes. Appears to be oldest ceiling tile.	Ph. 2. Rm 449. At window alcove in Office. Photo 299	None Detected
PH820-A33	Hard fitting insulation	Ph. 2. Rm 449. On piping above window alcove in Office. Photo 290	None Detected
<b>PH820-A34</b>	<b>Dark Gray ceiling grid mastic</b>	<b>Ph. 2. Rm 449. On east wall in window alcove in Office. Photo 297</b>	<b>1.6% chrysotile</b>

<b>SAMPLE NUMBER</b>	<b>MATERIAL</b>	<b>LOCATION</b>	<b>ASBESTOS CONTENT</b>
PH820-A35	Probably newer joint compound	Ph. 2. Rm 449. On what appears to be an added gwb on ext wall in window alcove in Office. Photo 298	None Detected
<b>PH820-A36</b>	<b>Probably older joint compound</b>	<b>Ph. 2. Rm 449. below added gwb on ext wall near window alcove in Office. Photo 300 &amp; 302</b>	None Detected, 1st analysis, <b>1.4% chrysotile in re-analysis</b>
<b>PH820-A37</b>	<b>Asbestos wire insulation</b>	<b>Ph. 2. Rm 449. At recessed ceiling spotlight. Photo 303 &amp; 304</b>	<b>80% chrysotile</b>
PH820-A38	LCT-4 2x2 drop bevel, fewer directional fissures, less 1/16" holes	Ph. 2. Rm 449. At room ceiling. Photo 305	None Detected
PH820-A39	Newer GWB & JC inside added closet	Ph. 2. Hallway outside Rm 449. In corner of wall. Photo 307	None Detected both layers
PH820-A40	LCT-5 2x4 Galaxy pattern, typical new ceiling throughout corridor	Orig area. Corridor 461. Near double doors to Lounge 456. Photo 309	None Detected
PH820-A41	Ceramic fiber heat shield	Ph. 2. Rm 406. At newer surface mtd light. Photo 319, 320, 321	None Detected both layers
PH820-A42	Gypsum wall board and Joint Compound	Ph. 2. Rm 406. Inside corner of Closet. Photo 322	None Detected both layers
PH820-A43	Tan carpet mastic	Ph. 2. Rm 404. Inside Closet. Photo 343	None Detected
PH820-A44	Light tan and dark brown cove base mastics	Ph. 2. Rm 404. Inside Closet. Photo 344	None Detected both layers
<b>PH820-A45</b>	<b>Light brown mastic between Marlite and Green board GWB</b>	<b>Ph. 2. Rm 403.1, At Tub/toilet wall. Photo BH01</b>	<b>2.2% chrysotile in mastic, None Detected in GWB</b>
<b>PH820-A46</b>	<b>Dark Gray ceiling grid mastic</b>	<b>Ph. 2. Rm 401. At exterior wall by windows. Photo BH02</b>	<b>1.4% chrysotile</b>
PH820-A47	Probably newer joint compound	Ph. 2. Rm 401. On what appears to be an added gwb on ext wall in window alcove in Office. Photo BH04	None Detected
PH820-A48	Probably old joint compound	Ph 2, Corridor 457, at fire hose cabinet hole. Photo 396	None Detected
<b>PH820-A49</b>	<b>SV-2 Identical to SV-1, but in Ph 2. area. Sheet Vinyl. 3/8" Cream, gray &amp; tan chip SV, with dark tan mastic</b>	<b>Ph. 2, Rm 437.1 on floor by tub location. Photo BH05</b>	<b>60% chrysotile in vinyl, 1.2% chrysotile in yellow mastic</b>
PH820-A50	Brown cove base mastic	Orig. Rm 435. At GWB wing-wall by sink. Photo 424	None Detected
<b>PH820-A51</b>	<b>SV-1 Sheet Vinyl. 3/8" Cream, gray &amp; tan chip SV, with tan mastic</b>	<b>Orig. Rm 434.1. At wall by toilet location. Photo BH006</b>	<b>60% chrysotile in vinyl, 1.2% chrysotile in yellow mastic</b>

<b>SAMPLE NUMBER</b>	<b>MATERIAL</b>	<b>LOCATION</b>	<b>ASBESTOS CONTENT</b>
<b>PH820-A52</b>	<b>Joint compound</b>	<b>Orig. Rm 431. At wing wall of closet. Photo BH07</b>	None Detected, 1st analysis, <b>1.4% chrysotile in re-analysis</b>
PH820-A53	Gypsum wall board	Orig. Rm 428. At wing wall of closet. Photo BH08	None Detected
<b>PH820-A54</b>	<b>Black Sink Undercoating</b>	<b>Ph. 2. Rm 448. At Office Sink. Photo BH09</b>	<b>2.2% chrysotile</b>
PH820-A55	Hard Fitting Insulation	Ph. 2, Rm 403. At holes cast into concrete beam for pipe passage. Photo 376	None Detected
The testing method used (polarized light microscopy [PLM]) is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation should be made by quantitative transmission electron microscopy (TEM).			

Table 1D includes samples taken in June 2020, by Absolute Environmental on the 4th floor, and the results of the laboratory analysis. Asbestos field survey data sheets and laboratory reports are included in Appendix A, note there were discrepancies in room numbers, these numbers match the numbers used in other sets of samples. There were no detailed descriptions or sample locations provided for these samples.

**TABLE 1D**

<b>SAMPLE NUMBER</b>	<b>MATERIAL</b>	<b>LOCATION</b>	<b>ASBESTOS CONTENT</b>
<b>2020010-01</b>	<b>Joint Compound</b>	<b>Room 408</b>	<b>3% chrysotile in 1 layer, ND in other</b>
<b>2020010-02</b>	<b>Vinyl Sheeting</b>	<b>Bathroom, Room 408</b>	<b>20% chrysotile, ND in mastic</b>
2020010-03	Drop in ceiling tile	Ceiling Room 408	None Detected
2020010-04	Joint Compound	Room 407	None Detected
2020010-05	Drop in ceiling tile	Ceiling Room 407	None Detected
2020010-06	Carpet Mastic	Room 407	None Detected
2020010-07	Cove base mastic and joint compound	Room 407	None Detected both layers
2020010-08	Cove base mastic	Room 407	None Detected
2020010-09	Carpet Mastic	Room 402	None Detected
<b>2020010-10</b>	<b>Vinyl Sheeting</b>	<b>Room 402</b>	<b>20% chrysotile, ND in mastic</b>
The following samples were also taken by the contractor, and were verbally described, but no field data sheets, lab reports or locations were provided.			
<b>Not known</b>	<b>"wall covering mastic"</b>	<b>Bathroom to 407 &amp; 408</b>	<b>4% (assumed to be chrysotile)</b>
Not known	"joint compound"	Bathroom to 407 & 408	"negative"
The testing method used (polarized light microscopy [PLM]) is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation should be made by quantitative transmission electron microscopy (TEM).			

Table 1E includes the results of the laboratory analysis of additional samples taken because of the discrepancies between the samples taken by EHS-Alaska, and by Absolute Environmental and highly suspect materials, like joint compound and "hard fitting" insulation. Note, some of these materials may

have been removed by the previous project, but are included here to illustrate similar materials from the eras of construction. Asbestos field survey data sheets and laboratory reports are included in Appendix A. Refer to Appendix C for sample locations.

**TABLE 1E**

<b>SAMPLE NUMBER</b>	<b>MATERIAL</b>	<b>LOCATION</b>	<b>ASBESTOS CONTENT</b>
<b>APH920-A01</b>	<b>Gypsum wall board &amp; joint compound</b>	<b>Phase I, Restroom 409.1 at corner by door. Photo 2</b>	None Detected in GWB, <b>1.7% chrysotile in JC</b>
APH920-A02	Gypsum wall board & joint compound	Phase I, Guest Rm. 409 at corner in closet. Photo 3	None Detected in GWB, <b>2.3% chrysotile in JC</b>
<b>APH920-A03</b>	<b>Gypsum wall board &amp; joint compound</b>	<b>Phase II, Guest Rm. 408, directly adjacent to Absolute's sample 1 at corner by sinks. Photo 4 &amp; 5</b>	None Detected in GWB, <b>1.8% chrysotile in JC</b>
APH920-A04	Joint compound	Phase II, Guest Rm. 407, corner of outside wall. Photo 7 & 8	None Detected
<b>APH920-A05</b>	<b>Gypsum wall board &amp; joint compound</b>	<b>Phase II, Guest Rm. 406, at corner by sinks. Photo 9</b>	None Detected in GWB, <b>1.4% chrysotile in JC</b>
APH920-A06	"Green board" Gypsum wall board & joint compound	Phase II, Restroom 405.1 at corner by door. Photo 10 & 11	None Detected both layers
APH920-A07	"Green board" Gypsum wall board & joint compound	Phase II, Restroom 402.1 at corner by door. Photo 12	None Detected both layers
<b>APH920-A08</b>	<b>Joint compound</b>	<b>Phase II, Guest Rm. 4039, outside corner by sink. Photo 13 &amp; 14</b>	<b>1.6% chrysotile in JC</b>
APH920-A09	"Green board" Gypsum wall board & joint compound	Phase II, Restroom 437.1 at corner by door. Photo 15	None Detected both layers
<b>APH920-A10</b>	<b>Gypsum wall board &amp; joint compound</b>	<b>Phase I, Guest Rm. 434 at corner in closet. Photo 16</b>	None Detected in GWB, <b>2.2% chrysotile in one layer of JC, 2.4 % in 2nd</b>
APH920-A11	Hard fitting insulation on domestic water	Phase I, Guest Room 435, through access panel. Photo 18	None Detected
APH920-A12	Hard fitting insulation on domestic water	Phase II, in Chase of Restroom 437.1, through fire extinguisher panel. Photo 19	None Detected
APH920-A13	Hard fitting. Probably domestic water	Phase II, Guest Room 439. Above ceiling. Photo 20	None Detected
APH920-A14	Hard fitting. Probably domestic water	Phase II, Lounge 458. Above ceiling. Photo 21 & 22	None Detected
APH920-A15	Hard fitting. Probably domestic water	Phase II, Guest Room 404. Above ceiling near Restroom. Photo 23	None Detected
APH920-A16	Hard fitting on Roof Drain	Phase II, Guest Room 404. Above ceiling near Window. Photo 24	None Detected
APH920-A17	Hard fitting. Probably hot water	Phase II, Guest Room 406. Above ceiling near Restroom. Photo 24	None Detected
APH920-A18	Hard fitting. Probably domestic water	Phase II, Lounge 456. Above ceiling near Center. Photo 25	None Detected



<b>SAMPLE NUMBER</b>	<b>MATERIAL</b>	<b>LOCATION</b>	<b>ASBESTOS CONTENT</b>
APH920-A19	Hard fitting. Probably domestic water	Phase II, Lounge 454. Above ceiling near Center. Photo 26	None Detected
APH920-A20	Hard fitting. Probably domestic water	Phase II, Corridor 452. Above ceiling near Door to 424. Photo 27	None Detected
The testing method used (polarized light microscopy [PLM]) is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation should be made by quantitative transmission electron microscopy (TEM).			

The April 2023 survey was limited to the direct areas likely to be affected by the Dish Room project, and did not include destructive testing of the flooring or wall systems, due to not wanting to cause water damage during continued operations. The Dish Room area has been previously remodeled, and this project has assumed that at least some of the original asbestos-containing materials are present, and concealed by more recently installed materials.

The following materials have been found to contain asbestos in this or previous surveys, or were assumed to contain asbestos, AND are in the area of the Dish Room Remodel, but not all of these materials are scheduled to be disturbed by this project.

1. Joint compound in gypsum wallboard systems on the ceilings and walls of Phase I and Phase II (confirmed ACM), but concealed beneath newer materials.
2. Sheet vinyl flooring and contaminated mastics underneath and concealed by newer sheet flooring, and floor sloping grouts (assumed asbestos, based on original sheet vinyl flooring of both Phase I and Phase II containing asbestos).
3. Cement asbestos board (CAB) "Glasweld" insulated infill panels at exterior windows of Phase I (confirmed asbestos), and Phase II (assumed asbestos).
4. Light brown mastic holding "Marlite" to gypsum wall board in Phase II (confirmed asbestos).
5. Door, window and penetration sealants and window glazing compounds (suspect, assumed asbestos).

The following materials have been found to contain asbestos in this or previous surveys, or were assumed to contain asbestos, but are unlikely to be disturbed by the Dish Room Remodel project.

6. Tan ceiling grid mastic holding perimeter "L" channels to walls of Phase I (confirmed asbestos).
7. Gray-green ceiling grid mastic holding perimeter "L" channels to walls of Phase II (confirmed asbestos).
8. Light tan "Liquid Nails" type mastic found at sheet metal trim at ceiling in Phase II (confirmed asbestos).
9. Sheet vinyl flooring and mastics in Guest Bathrooms (confirmed asbestos) and in other "wet" areas, including Public Bathrooms, laundry, and janitor closets, etc. (assumed asbestos).
10. Brown mastic holding mirrors to wall in Phase II area (confirmed asbestos).
11. Incandescent light fixture heat shields at original incandescent lights (confirmed asbestos).
12. High temperature wiring insulation at original incandescent lights (confirmed ACM).
13. Black sprayed-on undercoating on stainless steel sinks, in Phase II (confirmed asbestos).
14. Flange gaskets and valve packings on piping (suspect, assumed asbestos).
15. Insulation to fire doors (suspect, assumed asbestos).
16. Exterior tarry damp-proofing (suspect, assumed asbestos).
17. Interior tarry damp-proofing at inside face of exterior concrete or brick walls (suspect, assumed asbestos).
18. Various roofing materials, and patching tars (suspect, assumed asbestos).
19. Sound dampening tars at older Roof mounted Exhaust fans (suspect, assumed asbestos).
20. Various other colors of undercoatings on stainless steel sinks (black undercoating confirmed ACM, other colors suspect, assumed asbestos).
21. Other flooring materials (vinyl floor tiles, rubber flooring, rubber stair treads and stringers, etc.) and their associated mastics (suspect, assumed asbestos).
22. Other miscellaneous construction mastics for trim, paneling, etc. (suspect, assumed asbestos).

The following materials have been found to be asbestos-free in this or previous surveys, but is not to be considered a complete list of asbestos-free materials.

- All 2' x 2' Ceiling tiles.
- All 2' x 4' Ceiling tiles.
- Hard and chalky insulation at pipe valves and fittings of Phase I and Phase II.

The effects of the above asbestos-containing materials on the proposed renovation are discussed below.

### **Joint Compound**

Joint compound on gypsum board walls, soffits and ceilings throughout the Phase I and Phase II areas were found to contain asbestos. No asbestos has been detected in the gypsum board. The walls which are in the location of the original walls from Phase I and Phase II that are in the Dish Room area are assumed to have the original finishes concealed beneath newer materials. Joint compound is assumed to be in good condition and is not considered friable unless damaged. The gypsum wall board with asbestos-containing joint compound will be partially removed by this project.

### **Sheet Vinyl Flooring**

The sheet vinyl flooring in the guest bathrooms in both the Phase I and Phase II portions of the building appeared to be the same, and both were found to contain asbestos. Similar, but different color sheet vinyl flooring in other "wet areas" in the building are assumed to be asbestos containing. Sheet vinyl flooring was called out to be present in both the Phase I and Phase II portions of the Dish Room area on the 5th floor, but the current flooring in the Dish Room and Kitchen areas were installed by a 2002 renovation project, which included a welded seam sheet flooring installed over grout, which sloped to the various floor drains and floor sinks in the area. Because asbestos in the original sheet vinyl flooring is present in the paper-like backing, and because that backing is often left behind when removed, this project assumes that there are remnants of the original asbestos-containing sheet vinyl backing underneath the sloped grout flooring, that will be removed to construct the new sloping floor to the new floor drain and floor sink locations.

### **Cement Asbestos Window Wall Panels**

Cement asbestos panel are present at the window walls in the building. These panels are made of two cement asbestos panel with insulation sandwiched in between panels. Panels are present above and below windows in both the Phase I and Phase II portion of the building. The Phase I portion had the inner cement asbestos panel exposed within the guest rooms, but it was covered with gypsum wall board in the Kitchen, Dish Room, and Phase II portion of the building. The cement asbestos panels are in good condition and are not friable in their present condition and are unlikely to be disturbed by this project.

### **Light brown "Marlite" Mastics**

A light brown troweled-on mastic in the Phase II portion holding "Marlite" to the walls of the guest bathrooms contained asbestos. Similar "Marlite" is likely to be present in other "wet areas", and is assumed to have been originally installed at the Dish Room. Similarly to the Gypsum Wall Board and joint compound discussion above, the "Marlite" mastics may be concealed underneath more recently installed finishes, and will be removed by this project as shown on the drawings.

### **Tan and Gray-green Ceiling grid Mastics**

Two colors of mastics used to secure the "L" channels to walls contained asbestos. Typically most ceiling grids were secured to walls primarily with nails or screws; however, two colors were found to be asbestos-containing. Mastics were in good condition and were not friable. No ceiling grid mastics were noted in the Kitchen or Dish Room area of this project, but are located at the 4th floor guest rooms below the Dish Room. The Contractor should be able to avoid disturbance of the "L" channel mastics during the waste piping renovation for this project.

### **Other Asbestos-containing materials.**

The other asbestos-containing materials listed above are located in different areas of the building, and are unlikely to be disturbed by this project, therefore they are not further discussed in this section, but are noted above as part of the hazards communication efforts for the project.

## **2. Asbestos in Dusts**

The settled and concealed dusts were examined by an EPA Certified Building Inspector but no samples for asbestos in dusts were authorized for this project. Based on their visual inspection and experience from similar buildings, the inspector determined that the typical settled and concealed dusts are not “asbestos debris” from an asbestos-containing building material (ACBM). Based on similar sampling from similar buildings, the inspector also determined that the dusts are unlikely to contain more than one percent (1%) asbestos by weight, and therefore are not an asbestos-containing material (ACM).

## **3. Lead-Containing Materials**

### **Lead-Testing**

EHS-Alaska tested paint and other materials throughout the affected areas of the building using a Heuresis XRF lead paint analyzer. Lead in paints tested varied from a trace amount to 0.4 mg/cm<sup>2</sup>. Lead in other materials tested varied from a trace amount to 8.9 mg/cm<sup>2</sup>. Refer to the Lead Analyzer Test Results Table in Appendix D that identifies the surfaces tested, and the results. The Lead Test Locations are shown in the Drawings in Appendix C.

### **Paints**

There were varying lead contents found in the paints, based on what surfaces they are on, with most surfaces containing little lead (but are still classified as lead-containing materials by OSHA). The highest levels of lead were found on walls and other painted surfaces, and lowest levels on pre-finished materials.

Lead based paints (paint containing more than 1.0 mg/cm<sup>2</sup> of lead) were not identified in the project on however, it is anticipated that other components which are hidden, concealed, or otherwise not tested may be painted with lead-based paint. Lead was detected at very low levels in most of the painted wall and ceiling surfaces. XRF testing is not able to “prove” that “no” lead exists in the paint. Low levels of lead found by XRF testing does not mean that the paints are free of lead, the paints may contain lead. However, these paints may not present a hazard to occupants or workers performing renovation or demolition if lead-safe work practices are followed.

### **Ceramic Wall Tile and Glazing**

Relatively high concentrations of lead were found in the glazing of the ceramic tiles at the Cart Wash alcove. The concentrations of lead in ceramic glazing compounds should not be compared to lead-based paint criteria, as the glazing is inherently less likely to cause lead to be present in dusts or on surfaces, where it can be ingested. Lead in ceramic tile glazing may not pose a hazard to occupants, or workers performing renovation or demolition if lead-safe work practices are followed. All ceramic tiles and fixtures in the facility should be assumed to contain lead.

### **Plastic Components**

Relatively high concentrations of lead were found in plastic components, such as “Formica” plastic laminate panels found in areas outside of the Dish Room. The concentrations of lead in plastic compounds should not be compared to lead-based paint criteria. Lead in plastic compounds may have surface deterioration and if not cleaned regularly, lead may be present in dusts or on surfaces, where it can be ingested. Lead in plastic compounds may not pose a hazard to occupants, or workers performing renovation or demolition if good work practices are followed.

### **Metallic Lead in Batteries, Pipe Solder and Flashing**

Metallic lead items identified in the building included lead solder at copper piping, and poured lead sealants at bell and spigot joints of waste and vent piping and lead acid batteries in emergency lights and other battery backup equipment. If removed during renovation or demolition they should be recycled or disposed of as hazardous waste.

### **Lead Dusts**

The settled and concealed dusts were examined but no samples for lead in dusts were authorized for this project. Based on their visual inspection and similar sampling from similar buildings, the inspector also determined that the dusts are likely to have measurable concentrations of lead in the dusts.

#### **4. PCB-Containing Materials**

##### **Light Ballasts**

Older fluorescent lights typically have PCB-containing ballasts. PCB-containing ballasts in fluorescent lights were banned in 1978, but manufacturers were allowed to use up existing stocks, and lights may have been reused from other facilities. The survey included examination of what were considered to be representative light fixtures, but not all fixtures were able to be accessed. All lights shall be inspected during removal or relocation. Unless ballasts were marked "No PCBs," they must be assumed to contain PCBs and must be disposed of as a hazardous waste when removed for disposal. Fluorescent light fixtures with PCB-containing ballasts were found in the work area. The fluorescent light fixtures will be replaced as shown on the drawings.

Older HID lights may have PCB-containing ballasts. Due to height restrictions and sealed ballast enclosures, the HID fixtures were not able to be accessed. All HID lights shall be inspected during removal or relocation. If ballasts are not marked "No PCBs," we suggest contacting the manufacturer of the lights to determine if the ballasts contain PCB's, or assume that they contain PCB's and be disposed of as a hazardous waste. The HID light fixtures are unlikely to be disturbed by this project.

##### **Bulk Products**

Some older paints, sealants and other building materials may contain measurable amounts of PCB's. PCB use in paints and sealants was supposed to have been discontinued in 1979. The EPA does not require the sampling of bulk products, and no sampling of "Bulk Products" were authorized for this project.

#### **5. Mercury-Containing Materials**

##### **Fluorescent Lamps**

Fluorescent lamps use mercury to excite the phosphor crystals that coat the inside of the lamp. These lamps contain from 15 to 48 milligrams of mercury depending on their age and manufacturer. Fluorescent light fixtures will be replaced as shown on the drawings.

##### **Thermostats**

Older thermostats or other electrical switches that may contain mercury were noted in the building.

##### **High Intensity Discharge Lamps**

High Intensity Discharge (HID) lamps use mercury and sodium vapors in the lamp, and also typically have lead-containing solders at the bases. These lamps contain varying amounts of mercury depending on their age and manufacturer. The HID light fixtures are unlikely to be disturbed by this project.

#### **6. Other Hazardous Materials**

##### **Smoke Detectors**

Several radioactive smoke detectors were found in the renovation area. No radioactive exit signs were found in the renovation area, but may be present in other areas of the building. If any radioactive items are removed by this project, they are required be disposed of as hazardous waste or recycled.

##### **Household Chemicals**

Common household chemicals, including quantities cleaners, disinfectants, floor or furniture wax, were present in the building. These loose containers were present in utility spaces, and will be relocated by the owner.

##### **Soil Contamination**

The scope of work for EHS-Alaska, Inc. did not include investigation of soils for petroleum or other contaminations.

##### **Refrigerants**

Refrigerators, ice machines, and water coolers were identified in the building that may contain ozone depleting refrigerants. Air conditioning units are also present. The equipment with refrigerants are not

scheduled for disturbance by this project. Ozone depleting substances (ODS) are regulated by the EPA and must be removed by certified technicians prior to equipment disposal.

### **Heat Transfer Fluids**

The existing heating and cooling system is assumed to contain heat transfer fluids, including glycol or other boiler treatment chemicals. Any heat transfer fluids removed from the heating system shall be recovered and properly disposed of or recycled. The heating system is unlikely to be disturbed by this project.

## **E. REGULATORY CONSTRAINTS**

### **1. Asbestos-Containing Materials**

The Federal Occupational Safety and Health Administration (29 CFR 1926.1101) and the State of Alaska Department of Labor (8 AAC 61) have promulgated regulations requiring testing for airborne asbestos fibers; setting allowable exposure limits for workers potentially exposed to airborne asbestos fibers; establishing contamination controls, work practices, and medical surveillance; and setting worker certification and protection requirements. These regulations apply to all workplace activities involving asbestos-containing materials.

The EPA regulations, issued as Title 40 of the Code of Federal Regulations, Part 61 (40 CFR 61) Subpart M under the National Emission Standards for Hazardous Air Pollutants (NESHAP) established procedures for handling ACM during asbestos removal and waste disposal. It is recommended that clearance sampling which complies with the EPA's Asbestos Hazard Emergency Response Act (AHERA) protocol be required following removal of asbestos-containing materials to document that the asbestos has been properly removed.

The EPA regulations require an owner (or the owner's contractor) to notify the EPA of asbestos removal operations and to establish responsibility for the removal, transportation, and disposal of asbestos-containing materials.

The disposal of asbestos waste is regulated by the EPA, the Alaska Department of Environmental Conservation, and the disposal site operator. Wastes being transported to the disposal site must be sealed in leak tight containers prior to disposal and must be accompanied by disposal permits and waste manifests.

### **2. Dusts with Asbestos**

Settled and concealed dusts above ceilings, and at other areas that are not routinely cleaned (such as inside ducts and at roofs, etc.) are assumed to have measurable concentrations of asbestos. Based on sampling of similar settled and concealed dusts at similar buildings, those dusts are assumed to contain less than 1 percent asbestos. Normal settled and concealed dusts are distinct and treated differently from debris resulting from damaged asbestos-containing materials.

Background levels of asbestos in dusts for a particular location will depend on many factors, including whether or not asbestos occurs naturally in soils in the area.

#### **Likely sources of asbestos in dusts include natural occurrences of asbestos**

The types of asbestos found in settled and concealed dusts often contain actinolite, anthophyllite and tremolite forms of asbestos which are not commonly found in bulk samples taken of materials from buildings. Those forms of asbestos may come from natural occurrences of asbestos in an outside source, such as rock or ore deposits, which appear to be common in the Anchorage area.

Because the type of disturbance, concentration of asbestos in the dusts, cohesiveness of the dusts and room sizes will change, the airborne asbestos levels expected during the project will depend on the contractor's means and methods of conducting the work. The mere presence of asbestos in the dusts does not necessarily imply that a "hazard" exists which would require the use of specially trained workers to "abate" the "hazard". All dusts will likely be required to be removed from the areas where asbestos-containing materials are being removed (abatement areas) in order to achieve clearances. The dusts in

the other areas are to be controlled so as to limit worker exposures and prevent contamination of occupied areas of the building.

There is no established correlation between settled or adhered dusts with measurable concentrations of asbestos and airborne concentrations. The definition in the OSHA regulations of asbestos-containing materials as those materials that contain 1 percent or more asbestos by weight, apply to cohesive materials and not to dusts. The OSHA regulations are essentially "performance based", if workers are exposed above the permissible exposure limits, then all of the requirements in the regulations become effective.

### **3. Lead-Containing Materials**

The EPA Standard 40 CFR 745, Lead-Based Paint Poisoning Prevention in Certain Residential Structures, defines lead-based paint hazards and regulates lead based paint activities in target housing and child-occupied facilities. The requirements of this regulation include training certification, pre-work notifications, work practice standards and record keeping. Areas typically classified as child occupied facilities may include but are not limited to: day care facilities, preschools, kindergarten classrooms, restrooms, multipurpose rooms, cafeterias, gyms, libraries and other areas routinely used by children under 6 years of age. Training requirements for Firms (Contractors) and Renovators (Workers) became effective on April 22, 2010. The building is not classified as a child occupied facility, therefore the requirements of 40 CFR 745 do not apply.

Federal OSHA (29 CFR 1926.62) and the State of Alaska (8 AAC Chapter 61) have promulgated regulations that apply to all construction work where employees may be exposed to lead. The disturbance of any surfaces painted with lead-containing paint requires lead-trained personnel, personnel protective procedures, and air monitoring until exposure levels can be determined. If initial monitoring verifies that the work practices being used are not exposing workers, monitoring and protection procedures may be relaxed. Experience has shown that some paints in most buildings will contain low concentrations of lead and disturbance of those paints are still regulated under the OSHA lead standard, 29 CFR 1926.62. Low levels of lead found by XRF testing does not mean that the paints are free of lead, the paints may contain lead, and OSHA regulations apply anytime measurable amounts of lead are present in paints.

Settled and concealed dust above ceilings, and at other areas that are not routinely cleaned are assumed to have measurable concentrations of lead. Background levels of lead in dusts for a particular location will depend on many factors, including whether or not engines utilizing leaded gasoline were run in or near a building, and upon the age of the building, and thus the age of the dusts. Because the type of disturbance, quantity of lead dusts, cohesiveness of the dusts and room sizes will change, the airborne lead levels expected during the project will depend on the contractor's means and methods of conducting the work. The mere presence of lead in the dusts does not necessarily imply that a "hazard" exists which would require the use of specially trained workers to "abate" the "hazard".

There is no established correlation between settled or adhered lead dust concentrations and airborne concentrations. The OSHA regulations are essentially "performance based", if workers are exposed above the permissible exposure limits, then all of the requirements in the regulations become effective.

The EPA requires that actual construction or demolition debris that contains lead or lead-containing paint or other heavy metals be tested using the TCLP test to determine if the waste must be treated as hazardous waste. All federal, state and local standards regulating lead and lead-containing wastes are required to be followed during the renovation or demolition of portions of this building.

If the TCLP tests done on the waste stream(s) that are produced by the contractor are found to be classified as hazardous wastes, then those waste stream(s) will have to be packaged for shipping and disposal in accordance with hazardous waste and transportation regulations. Because there are no hazardous waste landfills in Alaska, this report assumes that disposal will take place in Seattle or elsewhere in the Pacific Northwest.

### **4. PCB-Containing Materials**

The EPA has promulgated regulations (40 CFR Part 761) that cover the proper handling and disposal of PCB-containing materials. PCB-containing equipment was found by this survey, and any removed PCB-containing equipment is required to be disposed of at fully permitted hazardous waste facilities. The EPA regulates liquid PCBs differently from non-liquid materials. Workers who remove or handle PCB-containing or PCB-contaminated materials or who transport or dispose of PCB wastes must be trained and certified in hazardous waste operations and emergency response (HAZWOPER) as required by 29 CFR 1910.120 and the State of Alaska Department of Labor (8 AAC 61). The Department of Transportation under 49 CFR Parts 100-199 regulates the marking, packaging, handling and transportation of hazardous materials. All federal, state and local standards regulating PCBs and PCB waste must be followed during this project.

## **5. Mercury-Containing Materials**

Thermostats and mercury-containing lamps are classified by the EPA as Universal Wastes. The EPA encourages that all Universal Wastes be recycled in accordance with 40 CFR 273. Mercury and mercury-containing products are considered hazardous waste if TCLP testing of the waste for mercury confirms the mercury content to be greater than the EPA criteria of 0.2 mg/l.

## **6. Other Hazardous Materials**

### **Refrigerants**

Refrigerators were stored on the floor, which are presumed to be scheduled to remain. Air conditioning systems were present in some guest windows that are scheduled to remain. Typically, refrigeration and air conditioning systems with ODS shall be maintained in order to prevent discharge of ODS. Systems that are to be removed, or dismantled shall have refrigerants containing ODS recovered and disposed of or recycled in accordance with 40 CFR 82.

### **Chemical Hazards**

The EPA has promulgated regulations (40 CFR Parts 260 to 299 amongst others) that cover the proper handling and disposal of waste chemicals, including listed wastes, which are ignitable, corrosive, reactive, toxic, or an acute hazardous waste or wastes that exhibit the characteristics of toxicity. All construction workers who are required to remove or handle chemical hazards or to transport or dispose of chemical wastes shall be trained and certified as required by the U.S. Department of Labor (29 CFR 1910.120) and the State of Alaska Department of Labor (8 AAC 61). Transportation of chemical hazards are regulated by Department of Transportation regulations under 49 CFR Parts 171 to 178 amongst others.

