SECTION 028303 - ABATEMENT OF LEAD CONTAINING MATERIALS

USE THIS SECTION FOR PROJECTS WHERE LEAD BASED PAINT OR LEAD CONTAINING MATERIALS ARE IDENTIFIED, AND ABATEMENT AND DISPOSAL ARE A REQUIRED PART OF THE PROJECT. INCLUDE DOCUMENTS 003126 AND 003127 IN THE PROJECT MANUAL. SHOW THE AREAS THAT REQUIRE ABATEMENT AND APPROXIMATE QUANTITIES ON THE CONTRACT DRAWINGS. COORDINATE WITH THE DESIGNER.

1. GENERAL
	* + 1. SUMMARY
				1. This Section specifies the requirements for protection of workers, prevention of lead dust, paint chips, or debris contamination of adjacent areas, performing lead-abatement, post-abatement cleaning, pre-disposal testing of removed materials, and appropriate disposal of removed materials. The results of the testing for lead containing materials are listed in the Appendix.
			2. RELATED WORK SPECIFIED ELSEWHERE
				1. Existing Hazardous Material Information: Document 003126.
				2. Summary of the Work: Section 011000.
				3. Construction Facilities and Temporary Controls: Section 015000.
				4. Removals, Cutting, and Patching: Section 017329.
			3. REFERENCES
				1. New York State Department of Environmental Conservation (DEC) 6NYCRR:

Part 360 Solid Waste Management Facilities.

Part 364 Waste Transporter Permits.

Part 370 Hazardous Waste Management System-General.

Part 371 Identification and Listing of Hazardous Wastes.

Part 372 Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities.

Part 373 Hazardous Waste Management Facilities.

* + - * 1. New York State Department of Transportation (DOT): Follow all regulations of 49CFR Part 100 through 199.
				2. Occupational Safety and Health Administration (OSHA): Lead Exposure in Construction: Interim Final Rule 29 CFR 1926.62.
				3. U.S. Department of Housing and Urban Development (HUD): Guidelines for evaluation and control of Lead based paint hazards: Title Ten of Housing and Community Act of 1992.
				4. U.S. Environmental Protection Agency (EPA): Resource Conservation and Recovery Act (RCRA) Section 3004 Hazardous and Solid Waste Amendments.
				5. U.S. Environmental Protection Agency (EPA): Toxicity Characteristics Leaching Procedure EPA Method 1311.
			1. DEFINITIONS
				1. Authorized Personnel: Facility or the Director’s Representative, and all other personnel who are authorized officials of any regulating agency, be it State, Local, Federal or Private entity who possess legal authority for enforcement or inspection of the work.
				2. Containment: The enclosure within the building which establishes a contaminated area and surrounds the location where lead remediation is taking place and establishes a Lead Control Work Area.
				3. Floor Surface Clearance Criteria: Shall be determined and established by an independent testing lab employed by the Director’s Representative, conforming to all standards set forth by all authorities having jurisdiction, mentioned in the references. At a minimum no single post work lead wipe sample test values shall have reading levels greater than the levels established by pre-work wipe sampling test values, or greater than 10 mg/ft2. Record levels in mg/ft2.
				4. Fixed Object: Mechanical equipment, electrical equipment, fire detection systems, alarms, and all other fixed equipment, furniture, fixtures or other items which cannot be removed from the work area.
				5. HEPA: High Efficiency Particulate Absolute filtration efficiency of 99.97 percent down to 0.3 microns. Filtration provided on specialized vacuums and air filtration devices to trap particles.
				6. Lead Based Paint (LBP): Paints or other surface coatings that contain lead equal to or greater than 1.0 milligrams per square centimeter or 0.5 percent of lead by weight.
				7. Lead Dust Control Work Area: A cordoned off area with drop cloths or an enclosed area or structure with containment to prevent the spread of lead dust, paint chips, or debris from lead-containing paint removal operations.
				8. PPE: Personal Protective Equipment.
			2. ABBREVIATIONS
				1. ASTM: American Society for Testing and Materials

1916 Race Street

Philadelphia, PA 19103

* + - * 1. CFR: Code of Federal Regulations

Government Printing Office

Washington, DC 20402

* + - * 1. DOT: Department of Transportation

Main Office, 50 Wolf Road

Albany, NY 12232

* + - * 1. NIOSH: National Institute for Occupational Safety and Health

Building J.N.E. Room 3007

Atlanta, Georgia 30333

* + - * 1. OSHA: Occupational Safety and Health Administration

200 Constitution Avenue

Washington, DC 20210

* + - * 1. USEPA: United States Environmental Protection Agency

401 M Street SW

Washington, DC 20460

* + - 1. SUBMITTALS
				1. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
				2. Manufacturer’s installation instructions shall be provided along with product data.
				3. Submittals shall be provided individually in the order in which they are specified and tabbed.
				4. Product Data: Catalog sheets, specifications, and application instructions for paint removal products, and all equipment used.
				5. Quality Control Submittals: Submit the entire Lead Abatement submittal package at the same time.

Worker’s Qualifications Data:

Name of each person who will be performing the Work and their employer’s name, business address and telephone number.

Names and addresses of 3 similar projects that each person has worked on during the past 3 years and documentation of completion of the EPA lead renovators training program.

Name of lead supervisor on site during the work.

Detailed Work Plan: Submit one copy of the work plan required under Quality Assurance Article.

Waste Transporter Permit: One copy of transporter’s current NYS DEC waste transporter permit.

* + - * 1. Operation and Maintenance Data: Submit air filtration unit operation and maintenance data and manufacturer’s catalog sheets for the HEPA filter.

Provide an affidavit stating that the HEPA filters to be used for this project are new and unused.

* + - * 1. Contract Closeout Submittals:

Disposal Site Receipts: Copy of waste shipment record and disposal site receipt showing where the lead-containing materials have been properly disposed.

* + - 1. QUALITY ASSURANCE
				1. Worker’s Qualifications: The persons performing lead abatement and their supervisor shall be personally experienced in lead abatement work and shall have been regularly employed by a company performing lead abatement for a minimum of 3 years.
				2. Regulatory Requirements: Comply with the referenced standards.
				3. Pre-Work Conference: Before the Work of this Section is scheduled to commence, a conference will be held by the Director’s Representative at the Site for the purpose of reviewing the Contract Documents, discussing requirements for the Work, phasing the work and reviewing the Work procedures.

The conference shall be attended by the Contractor, the lead removal subcontractor, and the testing laboratory employed by the Director.

* + - * 1. Detailed Lead-Containing Material Removal Work Plan: At the conclusion of the pre-work conference, before the physical lead abatement Work begins, prepare a detailed lead-containing material removal work plan.

The work plan shall include, but not be limited to, a drawing indicating the location, size, and details of lead dust control work areas, location and details of containment, decontamination facilities, sequencing of lead removal, work procedures, types of equipment, waste separation, containerization procedures, disposal and crew size. Include emergency procedures for fire and medical emergencies.

* + - 1. PROJECT CONDITIONS
				1. Shut-down of Air Handling System: Complete the Work of this Section within the time limitation allowed for shut-down of the