Waste heat transfer fluids (such as used heating/cooling system glycol or other circulating heating/cooling fluids) are a potentially hazardous waste and are required to be TCLP tested prior to disposal to determine if the fluids are classified as hazardous or non-hazardous waste per the EPA's RCRA regulations governing hazardous wastes. According to a study performed by the University of Northern Iowa, standard TCLP analysis using ICP SW 6010 testing procedures commonly report levels of Arsenic and Selenium over regulatory thresholds due to interferences in the matrix. That report concluded that additional analysis should be performed to refute the presence of Arsenic or Selenium over the regulatory levels by either mass spectrometry using method SW 6020, or by graphite furnace using method SW 7060. Some heat transfer fluids may also contain potentially hazardous additives that modify the properties of the fluids for use in a particular system. It is recommended that the contractor consult with the persons responsible for maintaining the system to determine if any additives that may be potentially hazardous were used in the system to further determine disposal requirements.

### **Radioactive Materials**

Self-luminous products that contain Tritium, Krypton-85, or Promethium-147 are considered radioactive. There are special disposal requirements for products that contain Tritium, Krypton-85, or Promethium-147 that are generally licensed. Data from the Nuclear Regulatory Commission (NRC) indicates that most all Tritium powered exit signs are generally licensed and therefore must be disposed of at a licensed disposal facility or returned to the manufacturer/distributor for disposal. Licensed radioactive products are regulated by Nuclear Regulatory Commission standard 10 CFR 20 and 10 CFR 32. Smoke detectors were present in the project area that may contain a radioactive material. If the detectors are of the ionization type they typically contain a small amount of Americium. When removed during renovation, the detectors should be

returned to the owner for reuse or returned to the manufacturer for disposal or recycling. There are no licensed disposal facilities for radioactive wastes in Alaska.

## **F. RECOMMENDATIONS**

### **1. Asbestos-Containing Materials**

The asbestos-containing materials identified in the building are typically in intact condition and are classified as both friable and non-friable ACM. All asbestos-containing materials that will be disturbed by the planned renovation work are required to be removed by trained asbestos workers. Refer to Section 02 82 33 Removal and Disposal of Asbestos Containing Materials.

### **2. Dusts with Asbestos**

Dusts with measurable concentrations of asbestos are assumed to be present, but are not classified as asbestos-containing materials, or as debris from asbestos-containing materials. Workers disturbing dusts are required to have hazard communication training in accordance with OSHA regulations, but are not required to receive 40 hours of training, which is required for asbestos workers. The contractor will need to choose means and methods to control worker exposures to airborne contaminants. At least an initial exposure assessment or data from previous air monitoring is needed to show that worker exposures are maintained below the OSHA permissible exposure limits (PELs). Refer to Section 01 35 45 Airborne Contaminant Control.

### **3. Lead-Containing Materials**

Federal OSHA (29 CFR 1926.62) and the State of Alaska (8 AAC Chapter 61) have promulgated regulations that apply to all construction work where employees may be exposed to lead, including disturbance of paints with low concentrations of lead.

Worker exposure to lead may be able to be controlled below the OSHA permissible exposure limit if proper engineering controls and procedures are used during renovation. Lead is a potentially hazardous waste and the EPA requires that all wastes that contains lead be tested to determine if they must be treated as hazardous waste. A TCLP test of the waste stream(s) produced by the Contractor's means and methods are required to be performed to determine if those wastes will be classified as hazardous or non-hazardous. Refer to Section 01 35 45 Airborne Contaminant Control and Section 02 83 33 Removal and Disposal of Materials Containing Lead.

### **4. PCB-Containing Materials**

PCB-containing ballasts scheduled for removal or replacement will need to be removed, handled, packaged and disposed of in accordance with all regulations. Refer to Section 02 84 18 Removal and Disposal of Chemical Hazards.

### **5. Mercury-Containing Materials**

Mercury-containing materials scheduled for removal or replacement will need to be removed, handled, packaged and disposed of in accordance with all regulations. If mercury-containing lamps and thermostats are handled and disposed of in accordance with the Universal Waste Regulations, no TCLP test is required. If the Contractor chooses to perform a TCLP test of fluorescent lamps, the test shall be conducted in accordance with the requirements of ANSI/NEMA Standard Procedure for Fluorescent Lamp Sample Preparation and Toxicity Characteristic Leaching Procedure, C78.LL 1256-2003 or latest version. Refer to Section 02 84 18 Removal and Disposal of Chemical Hazards.



## **6. Other Hazardous Materials**

Radioactive materials scheduled for removal or replacement will need to be removed, handled, packaged and disposed of in accordance with all regulations. Refer to Section 02 84 18 Removal and Disposal of Chemical Hazards.

If any ODS are removed or replaced, they will need to be removed, handled, packaged and disposed of in accordance with all regulations. Refer to Section 02 84 18 Removal and Disposal of Chemical Hazards.

If any heat transfer fluids are removed or replaced, they will need to be removed, handled, packaged and disposed of in accordance with all regulations. Refer to Section 02 84 18 Removal and Disposal of Chemical Hazards.

## **G. LIMITATIONS**

The conclusions and recommendations contained in this report are based upon professional opinions with regard to the subject matter. These opinions have been arrived at in accordance with currently accepted environmental consulting and engineering standards and practices and are subject to the following inherent limitations:

### **1. Accuracy of Information**

The laboratory reports utilized in this assessment were provided by the accredited laboratories cited in this report. Although the conclusions, opinions, and recommendations are based in part, on such information, our services did not include the verification of accuracy or authenticity of such reports. Should such information provided be found to be inaccurate or unreliable, EHS-Alaska, Inc. reserves the right to amend or revise its conclusions, opinions, and/or recommendations.

### **2. Site Conditions**

This limited survey did not include investigation of the entire site and may not be valid outside the survey area. The intent of this survey was to identify common hazardous materials that may be disturbed during the Guest Room renovations. This survey is not intended to be utilized as the sole design document for abatement. This survey was conducted while the site was occupied. All inspections were performed with furniture, equipment and/or stored items in place. The scope of work for this survey did not include identification of all potentially hazardous materials that may be present at this site, and was limited to the scope of work agreed upon with our client. Although a concerted effort was made to identify those common hazardous materials likely to be affected by this project, some hazardous materials may have been hidden by furniture, equipment or stored items and may not have been identified. The survey investigated representative materials and items, such as lights and mechanical components. Variations may occur between materials and items that appear to be the same, but are actually of different construction or materials. Other asbestos-containing or potentially hazardous materials may be present in the facilities that were concealed by structural members, walls, ceilings or floor coverings, or in materials where testing was not conducted.

### **3. Changing Regulatory Constraints**

The regulations concerning hazardous materials are constantly changing, including the interpretations of the regulations by the local and national regulating agencies. Should the regulations or their interpretation be changed from our current understanding, EHS-Alaska, Inc. reserves the right to amend or revise its conclusions, opinions, and/or recommendations.

# **APPENDIX A**

## **Asbestos Bulk Sample Field Survey Data Sheets and Laboratory Reports**

Field Data Sheets and Laboratory Reports  
Not Included to Save Paper,

Refer to Summarized Results in this Report

Reports Are Available for Review,  
Or Electronically Through the Anchorage Pioneer Home Offices

## **APPENDIX B**

### **Lead Analyzer Test Results**

# LEAD ANALYZER TEST RESULTS

Heuresis Pb200i, Serial No. 1770

NO.	SITE	INSPECTOR	FLOOR	ROOM	COMPONENT	SUBSTRATE	CONDITION	COLOR	DURATION	TIME	RESULTS		
											LBP	mg/cm <sup>2</sup>	+/- ERROR
1	PIONEER HM, DISHWASHER	FRENCH			CALIBRATION	0	0	0	5	4/26/23 15:43:21	POSITIVE	1	0.1
2	PIONEER HM, DISHWASHER	FRENCH			CALIBRATION	0	0	0	5	4/26/23 15:43:38	POSITIVE	1	0.1
3	PIONEER HM, DISHWASHER	FRENCH			CALIBRATION	0	0	0	5	4/26/23 15:43:53	POSITIVE	1	0.1
4	PIONEER HM, DISHWASHER	FRENCH	FIFTH	DISHWASHER	WALL	FRP	INTACT	OFF-WHITE	2	4/26/23 15:46:25	NEGATIVE	0.2	0.3
5	PIONEER HM, DISHWASHER	FRENCH	FIFTH	DISHWASHER	DOOR	METAL	INTACT	LT BROWN	2	4/26/23 15:47:14	NEGATIVE	0.2	0.2
6	PIONEER HM, DISHWASHER	FRENCH	FIFTH	DISHWASHER	DOOR FRAME	METAL	INTACT	BROWN	2	4/26/23 15:47:38	NEGATIVE	0.2	0.3
7	PIONEER HM, DISHWASHER	FRENCH	FIFTH	DISHWASHER	SOFFIT	DRYWALL	INTACT	OFF-WHITE	2	4/26/23 15:49:29	NEGATIVE	0.2	0.2
8	PIONEER HM, DISHWASHER	FRENCH	FIFTH	DISHWASHER	FLOOR	NON-SKID	INTACT	GRAY	2	4/26/23 15:50:25	NEGATIVE	0.1	0.2
9	PIONEER HM, DISHWASHER	FRENCH	FIFTH	DISHWASHER	CEILING	CONCRETE	INTACT	OFF-WHITE	2	4/26/23 15:54:30	NEGATIVE	0.4	0.3
10	PIONEER HM, DISHWASHER	FRENCH	FIFTH	DISHWASHER	WALL	DRYWALL	INTACT	OFF-WHITE	2	4/26/23 15:55:07	NEGATIVE	0.3	0.2
11	PIONEER HM, DISHWASHER	FRENCH	FIFTH	STORAGE	CEILING	CONCRETE	INTACT	OFF-WHITE	2	4/26/23 16:02:07	NEGATIVE	0.3	0.3
12	PIONEER HM, DISHWASHER	FRENCH	FIFTH	STORAGE	WALL	DRYWALL	INTACT	WHITE	2	4/26/23 16:03:42	NEGATIVE	0.2	0.2
13	PIONEER HM, DISHWASHER	FRENCH	FIFTH	KITCHEN	WALL	MARLITE	INTACT	WHITE	2	4/26/23 16:09:19	NEGATIVE	0.4	0.2
14	PIONEER HM, DISHWASHER	FRENCH	FIFTH	KITCHEN	BEAM	CONCRETE	INTACT	WHITE	2	4/26/23 16:10:31	NEGATIVE	0.4	0.3
15	PIONEER HM, DISHWASHER	FRENCH	FIFTH	KITCHEN	DOOR	METAL	INTACT	GRAY	2	4/26/23 16:16:06	NEGATIVE	0.1	0.2
16	PIONEER HM, DISHWASHER	FRENCH	FIFTH	KITCHEN	DOOR FRAME	METAL	INTACT	GRAY	2	4/26/23 16:16:22	NEGATIVE	0.2	0.2
17	PIONEER HM, DISHWASHER	FRENCH	FIFTH	KITCHEN	WALL	FRP	INTACT	OFF-WHITE	2	4/26/23 16:17:17	NEGATIVE	0.2	0.2
18	PIONEER HM, DISHWASHER	FRENCH	FIFTH	KITCHEN	WALL	DRYWALL	INTACT	WHITE	2	4/26/23 16:18:05	NEGATIVE	0.2	0.2
19	PIONEER HM, DISHWASHER	FRENCH	FIFTH	CART WASH	CEILING	DRYWALL	INTACT	WHITE	2	4/26/23 16:19:54	NEGATIVE	0.2	0.2
20	PIONEER HM, DISHWASHER	FRENCH	FIFTH	CART WASH	WALL	CERAMIC	INTACT	OFF-WHITE	2	4/26/23 16:20:23	POSITIVE	8.9	0.3
21	PIONEER HM, DISHWASHER	FRENCH	FIFTH	CART WASH	FLOOR	CERAMIC	INTACT	BROWN	1	4/26/23 16:21:07	NEGATIVE	0.3	0.3
22	PIONEER HM, DISHWASHER	FRENCH	FIFTH	DISHWASHER	WALL	DRYWALL	INTACT	BROWN	2	4/26/23 16:23:02	NEGATIVE	0.3	0.2
23	PIONEER HM, DISHWASHER	FRENCH	FIFTH	KITCHEN	COVE BASE	NON-SKID	INTACT	GRAY	2	4/26/23 16:25:37	NEGATIVE	0.1	0.2
24	PIONEER HM, DISHWASHER	FRENCH	FIFTH	KITCHEN	STRIPING	NON-SKID	INTACT	YELLOW	2	4/26/23 16:26:09	NEGATIVE	0.3	0.3
25	PIONEER HM, DISHWASHER	FRENCH	FIFTH	DISHWASHER	DUCT	METAL	INTACT	OFF-WHITE	2	4/26/23 16:29:38	NEGATIVE	0.3	0.2
26	PIONEER HM, DISHWASHER	FRENCH	FIFTH	DISHWASHER	WALL	DRYWALL	INTACT	OFF-WHITE	2	4/26/23 16:31:47	NEGATIVE	0.2	0.2
27	PIONEER HM, DISHWASHER	FRENCH	0	0	CALIBRATION	0	0	0	5	4/26/23 16:36:49	POSITIVE	1	0.1
28	PIONEER HM, DISHWASHER	FRENCH	0	0	CALIBRATION	0	0	0	5	4/26/23 16:37:04	POSITIVE	1.1	0.1
29	PIONEER HM, DISHWASHER	FRENCH	0	0	CALIBRATION	0	0	0	5	4/26/23 16:37:19	POSITIVE	1.1	0.1

## Table Heading Descriptions:

Duration: This is the nominal time in "source" seconds that each sample was analyzed.

LBP: Results are shown as positive (POS  $\geq$  1.0 mg/cm<sup>2</sup>) or negative (NEG < 1.0 mg/cm<sup>2</sup>). Positive results are shown in bold print.

mg/cm2: This is the testing results produced by the Heuresis Pb200i instrument in milligrams of lead per square centimeter (mg/cm<sup>2</sup>). The EPA defines lead based paint as paint containing lead at 1.0 mg/cm<sup>2</sup> or greater. A negative number is a result of an internal computation made by the instrument and should be interpreted as zero. Even though paint may be termed negative (less than 1.0 mg/cm<sup>2</sup>) by EPA definition, disturbance of the paint may still be regulated by OSHA under 29 CFR 1926.62. Where lead is present at any level, appropriate engineering controls, work practices and personal protective equipment should be used until a negative exposure assessment can be determined. <LOD indicates that the lead present was less than the limits of detection of the instrument (very little or no lead present).

VOID: This indicates that the test was intentionally terminated by the operator due to operator error (e.g. - operator moved analyzer while testing).

Substrate: Where ceramic is shown as a substrate, lead content is typically from the glazing on the tile unless the tile is painted.

# LEAD ANALYZER TEST RESULTS

SciAps X550Pb (Rh 4W), Serial Number 01052

NO.	SITE	INSPECTOR	FLOOR	ROOM	COMPONENT	SUBSTRATE	CONDITION	COLOR	TIME	RESULTS		
										LBP	mg/cm <sup>2</sup>	+/- ERROR
1	PIONEER HM, 3RD FLOOR	FRENCH	3		CALIBRATION	WOOD		Red	1/4/2023 16:33	<b>POSITIVE</b>	<b>1.03</b>	<b>0.03</b>
2	PIONEER HM, 3RD FLOOR	FRENCH	3		CALIBRATION	WOOD		Red	1/4/2023 16:34	<b>POSITIVE</b>	<b>1.09</b>	<b>0.03</b>
3	PIONEER HM, 3RD FLOOR	FRENCH	3		CALIBRATION	WOOD		Red	1/4/2023 16:34	<b>POSITIVE</b>	<b>1.01</b>	<b>0.03</b>
4	PIONEER HM, 3RD FLOOR	FRENCH	3		CALIBRATION	WOOD		Red	1/4/2023 16:34	<b>POSITIVE</b>	<b>1.04</b>	<b>0.02</b>
5	PIONEER HM, 3RD FLOOR	FRENCH	3	361 CORR	WALL	DRYWALL	INTACT	OFF-WHITE	1/4/2023 16:37	NEGATIVE	0.01	< 0.01
6	PIONEER HM, 3RD FLOOR	FRENCH	3	310	WALL	DRYWALL	INTACT	OFF-WHITE	1/4/2023 16:39	NEGATIVE	0.01	< 0.47
7	PIONEER HM, 3RD FLOOR	FRENCH	3	310	WALL	BRICK	INTACT	OFF-WHITE	1/4/2023 16:42	NEGATIVE	0.01	< 0.01
8	PIONEER HM, 3RD FLOOR	FRENCH	3	360.1 CORR	DOOR FRAME	METAL	INTACT	Grey	1/4/2023 16:44	NEGATIVE	0.01	< 0.01
9	PIONEER HM, 3RD FLOOR	FRENCH	3	307	SINK	CERAMIC	INTACT	White	1/4/2023 16:45	NEGATIVE	0.01	< 0.01
10	PIONEER HM, 3RD FLOOR	FRENCH	3	307.1	TRIM	WOOD	INTACT	Grey	1/4/2023 16:47	NEGATIVE	0.01	< 0.01
11	PIONEER HM, 3RD FLOOR	FRENCH	3	304	COUNTER	FORMICA	INTACT	Yellow	1/4/2023 16:50	NEGATIVE	0.01	< 0.01
12	PIONEER HM, 3RD FLOOR	FRENCH	3	336.1	WALL	MARLITE	INTACT	White	1/4/2023 16:52	NEGATIVE	0.01	< 0.01
13	PIONEER HM, 3RD FLOOR	FRENCH	3	336.1	TUB	CERAMIC	INTACT	White	1/4/2023 16:55	<b>POSITIVE</b>	<b>7.63</b>	<b>0.27</b>
14	PIONEER HM, 3RD FLOOR	FRENCH	3	332.1	TUB	CERAMIC	INTACT	White	1/4/2023 16:58	<b>POSITIVE</b>	<b>6.76</b>	<b>0.25</b>
15	PIONEER HM, 3RD FLOOR	FRENCH	3	332.1	DOOR	WOOD	INTACT	Blue	1/4/2023 17:00	NEGATIVE	0.01	< 0.01
16	PIONEER HM, 3RD FLOOR	FRENCH	3	332.1	DOOR FRAME	METAL	INTACT	Black	1/4/2023 17:00	NEGATIVE	0.01	0.01
17	PIONEER HM, 3RD FLOOR	FRENCH	3	326	WALL	DRYWALL	INTACT	OFF-WHITE	1/4/2023 17:02	NEGATIVE	0.02	0.01
18	PIONEER HM, 3RD FLOOR	FRENCH	3	323.1	FLOOR	EPOXY	INTACT	Brown	1/4/2023 17:04	NEGATIVE	0.01	< 0.01
19	PIONEER HM, 3RD FLOOR	FRENCH	3	316	SINK	CERAMIC	INTACT	White	1/4/2023 17:06	NEGATIVE	0.01	< 0.01
20	PIONEER HM, 3RD FLOOR	FRENCH	3	316.1	TUB	CERAMIC	INTACT	White	1/4/2023 17:07	<b>POSITIVE</b>	<b>7.6</b>	<b>0.27</b>
21	PIONEER HM, 3RD FLOOR	FRENCH	3	315	DOOR	WOOD	INTACT	Blue	1/4/2023 17:08	NEGATIVE	0.03	0.01
22	PIONEER HM, 3RD FLOOR	FRENCH	3	314	DOOR FRAME	METAL	INTACT	Black	1/4/2023 17:10	NEGATIVE	0.01	0.01
23	PIONEER HM, 3RD FLOOR	FRENCH	3	314	DOOR	WOOD	INTACT	Red	1/4/2023 17:11	NEGATIVE	0.03	0.01
24	PIONEER HM, 3RD FLOOR	FRENCH	3		CALIBRATION	WOOD		Red	1/4/2023 17:12	NEGATIVE	0.01	< 0.01
25	PIONEER HM, 3RD FLOOR	FRENCH	3		CALIBRATION	WOOD		Red	1/4/2023 17:13	<b>POSITIVE</b>	<b>1.04</b>	<b>0.03</b>
26	PIONEER HM, 3RD FLOOR	FRENCH	3		CALIBRATION	WOOD		Red	1/4/2023 17:13	<b>POSITIVE</b>	<b>1.05</b>	<b>0.03</b>
27	PIONEER HM, 3RD FLOOR	FRENCH	3		CALIBRATION	WOOD		Red	1/4/2023 17:13	NEGATIVE	0.7	0.01
28	PIONEER HM, 3RD FLOOR	FRENCH	3		CALIBRATION	WOOD		Red	1/4/2023 17:13	NEGATIVE	0.99	0.02
29	PIONEER HM, 3RD FLOOR	FRENCH	3		CALIBRATION	WOOD		Red	1/4/2023 17:14	<b>POSITIVE</b>	<b>1.03</b>	<b>0.03</b>
30	PIONEER HM, 3RD FLOOR	FRENCH	3		CALIBRATION	WOOD		Red	1/4/2023 17:15	<b>POSITIVE</b>	<b>1.04</b>	<b>0.03</b>
31	PIONEER HM, 3RD FLOOR	FRENCH	3		CALIBRATION	WOOD		Red	1/4/2023 17:15	NEGATIVE	0.97	0.03
32	PIONEER HM, 3RD FLOOR	FRENCH	3		CALIBRATION	WOOD		Red	1/4/2023 17:15	<b>POSITIVE</b>	<b>1.01</b>	<b>0.02</b>

## Table Heading Descriptions:

Duration: This is the nominal time in "source" seconds that each sample was analyzed.

LBP: Results are shown as positive (POS  $\geq$  1.0 mg/cm<sup>2</sup>) or negative (NEG < 1.0 mg/cm<sup>2</sup>). Positive results are shown in bold print.

mg/cm<sup>2</sup>: This is the testing results produced by the SciAps instrument in milligrams of lead per square centimeter (mg/cm<sup>2</sup>). The EPA defines lead based paint as paint containing lead at 1.0 mg/cm<sup>2</sup> or greater. A negative number is a result of an internal computation made by the instrument and should be interpreted as zero. Even though paint may be termed negative (less than 1.0 mg/cm<sup>2</sup>) by EPA definition, disturbance of the paint may still be regulated by OSHA under 29 CFR 1926.62. Where lead is present at any level, appropriate engineering controls, work practices and personal protective equipment should be used until a negative exposure assessment can be determined. <LOD indicates that the lead present was less than the limits of detection of the instrument (very little or no lead present).

## LEAD ANALYZER TEST RESULTS

VOID: This indicates that the test was intentionally terminated by the operator due to operator error (e.g. - operator moved analyzer while testing).

Substrate: Where ceramic is shown as a substrate, lead content is typically from the glazing on the tile or fixture unless the tile is painted.

LEAD ANALYZER TEST RESULTS

NO.	SITE	INSPECTOR	FLOOR	ROOM	COMPONENT	SUBSTRATE	CONDITION	COLOR	DURATION	TIME	RESULTS		
											LBP	mg/cm <sup>2</sup>	+/- ERROR
1	ANCHORAGE PIONEER HOME	HILL	-	-	CALIBRATION	-	-	GREEN	5	8/31/20 14:48:38	POSITIVE	1	0.1
2	ANCHORAGE PIONEER HOME	HILL	-	-	CALIBRATION	-	-	GREEN	5	8/31/20 14:48:51	POSITIVE	1	0.1
3	ANCHORAGE PIONEER HOME	HILL	-	-	CALIBRATION	-	-	GREEN	5	8/31/20 14:49:03	POSITIVE	1	0.1
4	ANCHORAGE PIONEER HOME	HILL	FOURTH	410	DOOR	WOOD	INTACT	OFF-WHITE	2	8/31/20 14:56:02	NEGATIVE	0.5	0.3
5	ANCHORAGE PIONEER HOME	HILL	FOURTH	410	DOOR FRAME	METAL	INTACT	TAN	5.96	8/31/20 14:57:14	NEGATIVE	0.11	0.12
6	ANCHORAGE PIONEER HOME	HILL	FOURTH	410	WALL	BRICK	INTACT	OFF-WHITE	5.6	8/31/20 15:00:54	NEGATIVE	0.03	0.13
7	ANCHORAGE PIONEER HOME	HILL	FOURTH	409.1	WALL	FORMICA	INTACT	OFF-WHITE	5.47	8/31/20 15:03:13	NEGATIVE	0.25	0.13
8	ANCHORAGE PIONEER HOME	HILL	FOURTH	409	DOOR FRAME	METAL	INTACT	BLACK	5.61	8/31/20 15:04:16	NEGATIVE	0.12	0.13
9	ANCHORAGE PIONEER HOME	HILL	FOURTH	407	DOOR	WOOD	INTACT	BLUE	5.68	8/31/20 15:07:30	NEGATIVE	0.17	0.13
10	ANCHORAGE PIONEER HOME	HILL	FOURTH	407	WALL	DRYWALL	INTACT	OFF-WHITE	5.63	8/31/20 15:10:02	NEGATIVE	0.14	0.13
11	ANCHORAGE PIONEER HOME	HILL	FOURTH	460	DOOR	WOOD	INTACT	TAN	5.26	8/31/20 15:11:14	NEGATIVE	0.11	0.13
12	ANCHORAGE PIONEER HOME	HILL	FOURTH	406	CABINET	FORMICA	INTACT	YELLOW	4.81	8/31/20 15:23:01	NEGATIVE	0.16	0.14
13	ANCHORAGE PIONEER HOME	HILL	FOURTH	406	WINDOW TRIM	METAL	INTACT	BLACK	5.6	8/31/20 15:24:22	NEGATIVE	0.51	0.13
14	ANCHORAGE PIONEER HOME	HILL	FOURTH	405.1	DOOR	WOOD	INTACT	RED	5.58	8/31/20 15:25:47	NEGATIVE	0.11	0.13
15	ANCHORAGE PIONEER HOME	HILL	FOURTH	405	CABINET	FORMICA	INTACT	ORANGE	5.95	8/31/20 15:27:19	NEGATIVE	0.92	0.12
16	ANCHORAGE PIONEER HOME	HILL	FOURTH	403	CABINET	FORMICA	INTACT	OFF-WHITE	5.77	8/31/20 15:29:03	NEGATIVE	0.12	0.12
17	ANCHORAGE PIONEER HOME	HILL	FOURTH	403	SINK	CERAMIC	INTACT	WHITE	5.68	8/31/20 15:30:32	POSITIVE	12.58	0.13
18	ANCHORAGE PIONEER HOME	HILL	FOURTH	402	DOOR FRAME	METAL	INTACT	BLACK	5.76	8/31/20 15:32:20	NEGATIVE	0.08	0.12
19	ANCHORAGE PIONEER HOME	HILL	FOURTH	401	RADIATOR	METAL	INTACT	BLACK	5.52	8/31/20 15:33:35	NEGATIVE	0.1	0.13
20	ANCHORAGE PIONEER HOME	HILL	FOURTH	401	DOOR	METAL	INTACT	OFF-WHITE	5.7	8/31/20 15:34:53	NEGATIVE	0.12	0.13
21	ANCHORAGE PIONEER HOME	HILL	FOURTH	439.1	WALL	FRP	INTACT	WHITE	6.13	8/31/20 15:36:30	NEGATIVE	0.24	0.12
22	ANCHORAGE PIONEER HOME	HILL	FOURTH	439	WALL	FRP	INTACT	WHITE	5.47	8/31/20 15:37:39	NEGATIVE	0.18	0.13
23	ANCHORAGE PIONEER HOME	HILL	FOURTH	438	CABINET	FORMICA	INTACT	ORANGE	6.93	8/31/20 15:40:04	NEGATIVE	1	0.11
24	ANCHORAGE PIONEER HOME	HILL	FOURTH	438	SINK	CERAMIC	INTACT	WHITE	5.79	8/31/20 15:41:31	POSITIVE	11.28	0.12
25	ANCHORAGE PIONEER HOME	HILL	FOURTH	457	DOOR	METAL	INTACT	OFF-WHITE	5.72	8/31/20 15:43:43	NEGATIVE	0.12	0.13
26	ANCHORAGE PIONEER HOME	HILL	FOURTH	457	WALL	DRYWALL	INTACT	OFF-WHITE	6.17	8/31/20 15:44:38	NEGATIVE	0.18	0.12
27	ANCHORAGE PIONEER HOME	HILL	FOURTH	449	CABINET	WOOD	FAIR	LT BROWN	5.57	8/31/20 15:46:45	NEGATIVE	0.2	0.13
28	ANCHORAGE PIONEER HOME	HILL	FOURTH	449	COUNTERTOP	FORMICA	INTACT	OFF-WHITE	6.47	8/31/20 15:47:42	NEGATIVE	0.19	0.12
29	ANCHORAGE PIONEER HOME	HILL	FOURTH	455	DOOR FRAME	METAL	INTACT	TAN	5.59	8/31/20 15:50:01	NEGATIVE	0.11	0.13
30	ANCHORAGE PIONEER HOME	HILL	FOURTH	434.1	TUB	CERAMIC	INTACT	WHITE	5.36	8/31/20 15:51:56	POSITIVE	25.48	0.13
31	ANCHORAGE PIONEER HOME	HILL	FOURTH	434	DOOR	WOOD	INTACT	WHITE	5.56	8/31/20 15:53:17	NEGATIVE	0.06	0.13
32	ANCHORAGE PIONEER HOME	HILL	FOURTH	434	WALL	BRICK	INTACT	OFF-WHITE	5.19	8/31/20 15:54:50	NEGATIVE	0.12	0.13
33	ANCHORAGE PIONEER HOME	HILL	FOURTH	433	SHELF	FRP	INTACT	OFF-WHITE	6.53	8/31/20 15:57:35	NEGATIVE	0.17	0.12
34	ANCHORAGE PIONEER HOME	HILL	FOURTH	431	SINK	CERAMIC	INTACT	WHITE	6.55	8/31/20 16:01:16	NEGATIVE	0.29	0.12
35	ANCHORAGE PIONEER HOME	HILL	FOURTH	429	SINK	CERAMIC	INTACT	WHITE	5.53	8/31/20 16:03:15	NEGATIVE	0.55	0.13
36	ANCHORAGE PIONEER HOME	HILL	FOURTH	429	DOOR	WOOD	INTACT	RED	5.4	8/31/20 16:04:15	NEGATIVE	0.06	0.13
37	ANCHORAGE PIONEER HOME	HILL	FOURTH	427	DOOR	WOOD	INTACT	BLUE	5.5	8/31/20 16:05:20	NEGATIVE	0.09	0.13
38	ANCHORAGE PIONEER HOME	HILL	FOURTH	427	DOOR FRAME	METAL	INTACT	BLACK	4.95	8/31/20 16:06:12	NEGATIVE	0.15	0.13
39	ANCHORAGE PIONEER HOME	HILL	FOURTH	426.1	WALL	MARLITE	INTACT	WHITE	5.65	8/31/20 16:07:16	NEGATIVE	0.18	0.13
40	ANCHORAGE PIONEER HOME	HILL	FOURTH	448	WALL	BRICK	INTACT	TAN	5.19	8/31/20 16:09:30	NEGATIVE	0.04	0.13
41	ANCHORAGE PIONEER HOME	HILL	FOURTH	448	COUNTERTOP	FORMICA	INTACT	OFF-WHITE	6.02	8/31/20 16:10:49	NEGATIVE	0.19	0.12
42	ANCHORAGE PIONEER HOME	HILL	FOURTH	448	CABINET	FORMICA	INTACT	ORANGE	10.21	8/31/20 16:11:31	POSITIVE	1.06	0.09
43	ANCHORAGE PIONEER HOME	HILL	FOURTH	425.1	TUB	CERAMIC	INTACT	WHITE	4.4	8/31/20 16:14:53	POSITIVE	27.32	0.14
44	ANCHORAGE PIONEER HOME	HILL	FOURTH	423	RADIATOR	METAL	INTACT	BLACK	5.49	8/31/20 16:18:00	NEGATIVE	0.07	0.13
45	ANCHORAGE PIONEER HOME	HILL	FOURTH	423	SINK	CERAMIC	INTACT	WHITE	5.39	8/31/20 16:19:06	POSITIVE	8.7	0.13
46	ANCHORAGE PIONEER HOME	HILL	FOURTH	419.1	TOILET	CERAMIC	INTACT	WHITE	5.56	8/31/20 16:22:02	NEGATIVE	7.8	0.13
47	ANCHORAGE PIONEER HOME	HILL	FOURTH	454	WATER FOUNTAIN	CERAMIC	INTACT	WHITE	5.6	8/31/20 16:28:06	POSITIVE	3.78	0.13
48	ANCHORAGE PIONEER HOME	HILL	FOURTH	461	TRIM	WOOD	INTACT	BLACK	5.77	8/31/20 16:30:52	NEGATIVE	0.02	0.12
49	ANCHORAGE PIONEER HOME	HILL	FOURTH	463	CEILING	WOOD	INTACT	WHITE	5.13	8/31/20 16:32:19	NEGATIVE	0.13	0.13
50	ANCHORAGE PIONEER HOME	HILL	-	-	CALIBRATION	-	-	GREEN	6.72	8/31/20 16:33:51	POSITIVE	1.04	0.12
51	ANCHORAGE PIONEER HOME	HILL	-	-	CALIBRATION	-	-	GREEN	5	8/31/20 16:34:24	POSITIVE	1	0.1



## LEAD ANALYZER TEST RESULTS

NO.	SITE	INSPECTOR	FLOOR	ROOM	COMPONENT	SUBSTRATE	CONDITION	COLOR	DURATION	TIME	RESULTS		
											LBP	mg/cm <sup>2</sup>	+/- ERROR
52	ANCHORAGE PIONEER HOME	HILL	-	-	CALIBRATION	-	-	GREEN	5	8/31/20 16:34:36	NEGATIVE	0.9	0.1

## Table Heading Descriptions:

Duration: This is the nominal time in "source" seconds that each sample was analyzed.

LBP: Results are shown as positive (POS  $\geq$  1.0 mg/cm<sup>2</sup>) or negative (NEG < 1.0 mg/cm<sup>2</sup>). Positive results are shown in bold print.

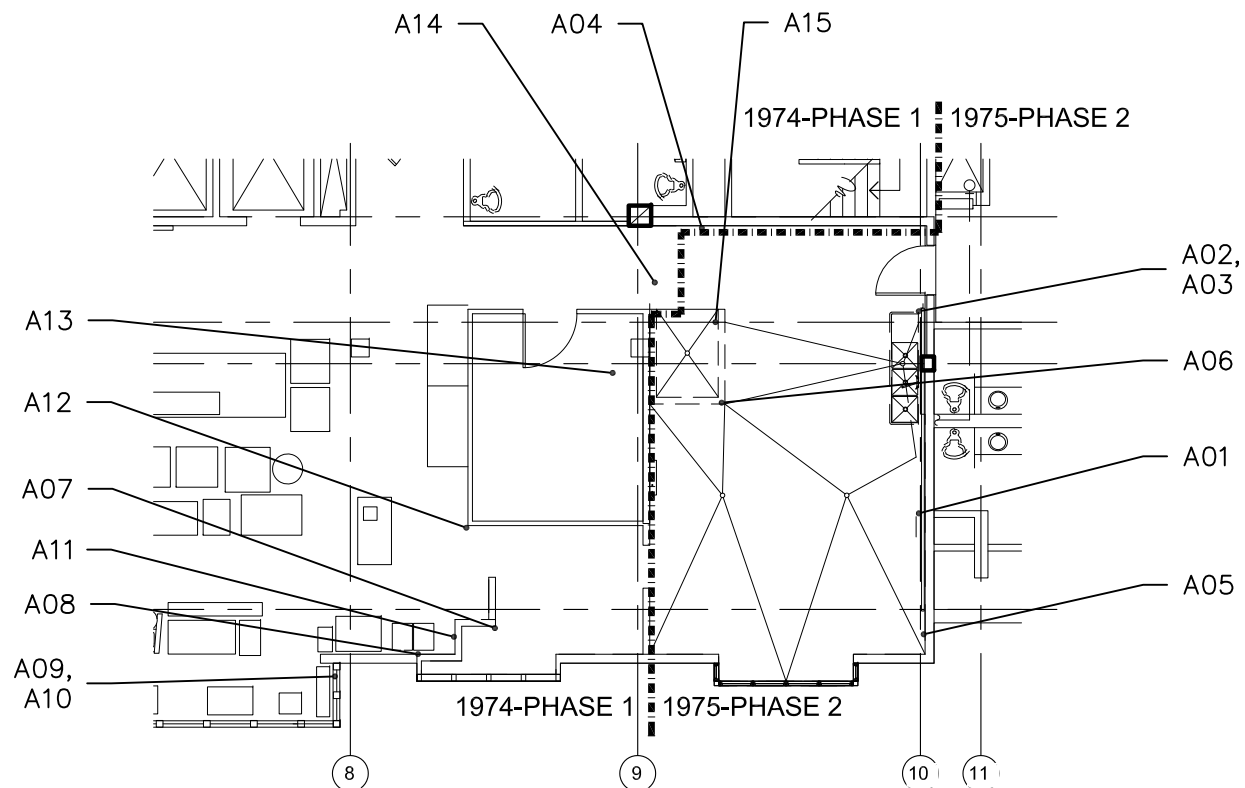
mg/cm<sup>2</sup>: This is the testing results produced by the Heuresis Pb200i instrument in milligrams of lead per square centimeter (mg/cm<sup>2</sup>). The EPA defines lead based paint as paint containing lead at 1.0 mg/cm<sup>2</sup> or greater. A negative number is a result of an internal computation made by the instrument and should be interpreted as zero. Even though paint may be termed negative (less than 1.0 mg/cm<sup>2</sup>) by EPA definition, disturbance of the paint may still be regulated by OSHA under 29 CFR 1926.62. Where lead is present at any level, appropriate engineering controls, work practices and personal protective equipment should be used until a negative exposure assessment can be determined. <LOD indicates that the lead present was less than the limits of detection of the instrument (very little or no lead present).

VOID: This indicates that the test was intentionally terminated by the operator due to operator error (e.g. - operator moved analyzer while testing).

Substrate: Where ceramic is shown as a substrate, lead content is typically from the glazing on the tile unless the tile is painted.

## **APPENDIX C**

### **Drawings of Sample Locations**



1  
C-1

FIFTH FLOOR, DISH ROOM AREA, ASBESTOS SAMPLES  
NTS



#### LEGEND

- AXX ASBESTOS TEST LOCATION
- AXX LAB TEST RESULTS POSITIVE FOR ASBESTOS

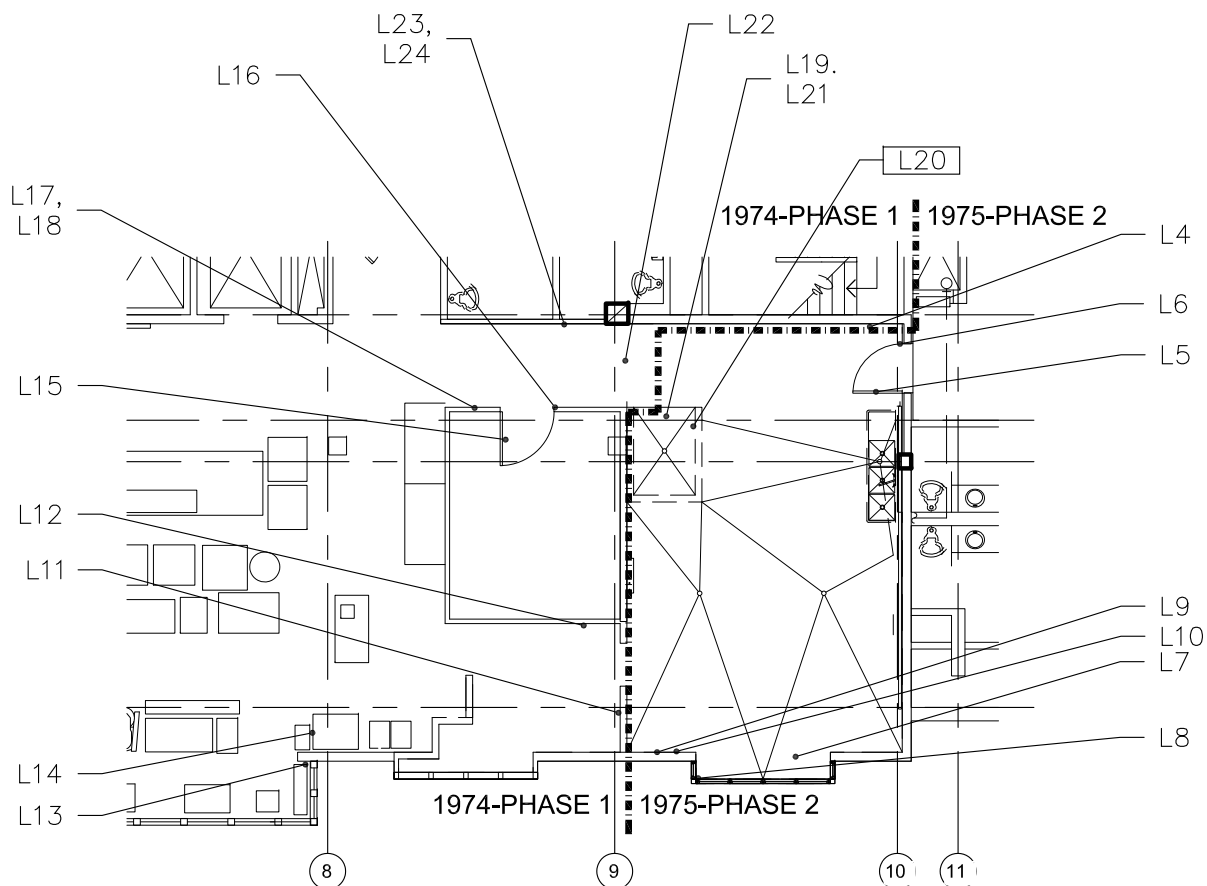
REFER TO TESTING SUMMARY IN REPORT FOR FULL DETAILS. ALL SAMPLES HAVE PH423 - PREFIX.

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DEPARTMENT OF HEALTH AND  
SOCIAL SERVICES

ANCHORAGE PIONEER HOME  
ANCHORAGE, ALASKA  
ASBESTOS SAMPLE LOCATIONS



DRAWN: JHL	DATE: 04/26/2023
CHECK: RAF	
FILE #:	DWG.NO:
8031-SL	C-1



1  
C-2  
FIFTH FLOOR, DISH ROOM AREA, LEAD TESTS  
NTS



#### LEGEND

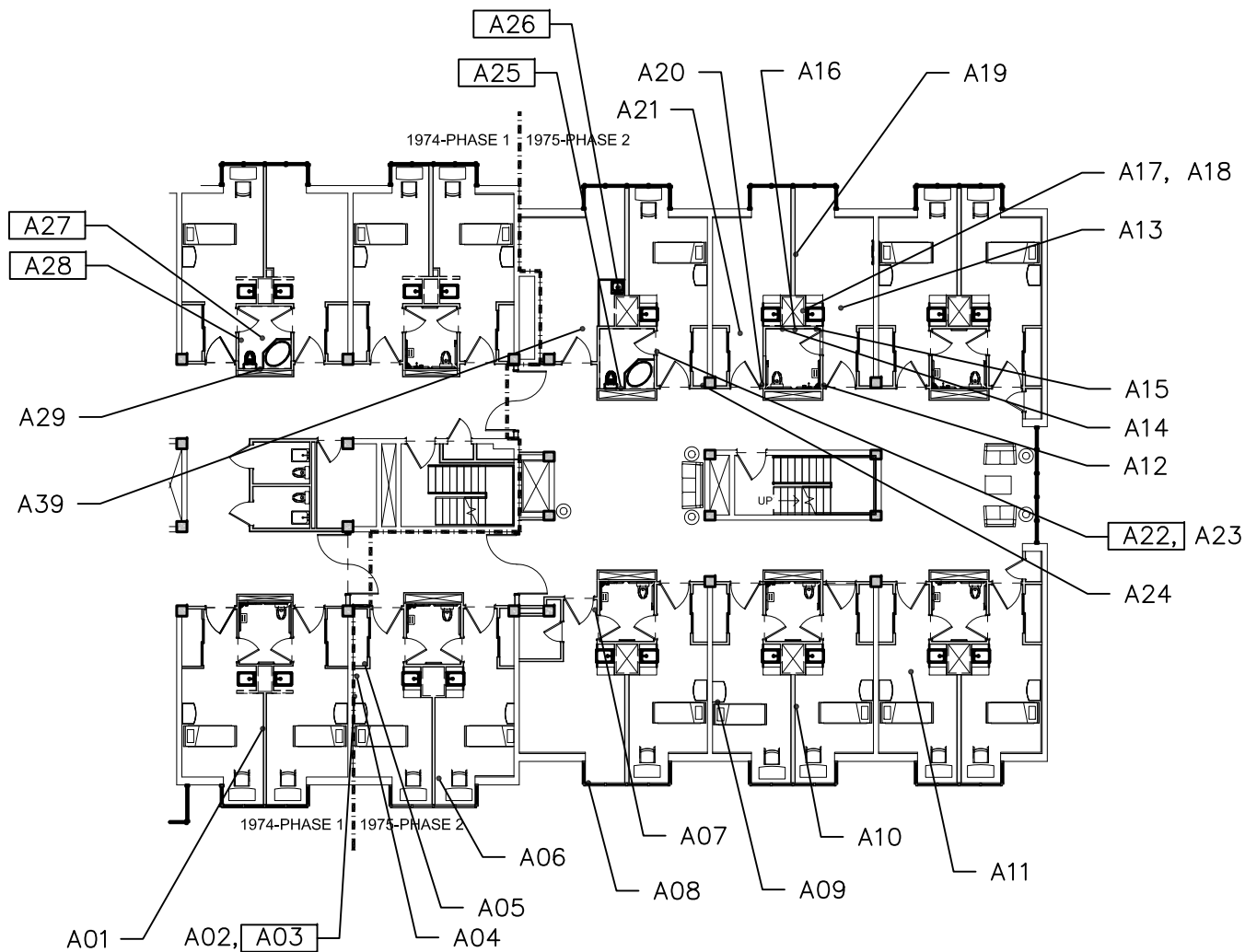
- LXX LEAD TEST LOCATION
  - LXX LEAD TEST CLASSIFIED AS LEAD BASED PAINT
- REFER TO TESTING SUMMARY IN REPORT FOR FULL DETAILS.

STATE OF ALASKA  
DEPARTMENT OF HEALTH AND  
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ANCHORAGE PIONEER HOME  
ANCHORAGE, ALASKA  
LEAD TEST LOCATIONS



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FILE #:	DWG.NO:
8031-SL	C-2



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C-1

THIRD FLOOR, EAST  
NTS



#### LEGEND

- AXX ASBESTOS TEST LOCATION
- AXX LAB TEST RESULTS POSITIVE FOR ASBESTOS

REFER TO TESTING SUMMARY IN REPORT FOR FULL DETAILS. ALL SAMPLES HAVE PH123 - PREFIX.

STATE OF ALASKA  
DEPARTMENT OF HEALTH AND  
SOCIAL SERVICES

ANCHORAGE PIONEER HOME  
ANCHORAGE, ALASKA  
ASBESTOS SAMPLE LOCATIONS



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FILE #:	DWG.NO:
7953-SL	C-1



● — AXX ASBESTOS TEST LOCATION

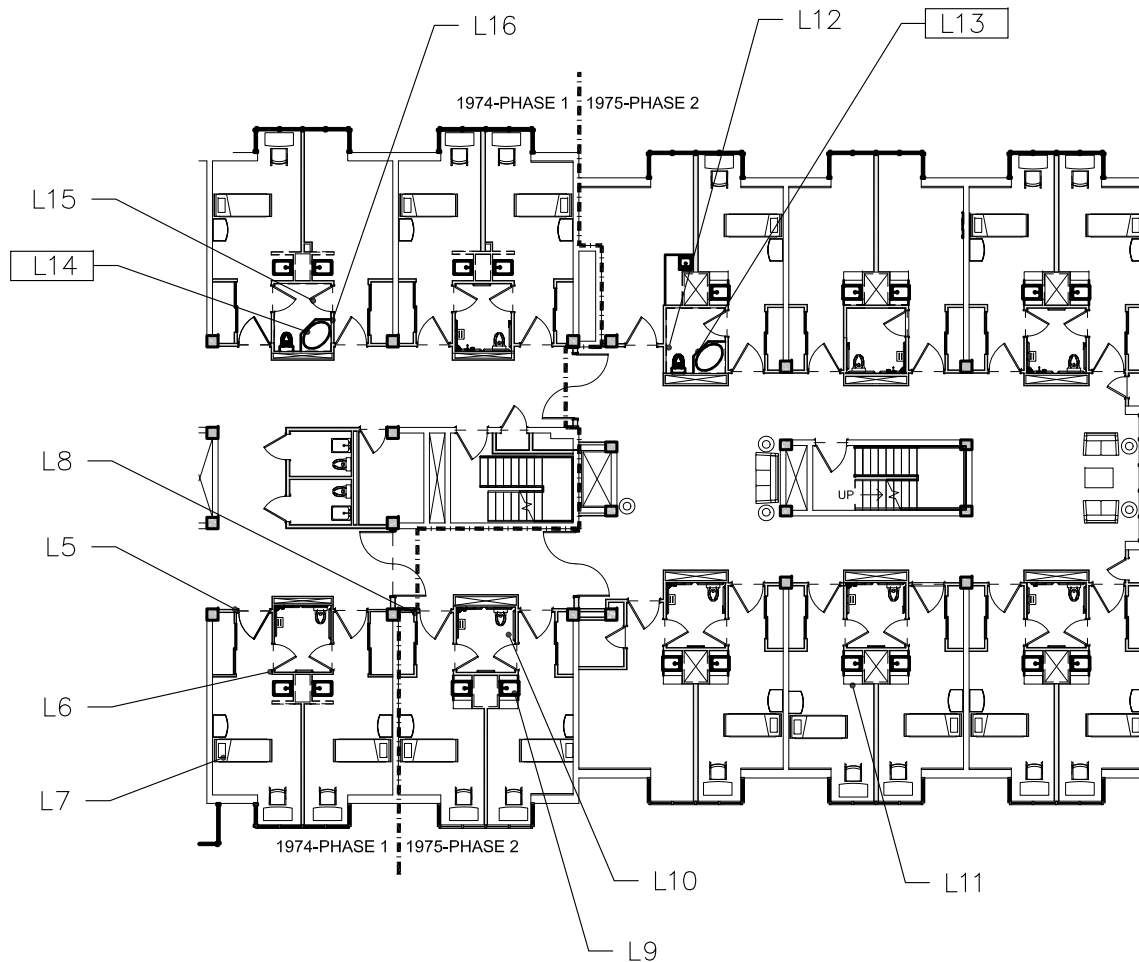
● — AXX LAB TEST RESULTS POSITIVE FOR ASBESTOS

REFER TO TESTING SUMMARY IN REPORT FOR FULL DETAILS. ALL SAMPLES HAVE PH123 – PREFIX.

ANCHORAGE PIONEER HOME  
ANCHORAGE, ALASKA  
ASBESTOS SAMPLE LOCATIONS



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FILE #:	DWG.NO:
7953-SL	C-2



1  
C-3

THIRD FLOOR, EAST  
WING



#### LEGEND

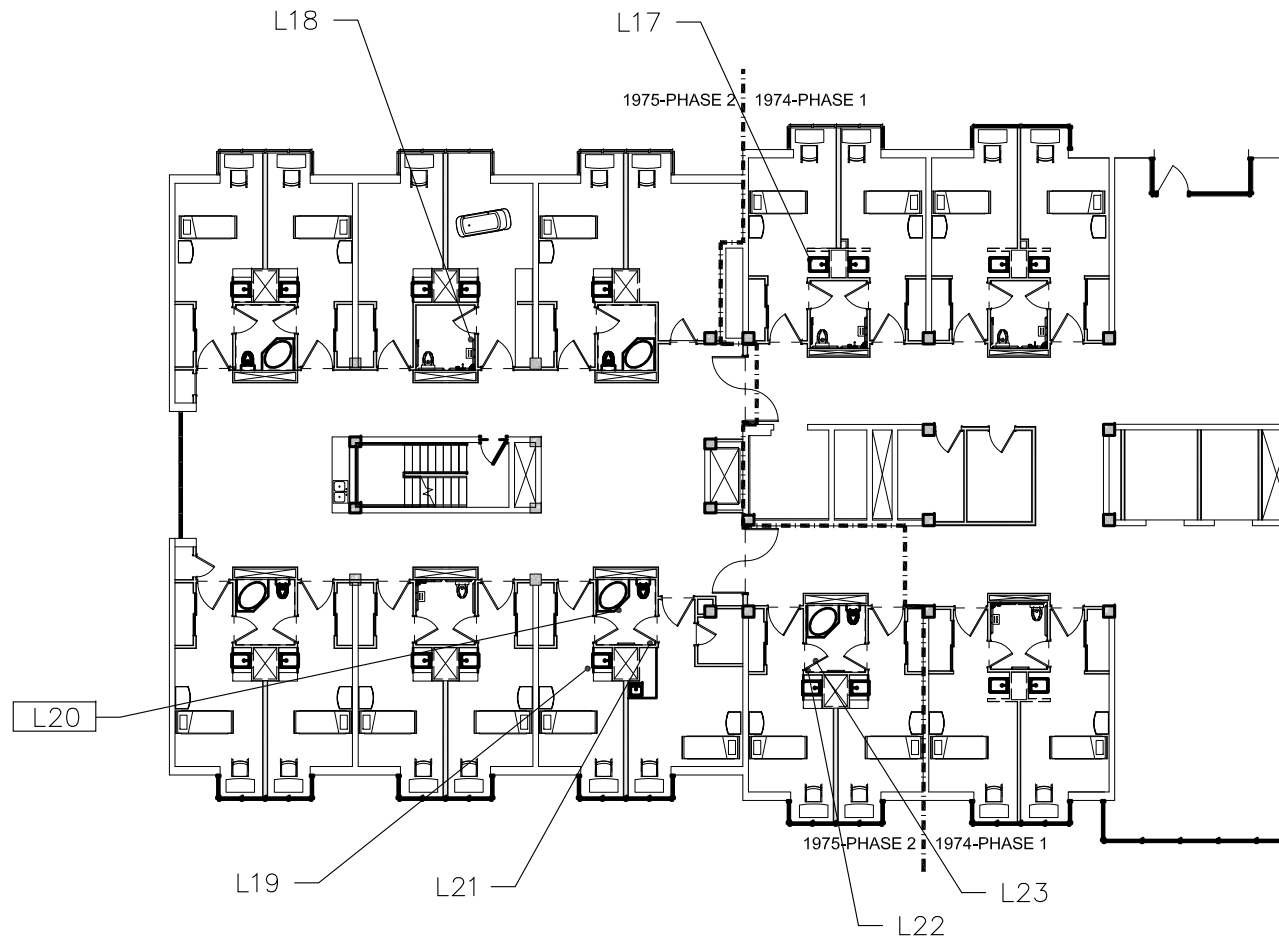
- LXX LEAD TEST LOCATION
  - LXX LEAD TEST CLASSIFIED AS LEAD BASED PAINT
- REFER TO TESTING SUMMARY IN REPORT FOR FULL DETAILS.

STATE OF ALASKA  
DEPARTMENT OF HEALTH AND  
SOCIAL SERVICES

ANCHORAGE PIONEER HOME  
ANCHORAGE, ALASKA  
LEAD SAMPLE LOCATIONS



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FILE #:	DWG.NO:
7953-SL	C-3



LEGEND

— LXX LEAD TEST LOCATION

— LXX LEAD TEST CLASSIFIED AS LEAD BASED PAINT

REFER TO TESTING SUMMARY IN REPORT FOR FULL DETAILS.

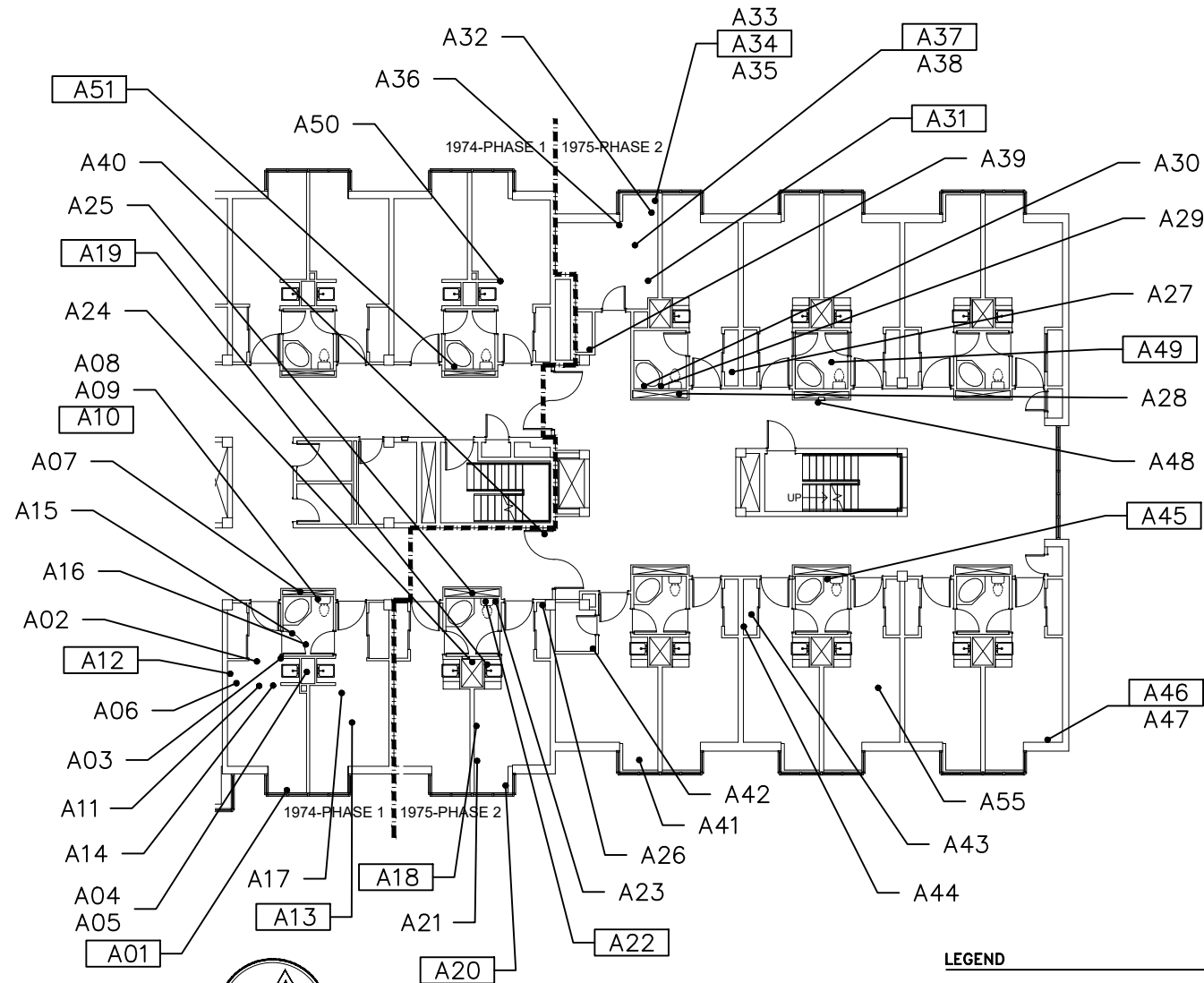
STATE OF ALASKA  
DEPARTMENT OF HEALTH AND  
SOCIAL SERVICES

ANCHORAGE PIONEER HOME  
ANCHORAGE, ALASKA  
LEAD SAMPLE LOCATIONS



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FILE #:	DWG.NO:
7953-SL	C-4





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C-1

FOURTH FLOOR, EAST  
NTS

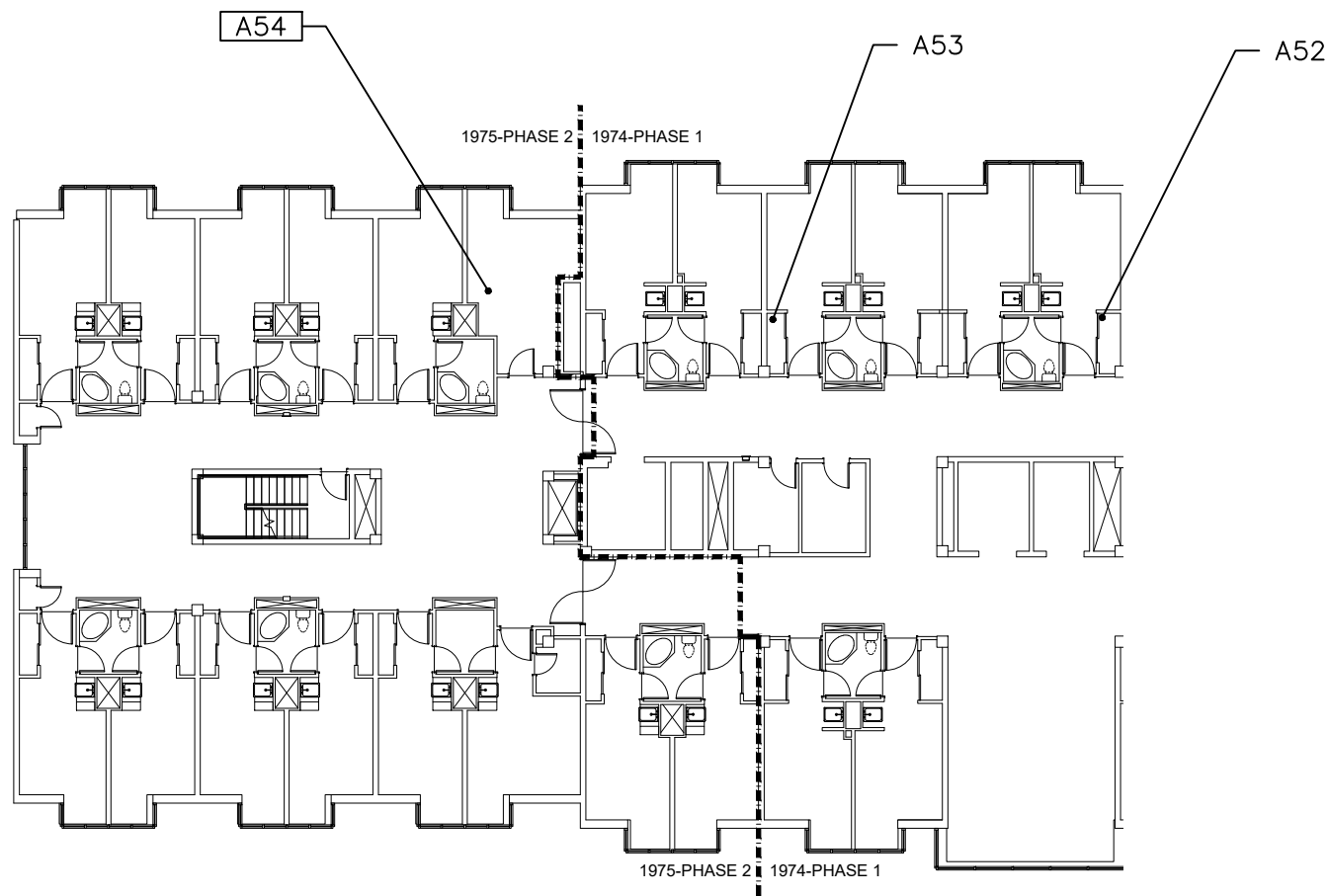


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ANCHORAGE PIONEER HOME  
ANCHORAGE, ALASKA  
ASBESTOS SAMPLE LOCATIONS



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FILE #:	DWG.NO:
7787-SL	C-1



# LEGEND

- AXX ASBESTOS TEST LOCATION
- AXX LAB TEST RESULTS POSITIVE FOR ASBESTOS

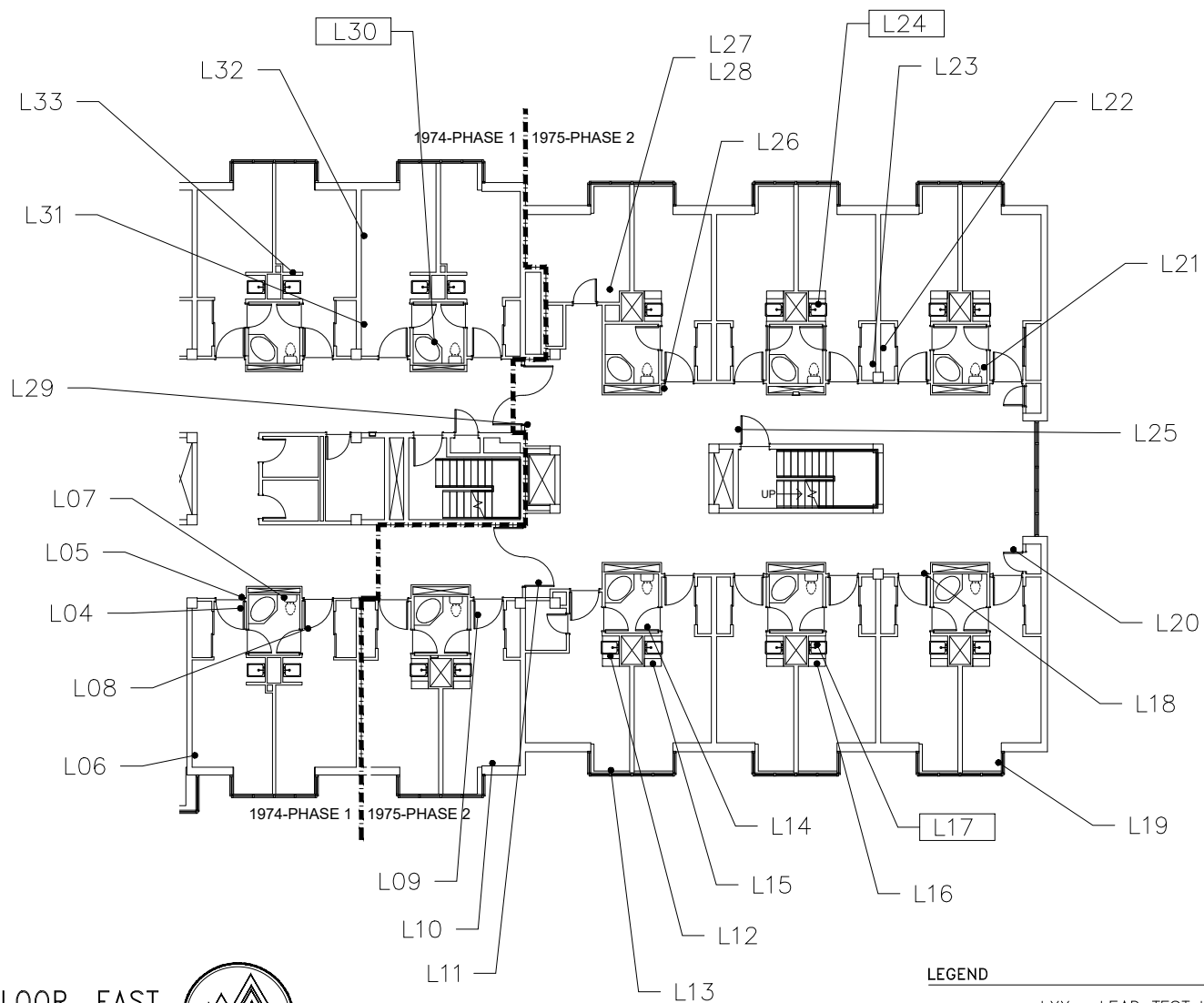
REFER TO TESTING SUMMARY IN REPORT FOR FULL DETAILS. ALL SAMPLES HAVE APH920- PREFIX.

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ANCHORAGE PIONEER HOME  
ANCHORAGE, ALASKA  
ASBESTOS SAMPLE LOCATIONS



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7787-SL	C-2



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FOURTH FLOOR, EAST  
NTS



LEGEND

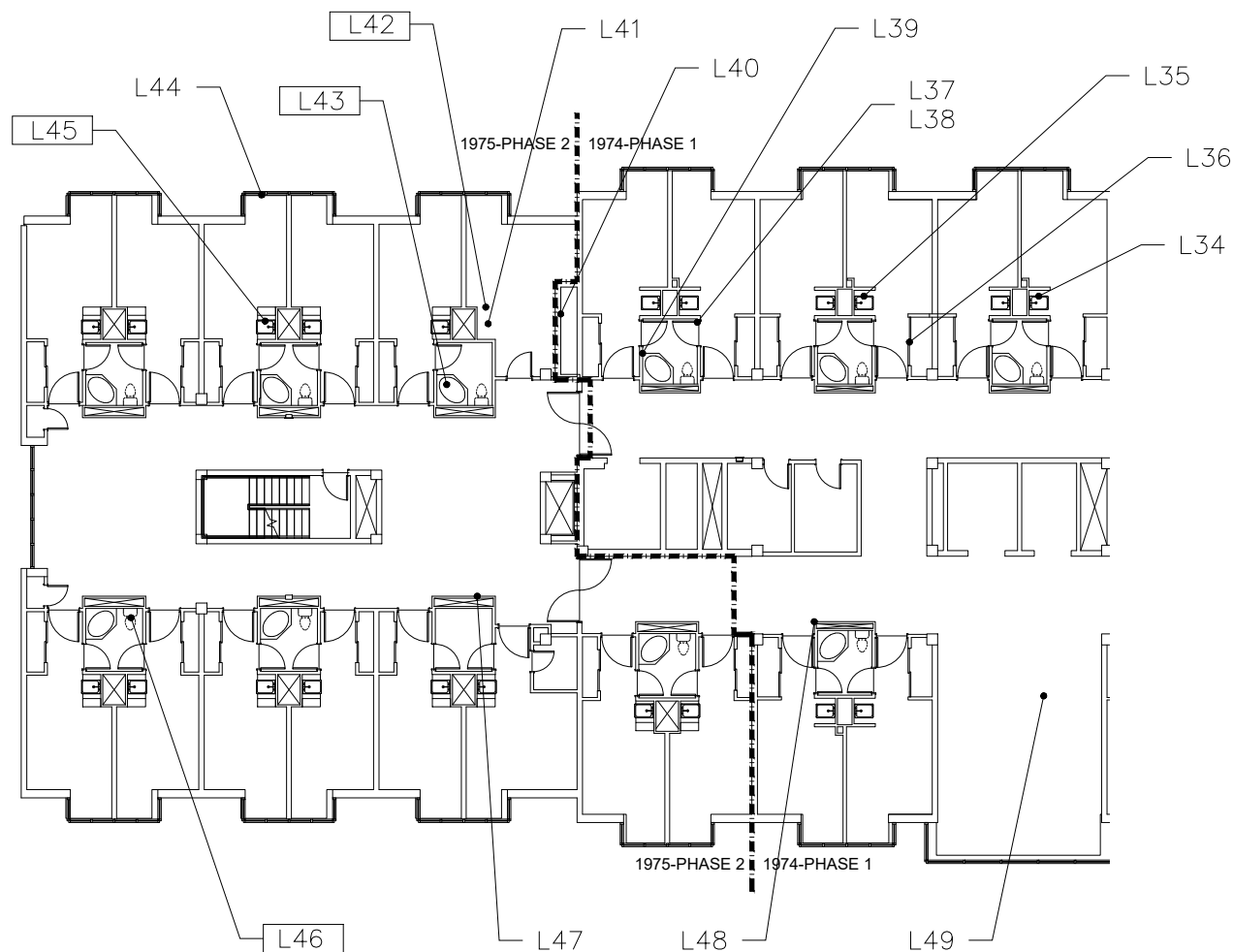
- LXX LEAD TEST LOCATION
  - LXX LEAD TEST CLASSIFIED AS LEAD BASED PAINT
- REFER TO TESTING SUMMARY IN REPORT FOR FULL DETAILS.

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DEPARTMENT OF HEALTH AND  
SOCIAL SERVICES

ANCHORAGE PIONEER HOME  
ANCHORAGE, ALASKA  
LEAD SAMPLE LOCATIONS



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7787-SL	C-3



FOURTH FLOOR, WEST  
NTS

#### LEGEND

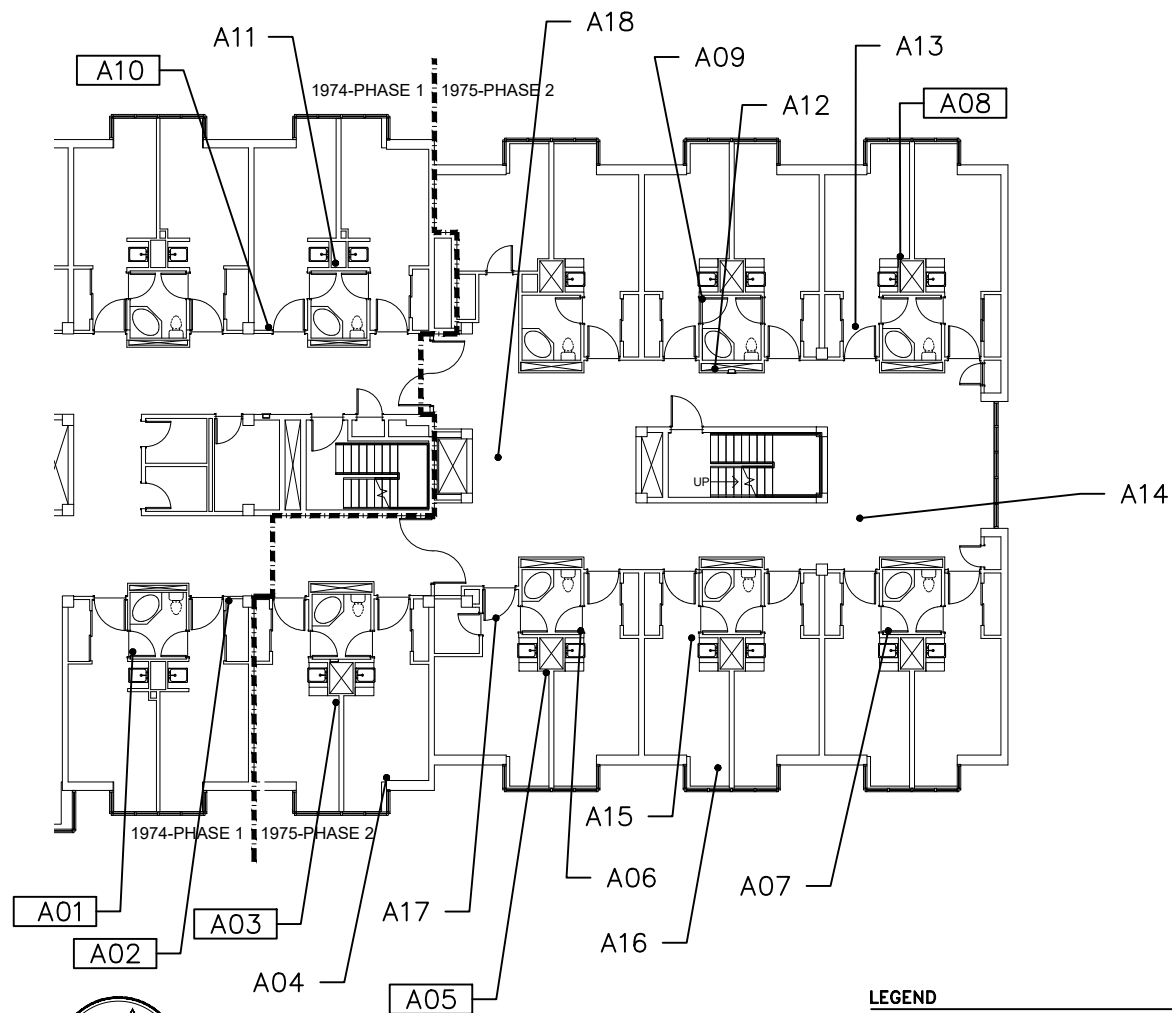
- LXX LEAD TEST LOCATION
  - LXX LEAD TEST CLASSIFIED AS LEAD BASED PAINT
- REFER TO TESTING SUMMARY IN REPORT FOR FULL DETAILS.

STATE OF ALASKA  
DEPARTMENT OF HEALTH AND  
SOCIAL SERVICES

ANCHORAGE PIONEER HOME  
ANCHORAGE, ALASKA  
LEAD SAMPLE LOCATIONS



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CHECK: RAF	
FILE #:	DWG.NO:
7787-SL	C-4



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C-5

FOURTH FLOOR, EAST  
NTS



#### LEGEND

- AXX ASBESTOS TEST LOCATION
- AXX LAB TEST RESULTS POSITIVE FOR ASBESTOS

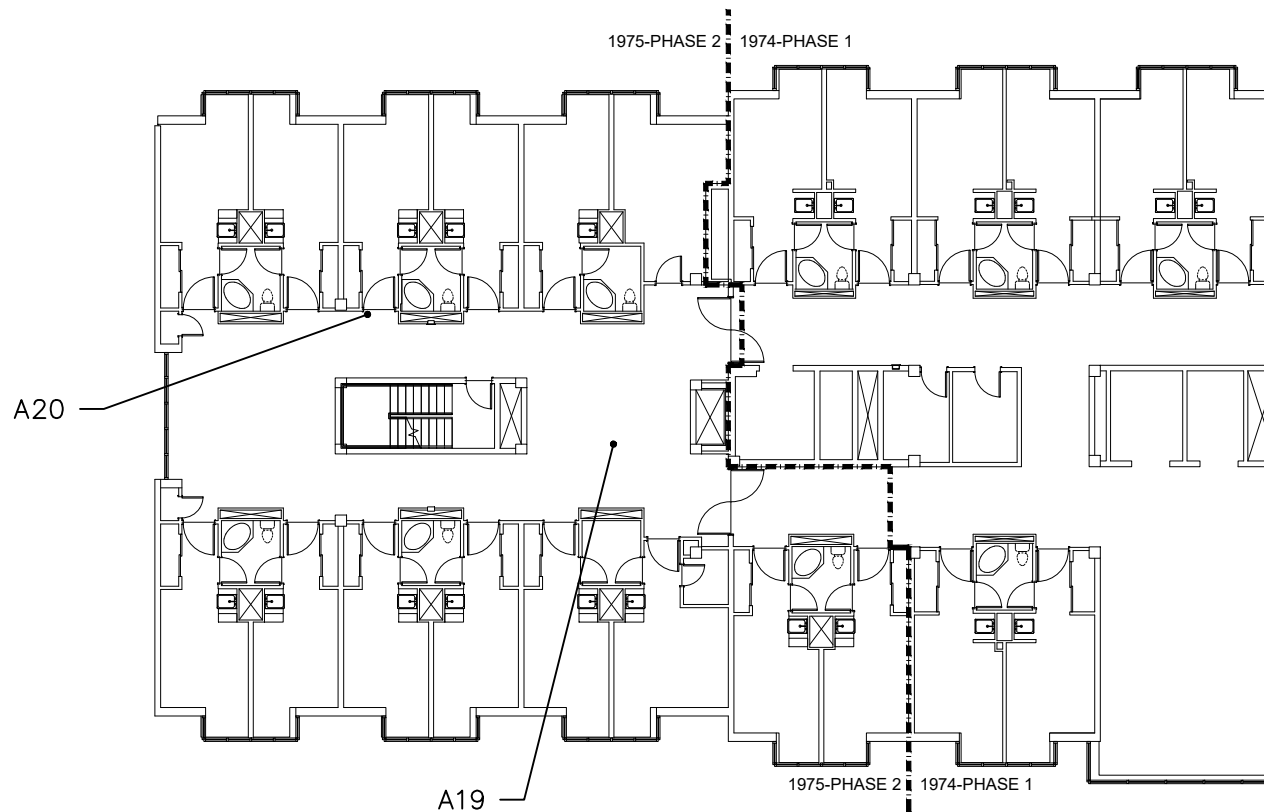
REFER TO TESTING SUMMARY IN REPORT FOR FULL DETAILS. ALL SAMPLES HAVE APH920- PREFIX.

STATE OF ALASKA  
DEPARTMENT OF HEALTH AND  
SOCIAL SERVICES

ANCHORAGE PIONEER HOME  
ANCHORAGE, ALASKA  
ASBESTOS SAMPLE LOCATIONS



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FILE #:	DWG.NO:
7787-SL	C-5



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C-6

FOURTH FLOOR, WEST  
NTS



#### LEGEND

- AXX ASBESTOS TEST LOCATION
- AXX LAB TEST RESULTS POSITIVE FOR ASBESTOS

REFER TO TESTING SUMMARY IN REPORT FOR FULL DETAILS. ALL SAMPLES HAVE APH920- PREFIX.

STATE OF ALASKA  
DEPARTMENT OF HEALTH AND  
SOCIAL SERVICES

ANCHORAGE PIONEER HOME  
ANCHORAGE, ALASKA  
ASBESTOS SAMPLE LOCATIONS



DRAWN: BWH	DATE:
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FILE #:	DWG.NO:
7787-SL	C-6

## PART 1 - GENERAL

### 1.1 SECTION INCLUDES

- A. Removal of indicated existing equipment and finishes in the Dish Room on the fifth floor. There may be some limited areas of work required on the fourth floor to access mechanical plumbing devices. Caution must be taken when cutting through tensioned floor slabs. Determining strand locations before cutting is strongly recommended. Site access to the fourth floor is further discussed in 1.2, B. of this specification. There has been a hazardous material investigation and asbestos and lead are present. See specification sections:
  - 1. Section 01 35 45 Airborne Contaminant Control
  - 2. Section 02 26 00 Hazardous Materials Assessment
  - 3. Section 02 41 19 Selective Demolition
  - 4. Section 02 82 33 Removal and Disposal of Asbestos Containing Materials
  - 5. Section 02 83 33 Removal and Disposal of Materials Containing Lead
  - 6. Section 02 84 18 Removal and Disposal of Chemical Hazards
- B. Extent of selective demolition work is that effort required to facilitate the installation of new or modified products as indicated on Drawings and specified within this document. Additional cutting or patching may be required to provide for proper installation of finished surfaces and system components.
- C. Types of Selective Demolition Work: Demolition requires the selective removal and subsequent off-site disposal of materials and building components as required to accomplish the work items shown on the drawings and as necessary to construct the work included in this project. This work will include but is not limited to removal of mechanical equipment, electrical devices, sheet vinyl, FRP wall panels, gypsum board, floor tile, and some food service equipment.
- D. The existing 5<sup>th</sup> floor kitchen is to remain operational during the Dish Room project. All meals currently served will continue to be served and the dishes from those meals will need to be washed. The Home's maintenance staff will install a temporary 3-compartment sink for use during the time when the permanent sink is unavailable due to construction.

### 1.2 JOB CONDITIONS

- A. Condition of Structures: Contractor shall verify actual condition of items to be removed or demolished. The contractor shall be responsible to notify Owner's Representative of discrepancies between actual conditions and information contained in the documents.
- B. Site Access: The Anchorage Pioneer Home is occupied by approximately 150 elderly Alaskans. It will be important for the Contractor to work closely with the Pioneer Home staff to ensure resident disruption is held to a minimum and safe conditions are always present in resident occupied areas. The majority of the work will occur on the fifth floor in the Dish Room. Floors below the fifth floor will remain fully occupied and it is important for the Contractor to be courteous and avoid loud noises, particularly structural bound noises that travel throughout the building. Dust and trash must be collected and cleaned up throughout the construction process. Staging may occur in the Dish Room, but floor load limits must be considered when heavy items such as rolls of flooring and gypsum board are stacked on the floor.
- C. Slab Cutting: Floor/ceiling slabs are post-tensioned planks with a thin topping. Care must be taken to avoid cutting/damaging reinforcing strands. Slab cutting, grinding chipping or other structure bound loud noises are to be restricted to 8:30 a.m. to 3:30 p.m. Monday through Saturday. No structure bound noises are to be created Sundays. Contractor access to the fourth floor to access services and install mechanical devices is to be restricted to allow demolition, system installation, access panel installation and gypsum board patching in one day. When the resident returns to their bedroom at the end of the day all work is to be complete, secure and cleaned up. Painting can occur at a separate, scheduled time as necessary.

- D. Partial Demolition and Removal: Following product removal, further demolition to access mechanical or electrical work will be required. Demolition to gain access is included in this scope of work.
- E. Salvage: Items indicated to be removed but of salvageable value to Contractor may be removed from the work area as work progresses. Transport salvaged items from work site as they are removed to areas designated by the Owner.
- F. Protection: Provide temporary barricades and other forms of protection as required to protect Owner's personnel, residents of the facility and general public from injury due to demolition work.
  - 1. The Anchorage Pioneer Home is an occupied residential senior center and the kitchen provides all resident food service. All demolished or removed material must be removed from the site before the Contractor leaves the site each day. Control of the work area HVAC and fire alarm during demolition is a requirement of the project. All systems are to remain fully functional in all parts of the building other than the Dish Room.
  - 2. Protect from damage the existing finish work that is to remain in place and becomes exposed during demolition operations. Repair any such damage to the building at no additional cost to the Owner.
  - 3. Protect floors with suitable coverings.
  - 4. Construct temporary insulated solid dustproof partitions where required.
  - 5. Remove protection on completion of work.
  - 6. Restrict return airflow to eliminate dust and odor transmission to other areas of the building.
- G. Damages: Promptly repair damages caused to existing products not scheduled to be removed by demolition work at no cost to Owner.
- H. Utility Service: Maintain existing utilities to remain in service and protect against damage during demolition operations.
- I. Dust Control: Control dust resulting from demolition and removal work to avoid creation of a nuisance in the surrounding area. Do not use water to control dust.
- J. Hazardous Materials: Asbestos and lead paint are expected to be encountered in this work area. There may be areas that may have been overlooked during the project survey. The Contractor is to err on the side of caution and stop work in the area and notify the project representative immediately if surfaces or existing products are encountered that are suspected to contain hazardous materials.

## PART 2 - PRODUCTS

Not Used.

## PART 3 - EXECUTION

### 3.1 DEMOLITION

- A. Perform selective demolition work in a systematic manner. Use such methods as required to complete work indicated on Drawings in accordance with demolition schedule and governing regulations.
  - 1. Do not use power driven impact tools without prior approval.
  - 2. Provide means for effective air and dust pollution control as required to eliminate airborne construction dust from leaving the immediate work area. The building's air handlers will be required to remain in operation in those areas occupied by residents and staff. The Contractor is required to block all return air grills in work areas to prevent dust and odor migration into inhabited areas of the building.



### 3.2 DESTRUCTIVE OBSERVATION

- A. Destructive Observation: The cart wash room and the east wall and a small portion of the south wall in the Dish Room is thought to have been subjected to extreme moisture conditions and the wall framing may be corroded and compromised. After the existing equipment, mechanical and electrical devices have been removed from the wall, the FRP and the gypsum board are to be removed. It is expected the wall is insulated, if so, all moist insulation is to be removed and the metal wall framing is to be inspected by the owner and consultant team. Once the condition of the steel framing is determined, the contractor will be requested to provide, yet to be determined, repair measures and to reconstruct the wall using materials specified in this project manual. The steel framing reconstruction will be negotiated as a change order, however the application of the wall finishes including gypsum board, paint, wall protection (FRP) and cove base are to be considered part of the base bid.

### 3.3 SALVAGE MATERIALS

- A. Items noted in this specification as "Salvage - For Owner Use", carefully remove indicated items, clean, store and turn over to Owner and obtain receipt.

### 3.4 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove debris, rubbish and other materials resulting from demolition operations from building site. Transport and legally dispose of materials off site.
- B. If unexpected hazardous materials are encountered during demolition operations, comply with applicable regulations, laws and ordinances concerning removal, handling and protection against exposure or environmental pollution.

### 3.5 CLEAN-UP AND REPAIR

- A. Repair demolition performed in excess of that required. Repair surfaces, which are to remain but have become soiled or damaged by demolition work, to new condition.

END OF SECTION

## PART 1 - GENERAL

### 1.1 DESCRIPTION OF WORK

- A. The work requires the disturbance, demolition, removal, and disposal of the following asbestos-containing materials (ACM) from the Anchorage Pioneer Home – Dish Room Remodel Project as shown on the drawings and as specified herein. Bulk samples have been taken of suspect materials in this facility and the results are documented in Section 02 26 00, Hazardous Materials Assessment:
1. Remnants of asbestos-containing backing to original sheet vinyl flooring and mastics concealed beneath newer flooring. (assumed asbestos).
  2. Joint compound in gypsum wallboard systems on the ceilings and walls of Phase I and Phase II (confirmed ACM).
  3. Flange gaskets and valve packings on piping (suspect, assumed asbestos).
- B. In addition to the above materials, the following materials are located in other areas of the building, and may require disturbance for auxiliary support, such as electrical and mechanical equipment and installation of equipment. Not all ACM is to be removed from these areas, only that required to complete the project work need be removed:
1. Tan ceiling grid mastic holding perimeter “L” channels to walls of Phase I (confirmed asbestos).
  2. Gray-green ceiling grid mastic holding perimeter “L” channels to walls of Phase II (confirmed asbestos).
  3. Light brown mastic holding “Marlite” to gypsum wall board in Phase II (confirmed asbestos).
  4. Light tan “Liquid Nails” type mastic found at sheet metal trim at ceiling in Phase II (confirmed asbestos).
  5. Brown mastic holding mirrors to wall in Phase II area (confirmed asbestos).
  6. Incandescent light fixture heat shields at original lights (confirmed asbestos).
  7. High temperature wiring insulation at original incandescent lights (confirmed ACM).
  8. Black sprayed-on undercoating on stainless steel sinks, in Phase II (confirmed asbestos).
  9. Cement asbestos board (CAB) “Glasweld” insulated infill panels at exterior windows of Phase I (confirmed asbestos), and Phase II (assumed asbestos).
  10. Insulation to fire doors (suspect, assumed asbestos).
  11. Exterior tarry damp-proofing (suspect, assumed asbestos).
  12. Door, window and penetration sealants and window glazing compounds (suspect, assumed asbestos).
  13. Interior tarry damp-proofing at inside face of exterior concrete or brick walls (suspect, assumed asbestos).
  14. Various roofing materials, and patching tars (suspect, assumed asbestos).
  15. Sound dampening tars at older Roof mounted Exhaust fans (suspect, assumed asbestos).
  16. Various other colors of undercoatings on stainless steel sinks (black undercoating confirmed ACM, other colors suspect, assumed asbestos).
  17. Other flooring materials (vinyl floor tiles, rubber flooring, rubber stair treads and stringers, etc.) and their associated mastics (suspect, assumed asbestos).
  18. Other miscellaneous construction mastics for trim, paneling, etc. (suspect, assumed asbestos).
- C. Quantities of ACM and hazardous materials shown on drawings are based on a comprehensive survey of the building and take-offs from scale drawings. The Hazardous Material Assessment and quantities provided are considered a baseline for bid purposes. It is the contractor's responsibility to remove and dispose of all ACMs affected by the project from the site in accordance with

applicable regulations. The contractor shall immediately notify the owner if other ACM or additional quantities are discovered. Quantities of materials removed shall be documented on a daily basis and shall include all materials removed and locations, in the units used on the drawings.

- D. Notification of Potential Hazards: Asbestos, lead and other potentially hazardous materials are present in the building that may impact the work of all trades. Regulated air contaminants, including asbestos and lead, are also present in settled and concealed dust in and on architectural, structural, mechanical and electrical components or systems throughout the building. All trades shall coordinate with other trades and conduct their work to prevent worker exposure or site contamination. Refer to Specification Divisions 0, 1 and 2 for specific information concerning disturbing, removing and disposing of these materials and the installation of new materials or components. This notification is provided in accordance with EPA and OSHA requirements.
- E. Note: Debris from previous renovation projects, including debris from the joint compound from the gypsum wall board and other materials is present in the work areas. Asbestos-containing materials may have come loose and fallen onto or into, floors, ceilings, walls, chases, wall cavities or mechanical, electrical and structural system components. The Contractor shall immediately notify the Owner if and when they encounter worn, damaged, or deteriorated ACM as evidenced by dust or debris adjacent to ACM materials.
- F. Work will be required while guests and staff are occupying the building. Work during occupied periods involving disturbance of asbestos-containing materials inside the building shall be performed using critical barriers and negative air pressure enclosures. Access to work area from within the building shall be blocked to prevent unauthorized or inadvertent entry by guests and staff. Access to work area shall be secured by lock when work is not ongoing.
- G. All work shall comply with Environmental Protection Agency (EPA) AHERA standard, 40 CFR 763. Clearance sampling is required if the necessary disturbance of asbestos-containing material is not classified as "Small-Scale, Short-Duration" work as defined in 40 CFR 763, and is not required for work that only involves the disturbance of dusts with asbestos. Visual inspections are required for all work disturbing or removing asbestos. Clearance air samples shall include a minimum of five (5) Transmission Electron Microscopy (TEM) samples from each affected space, taken using aggressive methods as outlined in Appendix A to 40 CFR 763 and analyzed in accordance with 40 CFR 763.90.

## 1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 02 26 00 Hazardous Materials Assessment
- B. Section 01 35 45 Airborne Contaminant Control
- C. Section 02 83 33 Removal and Disposal of Materials Containing Lead
- D. Section 02 84 18 Removal and Disposal of Chemical Hazards

## 1.3 DEFINITIONS AND ABBREVIATIONS: Definitions and abbreviations are provided in the applicable publications listed in Paragraph 1.4 of this section.

## 1.4 APPLICABLE PUBLICATIONS: The publications listed below form a part of this specification to the extent referenced.

- A. General Requirements: All work shall be performed in compliance with the International Building, Fire, Fuel Gas, Mechanical, Residential, Energy Conservation and Administrative Code; Uniform

Plumbing Code; the National Electrical Code; and the publications listed in this section that are in effect at the time of the bidding of this contract.

- B. Title 29 Codes of Federal Regulations (CFR), Department of Labor (USDOL)
  - Part 1910 General Occupational Safety and Health Standards
  - Part 1926 Safety and Health Regulations for Construction
- C. Title 40 CFR, Environmental Protection Agency (EPA)
  - Part 61 National Emission Standards for Hazardous Air Pollutants
  - Part 311 Worker Protection
  - Part 763 Asbestos
- D. Title 49 CFR, Department of Transportation (DOT)
  - Part 171 General Information, Regulations and Definitions
  - Part 172 Hazardous Materials Communication and Regulations
  - Part 173 General Requirements for Shipments and Packaging
  - Part 177 Carriage by Public Highway
  - Part 178 Specifications for Packaging
  - Part 382 Requirements for Drug Testing
  - Part 383 Commercial Driver's License Standards
- E. State of Alaska Administrative Codes (AAC)
  - 8 AAC 61 Occupational Safety and Health Standards
  - 18 AAC 60 Solid Waste Management
- F. State of Alaska Statutes
  - AS 18.31 Health and Safety - Asbestos
  - AS 45.50.477 Titles Relating to Industrial Hygiene
- G. Public Law 101-637  
Asbestos School Hazard Abatement Reauthorization Act
- H. Federal Standards
  - 313E Safety Data Sheets
- I. American National Standard Institute (ANSI)
  - Z9.2 Local Exhaust Systems
  - Z87.1 Eye and Face Protection
  - Z88.2 Practices for Respiratory Protection
- J. American Society for Testing and Materials (ASTM)
  - D-4397 Polyethylene Sheeting
- K. International Code Council  
International Building (IBC), Fire, Fuel Gas, Mechanical, Residential, Energy Conservation and Administrative Codes Current Standards
- L. National Fire Protection Association (NFPA)
  - NFPA 701 Fire Tests for Flame Resistant Textiles and Films
- M. National Institute of Occupational Safety and Health (NIOSH)  
Manual of Analytical Methods, Current Edition
- N. Underwriters Laboratories (UL)

UL 586

High-Efficiency, Particulate, Air (HEPA) Filter Units

## 1.5 QUALITY ASSURANCE

### A. On-site Observation:

1. The safety and protection of the Contractor's employees, sub-contractor's employees, Owner's employees, the facility, and the public is the sole responsibility of the Contractor.
2. The Owner, the Owner's Representative or representatives of State or Federal agencies may make unannounced visits to the site during the work. The contractor shall make available two complete sets of clean, protective clothing for such visitor use. If the work requires the use of PAPR or Supplied Air Respirators, the contractor shall provide respirators to the visitor to ensure compatibility with fresh batteries or supplied air system. It is the visitor's responsibility to ensure medical qualification, training, and current "fit test" prior to using any respirator provided by the Contractor.
3. If the Owner or agency visitor determines that practices are in violation of applicable regulations, they will immediately notify the Contractor that operations must cease until corrective action is taken. Such notification will be followed by formal confirmation.
4. The Contractor shall stop work after receiving such notification. The work may not be restarted until the Contractor receives written authorization from the Owner.
5. All costs resulting from such a stop work order shall be borne by the Contractor and shall not be a basis for an increase in the contract amount or an extension of time.

### B. Air Monitoring: Air monitoring during the work shall be performed as follows:

1. The Contractor shall hire Independent Testing Laboratories to collect and evaluate all air samples that are the responsibility of the Contractor. The Contractor shall direct its laboratories, in writing, to release air monitoring data, and all other pertinent data and records, to the Owner. A copy of this written direction shall be submitted to the Owner along with the information required by Paragraph 1.13 of this Specification.
2. The Contractor shall be responsible for monitoring its employees for potential exposure to airborne asbestos fibers as required by this specification and all applicable regulations.
3. The Contractor shall be responsible for work area monitoring and environmental monitoring outside the work area as required by this specification.
4. The Owner may perform air monitoring inside the building, inside the work areas, and on the Contractor's employees while asbestos work is underway and at any time during the work.
5. Final inspection and clearance air monitoring shall be conducted by the Contractor's Independent Testing Laboratory. The Independent Testing Laboratory may not be hired by the Abatement Subcontractor to perform final visual inspections and clearance air monitoring.
6. The Contractor shall have its Independent Testing Laboratories archive all air samples until the successful completion of the project.

### C. Additional Sampling of Suspect Materials:

1. The Contractor and all Subcontractors shall be vigilant during demolition and construction in the event additional suspect asbestos or hazardous materials are encountered. If suspect asbestos or hazardous materials not previously identified are encountered, the contractor shall stop work that may be affected by this material and immediately notify the Owner. The Owner or the Owner's Representative will provide recommendations and additional testing if necessary. All sampling by the Contractor shall be at their own cost.
2. The Contractor and all Subcontractors shall notify the Owner prior to any bulk sampling of suspect asbestos-containing material or other hazardous materials to allow the Owner or Owner's Representative to be present during such sampling. All results of bulk sampling conducted by the Contractor or Subcontractors shall be submitted to the Owner.

- 1.6 PROTECTION OF EXISTING WORK TO REMAIN: Perform asbestos removal in the project work areas without contamination of adjacent work or the facility.
- 1.7 MEDICAL REQUIREMENTS
  - A. Institute and maintain a medical surveillance program for employees in accordance with 29 CFR 1926.1101 and 29 CFR 1910.134.
  - B. Institute and maintain a random drug testing program, as required by 49 CFR 382, for all drivers of vehicles transporting asbestos or hazardous materials.
- 1.8 TRAINING: Employ only workers who are trained and certified as required by 8 AAC 61.600, 29 CFR 1910, 29 CFR 1926, 40 CFR 763, and 49 CFR 383 to remove, encapsulate, barricade, transport, or dispose of asbestos.
- 1.9 PERMITS AND NOTIFICATIONS: Secure necessary permits for asbestos removal, hauling, and disposal and provide timely notification as required by federal, state, and local authorities.
- 1.10 SAFETY AND ENVIRONMENTAL COMPLIANCE: Comply with laws, ordinances, rules, and regulations of federal, state, and local authorities regarding handling, storing, transporting, and disposing of hazardous materials and all other construction activities.
- 1.11 RESPIRATOR PROGRAM: Establish a respirator program as required by ANSI Z88.2 and 29 CFR 1910.134.
- 1.12 HAZARD COMMUNICATION PROGRAM: Implement a hazard communication program in accordance with 29 CFR 1910.1200.
- 1.13 SUBMITTALS
  - A. The Contractor shall submit the following documentation to the Owner for review, approval or rejection. Work shall not begin until submittals are approved.
    - 1. Shop drawings.
    - 2. Work plan.
    - 3. Liability insurance policy and performance bond.
    - 4. Schedule.
    - 5. Testing laboratory and laboratory personnel.
    - 6. Disposal site designations and disposal authorizations.
    - 7. Waste transporter designation.
    - 8. Notifications and certifications.
    - 9. "Competent Person" designation and experience.
    - 10. Request for substitutions.
  - B. Shop drawings shall show:
    - 1. Boundaries of each regulated work area.
    - 2. Location and construction of decontamination areas.
    - 3. Location of temporary site storage facilities.
    - 4. Location of air monitoring stations, both in and outside of the work area.
    - 5. Emergency egress route(s).
    - 6. Location of negative pressure exhaust systems, if required.
  - C. The work plan shall include procedures for:
    - 1. Work area setup and protection.
    - 2. Worker protection and decontamination.

3. Initial exposure assessment procedures.
  4. Asbestos removal procedures.
  5. Waste load-out, transport, and disposal procedures.
  6. Air monitoring procedures.
    - a. Air monitoring procedures shall include the number of daily samples and the target volumes of each type of sample.
    - b. Clearance air monitoring procedures and protocols for each work area.
  7. Determination by the Certified Project Designer of the estimated quantities of ACM and PACM to be removed, and determination of clearance requirements for each different type or phase of work.
  8. Emergency procedures.
  9. The Work Plan shall be prepared, signed and dated by an Environmental Protection Agency (EPA) Certified Project Designer.
- D. Insurance Policy and Bond: Submit copies of the Contractor's or Subcontractor's insurance policy and performance bond. Submittal requirement is only to ensure that the insurance certificate(s) show specific coverage for the potentially hazardous materials being handled by this project. The insurance and bond amounts and certificate holder requirements are addressed in other portions of the contract documents and are not covered as part of this submittal requirement.
- E. Schedule: Submit construction schedule by work area.
- F. Independent Testing Laboratories and Laboratory Personnel: Submit the name, location, and phone number of proposed independent testing laboratories, and the names and certifications of the industrial hygiene technicians. Include the laboratory's accreditation. Not all laboratories will require all accreditations.
1. The Independent Testing Laboratories shall be acceptable to Owner.
  2. The laboratories shall be proficient in the National Institute of Occupational Safety and Health (NIOSH) Proficiency in Analytical Testing (PAT) program and shall be accredited by the National Institute of Science and Technology (NIST) under their National Voluntary Laboratory Accreditation Program (NVLAP) for bulk asbestos analysis and airborne asbestos fibers as appropriate. NVLAP accreditation for bulk asbestos analysis may be waived if the microscopists are listed in the American Industrial Hygiene Association (AIHA) Asbestos Analyst Registry (AAR).
  3. Provide a current list of their microscopists who have participated in the latest PAT and NVLAP programs and provide the names of microscopists and evidence that they have completed the NIOSH 582 course or equivalent. Provide latest AAR report of performance for microscopists.
  4. Provide name(s) and resume(s) of proposed on-site industrial hygiene technician(s) showing academic degrees and Alaska Abatement Certificate(s).
- G. Disposal Site: Submit the name and location of the proposed Alaska Department of Environmental Conservation/ U.S. Environmental Protection Agency (DEC/EPA) permitted disposal site. Submit authorization to dispose of asbestos waste by the proposed disposal site operator.
- H. Waste Transporter: Submit the name and address of the proposed waste transporter.
- I. Representations: Submit a signed statement by the Contractor that records of employees' work assignments, certifications, respirator fit tests, and medical records are accurate, up-to-date, and available for inspection.
- J. Notifications and Certificates:

1. Submit a copy of the written "Notification of Demolition and Renovation" to the Environmental Protection Agency. (If required by NESHAP).
  2. Submit a State of Alaska Department of Labor (ADOL) approved copy of the written ADOL notification of proposed workers.
  3. Submit a copy of Project Designer's current certification.
- K. Competent Person: Submit the name and certifications of the Contractor's proposed Competent Person and a list of their previous projects. Certify by signed statement that the Competent Person has the knowledge and training to supervise the work in compliance with the publications listed in Paragraph 1.4 above.
- L. Substitutions: Submit requests for substitutions of materials, equipment and methods.
- M. Updated Project Information: Submit changes to the submitted project information at least 24 hours prior to the effective time of change for the following:
1. Updated schedules.
  2. Change in Competent Person.
  3. ADOL approval for additional workers.
  4. Changes to work plan.
  5. Revisions to the EPA notification.
- 1.14 TEST REPORTS: Contractor shall submit periodic test reports, daily logs, monitoring results as specified herein. Submit two (2) copies of the following information within twenty-four (24) hours after the end of a shift:
- A. Initial Exposure Assessment(s): Submit the results of the Contractor's initial exposure assessment(s).
- B. Daily Air Monitoring: Submit daily, all results of Contractor's air monitoring (submit no later than 24 hours after the end of the shift). Submittal shall consist of negative air pressure recordings, daily monitoring report, field data sheets, the analytical laboratory's results, and sketch of sample locations. Submit all results of any sampling of bulk materials to Owner within 24 hours of receipt of results. Bulk sample submittal shall consist of daily monitoring report, field data sheets, and the analytical laboratory's results, and sketch of sample locations, as well as the current certification of the asbestos Building Inspector who conducted the sampling.
- C. Project Daily Logs: Submit the previous day's Daily Logs. Logs shall include regulated area sign-in sheets and list of asbestos-containing materials removed including quantities and locations of those materials, in the units used on the drawings. Claims for additional quantities will not be addressed unless daily quantities are submitted.
- D. Clearance Air Monitoring: Submit draft results of Contractor's clearance air monitoring for each work area for Owner's review and approval prior to releasing the work area to unprotected workers. FAX or electronic submittals are acceptable. Submittal shall include the following:
1. A signed and dated copy of the final visual inspection report (completed prior to clearance air monitoring) certifying that all dust and debris have been removed from the work area and that all ACM to be removed as required by the contract, were removed. Visual inspection reports are required for all removal, even if clearance air monitoring is not required.
  2. Documentation that clearance air sample collection complied with 40 CFR 763, contract specifications and the approved work plan.
  3. Drawings of the work area with sampling locations clearly marked. Work area drawings shall be clearly identified as to their location within the facility.



4. Field data sheets for sampling including: sample locations, calibration device serial number, initial and final pump calibration readings, pump time on and off, initial and final sampling flow rate, pump type and serial number, and sample cassette identification.
  5. Laboratory results, signed and dated by the analyst.
  6. Data sheets and visual inspection sheets shall be signed and dated by the Industrial Hygiene Technician performing the work.
- 1.15 PROJECT COMPLIANCE DOCUMENTS: Prepare and submit the following records of compliance with hazardous materials regulations following each work area clearance. Submittals may contain segregated submittals for more than one (1) work area. Submittal shall be received by Owner within four (4) weeks following work area clearance. Compliance documents shall be signed and dated and shall include as a minimum:
  - A. Waste transport records (40 CFR 61, Figure 4).
  - B. Disposal site receipts.
  - C. Contractor's "Start" and Finish" dates for the work area(s).
  - D. Daily logs, including regulated area sign in sheets, materials summary, etc (if not previously submitted).
  - E. Final work area inspection report(s) and inspector certifications (if not previously submitted).
  - F. Final, signed, clean copies of all bulk and air sampling field data sheets, location drawings, negative air tapes and air monitoring log, including all clearance data.
  - G. Final, signed, clear, legible copies of all analytical laboratory bulk and air monitoring test results, including all clearance data, and current laboratory certifications (if changed from previously submitted).
  - H. Copies of Asbestos Worker Training certificates for workers performing work on this project and all approved Alaska DOL notifications for those workers, and any revisions to the EPA notification(s).
- 1.16 SANITARY FACILITIES: Provide adequate toilet and hygiene facilities.
- 1.17 MATERIAL STORAGE: Store all materials subject to damage off the ground and secure from damage, weather, or vandalism.
- 1.18 ON-SITE DOCUMENTATION: The Contractor shall maintain on the job site, at a location approved by the owner, copies of the following data for safety procedures, equipment, and supplies used for the work
  - A. Equipment: Show the model, style, capacity and the operation and maintenance procedures for the following, as applicable:
    1. High-Efficiency, Particulate, Air (HEPA) Filtration units.
    2. HEPA Vacuum cleaners.
    3. Pressure differential recording equipment.
    4. Heat stress monitoring equipment.
  - B. Safety Data Sheets (SDS): Maintain SDSs for each encapsulant, surfactant, solvent, detergent, and other material proposed to be used.
  - C. Respiratory Protection Plan: The Contractor's and/or Subcontractor's written respirator program.

## PART 2 - PRODUCTS

- 2.1 PERSONAL PROTECTIVE EQUIPMENT: Provide personal protective clothing as approved and selected by the IH.
- A. Respirators: Provide personally issued and marked respirators approved by the National Institute of Occupational Safety and Health (NIOSH). Provide sufficient replacements for respirators with disposable canisters. Use respirators equipped with dual cartridges whenever both asbestos hazards and other respiratory hazards exist in the work area.
  - B. Provide filter cartridges approved for each airborne contaminant which may be present. NIOSH approved filter cartridges shall be used. At no time shall the permissible exposure limit (PEL) for the contaminant exceed the PEL listed in 8 AAC 61.1100.
  - C. Whole Body Protection: Provide approved disposable fire retardant, full body coveralls and hoods fabricated from nonwoven fabric, gloves, eye protection, and hard-hats, and other protective clothing as required to meet applicable safety regulations to personnel potentially exposed to asbestos above the permissible exposure limits (PELs). Wear this protection properly. Full facepiece respirators shall meet the requirements of ANSI Z87.1.
  - D. Provide protective personal equipment and clothing at no cost to the workers.
- 2.2 DECONTAMINATION UNIT
- A. Provide a temporary three-stage decontamination unit, attached in a leak-tight manner to each negative pressure work area. Decontamination units shall consist of a clean room equipped with separate lockers for each worker, a shower room, and an equipment locker room equipped with separate lockers for each worker.
  - B. Shower specifications: Locate flow and temperature controls within the shower where adjustable by the user. Hot water service may be secured from the building hot water system if available, but only with back-flow protection installed by the Contractor at the point of connection, and with prior notification and approval by the Owner. Should sufficient hot water be unavailable, the Contractor shall provide a minimum 40-gallon electric hot water heater with a minimum recovery rate of 20 gallons per minute. Water from the shower room shall not be allowed to wet the floor in the clean room.
- 2.3 WASTE WATER FILTERS: Provide Water Filtration Units with filters of adequate capacity to treat decontamination water and shower flows. Water filtration unit effluent shall contain less than 7,000,000 asbestos fibers per liter prior to discharge to sanitary sewer or storm drains.
- 2.4 DANGER SIGNS AND TAPE: Post danger signs and tape signs to demarcate areas where asbestos waste is temporarily stored, and, in areas not accessible to the public, where asbestos-containing materials are left in place. Signs and labels shall be in accordance with applicable regulations and codes. The signs posted at work area entrances, exits, decontamination areas, emergency egress, and waste disposal areas shall comply with 29 CFR 1926.1101 and the International Fire Code.
- 2.5 WARNING LABELS: Affix warning labels to all components or containers containing asbestos wastes. Conform labeling to 29 CFR 1926.1101 and 49 CFR 172.
- 2.6 HEPA FILTRATION UNITS: (if required) shall conform to ANSI Z9.2, and HEPA filters shall be UL-586 labeled.

- 2.7 PRESSURE DIFFERENTIAL MONITORING EQUIPMENT: Provide continuous monitoring of the pressure differential with an automatic recording instrument for each negative pressure enclosure. Locate the instrument in a clean area where personnel have access to it without respiratory protection. The instrument shall be fitted with an alarm should the negative pressure drop below -0.02 inches of water column relative to the air outside containment.
- 2.8 CHEMICALS
- A. Adhesives: Adhesives shall be capable of sealing joints of adjacent sheets of polyethylene to finished or unfinished surfaces and of adhering under both dry and wet conditions.
  - B. Mastic Removal Solvents: Mastic removal solvents shall not contain halogenated compounds or compounds with flashpoints less than 60° C (140° F). Solvents shall be compatible with replacement materials.
  - C. Sealants and Encapsulants: Penetrating and bridging encapsulants for asbestos applications. Tint "Lock-Down" encapsulants used in non-finished areas for identification in a color that will not obscure residual asbestos. Encapsulants shall be compatible with replacement materials.
  - D. Surfactant: Use a surfactant specifically designed to effectively wet asbestos. Mix and apply the surfactant as recommended by the manufacturer.
- 2.9 SAFETY DATA SHEETS (SDSs): Provide SDSs for all chemical materials brought onto the work-site.
- 2.10 MATERIALS
- A. Disposal Containers: Use disposal containers to receive, retain, and dispose of asbestos-containing or contaminated materials. Label leak tight containers in accordance with the applicable regulations. Non-leak tight containers are not acceptable. Plastic bags shall be a minimum 6-mil polyethylene, pre-printed with approved warning labels. Plastic wrap shall be 6-mil polyethylene sheets, securely wrapped and taped. Disposal containers shall be labeled with "ASBESTOS NA 2212," Contractor's name and location, and a Class 9 label.
  - B. Glove Bags: The glove bags shall be a minimum of 6-mil polyethylene or polyvinylchloride plastic, and specially designed for removal of asbestos-containing materials, with two inward projecting long sleeves and rubber gloves, one inward projecting water wand sleeve, an internal tool pouch, and an attached, labeled receptacle for asbestos waste.
  - C. Plastic Sheet: A minimum 6-mil thick flame resistant polyethylene (in accordance with NFPA 701) shall be used unless otherwise specified.
  - D. Tape: Tape shall be capable of sealing joints of adjacent sheets of polyethylene, for attachment of polyethylene sheets to finished or unfinished surfaces and of adhering under both dry and wet conditions.
- 2.11 OTHER MATERIALS: The Contractor shall provide standard commercial quality of all other materials as required to prepare and complete the work.
- 2.12 TOOLS AND EQUIPMENT
- A. The Contractor shall provide tools and equipment as required to prepare and complete the work. Tools and equipment shall meet all applicable safety regulations.

- B. Transportation equipment shall be suitable for loading, temporary storage, transit, and unloading of contaminated waste without exposure to persons or property. All trucks or vans used to transport asbestos shall be enclosed and all containers sealed leaktight. Truck drivers shall have a commercial driver's license with hazardous material endorsement.

### PART 3 - EXECUTION

#### 3.1 WORK AREAS

- A. Regulated Work Areas: Establish regulated work areas in compliance with 29 CFR 1926.1101.
- B. Decontamination Area: Install decontamination areas in compliance with 29 CFR 1926.1101. Decontamination area shall meet fire-exiting requirements of the International Fire Code. Showers shall be provided with hot water and water filtration units.
- C. Negative Pressure Enclosure System: Construct Negative Pressure Enclosure Systems as required by 29 CFR 1926.1101, these specifications, and approved work plan. Signage shall conform to the International Fire Code and 29 CFR 1926.1101. Exhausts from HEPA Filtration Units shall terminate outside of the building.
- D. Notify applicable Fire Marshal as required by the International Fire Code.

#### 3.2 PERSONNEL PROTECTION PROCEDURES

- A. Contractor's Competent Person shall strictly enforce personal protection procedures as required by the approved work plan and all applicable regulations.
- B. Post the decontamination, safety, and work procedures to be followed by workers.
- C. Provide continuous on-site supervision by the approved Competent Person.
- D. Maintain a daily log of all workers and visitors entering regulated work areas. Log shall contain the name of each individual, his or her organization, accurate time of entering and leaving, and purpose of visit.

- 3.3 ASBESTOS REMOVAL PROCEDURES: Remove asbestos in accordance with the Contractor's Approved Work Plan, applicable regulations and this specification. The Owner shall be notified 24-hours in advance of any asbestos disturbance taking place outside of a Negative Pressure Enclosure System.

#### 3.4 AIR MONITORING

- A. Perform personal, work area, and environmental monitoring for airborne asbestos fibers by industrial hygiene technicians who are employees of (one of) the Contractor's Independent Testing Laboratories.
- B. Conduct air monitoring in accordance with 29 CFR 1926.1101, current EPA guidance, and as specified herein. Calibrate all sampling pumps on-site with a calibrated transfer standard before and after each sample. Built-in rotameters on pumps are not acceptable for calibration. Additional samples beyond the minimum numbers shown below may be necessary if samples are overloaded or require shorter sampling periods to achieve readable samples, due to size of the work force, or due to more than one 8-hour work shifts.
- C. Conduct daily work area and environmental air monitoring per shift as follows:
  - 1. Three (3) air samples within the work area.

2. One (1) air sample located outside the entrance to the work area.
  3. One (1) air sample located at the exhaust(s) of the HEPA filtration unit(s) (if more than one unit is used, the sampling may be rotated between units, however, each unit must be sampled at least once every three days).
  4. Three (3) air samples located in adjacent occupied areas.
  5. Two (2) waste load-out samples for the full duration of the operation, one taken inside the wash-down station and one taken on the clean side of the wash-down station, in addition to the daily work area and environmental samples, (no samples are necessary if no load-out operation is performed).
- D. Clearance air monitoring shall be conducted by the Contractor's Independent Testing Laboratory subcontractor. The Independent Testing Laboratory may not be hired by the Abatement Subcontractor to perform visual inspections and clearance air monitoring. Owner approval is required before a work area is released to unprotected workers. The Contractor is responsible for all costs associated with clearance and scheduling of visual inspection and clearance air monitoring. The maximum acceptable level of airborne asbestos fibers for work area clearance is as published in 40 CFR 763 for TEM analysis. A minimum of five aggressive clearance samples are required for each work area, regardless of the type of analysis. TEM analysis shall be used unless PCM analysis is approved. PCM analysis (NIOSH Method 7400) may be performed if allowed by 40 CFR 763 and with prior approval by the Owner or Owner's representative. The Contractor has the option, at its expense and at no cost to the Owner, of re-cleaning the work area and repeating the clearance air monitoring procedures or of having failed phase contrast microscopy (PCM) sample media sent to an approved NVLAP accredited laboratory for TEM analysis by NIOSH Method 7402.
- E. For small-scale, short-duration work, such as minor penetrations of gypsum wall board with asbestos-containing joint compound, gasket removal, or similar work, that work may be requested to be "cleared" on the basis of a minimum of 5 air samples taken inside the work area during the work, immediately adjacent to where removal is taking place, and where each of those air samples have fiber counts of less than 0.01 f/cc. If the samples taken during the work exceed 0.01 f/cc, the Contractor has the option, at its expense and at no cost to the Owner, of having failed PCM samples sent to an approved NVLAP accredited laboratory for TEM analysis by NIOSH Method 7402, or of re-cleaning the work area and conducting aggressive clearance PCM air monitoring procedures. These alternative "clearance" sampling protocols will only be allowed if fully outlined in the contractor's work plan, with specific pre-approval by the Owner. Visual inspections are required for all removal work, including small-scale, short-duration work.
- F. Conduct personal air monitoring in accordance with 29 CFR 1926.1101 and as specified herein.
1. Take personnel samples (excluding excursion samples) at least twice per eight-hour work shift at the rate of one sample for every six people performing that task in the same work area. Persons performing separate tasks or in separate work areas shall be sampled separately.
  2. Collect and analyze excursion samples as required by 29 CFR 1926.1101.
  3. Continuously monitor all workers disturbing asbestos outside of a Negative-Pressure Enclosure System if that work is conducted indoors.
- G. Daily personnel monitoring may be discontinued only after the Contractor's Independent Testing Laboratory certifies in writing that a Negative Exposure Assessment has been obtained and the Owner has reviewed and approved the negative exposure assessment data.
- H. Submit air monitoring results to the Owner as specified in Paragraphs 1.14 and 1.15.

### 3.5 DISPOSAL

- A. Dispose of asbestos wastes in an EPA/DEC permitted asbestos landfill.
- B. Comply with current waste disposal, handling, labeling, storage, and transportation requirements of the waste disposal facility, U.S. Department of Transportation, and EPA regulations.
- C. Workers handling waste shall wear protective clothing and canister type respirators.
- D. Drivers of the waste transport vehicles need not wear respirators while enroute.
- E. Workers shall wear respirators when handling asbestos material at the disposal site.

### 3.6 CLEANING OF WORK AREA

- A. Remove all asbestos material and debris upon completion of asbestos repair or removal within a work area. Wet clean or HEPA vacuum all surfaces within the work area.
- B. Notify the Owner and the Independent Testing Laboratory that asbestos work has been completed and the work area is ready for visual inspection. Visual inspections are required even if clearance air monitoring is not required. Include in the visual inspection report a statement that all asbestos in the work area has been removed, repaired and/or encapsulated as required by the contract, and that all debris has been removed.
- C. All required demolition (ACM and non-ACM) shall be completed in each work area prior to clearance air monitoring. Exceptions may be made with prior approval of the Owner.
- D. A lockdown encapsulant shall be applied to all surfaces within the abatement areas prior to performing clearance air monitoring.

### 3.7 CLEARANCE AIR MONITORING

- A. The Contractor and its Independent Testing Laboratory shall conduct and document a visual inspection to verify that all asbestos in the work area has been removed, repaired and/or encapsulated as required by the contract, and that all debris has been removed.
- B. Final clearance air monitoring tests shall not be performed until all areas and materials within the work area are fully clean and dry.
- C. Final clearance air monitoring shall be conducted by the Contractor's Independent Testing Laboratory in accordance with all applicable regulations and the Contractor's approved work plan after passing the visual inspection. The clearance criteria shall include a minimum of five clearance samples using "aggressive methods" collected and analyzed in accordance with 40 CFR 763. TEM analysis is required, unless PCM analysis is specifically pre-approved by the Owner as part of the work plan submittal.
- D. If the final clearance air monitoring results show that the work area has failed to meet the clearance criteria, the Independent Testing Laboratory shall notify the Owner and the Contractor. The Contractor shall reclean the work area and request the Independent Testing Laboratory to conduct a follow-up inspection to be followed by another set of clearance air monitoring samples. All work specified in this paragraph shall be done at no additional expense to the Owner.
- E. If the clearance air monitoring results meet the clearance criteria of 40 CFR 763 and the specifications for the work and the Owner has reviewed and accepted the clearance results as

required by 1.14 D, then the HEPA filtration units may be deactivated (if applicable) and all seals, barriers, barricades, and decontamination areas shall be dismantled and removed and the work area released to unprotected workers.

- F. Submit the final work area inspection report, clearance air monitoring field data sheets and the laboratory air monitoring report to the Owner as specified in Paragraph 1.15.

### 3.8 SUBSTANTIAL COMPLETION

- A. After the work area barriers and temporary construction and equipment have been removed, the Contractor shall inspect the work area to verify that no asbestos debris, contaminated water, or other residue remains. Any remaining residue shall be cleaned up using HEPA vacuum cleaners and wet wiping methods.
- B. The Contractor shall certify that the work area has been cleaned of all asbestos in compliance with the contract, and that there is no unrepaired damage to walls, ceilings, doors, surfaces, equipment or finishes other than that called for by the scope of work.
- C. Costs of restoration of damaged finishes shall be borne by the Contractor.

END OF SECTION

## PART 1 - GENERAL

### 1.1 DESCRIPTION OF WORK

- A. The work may require the disturbance (including cleanup of existing loose paint), demolition, or removal, and disposal of lead painted and/or lead-containing materials related to the Anchorage Pioneer Home – Dish Room Remodel Project as shown on the drawings and as specified herein. Items to be disturbed may include, but are not limited to:
  - 1. Painted interior surfaces, including, but not limited to painted windows, doors and frames, painted mechanical and electrical equipment, painted structural and miscellaneous steel, etc.
  - 2. Lead-acid batteries for exit and emergency lights, and other equipment.
  - 3. Metallic lead caulking in bell and spigot pipe joints.
  - 4. Metallic lead in pipe solder at copper pipe fittings.
  - 5. Lead-containing dust in and on architectural, structural, mechanical, and electrical components.
- B. In addition to the above materials, the following materials are located in other areas of the building, and may require disturbance for auxiliary support, such as electrical and mechanical equipment and installation of equipment. Not all lead-containing materials are to be removed from these areas, only that required to complete the project work need be removed:
  - 1. Metallic lead flashings at VTR's, roof drain bowl clamping rings, and other roof penetrations, etc.
  - 2. Painted exterior surfaces, including, but not limited to painted windows, doors and frames, painted mechanical and electrical equipment, painted siding, trim, etc.
- C. Notification of Potential Hazards: Asbestos, lead and other potentially hazardous materials are present in the building that may impact the work of all trades. Regulated air contaminants, including asbestos and lead, are also present in settled and concealed dust in and on architectural, structural, mechanical and electrical components or systems throughout the building. All trades shall coordinate with other trades and conduct their work to prevent worker exposure or site contamination. Refer to Specification Divisions 0, 1 and 2 for specific information concerning disturbing, removing and disposing of these materials and the installation of new materials or components. This notification is provided in accordance with EPA and OSHA requirements.
- D. This building was constructed prior to 1978, but is not regulated by 40 CFR 745.
- E. The work includes all air monitoring, dust sampling, waste testing and disposal as specified herein. Materials listed are not necessarily hazardous waste or hazardous to handle. Lead-containing paints or materials identified for demolition and disposal shall be tested by the Toxicity Characteristics Leaching Procedure (TCLP) to determine if they are hazardous waste prior to disposal. Metal waste shall be recycled where practical.
- F. All work disturbing lead-containing materials shall comply with 29 CFR 1926.62 and other applicable regulations. OSHA regulations apply equally to lead-containing materials, lead-containing paints, and lead-based paints, and are referred herein as lead-containing materials.

### 1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 02 26 00 Hazardous Materials Assessment
- B. Section 01 35 45 Airborne Contaminant Control



- C. Section 02 82 33 Removal and Disposal of Asbestos Containing Materials
- D. Section 02 84 18 Removal and Disposal of Chemical Hazards
- 1.3 DEFINITIONS AND ABBREVIATIONS: Definitions and abbreviations are provided in the applicable publications listed in Paragraph 1.4 of this section.
- 1.4 APPLICABLE PUBLICATIONS: The publications listed below form a part of this specification to the extent referenced.
  - A. General Requirements: All work shall be performed in compliance with the International Building Code (IBC), Fire, Fuel Gas, Mechanical, Residential, Energy Conservation and Administrative Code; Uniform Plumbing Code; the National Electrical Code; and the publications listed in this section that are in effect at the time of the bidding of this contract.
  - B. Title 29 Code of Federal Regulations (CFR), Department of Labor (USDOL)
    - Part 1910 General Occupational Safety and Health Standards
    - Part 1926 Safety and Health Regulations for Construction
  - C. Title 40 CFR, Environmental Protection Agency (EPA)
    - Part 260 Hazardous Waste Management System: General
    - Part 261 Identification and Listing of Hazardous Wastes
    - Part 262 Standards Applicable to Generators of Hazardous Waste
    - Part 263 Standards Applicable to Transporters of Hazardous Waste
    - Part 270 Hazardous Waste Permit Program
    - Part 273 Standards for Universal Waste Management
    - Part 311 Worker Protection
    - Part 745 Lead Based Paint Poisoning Prevention in Certain Residential Structures
  - D. Title 49 CFR, Department of Transportation (DOT)
    - Part 171 General Information, Regulations and Definitions
    - Part 172 Hazardous Materials Communication and Regulations
    - Part 173 General Requirements for Shipments and Packaging
    - Part 176 Carriage by Vessel
    - Part 177 Carriage by Public Highway
    - Part 178 Specifications for Packaging
    - Part 382 Requirements for Drug Testing
    - Part 383 Commercial Driver's License Standards
  - E. Alaska Administrative Codes (AAC)
    - 8 AAC 61 Occupational Safety and Health Standards
    - 18 AAC 60 Solid Waste Management
    - 18 AAC 62 Hazardous Waste Management
    - 18 AAC 70 Water Quality Standards
    - 18 AAC 75 Oil and Hazardous Substances Pollution Control
  - F. Alaska Statutes (AS)
    - AS 45.50.477 Titles Relating to Industrial Hygiene
  - G. Municipality of Anchorage
    - AMC 26.50.060 Specific Discharge Limitations
  - H. Federal Standards

313E Safety Data Sheets

- I. American National Standards Institute (ANSI)
  - Z9.2 Local Exhaust Systems
  - Z87.1 Eye and Face Protection
  - Z88.2 Practices for Respiratory Protection
- J. American Society For Testing and Materials (ASTM)
  - D 4397 Polyethylene Sheeting
  - E 1728 Standard Practice for Collection of Settled Dust Samples Using Wipe Sampling Methods for Subsequent Lead Determination
  - E 1792 Specification for Wipe Sampling Materials for Lead in Surface Dust
- K. International Code Council  
International Building (IBC), Fire, Fuel Gas, Mechanical, Residential, Energy Conservation and Administrative Code Current Standards
- L. National Fire Protection Association (NFPA)  
NFPA 701 Fire Tests for Flame Resistant Textiles and Films
- M. National Institute of Occupational Safety and Health (NIOSH)  
Manual of Analytical Methods, Current Edition
- N. Underwriters Laboratories (UL)  
UL 586 High-Efficiency, Particulate, Air (HEPA) Filter Units

1.5 QUALITY ASSURANCE

- A. On-site Observation:
  - 1. The safety and protection of the Contractor's employees, Subcontractor's employees, Owner's employees, the facility, and the public is the sole responsibility of the Contractor.
  - 2. The Owner, the Owner's Representative, or representatives of State or Federal agencies may make unannounced visits to the site during the work. The Contractor shall make available two complete sets of clean, protective clothing for such visitor use. If the work requires the use of PAPR or Supplied Air Respirators, the contractor shall provide respirators to the visitor to ensure compatibility with fresh batteries or supplied air system. It is the visitor's responsibility to ensure medical qualification, training, and current "fit test" prior to using any respirator provided by the Contractor.
  - 3. If the Owner or agency visitor determines that practices are in violation of applicable regulations, they will immediately notify the Contractor that operations must cease until corrective action is taken. Such notification will be followed by formal confirmation.
  - 4. The Contractor shall stop work after receiving such notification. The work may not be restarted until the Contractor receives written authorization from the Owner.
  - 5. All costs resulting from such a stop work order shall be borne by the Contractor and shall not be a basis for an increase in the contract amount or an extension of time.
- B. Monitoring and Testing: Monitoring and testing during the work shall be performed as follows:
  - 1. The Contractor shall hire Independent Testing Laboratories to collect and evaluate all air, dust, bulk, and toxicity characteristic leaching procedure (TCLP) samples that are the responsibility of the Contractor. The Contractor shall direct its laboratories, in writing, to release monitoring and testing data, and all other pertinent data and records, to the Owner.
  - 2. The Contractor shall be responsible for monitoring its employees for potential exposure to airborne contaminants as required by this specification and all applicable regulations.

3. The Contractor shall be responsible for work area monitoring and environmental monitoring outside the work area as required by this specification.
  4. The Owner may perform monitoring and testing inside the building, inside the work areas, and on the Contractor's employees while work is underway and at any time during the work.
  5. Final inspection and clearance testing shall be conducted by the Contractor.
  6. The Contractor shall have its Independent Testing Laboratories archive all samples until the successful completion of the project.
- C. Additional Sampling of Suspect Materials:
1. The Contractor and all Subcontractors shall be vigilant during demolition and construction in the event additional suspect lead or hazardous materials are encountered. If suspect lead or hazardous materials not previously identified are encountered, the contractor shall stop work that may be affected by this material and immediately notify the Owner. The Owner or the Owner's Representative will provide recommendations and additional testing if necessary. All sampling by the Contractor shall be at their own cost.
  2. The Contractor and all Subcontractors shall notify the Owner prior to any bulk sampling of suspect lead-containing material or other hazardous materials to allow the Owner or Owner's Representative to be present during such sampling.
- 1.6 PROTECTION OF EXISTING WORK TO REMAIN: Perform lead removal in the project work areas without damage or contamination of adjacent work or the facility.
- 1.7 MEDICAL REQUIREMENTS
- A. Institute and maintain a surveillance program in accordance with 29 CFR 1926.62 and 29 CFR 1910.134.
  - B. Institute and maintain a random drug testing program, as required by 49 CFR 382, for all drivers of vehicles transporting hazardous materials.
- 1.8 TRAINING: Employ only workers who are trained and certified as required by 29 CFR 1910, 29 CFR 1926, 40 CFR 311 and 49 CFR 383 to remove, encapsulate, barricade, transport, or dispose of lead-containing materials.
- 1.9 PERMITS, IDENTIFICATION NUMBERS AND NOTIFICATIONS: Secure necessary permits for hazardous material removal, storage, transport and disposal and provide timely notification as required by federal, state, and local authorities.
- 1.10 SAFETY AND ENVIRONMENTAL COMPLIANCE: Comply with laws, ordinances, rules, and regulations of federal, state, and local authorities regarding handling, storing, transporting, and disposing of hazardous materials and all other construction activities.
- 1.11 RESPIRATOR PROGRAM: Establish a respirator program as required by ANSI Z88.2 and 29 CFR 1910.134.
- 1.12 HAZARD COMMUNICATION PROGRAM: Implement a hazard communication program in accordance with 29 CFR 1910.1200.
- 1.13 SUBMITTALS
- A. Submit the following documentation to the Owner for review, approval or rejection. Work shall not begin until submittals are approved.
    1. Shop drawings.

2. Work plan.
  3. Liability insurance policy and performance bond.
  4. Schedule.
  5. Independent testing laboratory and laboratory personnel.
  6. Disposal site designations.
  7. Waste transporter designations.
  8. Representations.
  9. "Competent Person" designation and experience.
  10. Request for substitutions.
- B. Shop drawings shall show:
1. Boundaries of each lead work area, if required.
  2. Location and construction of decontamination stations, if required.
  3. Location of temporary site storage facilities.
  4. Location of air monitoring stations, both in and outside of the work area.
  5. Emergency egress route(s).
  6. Location of negative pressure exhaust systems, if required.
- C. The work plan shall include procedures for:
1. Work area set-up and protection.
  2. Worker protection and decontamination.
  3. Initial exposure determination(s).
  4. Lead removal procedures.
  5. Waste testing, transport, and disposal procedures.
  6. Monitoring and testing procedures (Sampling and Analysis Plan).
  7. Spill clean-up emergency procedures.
- D. Insurance Policy and Bond: Submit copies of the Contractor's or Subcontractor's insurance policy and performance bond. Submittal requirement is only to ensure that the insurance certificate(s) show specific coverage for the potentially hazardous materials being handled by this project. The insurance and bond amounts and certificate holder requirements are addressed in other portions of the contract documents and are not covered as part of this submittal requirement.
- E. Schedule: Submit construction schedule by work area.
- F. Independent Testing Laboratories and Laboratory Personnel: Submit the name, location, and phone number of proposed independent testing laboratories, and the names and certifications of the industrial hygiene technicians. Include the laboratory's accreditation. Not all laboratories will require all accreditations.
1. The Independent Testing Laboratories shall be acceptable to Owner.
  2. Submit evidence that the laboratory is currently judged proficient in lead analysis, as determined by the Environmental Lead Proficiency Analytical Testing (ELPAT) Program, of the American Industrial Hygiene Association (AIHA) Environmental Lead Laboratory Accreditation Program (ELLAP) for lead in paint chip, soil, and dust wipe samples.
  3. Submit evidence that the laboratory is currently certified by OSHA to perform blood lead analysis.
  4. Submit evidence that the laboratory has demonstrated proficiency as determined by ELPAT or ELLAP performance for NIOSH Method 7082 and/or NIOSH Method 7105 analytical method for the determination of lead in air.
  5. Submit evidence that the laboratory has demonstrated proficiency in performing analyses according to Method 1311 TCLP, corresponding to the current version of Test Methods for Evaluating Solid Wastes (Chemical Physical Methods), SW-846. Evidence may include successful participation in a recognized inter-laboratory quality control program such as a

- laboratory certified by the California Health and Welfare Agency, Department of Health Services, or a more informal inter-laboratory quality control program.
6. Submit evidence that the laboratory is currently accredited by the American Industrial Hygiene Association (AIHA).
  7. Submit the name, address, telephone number, and résumé of the Contractor's Industrial Hygienist (IH) who prepared the Sampling and Analysis Plan and will oversee the on-site monitoring, visual inspections and clearance testing. Submit the names, addresses, and résumés of industrial hygiene technicians who may assist the IH for on-site tasks. Submit documentation that the IH has all the qualifications for the assigned duties as required by the Contractor's liability insurance policy.
  8. Submit copies of the Contractor's letter to each of the independent testing laboratories, directing each to release all the results for this project to the Owner, as these results become available and as specified herein.
- G. Disposal Site: Submit the name and location of the proposed Environmental Protection Agency (EPA) permitted disposal site.
- H. Waste Transporter: Submit the name and address of the proposed waste transporter.
- I. Representations: Submit statement by the Contractor that records of employees' work assignments, certifications, respirator fit tests, and medical records are accurate, up-to-date, and available for inspection.
- J. Competent Person: Submit the name and certifications of the Contractor's proposed Competent Person and a list of their previous projects. Certify that the Competent Person has the knowledge and training to supervise the work in compliance with the publications listed in Paragraph 1.4 above.
- K. Substitutions: Submit requests for substitutions of materials, equipment and methods.
- L. Updated Project Information: Submit changes to the submitted project information at least 24 hours prior to the effective time of change for the following:
1. Updated schedules for lead removal.
  2. Change in Competent Person.
  3. Changes to work plan.
- 1.14 TEST REPORTS: Submit the following documentation produced during the work as soon as received:
- A. Project Daily Logs: Submit the previous day's Daily Logs. Logs shall include regulated area sign-in sheets and list of lead-containing materials removed, including quantities and locations of those materials, in the units used on the drawings. Claims for additional quantities will not be addressed unless daily quantities are submitted.
  - B. Daily Monitoring: Submit daily, all results of Contractor's air, and dust monitoring (submit no later than 24 hours after the end of the shift). Submittal shall consist of daily monitoring report, field data sheets, the analytical laboratory's results, and sketch of sample locations. Submit all results of any TCLP sampling or testing of bulk materials to Owner within 24 hours of receipt of results. Bulk or TCLP sample submittal shall consist of daily monitoring report, field data sheets, the analytical laboratory's results, and sketch of sample locations (sketch not required for TCLP samples, but descriptions of materials included is required).
- 1.15 PROJECT COMPLIANCE DOCUMENTS: Submit the following documents to the Owner with application for final payment:

- A. Contractor's actual project "Start and Finish" dates.
  - B. Waste testing results per Paragraph 3.5 (A).
  - C. Waste Shipment Records (Manifest EPA form 8700-22) if required.
  - D. Clearance sampling and soil sampling data sheets (if required) and laboratory reports.
  - E. Disposal site receipts, or certification of acceptance for recycling.
  - F. Final clearance submittals as outlined in 3.7 (if required).
  - G. Evidence that each employee who was engaged in lead disturbance/removal work or who was exposed to lead completed training on lead covering the requirements of 29 CFR 1926.62.
- 1.16 SANITARY FACILITIES: Provide adequate toilet and hygiene facilities.
- 1.17 MATERIAL STORAGE: Store all materials subject to damage off the ground and secure from damage, weather, or vandalism.
- 1.18 ON-SITE DOCUMENTATION: The Contractor shall maintain on the job site, at a location approved by the owner, copies of the following data for safety procedures, equipment, and supplies used for the work.
- A. Equipment: Show the model, style, capacity and the operation and maintenance procedures for the following, as applicable:
    - 1. High-Efficiency, Particulate, Air (HEPA) Filtration units.
    - 2. HEPA Vacuum cleaners.
    - 3. Pressure differential recording equipment.
    - 4. Heat stress monitoring equipment.
  - B. Safety Data Sheets (SDSs): Maintain SDSs for each encapsulant, surfactant, solvent, detergent, and other material proposed to be used.
  - C. Respiratory Protection Plan: The Contractor's written respirator program.

## PART 2 - PRODUCTS

- 2.1 PERSONAL PROTECTIVE EQUIPMENT: Provide personal protective clothing as approved and selected by the IH.
- A. Respirators: Provide personally issued and marked respirators approved by the National Institute of Occupational Safety and Health (NIOSH). Provide sufficient replacements for respirators with disposable canisters. Use respirators equipped with dual cartridges whenever both lead hazards and other respiratory hazards exist in the work area.
  - B. Provide filter cartridges approved for each airborne contaminant which may be present. NIOSH approved filter cartridges shall be used. At no time shall the permissible exposure limit (PEL) for the contaminant exceed the PEL listed in 8 AAC 61.1100.
  - C. Whole Body Protection: Provide approved aprons, gloves, eye protection, and hard-hats, and other protective clothing as required to meet applicable safety regulations to personnel potentially exposed to lead dust or fumes above the permissible exposure limit (PEL). Wear this protection properly. Full facepiece respirators shall meet the requirements of ANSI Z87.1.

- D. Provide protective personal equipment and clothing at no cost to the workers.

## 2.2 DECONTAMINATION UNIT

- A. Provide a temporary three-stage decontamination unit, attached in a leak-tight manner to each Contained Work Area. Decontamination units shall consist of a clean room equipped with separate lockers for each worker, a shower room, and an equipment locker room equipped with separate lockers for each worker.
- B. Shower specifications: Locate flow and temperature controls within the shower and be adjustable by the user. Hot water service may be secured from the building hot water system if available, but only with back-flow protection installed by the Contractor at the point of connection, and with prior notification and approval by the Owner. Should sufficient hot water be unavailable, the Contractor shall provide a minimum 40 gallon electric hot water heater with a minimum recovery rate of 20 gallons per hour. Water from the shower room shall not be allowed to wet the floor in the clean room.

- 2.3 WASTE WATER FILTERS: Install the waste water filters in a series of stages with the final filtration stage sufficient to meet discharge standard of 18 AAC 70 and/or any local sewage system discharge limit for lead. Size the waste water pump for 1.25 times the shower head flow-rate. Dispose all filters as lead contaminated waste.

- 2.4 WARNING SIGNS AND TAPE: Post warning signs and tape at the boundaries and entrances to lead disturbance and removal work areas. Signs required by other statutes, regulations, or ordinances may be posted in addition to, or in combination with, this warning sign. Conform warning signs and tape to the requirements of 29 CFR 1926.62.

- 2.5 WARNING LABELS: Affix warning labels to all hazardous waste disposal containers as described in the Contractor's approved Solid Waste Disposal Plan. Conform labeling to 29 CFR 1926.62 and 49 CFR 100-199.

- 2.6 NEGATIVE PRESSURE EXHAUST SYSTEM: Use the negative pressure exhaust systems to exhaust each contained work area where the PEL will or is expected to be exceeded. Operate the negative pressure exhaust system continuously (24 hours a day) during lead work. Select the negative pressure exhaust system equipment to provide a minimum of 4 air changes per hour under load within the work area. The negative pressure exhaust system shall have a minimum of two stages of pre-filtration ahead of the HEPA filter. The HEPA filter shall bear the UL-586 label. In no case shall the building ventilation system be used as the local exhaust for the contained work area. Terminate the exhaust outside of the building. The exhaust ventilation system equipment shall be equipped with lock-out protection to prevent operation without a HEPA filter properly installed. The exhaust system equipment shall be equipped with the following instrumentation: a static pressure gauge with low flow alarm, an elapsed time indicator, automatic shutdown capability in the event of a major rupture in the HEPA filter or blocked air discharge and an automatic re-start when power is restored after a power failure.

- 2.7 PRESSURE DIFFERENTIAL MONITORING EQUIPMENT: Provide continuous monitoring of the pressure differential with an automatic recording instrument for each contained work area. Locate the instrument in a clean area where personnel have access to it without respiratory protection. The instrument shall be fitted with an alarm should the negative pressure drop below -0.02 inches of water column relative to the air outside containment.

- 2.8 TOOLS: Vacuum cleaners shall be equipped with HEPA filters. Use only approved power tools to remove lead-containing material. Do not use open-flame and electric element heat-gun type tools with temperatures in excess of 700° F to remove lead-containing material. Remove all residual lead contamination from

reusable tools being removed from lead disturbance or removal work areas. Electrical tools and equipment shall be UL listed.

- 2.9 AIR MONITORING EQUIPMENT: The Contractor's IH shall select the air monitoring equipment to be used for the evaluation of airborne lead.
- 2.10 EXPENDABLE SUPPLIES: Provide flame resistant 6-mil thick polyethylene sheet plastic in widths necessary to minimize seams.
- 2.11 SAFETY DATA SHEETS (SDSs): Provide SDSs for all chemical materials brought onto the work-site.
- 2.12 OTHER ITEMS: Provide other items, such as consumable materials, disposable and/or reusable cleaning equipment and hand tools, or miscellaneous construction equipment and materials, in sufficient quantity as necessary to fulfill and complete the requirements of the contract. Electrical equipment and supplies shall be UL listed.
- 2.13 ENCAPSULANTS: Encapsulants shall contain no toxic or hazardous substances. Encapsulants shall be compatible with the products to which they are applied and be compatible with replacement products.

### PART 3 - EXECUTION

#### 3.1 WORK AREAS

- A. Lead Control Areas: A control area, structure or containment where lead-containing or contaminated materials are being disturbed. Critical barriers and/or physical boundaries shall be employed to isolate the lead control area and to prevent migration of lead contamination and unauthorized entry of personnel.
- B. Contained Lead Work Area Requirements: Construct contained lead work areas as described in the Contractor's approved work plan. A contained lead work area is required whenever airborne lead levels cannot be maintained below the OSHA action level at the boundary of a lead work area.
- C. Building Ventilation System: Shut down and isolate by air-tight seals all building ventilation systems supplying air into or returning air from a lead control area or contained lead work area.
- D. Building Electrical Systems: Verify that the electrical service is deactivated, disconnected and locked out where necessary for wet washing and/or removal. Provide temporary electrical service, equipped with ground fault protection, where needed.

#### 3.2 PERSONNEL PROTECTION PROCEDURES

- A. Initial Determination: An initial determination is required in the absence of acceptable prior exposure data in accordance with 29 CFR 1926.62. Establish an initial lead work area for each material to be disturbed and each disturbance procedure if required. Isolate these lead work areas from the rest of the building. Personnel working in these areas shall wear respiratory protection and personal protective equipment as directed by the IH. Perform personal and work area air monitoring as directed by the IH. Operational decontamination facilities shall be available. Work performed shall be representative of the work to be done during the remainder of the project.
- B. Respirator Evaluation: Upgrading, downgrading, or not requiring respirators shall be recommended by the Contractor's IH based on the measured airborne lead-containing dust or fume concentrations. Immediately implement recommendations to upgrade the respiratory protection, followed by notification to the Owner. NOTE: Submit recommendations in writing to downgrade



respirator type or not require respirators to the Owner for review and written approval prior to implementation.

- C. Decontamination Procedures: Worker and material decontamination procedures shall be as described in the Contractor's approved work plan. Worker decontamination shall be as directed by the Contractor's competent person.
- D. Work Stoppage: Stop work if the IH, the Owner, or a representative of a regulatory agency determines that the work is not in compliance with the Contractor's approved work plan, these specifications, or applicable laws and regulations. The Contractor shall stop work and notify the Owner whenever the measured concentrations of lead outside the lead control area equal or exceed 30  $\mu\text{g}/\text{m}^3$  for airborne lead or 200  $\mu\text{g}/\text{ft}^2$  for lead dust on surfaces that would normally be accessible by building occupants. When such work stoppage occurs, the cause of the contamination shall be corrected and the damaged or contaminated area shall be restored to its original decontaminated condition by the Contractor at no expense to the Owner. The Contractor is responsible for removing dusts and debris that were generated as a result of his work.
- E. The Contractor shall adhere to all applicable regulations regarding entry into confined spaces.

### 3.3 LEAD DISTURBANCE AND REMOVAL PROCEDURES:

- A. General: Perform lead disturbance or removal work in accordance with the Contractor's approved work plan, applicable regulations and this specification.
- B. Pre-Cleaning: Removal of existing loose paint chips is included in the scope of work. Pre-clean surfaces by HEPA vacuum and wet washing/wiping prior to the establishment of a work area.
- C. Perform waste battery storage and disposal in accordance with 40 CFR 261, 40 CFR 264, 40 CFR 265, 40 CFR 273 and 8 AAC.

### 3.4 MONITORING AND TESTING: Conduct daily sampling in accordance with the Contractor's accepted Sampling and Analysis Plan and this specification. The Owner may conduct air monitoring in the Contractor's work areas and on the Contractor's employees.

- A. Perform environmental air monitoring outside the lead work area for each lead work area without a negative initial determination. Take a minimum of two lead-in-air samples inside the work area, and two lead-in-air samples in adjacent areas.
- B. Perform dust wipe sampling for each lead work area without a negative initial determination. Include at least one sample immediately outside the entrance to the work area daily.
- C. Take personnel samples in accordance with 29 CFR 1926.62. Personal samples for an employee will include a minimum of two samples per 8 hour shift. Employees will be monitored at the rate of at least one employee for every eight people performing each task in each work area. Persons performing separate tasks or in separate lead work areas shall be sampled separately.
- D. Reduction of monitoring: For each operation for which the Negative Initial Determination established workers' exposure will be below the action level, the Contractor's IH may petition the Owner's Representative to recommend that the monitoring as required above be reduced for the specific task or operation.

### 3.5 DISPOSAL

- A. Sampling of Waste Materials: The Contractor shall test waste materials according to 40 CFR 261 and the disposal site's permit to determine if they are hazardous waste and to dispose of them accordingly. Collect, package and transport to an EPA approved Hazardous Waste Disposal Site all bulk debris, loose paint chips, fines, dust from HEPA filters and vacuum bags, unfiltered waste water, water filter cartridges, disposable personal protective equipment (including respirator filters, poly, and tape) which do not have TCLP test results that classify the material as non-hazardous for lead. Lead-acid batteries and other batteries are classified by the EPA as Universal Wastes. The EPA encourages that all Universal Wastes be recycled in accordance with 40 CFR 273, or in the case of lead-acid batteries, in accordance with 40 CFR 266, subpart G.
- B. Hazardous Waste Disposal: Dispose of hazardous project wastes as required by 40 CFR 260 and the Contractor's approved work plan.
- C. Construction (Non-Hazardous) Waste Disposal: Dispose of solid (non-hazardous) waste in a permitted waste facility, in accordance with applicable federal, state, and local laws and regulations. Burning of waste is prohibited.
- D. Salvageable Materials: The Contractor may salvage metallic lead, lead-acid batteries and other materials to keep such materials from entering the project waste stream. Sell or transfer salvage with a document of exempt status as provided by 40 CFR 261.
- E. Waste Storage: Temporarily store solid wastes as described in the approved work plan.

3.6 FINAL CLEANING AND VISUAL INSPECTION: Perform a final cleaning and visual inspection of each lead control area prior to release to unprotected workers in accordance with the Contractor's approved work plan. Clean the lead control area by vacuuming with a HEPA filtered vacuum cleaner, wet mopping or wet wiping. Do not dry sweep or use pressurized air to clean up the area. A final visual inspection report shall be provided verifying that all lead disturbance required by the contract has been completed and that all visible dust and debris subject to disturbance by the planned work under this contract have been removed and the area HEPA vacuumed, wet mopped or wet wiped.

3.7 WORK AREA CLEARANCE TESTING: Work area clearance testing by the Contractor is required for each lead control area where the lead action level has been exceeded. Clearance testing shall be performed only after a visual inspection report by the Contractor's IH Technician has documented that the work area is clean and that all lead disturbance required by the contract has been completed. Clearance testing shall include the following:

- A. A visual inspection report by the Contractor's IH Technician verifying that all lead disturbance required by the contract has been completed and that all visible dust and debris subject to disturbance by the planned work under this contract have been removed and the area HEPA vacuumed, wet mopped or wet wiped.
- B. Three (3) lead wipe and/or lead soil sample results from within the lead control area per the Contractor's approved work plan and in accordance with NIOSH method 9100. Clearance levels shall be 200 µg/ft<sup>2</sup> for wipes or 500 ppm in soil.
- C. The Owner may conduct concurrent clearance testing.
- D. Work area barriers or containments shall not be removed until clearance testing results are reviewed and approved by the Owner.

3.8 SUBSTANTIAL COMPLETION

- A. After the work area barriers and temporary construction and equipment have been removed, the Contractor shall inspect the work area to verify that no lead debris, contaminated water, or other residue remains. Any remaining residue shall be cleaned up using HEPA vacuum cleaners and wet wiping methods.
- B. The Contractor shall certify that the work area has been cleaned of all lead in compliance with the contract, and that there is no unrepaired damage to walls, ceilings, doors or surfaces or finishes other than that called for by the scope of work.
- C. Costs of restoration of damaged finishes shall be borne by the Contractor.

END OF SECTION

PART 1 - GENERAL

- 1.1 DESCRIPTION OF WORK: The work includes proper removal and disposal of electrical equipment and chemical hazards related to the Anchorage Pioneer Home – Dish Room Remodel Project as shown on the drawings and as specified herein. Items to be removed or disturbed may include, but are not limited to:
- A. Mercury and mercury compounds in electrical equipment and light fixtures, switches, etc.
  - B. Heat transfer fluids.
  - C. Radioactive components in smoke detectors.
  - D. Universal Waste batteries for exit and emergency lights, and other equipment.
  - E. In addition to the above materials, the following chemical hazards are located in other areas of the facility, and are not presently planned for disturbance or removal. Not all Chemical Hazards are to be removed from these areas, only that required to complete the project work need be removed:
    - 1. Radioactive components in smoke detectors and self-illuminating exit signs.
    - 2. Ozone Depleting Substances (ODS) in refrigeration equipment.
    - 3. Mercury-containing electrical components, such as mercury switches or float valves.
  - F. Notification of Potential Hazards: Asbestos, lead and other potentially hazardous materials are present in the building that may impact the work of all trades. Regulated air contaminants, including asbestos and lead, are also present in settled and concealed dust in and on architectural, structural, mechanical and electrical components or systems throughout the building. All trades shall coordinate with other trades and conduct their work to prevent worker exposure or site contamination. Refer to Specification Divisions 0, 1 and 2 for specific information concerning disturbing, removing and disposing of these materials and the installation of new materials or components. This notification is provided in accordance with EPA and OSHA requirements.
- 1.2 RELATED WORK SPECIFIED ELSEWHERE
- A. Section 02 26 00 Hazardous Materials Assessment
  - B. Section 01 35 45 Airborne Contaminant Control
  - C. Section 02 82 33 Removal and Disposal of Asbestos Containing Materials
  - D. Section 02 83 33 Removal and Disposal of Materials Containing Lead
- 1.3 DEFINITIONS AND ABBREVIATIONS: Definitions and abbreviations are provided in the applicable publications listed in Paragraph 1.4 of this Section.
- 1.4 APPLICABLE PUBLICATIONS: The publications listed below form a part of this specification to the extent referenced.
- A. General Requirements: All work shall be performed in compliance with the International Building (IBC), Fire, Fuel Gas, Mechanical, Residential, Energy Conservation and Administrative Code; Uniform Plumbing Code; the National Electrical Code; and the publications listed in this section that are in effect at the time of the bidding of this contract.
  - B. Title 10 Code of Federal Regulations (CFR), Nuclear Regulatory Commission  
Part 20 Standard for Protection Against Radiation

- C. Title 29 CFR, Department of Labor (USDOL)
  - Part 1910 General Occupational Safety and Health Standards
  - Part 1926 Safety and Health Regulations for Construction
- D. Title 40 CFR, Environmental Protection Agency (EPA)
  - Part 61 National Emission Standards for Hazardous Air Pollutants
  - Part 260 Hazardous Waste Management System: General
  - Part 261 Identification and Listing of Hazardous Waste
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  - Part 270 The Hazardous Waste Permit Program
  - Part 273 Standards for Universal Waste Management
  - Part 311 Worker Protection
  - Part 761 Polychlorinated Biphenyls (PCBs)
- E. Title 49 CFR, Department of Transportation (DOT)
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  - 18 AAC 75 Oil and Hazardous Substances Pollution Control
- G. State of Alaska Statutes (AS)
  - AS 45.50.477 Titles Relating to Industrial Hygiene
- H. Federal Standards
  - 313E Safety Data Sheets
- I. American National Standard Institute (ANSI)
  - Z9.2 Local Exhaust Systems
  - Z87.1 Eye and Face Protection
  - Z88.2 Practices for Respiratory Protection
  - C78.LL 1256 Procedures for Fluorescent Lamp Sample Preparation and Toxicity Characteristic Leaching Procedure.
- J. American Society for Testing and Materials (ASTM)
  - D-4397 Polyethylene Sheeting
- K. International Code Council
  - International Building (IBC), Fire, Fuel Gas, Mechanical, Residential, Energy Conservation and Administrative Code Current IC Standards
- L. National Fire Protection Association (NFPA)
  - NFPA 701 Fire Tests for Flame Resistant Textiles and Films
- M. National Institute of Occupational Safety and Health (NIOSH)

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1.5 QUALITY ASSURANCE

A. On-site Observation:

1. The safety and protection of the Contractor's employees, sub-contractor's employees, Owner's employees, the facility, and the public is the sole responsibility of the Contractor.
2. The Owner, the Owner's Representative, or representatives of State or Federal agencies may make unannounced visits to the site during the work. The contractor shall make available two complete sets of clean protective clothing for such visitor use. If the work requires the use of PAPR or Supplied Air Respirators, the contractor shall provide respirators to the visitor to ensure compatibility with fresh batteries or supplied air system. It is the visitor's responsibility to ensure medical qualification, training, and current "fit test" prior to using any respirator provided by the Contractor.
3. If the Owner or agency visitor determines that practices are in violation of applicable regulations, they will immediately notify the Contractor that operations must cease until corrective action is taken. Such notification will be followed by formal confirmation.
4. The Contractor shall stop work after receiving such notification. The work may not be restarted until the Contractor receives written authorization from the Owner.
5. All costs resulting from such a stop work order shall be borne by the Contractor and shall not be a basis for an increase in the contract amount or an extension of time.

B. Monitoring and Testing: Monitoring and testing during the work shall be performed as follows:

1. The Contractor shall hire Independent Testing Laboratories to collect and evaluate all air, bulk, and toxicity characteristic leaching procedure (TCLP) samples, which are the responsibility of the Contractor. The Contractor shall direct its laboratories, in writing, to release monitoring and testing data, and all other pertinent data and records, to the Owner.
2. The Contractor shall be responsible for monitoring its employees for potential exposure to airborne contaminants as required by specification 01 35 45 and all applicable regulations.
3. The Contractor shall be responsible for work area monitoring and environmental monitoring outside the work area as required by this specification. All sampling by the Contractor shall be at their own cost.
4. The Owner may perform monitoring and testing inside the building, inside the work areas, and on the Contractor's employees while work is underway and at any time during the work.
5. The Contractor shall have its Independent Testing Laboratories archive all samples until the successful completion of the project.
6. Final inspection and clearance testing shall be conducted by the Contractor.

1.6 PROTECTION OF EXISTING WORK TO REMAIN: Perform hazardous material removal work without damage or contamination of adjacent work or the site.

1.7 MEDICAL REQUIREMENTS

- A. Institute and maintain a medical surveillance program in accordance with 29 CFR 1910.134.
- B. Institute and maintain a random drug testing program, as required by 49 CFR 382, for all drivers of vehicles transporting hazardous materials.

1.8 TRAINING: Employ only workers who are trained and certified as required by 29 CFR 1910, 29 CFR 1926, 40 CFR 311, and 49 CFR 383 to remove, encapsulate, barricade, transport, or dispose of hazardous materials.

- 1.9 PERMITS AND NOTIFICATIONS: Secure necessary permits for hazardous material removal, storage, transport and disposal and provide timely notification as required by federal, state, and local authorities.
- 1.10 SAFETY AND ENVIRONMENTAL COMPLIANCE: Comply with laws, ordinances, rules, and regulations of federal, state, and local authorities regarding handling, storing, transporting, and disposing of hazardous materials and all other construction activities.
- 1.11 RESPIRATOR PROGRAM: Establish a respirator program as required by ANSI Z88.2 and 29 CFR 1910.134.
- 1.12 HAZARD COMMUNICATION PROGRAM: Implement a hazard communication program in accordance with 29 CFR 1910.1200.
- 1.13 SUBMITTALS
  - A. Approval: Submit the following documentation to the Owner for review, approval, or rejection. Work shall not begin until submittals are approved.
    1. Shop drawings.
    2. Hazardous material removal work plan.
    3. Liability insurance policy and performance bond.
    4. Schedule.
    5. Independent testing laboratories.
    6. Disposal site designations.
    7. Waste Transporter Designations.
    8. Notifications and certifications.
    9. Competent Person Designation Notifications and Certifications.
    10. Request for Substitutions.
  - B. Shop drawings shall show:
    1. Boundaries of all hazardous material removal areas.
    2. Location and construction of decontamination stations, if required.
    3. Location of temporary site storage facilities.
    4. Location of air monitoring stations, if required.
    5. Emergency egress route(s).
  - C. The work plan shall include procedures for:
    1. Work area set-up and protection.
    2. Worker protection and decontamination.
    3. PCB removal procedures.
    4. Mercury-containing lamp removal and packaging procedures.
    5. Mercury-containing material removal procedures.
    6. Monitoring and testing procedures (Sampling and Analysis Plan).
    7. Radioactive materials removal and tracking procedures.
    8. Waste handling, packaging, labeling, manifesting and disposal procedures.
  - D. Insurance Policy and Performance Bond: Submit copies of the Contractor's or Subcontractor's insurance policy and performance bond. Submittal requirement is only to ensure that the insurance certificate(s) show specific coverage for the potentially hazardous materials being handled by this project. The insurance and bond amounts and certificate holder requirements are addressed in other portions of the contract documents and are not covered as part of this submittal requirement.
  - E. Schedule: Submit construction schedule by work area.

- F. Independent Testing Laboratories and Laboratory Personnel: Submit the name, location, and phone number of proposed independent testing laboratories, and the names and certifications of industrial hygiene technicians. Include the laboratory's accreditation. Not all laboratories will require all accreditations.
1. The Independent Testing Laboratories shall be acceptable to the Owner.
  2. Evidence that a laboratory has demonstrated proficiency in performing analyses according to Method 1311 TCLP, corresponding to the current version of Test Methods for Evaluating Solid Wastes (Chemical Physical Methods), SW-846. Evidence may include successful participation in a recognized inter-laboratory quality control program such as a laboratory certified by the California Health and Welfare Agency, Department of Health Services, or a more informal inter-laboratory quality control program.
  3. Submit the name, address, telephone number, and résumé of the Industrial Hygienist (IH) who prepared the Sampling and Analysis Plan and will oversee the on-site monitoring. Submit the names, addresses, and résumés of industrial hygiene technicians who may assist the IH for on-site tasks. The Contractor shall submit documentation that the IH has all the qualifications for the assigned duties as required by the Contractor's liability insurance policy.
  4. Submit copies of the Contractor's letters to the independent testing laboratories, directing each to release all the results for this project to the Owner, as these results become available and as specified herein.
- G. Disposal Site: Submit the name and location of the proposed Alaska Department of Environmental Conservation (DEC) or U.S. Environmental Protection Agency (EPA) permitted disposal sites.
- H. Waste Transporter: Submit the name, address and EPA Hazardous Waste Transporter identification number for the proposed waste transporters.
- I. Certifications, Permits, and Notifications: Obtain and submit copies of EPA Hazardous Waste Generator identification number for the purpose of accumulating hazardous waste in accordance with 40 CFR 262. Submit copies of refrigerant recovery technician's EPA certification and company name when refrigeration systems are being demolished or deactivated. If the site does not have an EPA ID number for hazardous wastes, the contractor will need to assist the Owner in obtaining the EPA ID number, but the Owner will be available to sign the application documents and shipment records prepared by the contractor.
- J. Representations: Submit statement by the Contractor that records of employees' work assignments, certifications, respirator fit tests, and medical records are accurate, up-to-date, and available for inspection.
- K. Competent Person: Submit the name and certifications of the Contractor's proposed Competent Person and a list of their previous projects. Certify that the Competent Person has the knowledge and training to supervise the work in compliance with the publications listed in Paragraph 1.4 above.
- L. Substitutions: Submit requests for substitutions of materials, equipment and methods.
- M. Updated Project Information: Submit changes to the submitted project information at least 24 hours prior to the effective time of change for the following:
1. Updated schedules for hazardous material removal.
  2. Change in competent person.
  3. Changes to work plan.

1.14 TEST REPORTS: Submit the following documentation produced during the work as received:



- A. Project Daily Logs: Submit the previous day's Daily Logs. Logs shall include regulated area sign-in sheets and list of chemical hazards removed including quantities and locations of those materials, in the units used on the drawings. Claims for additional quantities will not be addressed unless daily quantities are submitted.
  - B. Monitoring and testing data sheets and laboratory reports.
- 1.15 PROJECT COMPLIANCE DOCUMENTS: Submit the following documents with the application for final payment.
- A. Daily sign-in sheets.
  - B. Contractor's actual "start and finish" project dates.
  - C. All hazardous waste shipping manifests.
  - D. Disposal site receipts, including manufacturer name and serial numbers from each radioactive exit sign (if removed).
  - E. All final laboratory results.
  - F. Submit legible copies of the each Worker's Hazardous Waste Operations and Emergency Response (HAZWOPR) cards and/or a copy of the refresher training certificate to show that all workers have received their initial training or an eight-hour refresher course within the past year.
- 1.16 SANITARY FACILITIES: Provide adequate toilet and hygiene facilities.
- 1.17 MATERIAL STORAGE: Store all materials subject to damage off the ground and secure from damage, weather, or vandalism.
- 1.18 ON-SITE DOCUMENTATION: The Contractor shall maintain on the job site, at a location approved by the owner, copies of the following data for safety procedures, equipment, and supplies used for the work.
- A. Equipment: Show the model, style, operations, and maintenance for the following, as applicable:
    - 1. Respirators, PAPR and canister types.
    - 2. Decontamination facilities.
    - 3. Specialized hazards handling equipment.
  - B. Expendable supplies: Maintain the manufacturer's safety data, and use the data for the following supplies:
    - 1. Coveralls and headgear.
    - 2. Boots, aprons, and gloves.
    - 3. Disposal containers.
    - 4. Solvents and degreasers.
  - C. Safety Data Sheets (SDS): Maintain SDSs for each encapsulant, surfactant, solvent, detergent, and other material proposed to be used.
  - D. Respirator Program: The Contractor's written respirator program.

## PART 2 - PRODUCTS

- 2.1 PERSONAL PROTECTIVE EQUIPMENT: Provide personal protective clothing as approved and selected by the IH.

- A. Respirators: Provide personally issued and marked respirators approved by the National Institute of Occupational Safety and Health (NIOSH). Provide sufficient replacements for respirators with disposable canisters.
  - B. Provide filter cartridges approved for each airborne contaminant which may be present. NIOSH approved filter cartridges shall be used. At no time shall the permissible exposure limit (PEL) for the contaminant exceed the PEL listed in 8 AAC 61.1100.
  - C. Whole Body Protection: Provide approved aprons, gloves, goggles, face shields, and hard-hats, and other protective clothing as required to meet applicable safety regulations to all workers engaged in hazardous materials removal. Full facepiece respirators shall meet the requirements of ANSI Z87.1.
  - D. Provide protective personal equipment and clothing at no cost to the workers.
- 2.2 DECONTAMINATION UNIT: Provide a decontamination station in accordance with the Contractor's accepted work plan and applicable regulations.
- 2.3 WARNING SIGNS AND TAPE: Post warning signs and tape at the boundaries and entrances to chemical hazards removal areas. Signs required by other statutes, regulations, or ordinances may be posted in addition to, or in combination with, this warning sign.
- 2.4 WARNING LABELS: Affix warning labels to all hazardous waste disposal containers as described in the Contractor's approved Solid Waste Disposal Plan. Conform labeling to 49 CFR 100-199.
- 2.5 SPECIALIZED EQUIPMENT: Lamp crushers and other specialized equipment to consolidate, reduce or treat hazardous materials are classified as RCRA treatment and the EPA specifically prohibits the use of Drum Top Crushers for management of fluorescent lamps as universal waste unless an equivalency determination is made by the state.
- 2.6 EXPENDABLE SUPPLIES: Provide flame resistant 6-mil thick polyethylene sheet plastic in widths necessary to minimize seams.
- 2.7 SAFETY DATA SHEETS (SDSs): Provide SDSs for all chemical materials brought onto the work-site.
- 2.8 OTHER ITEMS: Provide other items, such as consumable materials, disposable and/or reusable cleaning equipment and hand tools, or miscellaneous construction equipment and materials, in sufficient quantity as necessary to fulfill and complete the requirements of the contract. Electrical equipment and supplies shall be UL listed.
- 2.9 ENCAPSULANTS: Encapsulants shall contain no toxic or hazardous substances. Encapsulants shall be compatible with the products to which they are applied and be compatible with any replacement products.

### PART 3 - EXECUTION

#### 3.1 WORK AREAS

- A. Electrical Power: Verify that the electrical power to the equipment being removed is deactivated, disconnected, and locked-out.
- B. Loaded Disposal Drums: The Contractor shall provide handling equipment to move disposal drums loaded with hazardous wastes.

#### 3.2 PERSONNEL PROTECTION PROCEDURES

- A. All personnel entering the work area shall sign the daily log and put on clean protective clothing.
  - B. Basic protective clothing shall consist of aprons, gloves, goggles, face shields, and hard hats--with the addition of approved full body coveralls, bib-type aprons, and respirators as conditions warrant.
  - C. Make available a contaminated material disposal drum, 6-mil. plastic wrapping and tape, or appropriate bagging materials for leaking ballasts and/or oil-contaminated components.
  - D. Decontamination Procedures: All personnel handling or removing hazardous materials will comply with the decontamination procedures as described in the approved work plan.
- 3.3 HAZARDOUS MATERIAL REMOVAL PROCEDURES: Conduct hazardous materials removal, handling, packaging, storage, transport and disposal in accordance with the Contractor's approved work plan, applicable regulations, and this specification.
- A. Perform PCB related work in accordance with 40 CFR 761, 8 AAC 61, 18 AAC 60 and 18 AAC 62.
  - B. Perform mercury-containing lamps work in accordance with 40 CFR 261, 40 CFR 264, 40 CFR 265, 40 CFR 273 and 8 AAC.
  - C. Perform waste battery work in accordance with 40 CFR 261, 40 CFR 264, 40 CFR 265, 40 CFR 273 and 8 AAC.
  - D. Perform radioactive smoke detector work in accordance with 10 CFR 20, 8 AAC 61, 18 AAC 60 and 18 AAC 62.
  - E. Perform heat transfer fluid work in accordance with 40 CFR 261, 40 CFR 264, 40 CFR 265, 40 CFR 273 and 8 AAC.
- 3.4 MONITORING AND TESTING: Conduct daily sampling in accordance with the Contractor's accepted Sampling and Analysis Plan and this Specification. The Owner may conduct air monitoring in the Contractor's work areas and on the Contractor's employees.
- A. Personal, work area, and environmental monitoring for airborne contaminants shall be performed by industrial hygiene technicians who are employees of (one of) the Contractor's Independent Testing Laboratories.
  - B. Perform air monitoring in accordance with 29 CFR 1926, current EPA guidance, and as specified herein. Calibrate all sampling pumps on-site with a calibrated transfer standard before and after each sample. Built-in rotameters on pumps are not acceptable for calibration.
  - C. Monitor for all airborne contaminants listed in 29 CFR 1926.55 and 8 AAC 61.1100, which are produced by the Contractor's operations.
  - D. Contractor shall test waste materials as required by 40 CFR 261, the disposal site's permit, and it's approved work plan. If performed, TCLP testing of fluorescent lamps shall comply with ANSI/NEMA Standard Procedure for Fluorescent Lamp Sample Preparation and Toxicity Characteristic Leaching Procedure, C78.LL 1256-2003 or latest version.
- 3.5 DISPOSAL
- A. Dispose of hazardous wastes in an EPA permitted hazardous waste disposal site as required by 40 CFR 260 and 40 CFR 761, the Contractor's approved plan, and the disposal site operator.

- B. Comply with current waste disposal, handling, labeling, storage, and transportation requirements of the waste disposal facility, U.S. Department of Transportation, and EPA regulations.
- C. Dispose of PCB Containing ballasts and/or other PCB Equipment in accordance with 40 CFR 761.
- D. Fluorescent, mercury vapor, metal halide and high pressure sodium lamps are classified by the EPA as hazardous mercury waste under the Universal Waste Rule under 40 CFR 273. Mercury and mercury-containing products are considered hazardous waste unless TCLP testing of the waste for mercury confirms the mercury content to be less than the EPA criteria of 0.2 mg/l. If mercury-containing lamps and thermostats are handled and disposed of in accordance with the Universal Waste Regulations, no TCLP test is required. If the Contractor chooses to perform a TCLP test of fluorescent lamps, the test shall be conducted in accordance with the requirements of ANSI/NEMA Standard Procedure for Fluorescent Lamp Sample Preparation and Toxicity Characteristic Leaching Procedure, C78.LL 1256-2003 or latest version.
- E. Dispose or recycle universal waste batteries as required by 40 CFR 273, the Contractor's approved plan, and the disposal/recycling site operator.
- F. Dispose of radioactive materials and equipment in accordance with the manufacturer's recommendations, the disposal site's requirements and 10 CFR 20, Subpart K. Provide list of manufacturer name and serial numbers for all removed radioactive exit signs to owner.
- G. Waste heat transfer fluids (such as used heating/cooling system glycol or other circulating heating/cooling fluids) are a potentially hazardous waste and shall be drained and collected in appropriate waste containers for recycling or disposal. Fluids shall be TCLP tested prior to disposal to determine if the fluids are classified as hazardous or non-hazardous waste per the EPA's RCRA regulations governing hazardous wastes. Fluids that failed the TCLP test shall be packaged for disposal as hazardous waste.

### 3.6 CLEANING OF WORK AREA

- A. Remove all hazardous materials and debris within a work area. Wet clean all work area surfaces.
- B. Notify the Owner that hazardous materials removal has been completed and the work area is ready for visual inspection. Include a statement that all hazardous materials and debris in the work area have been removed as required by the contract.

END OF SECTION

## PART 1 - GENERAL

### 1.1 SECTION INCLUDES

- A. Flexible commercial joint sealants to be used to fill open joints and to bed surface mounted equipment, furnishings, and fixtures. When complete, there are to be no gaps or open joints between walls, floors and ceilings, and surface applied devices.

### 1.2 PRODUCT DELIVERY, HANDLING AND STORAGE

- A. Deliver materials in original containers with manufacturer's labels thereon. Store in a warm dry place. Replace damaged materials as directed or as necessary.

### 1.3 SUBMITTALS

- A. Manufacturer's Data: Submit manufacturer's specifications and installation instructions for sealant and sealant backing. Include data substantiating compliance with specified requirements.
- B. Samples: Submit samples in the manufacturer's standard range of colors.
- C. Guarantee: Before commencement of work, furnish two copies of a written guarantee, signed by the Contractor and the installer, agreeing to repair or replace sealants that fail in joint adhesions, cohesion, abrasion resistance, weather resistance, extrusion resistance, migration resistance, stain resistance or general durability, or appear to deteriorate in any other manner not clearly specified as an inherent quality of the material in submitted manufacturer's data.

## PART 2 - PRODUCTS

### 2.1 MATERIALS, GENERAL

- A. VOC Content of Interior Sealants: Provide sealants and sealant primers for use inside the waterproofing system that comply with the following limits for VOC content when calculated according to 40 CFR 59, Part 59, Subpart D (EPA Method 24):
  - 1. Architectural Sealants: 250 g/L.
  - 2. Sealant Primers for Nonporous Substrates: 250 g/L.
  - 3. Sealant Primers for Porous Substrates: 775 g/L.

### 2.2 URETHANE JOINT SEALANTS

- A. Pick-Resistant Urethane Joint Sealant: ASTM C920.
  - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
    - a. BASF Building Systems Master Seal CR95
    - b. Bostik Findley Seal N Flex FC
    - c. Pecora Corporation Dynaflex SC
  - 2. Hardness: 50 Shore A.
  - 3. Type: Single component (S).
  - 4. Grade: Nonsag (NS).
  - 5. Class: 25

### 2.3 JOINT SEALANT BACKING

- A. Cylindrical Sealant Backings: ASTM C1330, Type C (closed-cell material with a surface skin), Type O (open-cell material), Type B (bicellular material with a surface skin), or any of the preceding types, as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to production optimum sealant performance.
- B. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer.

## 2.4 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates.

## PART 3 - EXECUTION

### 3.1 GENERAL

- A. Sealant shall be applied to all open construction joints and to bed all identified and required surface applied products to form moisture and ligature resistant tight joints.

### 3.2 INSTALLATION

- A. Installation of Backing Materials: Install bond breaker tape and sealant backer rod in accordance with manufacturer's instructions.
- B. Installation of Sealant: Apply sealant in accordance with manufacturer's printed instructions for the specific conditions including manufacture range of installation using a handgun with nozzle of proper size. Fill joints and voids solid. Tool joints with equipment designed especially for that purpose, leaving surfaces uniform, smooth, and free of sags, gaps, bulges, air pockets and other inconsistencies. Remove excess material immediately. Leave adjacent surfaces clean. Cure sealed joints for a period of not less than 48 hours.

END OF SECTION

## PART 1 - GENERAL

### 1.1 DESCRIPTION

- A. Description of Work: The extent of work is shown on the Drawings and specified within this document and includes furnishing and installing sheet metal framing, gypsum board, gypsum board accessories and finishing materials.

### 1.2 QUALITY ASSURANCE

- A. Reference Standards: Comply with recommendations and specifications of the Gypsum Associated (GA), American Society for Testing and Materials (ASTM) and American National Standards Institute (ANSI) as modified and supplemented on the Drawings and herein. Refer to ASTM C1007-83 "Standard Specification for Installation of Load Bearing Steel Studs and Related Accessories", ASTM C754-88 "Standard of Steel Framing Members to Receive Screw Attached Gypsum", ANSI C840-88 "Standard Specifications for the Application and Finishing of Wallboard", GA-216-96 "Application and Finishing of Gypsum Board". Shaft Wall construction in conformance with UL Design U499, FM WP-755,2-27-85.
- B. Tolerances: Do not exceed 1/8 inch in 8 feet variation from plumb or level in any exposed line or surface except at joints between units; do not exceed 1/16 inch variation between planes of abutting edges or ends. Space between the edge of gypsum wallboard panels and floor surface shall not exceed 1/4 inch.

## PART 2 - PRODUCTS

### 2.1 INTERIOR GYPSUM BOARD

- A. Metal Framing System For Interior Walls: Not less than 20 gauge galvanized steel studs, runners, and rigid furring channels conforming to requirements of ASTM Designation C645.
- B. General: Complying with ASTM C1629. ASTM D3273.
  - 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Georgia-Pacific Gypsum, LLC.
    - b. National Gypsum Company.
    - c. USG Corporation.
- C. Impact/Mold Resistant Gypsum Board: For use on all walls and ceilings.
  - 1. Gypsum Wallboard: U.L. Labeled Type "X", 5/8 inch thick gypsum board with tapered edges. Gypsum board shall be fiberglass faced. Basis of Design: National Gypsum Gold Bond eXP Interior Extreme AR. Provide this product or an approved product with the same or better characteristics.
- D. Gypsum Wallboard Accessories
  - 1. Edge Trim: U-shaped galvanized steel casing bead, U.S. Gypsum Company "No. 200-A" or approved. Reveal type edge trim will not be accepted.
  - 2. Control Joint: V-shaped galvanized steel control joint, U.S. Gypsum Company No. .093 or approved.
- E. Mechanical Fasteners: Provide screws, nails, and other fasteners in varieties recommended by the gypsum wallboard manufacturer and in quantities required.
- F. Finishing Materials:
  - 1. Joint Treatment Tapes: Plain or perforated tape conforming to requirements of ASTM Designation C475.
  - 2. Joint Treatment Compound: Commercially formulated compound conforming to requirements of ASTM Designation C475.

## PART 3 - EXECUTION

### 3.1 INSPECTION

- A. Carefully examine the substrate and observe conditions under which the work is to be performed. Do not proceed with the work until unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Temperature and Ventilation: During the installation of gypsum wallboard maintain a temperature in the building at not less than 50 degrees F. Provide ventilation as required to prevent moisture accumulation.

### 3.2 DESTRUCTIVE OBSERVATION.

- A. See Selective Demolition section 02 41 19, paragraph 3.2 for re-construction of east Dish Room wall.

### 3.3 INSTALLATION

- A. Installation of Metal Wall Framing System: Carefully place and align metal runners in accordance with dimensions and other conditions shown on the Drawings. Secure bottom runners to floor with appropriate fasteners or anchors spaced not more than 24 inches on centers. Secure top runners to floor or roof structure above in a similar fashion. Walls to extend to the structure above the ceiling and shall be provided with top stud track. Brace as required. Space metal studs not more than 16 inches on centers and secure to metal runners with screws. Locate framing members as required for attachment of surface materials as shown on the Drawings. Provide seismic restraint as required. Provide sheet metal backing for all wall mounted components including, but not limited to, cabinets, handrails, bathroom fixtures and hardware.
- B. Installation of Gypsum Wallboard:
  - 1. All gypsum wallboard is to be installed in accordance with requirements of ANSI C840-88 and GA-216-96, comply with manufacturer's printed instructions where more stringent. Apply gypsum wallboard horizontally to walls and partitions with vertical joints located over supports. Stagger vertical joints in alternate courses and offset vertical joints at least one stud space on opposite faces of partitions. Apply gypsum wallboard with the long dimension perpendicular to supports with end joints located over supports. Fasten gypsum wallboard to wall framing and to ceiling joists with screws. Gaps between gypsum wallboard panels and adjacent surfaces such as finish floors, perpendicular walls and ceilings shall not exceed 1/4 inch unless indicated otherwise.
  - 2. Trimming: Reinforce all external corners of gypsum wallboard work with corner bead. Trim all exposed edges, especially those edges where gypsum wallboard abuts dissimilar construction with metal edge trim. Use continuous trim components where possible. Miter corners. Secure trim in place with fasteners. Fully conceal fasteners and trim flanges with joint compound.
  - 3. Finishing:
    - a. Joint Reinforcement: Use joint tape to reinforce joints formed by tapered edges or butt ends of drywall units and at internal corners and angles. Set tape in joint compound then apply a skim coat over tape in one application. Allow joint compound to dry, then sand smooth. Where open spaces of more than 1/16 inch width occur between abutting gypsum wallboard units, prefill joints with joint compound and allow prefill to dry before application of joint tape.
    - b. Application of joint compound (where exposed and under resilient wall panels): Finish Level 4, apply not less than three (3) separate coats of joint compound over joints, fastener heads and metal flanges. Allow drying time between applications of joint compound in accordance with manufacturer's printed instructions but in no case less than 24 hours. Sand surfaces smooth between each coat. Leave surfaces smooth and flush without joints, fastener heads, metal flanges or surface defects visible following application of field applied finishes.



- c. Fire Taping (under applied finish): Finish Level 2, apply one (1) coat of joint compound over joints and fastener heads in locations where gypsum board surfaces are not visually accessible or otherwise concealed.
- d. Texture: Provide flat wall finish. Apply joint compound evenly to achieve smooth wall surface.

END OF SECTION

## PART 1 - GENERAL

### 1.1 DESCRIPTION

- A. Description of Work: The extent of the work includes furnishing and installing coved sheet flooring and wall covering. Floors throughout the Dish Room space have been sloped to ensure water flows to drains. These existing slopes are to remain and be reused with the new flooring.

### 1.2 QUALITY ASSURANCE

- A. Reference Standards: Comply with recommendations and standard specifications of the Resilient Floor Covering Institute, as modified and supplemented on the Drawings and herein.
- B. Installer Qualifications: Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project with a minimum of 3 years experience.
  - 1. Training: Installer who has attended an Altro Whiterock installation training clinic and has received their certificate of course completion.

### 1.3 SUBMITTALS

- A. Manufacturer's Data: Submit manufacturer's specifications and installation instructions for resilient flooring and wall covering. Include data substantiating compliance with specified requirements.
- B. Samples: Submit samples of resilient flooring and wall covering in the manufacturer's complete range of colors and patterns.
- C. Maintenance Instructions: Upon completion and prior to acceptance of the work, submit current copies of the flooring manufacturer's recommendations of maintenance methods for each type of flooring.

### 1.4 PRODUCT DELIVERY, HANDLING AND STORAGE

- A. Deliver materials in original and unbroken containers with manufacturer's labels thereon. Store in a dry place.

## PART 2 - PRODUCTS

### 2.1 COLORS AND PATTERNS

- A. As selected.

### 2.2 MATERIALS

- A. Flooring: Basis of Design: Altro, Stronghold 30 ASTM F 1303, 3mm thick. Roll 6'-7" x 49'. Heat welded seams. Cove base extending up walls 6".
- B. Wall Protection: Basis of Design: Altro, Whiterock panels. Extruded semi-rigid PVC sheet. 10' x 4' x 2.5mm.

### 2.3 INSTALLATION MATERIALS

- A. Trowelable Leveling and Patching Compounds: Basis of Design, ARDEX or Sika or approved by manufacturer for applications indicated.
- B. Adhesives: Water-resistant type recommended by manufacturer to suit floor tile and substrate conditions indicated.

## PART 3 - EXECUTION

### 3.1 INSPECTION

- A. Carefully examine the substrate and observe conditions under which the work is to be performed. Do not proceed with the work until unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Timing: Defer installation of resilient flooring and base until other finishing operations, including painting, have been completed.
- B. Environmental Conditions: In spaces where flooring is to be installed, maintain a temperature at floor level of 65°F to 85°F for not less than 48 hours prior to commencement of work. Provide adequate ventilation to remove moisture and fumes from work areas.
- C. NOTE: Floors are required to be repaired as needed after removal of the existing sheet vinyl. Ensure substrate is fully cured prior to flooring application.
- D. Preparation of Surfaces: Vacuum or broom clean surfaces to be covered and remove oil, paint, wax, dirt and other foreign substances.
- E. All surfaces must be free from dust and cleaned prior to installation. The working environment must also be dust free. Failure to comply with these conditions will reduce the bond strength between the adhesive substrate and new finishes.

### 3.3 INSTALLATION

- A. General: Install resilient flooring and wall panels in strict accordance with manufacturer's printed instructions using skilled craftsmen to perform the work. Secure materials to the substrate with adhesive.
- B. Installation of Sheet Flooring: Fit sheet vinyl flooring to the space by straight scribing or patter scribing as required by job conditions. Cut seams by overlapping or underscribing as recommended by the manufacturer. Cove flooring onto walls. After flooring is properly fitted, roll back half sheet at a time and spread adhesive on floor and wall surfaces. Embed flooring in the spread adhesive and roll the floor surface with roller weighing not less than 100 pounds, starting at the center of the sheet and rolling outward to expel any trapped air and thoroughly bond the flooring to the substrate. Roll wall surfaces with a hand roller. Weight seams with sandbags to insure complete adhesion. Prepare the top edge of the cove base to receive Altro Whiterock wall covering in a moisture resistant assembly.
- C. Wall Panels: Install wall panels in accordance with the current published manufacturer's Installation Guide. All panels should be joined via heat welding to ensure a hygienic seal by approved methods as detailed in the installation guide. Wall panels are currently planned to be installed in the cart wash room and behind the dishwasher.
- D. Internal and external pencil radius corners shall be made on site following the methods detailed in the Installation Guide.

### 3.4 CLEANING AND PROTECTION

- A. Initial Cleaning: Immediately upon completion, remove any excess adhesive from resilient flooring and wall base using neutral type cleaner approved by the manufacturer. Protect flooring from damage by providing plywood covering to all surfaces receiving heavy traffic or by covering with heavy kraft paper to protect from foot traffic.
- B. Final Cleaning: Just prior to final acceptance, wash resilient flooring and base with a non-alkaline cleaning solution and rinse thoroughly with clear cold water. Carefully follow manufacturer's printed instructions for cleaning and finishing flooring. If the manufacturer's instructions vary from these listed above, follow manufacturer's instructions.
- C. Perform initial maintenance according to the floor manufacturer's instructions.
- D. Protect installed flooring as recommended by the flooring manufacturer against damage from rolling loads, other trades or the placement of fixtures and furnishings.

END OF SECTION

## PART 1 - GENERAL

### 1.1 DESCRIPTION

- A. Description of Work: The extent of the work is shown on the Drawings and specified within this document and includes furnishing materials and preparing and painting interior surfaces of new walls and existing gypsum board, finished walls, as well as surfaces under resilient wall panels. Omission of specific new surfaces from Finish or Color Schedules is not to be interpreted to mean that finish is not required. In such an instance, obtain clarification from the Architect. Surface preparation, prime coats and finish coats specified are in addition to surface treatments and prime coats specified in other sections of the specification. The number of coats specified is to be interpreted as the minimum number of finish coats required. Apply additional coats if required to achieve complete coverage and concealment of surface receiving finish or to achieve uniformity of color, sheen and texture.
- B. Items Requiring No Finish:
1. Concealed Surfaces: Unless specifically indicated on the Drawings, painting is not required on concealed surfaces such as walls above ceilings or in pipe spaces. Surfaces under new wall protection are to be fully painted with primer as noted in 09 91 00, 2.3.
  2. Finished Metal Surfaces: Do not paint anodized aluminum, stainless steel, chromium plate, brass, bronze, copper or other similar metals.
  3. Finished Plastic Surfaces: Do not paint acrylic fiberglass, polycarbonate, polyethylene, vinyl or other similar plastic surfaces.
  4. Pre-Finished Materials: Do not paint such items as (but not limited to) pre-finished architectural woodwork, pre-finished metal roofing and siding, acoustic materials, pre-finished mechanical and electrical items and equipment except where indicated on the Drawings.
  5. Mechanical Piping and Ductwork: Except for color coding and painting specified in other sections of this Specification, do not paint piping and ductwork.
  6. Operating Parts: Do not paint moving parts of operating units such as valve and damper operators, linkages, sensing devices and motor and fan shafts.
  7. Labels: Do not paint over code-required labels or equipment name, identification, performance or nomenclature plates.
  8. Existing Non-Painted Brick/Masonry Surfaces: Do not paint existing non-painted brick surfaces.

### 1.2 SUBMITTALS

- A. Materials List: Submit a complete materials list showing the intended use of each item listed. Include certificates from suppliers of painting materials stating that each material is the best of its respective kind and suitable for the intended purpose.
- B. Manufacturer's Data: With the materials list, submit manufacturer's specifications and printed instructions for preparation of surfaces and for mixing and thinning and application of each material used. Include data substantiating with specified requirements.
- C. Samples: Prepare 12 x 12 inch samples of selected colors. Allow ample time for review. Obtain approval from the Architect before applying paint to finished surfaces.
- D. Overages: Upon completion of work, furnish one (1) gallon can of each type and color of paint for maintenance purposes. Label for positive identification; list tinting formulas. Store on the premises where directed.

### 1.3 PRODUCT DELIVERY, HANDLING AND STORAGE

- A. General: Deliver materials in original and unbroken containers with manufacturer's labels thereon. Store in a clean, dry, well-ventilated space.

## PART 2 - PRODUCTS

### 2.1 COLORS AND FINISHES

- A. Prior to beginning work, the Architect will furnish color selections for surfaces to be painted. Selections will be derived from submitted color wheel.
- B. Color Pigments: Pure, non-fading, applicable types to suit the substrates and service intended.
  - 1. Lead content in the pigment, if any, is limited to contain not more than 0.06% lead, as lead metal based on the total non-volatile (dry-film) of the paint by weight. This limitation is extended to all interior and exterior surfaces.
- C. Paint Coordination: Provide finish coats which are compatible with prime paints used. Review other sections of these specifications in which prime paints are to be provided to ensure compatibility of total coatings system for various substrates. Upon request from other trades, furnish information on characteristics of finish materials proposed for use, to ensure compatible prime coats are used. Provide barrier coats over incompatible primers or remove and reprime as required

### 2.2 MATERIAL QUALITY

- A. Provide the best quality grade of the various types of coatings as regularly manufactured by acceptable paint material manufacturers. Materials not displaying the manufacturer's identification as a standard, best-grade product will not be acceptable. Design Standard is Sherwin Williams.
- B. Provide undercoat paint produced by the same manufacturer as the finish coats. Use only thinners approved by the paint manufacturer and use only within recommended limits.

### 2.3 INTERIOR PAINT SYSTEMS

- A. General: Unless trade name is listed below, the product numbers refer to materials as manufactured by Sherwin Williams, which shall establish a minimum standard of quality, limited to those manufacturers listed above, may be substituted.
  - 1. IPT 1. Extreme Bond Primer: For cement, plaster, metal doors and frames, and gypsum board walls. One coat. Basis of Design: Sherwin Williams Extreme Bond B51W00150.  
Pre-Catalyzed Water Based Epoxy: Gloss level 4 for cement, plaster, and gypsum board walls. Two Coats. Basis of Design: Sherwin Williams Pre-Catalyzed Water Based Epoxy K47 W01151
  - 2. IPT 2. Coated surface under all Resilient Wall Panels: Shervin Williams PVA B28 W830.

## PART 3 - EXECUTION

### 3.1 INSPECTION

- A. Applicator must examine the areas and conditions under which painting work is to be applied. Do not proceed with the work until unsatisfactory conditions have been corrected.
- B. Starting of painting work will be construed as the applicator's acceptance of the surfaces and conditions within any particular area.
- C. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces or conditions otherwise detrimental to the formation of a durable paint film.

### 3.2 SURFACE PREPARATION

- A. General: Perform preparation and cleaning procedures in strict accordance with the paint manufacturer's instructions as herein specified, for each particular substrate condition.

1. Remove all hardware, hardware accessories, machined surfaces, plates, lighting fixtures and similar items in place and not to be finish-painted or provide surface-applied protection prior to surface preparation and painting operations. Remove, if necessary, for the complete painting of the items and adjacent surfaces. Following completion of painting of each space or area, reinstall the removed items by workmen skilled in the trades involved.
2. Clean surfaces to be painted before applying paint or surface treatments. Remove oil and grease prior to mechanical cleaning. Program the cleaning and painting so that contaminants from the cleaning process will not fall onto wet, newly painted surfaces.

### 3.3 APPLICATION

#### A. General:

1. All materials shall be applied and cut in neatly so as to dry uniformly to the color and sheen specified, free from any runs, sags, crinkles, shiners, streaks, holidays and brush marks.
2. Basic application Procedures: It is the intent of this Specification to require procedures which are within the accepted standards of the industry and conform to the recommendations of the manufacturer. The following is intended as a general guide for application of painting materials and is to be followed unless it conflicts with the recommendations of the manufacturer:
  - a. Interior Finished Surfaces Finished Prior to Final Installation: Sprayed if practicable; brushed if spraying is not practicable; end result required is flat, smooth finish without stipple or brush marks.
  - b. Apply additional coats when undercoats, stains or other conditions show through the final coat of paint, until the paint film is of uniform finish, color and appearance. Give special attention to ensure that all surfaces including edges, corners, crevices, welds and exposed fasteners receive a dry-film thickness equivalent to that of flat surfaces.
  - c. Paint surfaces behind movable equipment the same as similar exposed surfaces. Paint surfaces behind permanently fixed equipment or furniture with prime coat only before final installation of equipment.
  - d. Sand lightly between each succeeding coat.

#### B. Scheduling Painting

1. Apply the first coat material to surfaces that have been cleaned, pretreated or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
2. Allow sufficient time between successive coatings to permit proper drying. Do not recoat until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and the application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

#### C. Minimum Coating Thickness: Apply each material at not less than the manufacturer's recommended spreading rate to establish a total dry-film thickness as recommended by coating manufacturer.

### 3.4 CLEAN UP AND PROTECTION

- A. Clean Up: During the progress of the work, remove from the site all discarded paint materials, rubbish, cans and rags at the end of each workday.
- B. Upon completion of painting work, clean paint-spattered surfaces. Remove spattered paint by proper methods of washing and scraping, using care not to scratch or otherwise damage finished surfaces.
- C. Protection: Protect work of other trades, whether to be painted or not, against damage by painting and finishing work. Correct any damage by cleaning, repairing or replacing, and repainting, as acceptable to Owner's Representative.

- D. Provide "Wet Paint" signs as required to protect newly painted finishes. Remove temporary protective wrappings provided by others for protection of their work, after completion of painting operations.
- E. At the completion of work of other trades, touch up and restore all damaged or defaced painted surfaces. Should touch up paint be visually noticeable, repaint entire surface.
- F. Repairs: The Contractor is responsible for defective work, whatever the cause. Replace coatings which do not comply with requirements of the Specification and repair damaged surfaces at no expense to the Owner. Leave surfaces clean, smooth and free of defects at the time of final acceptance.

END OF SECTION

## PART 1 - GENERAL

### 1.1 DESCRIPTION

- A. Description of Work: The extent of the work is shown on the Drawings and specified within this document and includes furnishing and installing corner guards on out turned GWB corners where indicated in the Dish Room areas.

### 1.2 SUBMITTALS

- A. Submit manufacturer's technical data and installation instructions for stainless steel corner guards.

### 1.3 PRODUCT DELIVERY, HANDLING AND STORAGE

- A. Deliver materials in original and unbroken containers with manufacturer's label thereon. Store in a dry place.

## PART 2 - PRODUCTS

### 2.1 STAINLESS STEEL CORNER GUARDS

- A. Basis of Design; Wallguard, 2 inch x 2 inch x 48 inch high, or in height indicated on drawings, 16 gauge 304 stainless steel with drilled holes for fasteners.
- B. Fasteners: Install corner guards using manufacturer's recommended stainless steel screws.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication where possible.

### 3.2 INSTALLATION

- A. Install corner guards on out turned GWB corners in the Dish Room. Install in accordance with manufacturer's instruction. Provide all necessary fasteners and accessories for complete installation. Extend corner guards from top of wall base to 48 inches above wall base and as illustrated on drawings.

### 3.3 CLEANING

- A. Clean units in accordance with manufacturer's instruction.

END OF SECTION



## PART 1 - GENERAL

### 1.1 DESCRIPTION

- A. The Conditions and General Requirements of the project in Division 1 including all supplementary documents apply to the requirements of this section.
- B. Work to be provided and installed includes, but is not limited to:
  - 1. Furnish all labor, materials and services necessary for the assembly, setting in place and sealing of all equipment as specified in the equipment schedule. Work must be in strict compliance with the contract documents.
  - 2. Coordinating work of other sections and providing support and accommodation to related work.
  - 3. Cutting of all holes in equipment, including holes for pipes, drains, electrical outlets required for this section. Work shall include welded sleeves, collars, ferrules, or escutcheons.
  - 4. Repair of all damage to building resulting from work of this section.
  - 5. Remove all debris resulting from work of this section.
  - 6. Clean and make ready for operation all Kitchen Equipment Contractor (KEC) supplied equipment, and the re-installed existing equipment.
  - 7. Furnish faucets, sink wastes, drain fittings, tail pieces and strainers for food service equipment.
  - 8. Mechanical and electrical devices furnished for installation by others shall comply with requirements of mechanical and electrical sections.
  - 9. The furnishing of items required by regulations, but not specified or indicated.
  - 10. Provide 1/4" scale shop drawings showing the plumbing, electrical, and mechanical utility rough-in locations, the wood support blocking locations and/or any other wall, floor or ceiling reinforcement or special support system. See paragraph 1.5 for additional requirements.
  - 11. Training of owner's personnel staff in the start-up, demonstration, operation and maintenance of the equipment. See paragraph 3.6 for additional information.

### 1.2 RELATED WORK IN OTHER SECTIONS

- A. Section 26 05 00 Electrical General Provisions  
All field wiring of any nature including but not limited to power connections, including interconnections between components, conduits, switches, plugs, fuses, breakers, disconnects, junction boxes, magnetic starters, electric receptacles, transformers, or other electrical apparatus required by codes. Includes the mounting and wiring of light fixtures provided by the KEC, and the insulation of conduit penetrations in refrigerated zones.
- B. Section 22 05 00 Common Work Results for Plumbing  
Shut-off valves, control valves, check valves, pressure regulating valves, equipment drain lines, P-traps, or apparatus required by codes or regulations.
- C. Section 22 13 00 Sanitary Waste and Vent Piping  
Floor drains, floor sinks, strainers, sumps, grease traps, funnel drains, vents or apparatus required by codes or regulations.
- D. Section 23 30 00 HVAC Air Distribution  
Exhaust hood ventilation systems, control panels, duct work from the hood to the fan, connecting trim, flue pipes, exhaust fans, room ventilators, make-up air systems and controls, or apparatus required by codes or regulations.

- E. Architectural and Structural
  - 1. Provide all necessary openings or penetrations, routs, cut-outs, etc. in or through the architectural walls, ceilings or floors as necessary for the installation of the food service equipment and accessories.
  - 2. Section 09 65 00 Resilient Flooring  
Provide the floor finish, coved base, raised equipment bases and recessed floor openings. Caulk, seal or grout the floor around all equipment installed into the recessed opening(s).

### 1.3 QUALITY ASSURANCE

- A. All work shall be in accordance with the governing health, building and safety, and fire protection codes and regulations. Rulings and interpretations of State and local enforcing agencies shall be considered part of the regulations, including equipment licensing fees, and necessary signatures and/or notaries on food service drawings as may be required.
- B. Regulatory Agencies
  - 1. Regulations of the U.S. Department of Agriculture, Anchorage Building Department, Anchorage Health Department and the Anchorage Fire Marshal govern the requirements of this Section. The KEC to comply with rulings and interpretations of these agencies and the owner's representative and make necessary adjustments with no additional cost to the Owner.
  - 2. The publications listed below form a part of this specification to the extent referenced.
    - a. American National Standards Institute (ANSI)
    - b. American Society for Testing and Materials (ASTM)
    - c. American Society of Mechanical Engineers (ASME)
    - d. National Electrical Manufacturing Association (NEMA)
    - e. National Fire Protection Association (NFPA)
    - f. National Sanitation Foundation (NSF)
    - g. Underwriters Laboratories (UL)
    - h. Intertek Testing Services NA (ITSNA)
    - i. International Mechanical Code (IMC)
    - j. Uniform Plumbing Code (UPC)
- C. The responsibility for obtaining applications, permits and inspections required by the Anchorage Building Department, the Anchorage Health Department, the Anchorage Fire Marshal and/or other regulatory agencies having jurisdiction shall be the General Contractor's unless noted otherwise.
- D. All materials used shall be free of asbestos, lead, PCBs and any other regulated materials.

### 1.4 BID DOCUMENTS

- A. Basis of the bid and all work for this project shall be the equipment specified in this section and as indicated on the drawings. The bidder shall submit their bid based on the equipment and manufacturers specifically stated in the specifications. All equipment shall be of the latest model.
- B. Any request for substitutions must be submitted in accordance with division 01. The Food Service Consultant must review any alternate or substitute item prior to the scheduled bid opening date. Acceptance of proposed alternate or substitution is entirely at discretion of the Owner and Food Service Consultant in accordance with the requirements of Division 01. In addition, any alternate or substitution is subject to all of the following qualifications:
  - 1. Equal in quality of materials used, in structural strength, finish, and in details of construction.
  - 2. Equal in mechanical and electrical performance, and equal in capacity.
  - 3. Availability of replacement parts and maintenance service, including in-state service and repair representatives.
  - 4. Brand names and models in current use at this or Owner's other facilities.

### 1.5 SUBMITTALS

- A. Manufacturer's Data: KEC to submit manufacturer's specification for each new item of equipment. The data shall be provided in electronic format (Adobe PDF version 2023.003 or later), with the Contractor's name and project name on the cover. Include the following:
  - 1. Index sheet with item number, item description, quantity, brand name and model number;
  - 2. Cover information sheet for each item in sequence, clearly labeled in the upper right hand corner with the item and model number and quantity furnished. Cover sheets for each item shall include all plumbing, mechanical and/or electrical information, accessories, options and any special features or cautions.
  - 3. Where no printed data exists, submit the required information in the form of a shop drawing.
- B. Rough-in Drawings: KEC to submit plumbing, electrical, support blocking and any other type of rough-in drawings, drawn to a scale of not less than 1/4" to twelve inches and informatively labeled and titled. Every mechanical and electrical point for connection or location shall be clearly identified and dimensioned. Critical notes to other trades shall be clearly and completely identified for appropriate action. All dimensions shall be related to finished surfaces, center-lines, heights, etc. above the finished floor or walls.
- C. Maintenance Manuals: After the installation is completed and concurrent with the kitchen demonstration (see paragraph 3.7-B), the KEC to submit one hard copy of the maintenance manual, and a copy in electronic format (Adobe PDF version 2023.003 or later), in the same format as the submittal manual. Include the serial number on each item's cover sheet. The maintenance manual will include operating and maintenance instructions, wiring diagrams, replacement parts lists and other information pertinent to the proper operation and upkeep of the various items of mechanical and electrical equipment. Provide the fire suppression system field certification report in the manual. It is the responsibility of the KEC to fill out and forward all warranty and registration forms required by various manufacturers for the equipment installed.
  - 1. Provide the names, addresses, telephone numbers, and e-mail address of the authorized service agency(s) for all KEC supplied equipment.
  - 2. Provide complete warranty information including proof of warranty, number of months or years and any special conditions.

### 1.6 CONSTRUCTION DOCUMENTS

- A. The equipment drawings constitute a part of these specifications. They show locations of equipment and the general arrangement of mechanical and electrical services. Necessary deviation from the illustrated arrangements to meet structural conditions or building configurations shall be considered a part of the work of this section.
- B. Drawings and equipment specifications are intended to complement one another. Therefore, neither should be considered complete without the other. Should there be a conflict between the drawings and the specifications, contact the Owner's Representative for clarification.

### 1.7 PROJECT COORDINATION

- A. Deliver all the equipment necessary to complete the work as scheduled. This contractor shall cooperate with other trades and exchange information, drawings or other pertinent data required to properly install the food service equipment.
- B. Protect all equipment from weather, humidity, temperature variations, dirt, dust and other contaminants. Fiberboard, cardboard or plywood shall be taped on surfaces as required to protect them from damage until project is turned over to the owner.

- C. Equipment shall not be used as tool and material storage, workbench, scaffold or stacking area. If equipment is damaged in some way, KEC shall repair or replace the item(s) as required.

## 1.8 WARRANTY AND SERVICE

- A. The KEC shall warrant (Guarantee) all of the equipment furnished under this Section against defective material, design and workmanship for the period of one year from the date of beneficial occupancy or final acceptance of the equipment and installation.
- B. Service
  - 1. During the period of guarantee, the KEC shall provide a trained and qualified, local facility to repair or replace defective equipment without cost to the owner for labor, material, travel or other expenses, unless such service is required because of misuse, negligence, willful damage, improper maintenance or accident.
  - 2. Repairs shall be performed during regular working hours on regular working days. Repair work shall start within a reasonable time after notification of a problem.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Metal
  - 1. Stainless Steel: All new, first grade, material; U.S. Standard Gauge, Type 300 series with not over 0.015% carbon, and with a No. 4 or No. 2 polished finish, as specified.
  - 2. Galvanized Steel: All new, commercial quality, zinc coated carbon steel; U.S. Standard Gauges as specified; cold rolled, stretcher leveled, furniture grade galvanized steel sheet conforming to requirements of ASTM A526, free of scale, rust etching, scratches, rugged edges, waves, and other imperfections.
  - 3. Steel Pipe: All new, commercial quality, galvanized; rust resistant coating on threads.
- B. Hardware
  - 1. Locks  
All refrigerated reach-in cabinets shall be furnished with heavy-duty cylinder locks, on all doors; all keyed alike.
  - 2. Catches  
For metal sliding doors, catches shall be stainless steel recessed type Component Hardware model M21-2580, or equal.
  - 3. Hinges  
For metal cabinet doors, hinge shall be heavy-duty, stainless steel continuous type; Component Hardware model M48-0132.
  - 4. Casters  
Shall be heavy-duty, bright zinc or chrome plated, ball-bearing type with greaseproof rubber, neoprene or polyurethane tires. Wheels shall be 5 inches diameter with minimum width treads of 1-1/8 inches and minimum capacity of 250 lb. per caster. Furnish with rubber donut bumpers and wheel brakes where specified.

C. Plumbing Fixtures

1. Faucets
  - a. Deck mounted mixing faucet assemblies shall be Fisher Model 3315 with 12 inch swivel gooseneck spout, non-splash aerator, and wrist blade handles.
  - b. Splash mounted mixing faucet assemblies shall be Fisher Model 13256 with 12 inch swing spout, non-splash aerator, supply elbows and wrist blade handles.
  - c. All faucet assemblies shall be polished chrome plated.
2. Rotary Wastes
  - a. Shall be Fisher Model 22322 with stainless steel flat strainer, or equal.
3. Pre-Rinse Assemblies
  - a. Splash mounted pre-rinse assemblies shall be Fisher Model 13390 with inline backflow preventor, wrist blade handles, wall bracket, and supply elbows.
  - b. All pre-rinse assemblies shall be polished chrome plated.
4. Vacuum Breakers
  - a. Atmospheric type vacuum breakers shall be Watts 288A or equal.
  - b. Any exposed piping above the back splash shall be chrome plated.

D. Electrical Fixtures

1. Furnish a control switch and starter with overload protection for each motor driven appliance and electrical heating unit, unless specified otherwise. All switches shall be located out of the heat zone.
2. Furnish and install all electrical devices unless specified otherwise and provide all internal wiring of electrical apparatus built into or forming an integral part of fabricated equipment, complete to a J-box or breaker panel, as shown on plans, ready for final connection to building power.
3. Make cutouts and install appropriate boxes or receptacles in fabricated fixtures complete with wiring, conduit, receptacle and stainless steel coverplates.
4. All outlets and plugs shall conform to NEMA standards.
5. All electrical devices shall be first quality "Specification Grade".
6. Furnish cord and plug for all mobile and portable equipment unless specified or indicated otherwise.
  - a. Cord to be type SO rubber covered, with wire sized for proper current capacity. Furnish appropriate length.
  - b. Plug to be multi prong, grounded type of proper NEMA configuration. (Verify for matching receptacle).
7. Furnish and install all LED light fixtures with lamps, as specified and/or shown on the drawings. Light switches and disconnects (unless a part of a fixture) shall be furnished and installed by the Electrical Contractor.

E. Miscellaneous

1. Sealants shall be translucent liquid silicone rubber, containing no solvents, and are non-hardening, non-toxic and water resistant, capable of maintaining elasticity between minus 65° F. and plus 250° F.
2. Sound Deadening: Apply non-combustible, hard drying sound deadening mastic on the undersurface of worktables, pot and preparation sinks and dish tables, with a minimum of 0.125 inch thickness, sprayed or painted on. Apply the mastic material after the reinforcing members have been installed.

## 2.2 FABRICATION

- A. Custom fabricated equipment shall be fabricated by one manufacturer complying with current standards of the National Sanitation Foundation, and acceptable to the Owner's Representative. The manufacturer shall have a minimum of five years documented experience in the manufacturing of food service equipment.
- B. Workmanship
1. All welds will use the Tungsten Inert Gas (TIG) method with welding rod of the same composition as parts being welded. Welded joints shall be ground smooth, polished, and re-grained to match the original finish. Materials 18 gauge or heavier shall be welded. No welds are to be visible on exposed surface. Welds are required to be non-toxic on surfaces that are exposed to unpackaged food. Continuously weld all joints on tops, shelves, face joints in base cabinets, field joints and others where required. Field joints in stainless steel tops, etc. where required due to limitations of sheet sizes, equipment sizes, or installation requirements, shall be made sanitary, tight, and without open seams by means of spot welding. Butt joints made by riveting straps at seams and filing with solder will NOT be accepted. Depressions, warps, burns, bend marks, burrs, or irregular projections are NOT allowed.
  2. No exposed rivets, screw or bolt heads will be permitted on equipment work surfaces exposed to unpackaged food or exposed finished surfaces.
  3. Welds on galvanized steel are to be ground smooth, cleaned and coated with an approved galvanizing repair compound.
    - a. Painted galvanized surfaces: Remove film with phosphoric acid or similar solution. Apply a primer coat and finish coat of hammer-tone enamel paint.
  4. Continuous weld all gaps in the tops and provide a 5/8" minimum cove at all horizontal and vertical intersections of sheet metal.
- C. Sheet Metal Gauges and Materials specified are minimum and refer to U.S. Standard Gauge for sheets, plates and tubular material.

<u>Description</u>	<u>Gauge</u>	<u>Material</u>
Dish Tables	14	Stainless Steel
Work Tables	16	Stainless Steel
Counters	16	Stainless Steel
Hoods	18	Stainless Steel
Under-Shelves	18	Stainless Steel
Elevated Shelves	16	Stainless Steel
Reinforcing Members	14	Galvanized Steel
Unexposed Cabinet Base	16	Galvanized Steel
Exposed Cabinet Base	18	Stainless Steel
Sinks	16	Stainless Steel
Drain Boards	16	Stainless Steel

- D. Counters & Tables
1. All metal tops shall be on one-piece welded construction, reinforced on the underside with closed galvanized steel hat channel sections welded in place such that tops can support heavy weights without deflection. Cross braces shall be located not more than 30 inches on centers.
  2. Edges
    - a. Front and side edges shall be turned down two inches at 90 degrees with 3/4" wide hem turned back 30 degrees at the bottom. Outside corners shall be rounded on a 3/4" radius.

- b. Raised rolled rim edges shall be covered up 2 inches minimum with a 1-1/2" wide rim rolled 180 degrees and turned down to the table top with smooth, deburred edges and bull-nose corners.
  3. The back splash shall be covered up as specified, sloped back 2" at the top on a 45 degree angle and turned down at 3/4" at its rear. The ends shall be closed. The back splash shall be secured to the wall over stainless steel wall clips.
  4. Gussets shall be stainless steel fully enclosed, a minimum of 3" in diameter at the top, reinforced with a bushing and shall be welded to a reinforcing channel under the table top.
  5. Legs and Cross Rails: All equipment legs and cross rails shall be 16 gauge stainless steel seamless tubing 1-5/8 inch diameter, unless otherwise noted. Cross rails shall be welded to the legs and the welds ground smooth, or a cross rail brace fitting equal to Component Hardware models A35-1010, A35-1020 or A35-1030 shall be used.
  6. All legs shall be fitted with sanitary stainless steel bullet feet with not less than 1- inch adjustment (Component Hardware model A10-0851 or equal) or with flanged feet with mounting holes (Component Hardware model A10-0854 or equal) as specified.
  7. Radius notch under shelf corners and weld to legs with tight joints at all intersections or use Component Hardware quick corner/center brackets models A37-1010 or A37-1020 at each shelf corner or center leg. Edges shall be turned down two inches and under 1/2 inch on the front and turned up two inches on the backs and sides.
- E. Sinks
1. Sinks shall be of the dimensions specified or shown and conform to NSF standards. Sinks that are integral with drain boards shall be fabricated and constructed of same gauge and material as drain board and splash.
  2. Vertical and horizontal corners shall be fully covered to a radius of 5/8 inches minimum. Partitions between adjacent sink compartments shall be one inch apart joined with continuously welded radius top closure, or welded together at the top seam without any space between the sink compartments.
  3. The sink bottoms shall be scored or "cross broke" to assure drainage to the waste outlet. Provide waste and overflow fittings, or drain plug with quick-opening valve for each compartment.
  4. Each sink bowl shall be sound deadened in accordance with paragraph 2.1-E.2.
- F. Drawers shall have a welded 16 gauge stainless steel drawer front with interlocking channel supports, large ball-bearing wheel suspension, drawer stops, recessed stainless steel drawer pulls, reinforced plastic die-formed drawer insert. Drawer and insert shall be easily removable. Furnish 18 gauge stainless steel enclosure on sides and rear on drawers mounted to the underside of work tables.
- G. Shelves
1. Wall mounted shelves shall be turned down 1-1/2 inches at front and ends, and turned up 1-1/2 inches at back. Shelf shall be mounted on 16 gauge stainless steel brackets and anchored securely to wall.
  2. Where rolled edges are indicated, they shall be die-rolled down 1-1/2 inches. Elevated table mounted shelf supports shall extend below table or countertops and be securely attached to the structural frame or under shelf.

## 2.3 ITEMIZED EQUIPMENT SCHEDULE

- A. All of the above shall be considered a part of the following itemized specifications. Items noted or indicated as custom-fabricated shall comply with the standards previously described. All standard

materials, components and features normally furnished with that model, whether specifically delineated or not, shall be considered inherent in the specifications. Provide accessories as listed.

- B. Each model number includes the code \*L043 as a suffix. This code is known as the Specifier Identification System created by the North American Food Equipment Manufacturers Association (NAFEM). It is not to be removed. Its purpose is to identify the specifier to the manufacturer in the event it is necessary to communicate questions, clarifications and comments. It is to be used on all correspondence including fax and email, when communicating with manufacturer representatives and factories.

Item 1      Soiled Dish Table, L-Shape

Quantity: One each

Manufacturer: Advance

Model: DTS-G30-132L\*L043

- Notes:
1. 11'-0" long x 6'-0" long x 30" wide x 34" high
  2. 14 gauge type 304 stainless steel construction with #4 finish
  3. 10" high back splash with 45° turn-back & turn down
  4. Clipped down back splash
  5. Stainless steel legs, cross-rails and adjustable bullet and flanged feet
  6. Stainless steel under-shelf, 48" long
  7. One 20" x 20" x 8" deep pre-rinse sink bowl
  8. Stainless steel pre-rinse basket with slide bar
  9. No faucet holes in deck or back splash
  10. Inside mitered corner
  11. Stainless steel mounting bracket for item 3 control valve
  12. Sound deadening
  13. Provision for item 2 table mounted sorting shelf
  14. Approved alternates: FS Fabco, SPG Universal Stainless

Item 2      Dish Table Sorting Shelf

Quantity: One each

Manufacturer: Advance

Model: DTA-79\*L043

- Notes:
1. 11'-0" long x 27" wide x 33" high
  2. 14 gauge type 304 stainless steel construction with #4 finish
  3. 18 gauge, type 300 series stainless steel tubing
  4. Support legs mount through back splash at one end, to the rolled edge at the other end, and offset from center for the mid support legs
  5. Option one lower angle slant for the dish racks
  6. Approved alternates: FS Fabco, SPG Universal Stainless

Item 3      Hose Reel with Spray

Quantity: One each

Manufacturer: T&S Brass

- Notes:
1. Re-install existing hose reel as shown on the drawings.
  2. Ensure support blocking is installed in the wall to prevent unit from pulling off the wall.
  3. Provide new control valve, part B-0512 mounted to bracket on soiled dish table.
  4. Provide new continuous pressure vacuum breaker, part B-0963 to be installed by the plumbing contractor upstream of the hose reel tempered water supply.



- Item 4      Ware Washer, Rack Conveyor, with Side Loader  
Quantity: One each  
Manufacturer: Hobart Corp  
Model: CL44EN-BAS-LR\*L043  
Notes: 1. Hot water sanitation  
2. Electric tank heat  
3. Solid state top-mounted controls with digital display  
4. Left hand side loader SL30-LR  
5. Flanged feet  
6. Table limit switch  
7. Standard stainless steel vent hoods at each end  
8. Left to right operation  
9. 208 volt/3 phase  
10. Owner's purveyor to provide and install new soap dispenser system for the ware washer.
- Item 5      Clean Dish Table, Island Type  
Quantity: One each  
Manufacturer: Advance  
Model: DTC-S70-84R\*L043  
Notes: 1. 6'-11" long x 30" wide x 34" high  
2. 16 gauge type 304 stainless steel construction with #4 finish  
3. Stainless steel gussets, legs, under-shelf and adjustable flanged feet  
4. Standard 3" high rolled edge on three sides, and no back splash  
5. Sound deadening  
6. Provision for table limit switch  
7. Approved alternates: FS Fabco, SPG Universal Stainless
- Item 6      Hand Sink with Eye Wash  
Quantity: One each  
Re-install existing hand sink, soap dispenser and towel dispenser, in existing location, as shown.
- Item 7      Pot Sink, Three Compartment  
Quantity: One each  
Notes: 1. Re-install existing pot sink in modified location shown. Location may be slightly different from its existing location.  
2. Provide two new back splash mounted swing spout faucets, Fisher 13256 with 3984 wrist handles and 2400-2103 supply elbows.  
3. Owner's purveyor to provide and install new sanitizing solution dispenser for the pot sink.
- Item 8      Shelf, Wall Mount  
Quantity: One each  
Manufacturer: Advance Tabco  
Model: WS-12-108-16\*L043  
Notes: 1. Modify length to 99-1/2" long x 12" wide  
2. 16 gauge 300 series, #4 finish stainless steel construction  
3. 16 gauge 300 series, #4 finish stainless steel mounting brackets  
4. Mount shelf at 54" AFF  
5. Approved alternates: FS Fabco, SPG Universal Stainless

- Item 9 Grease Interceptor  
Existing unit re-installed by Div 22
- Item 10 Hot Water Booster Heater, Gas  
Quantity: One each  
Manufacturer: Hatco  
Re-install existing booster heater as shown on the drawings.

### PART 3 - EXECUTION

#### 3.1 GENERAL INSTALLATION OF EQUIPMENT

- A. Supervision: An experienced, competent superintendent representing the KEC shall be present during progress of their work. KEC is required to furnish all labor, materials and services necessary for the assembly, setting in place and sealing of all equipment as scheduled.

#### 3.2 UTILITIES, STORAGE AND SPECIAL HANDLING

- A. It shall be the Kitchen Equipment Contractor's responsibility to coordinate with the prime contractor to furnish and provide temporary power and light, openings and storage space to permit scheduled delivery of equipment.
- B. The Kitchen Equipment Contractor shall verify door openings, passages and conditions at the building and pay any special handling charges.

#### 3.3 CONDITIONS AND PREPARATION

- A. Verify all pertinent dimensions of the building and examine conditions affecting proper execution of this section. Evaluate access to various areas for moving in equipment, and coordinate with prime contractor.
- B. Inspect flooring and wall finishes. Verify existence of required mechanical and electrical rough-in utilities. Check walls, ceiling and floor and all related work of other trades for readiness to receive installation of kitchen equipment.
- C. Coordinate with the prime contractor's project superintendent as to the proper sequence for installation of equipment.
- D. Sweep clean all floor areas before setting equipment in place. Remove any spillage of foreign matter.
- E. Report any unsafe conditions immediately to the prime contractor's project superintendent and follow-up with a written report.

#### 3.4 TRIMMING AND SEALING EQUIPMENT

- A. All gaps, joints and seams between fixtures and walls, ceilings and/or floor shall be completely closed and sealed with stainless steel trim strips or angles, silicone sealant (Dow Corning No. #782 or equal) or epoxy sealant.
- B. All exposed ends of back splashes shall be capped with stainless steel, welded, ground smooth and polished. Ends of all fixtures, back splashes and shelves, shall be finished flush to walls or adjoining fixtures.
- C. Anchor the flanged feet or pin the adjustable feet on the opposite corner legs of all island worktables as detailed in the SMACNA guidelines. Ends of all fixtures, back splashes and shelves shall be finished flush to walls or adjoining equipment. Attach all back splashes that abut the wall with wall clips.

#### 3.5 CLEANING

- A. All debris, crates and packages resulting from this work shall be removed from the premises or to an area designated by the prime contractor.
- B. All food service equipment shall be cleaned and ready for use when the building is turned over to the owner. Protection of completed and cleaned work shall be the responsibility of the Kitchen Equipment Contractor.

3.6 EQUIPMENT ADJUSTMENTS, COMMISSIONING, AND DEMONSTRATION

- A. Turn on all mechanical and electrical equipment to verify proper operation. Test for leaks, poor connections, inadequate or faulty performance and correct as necessary. Adjust all equipment for proper operation. All thermostatically controlled equipment and equipment with automatic features shall be operated for a sufficient length of time, not less than 2 hours to prove controls are functioning as intended.
- B. At a time and date selected by the owner representative, the Kitchen Equipment Contractor shall provide an on-site training of the start-up, demonstration, operation and basic maintenance of all food service refrigeration, mechanical and electrical equipment for the owner or his appointed representatives.

END OF SECTION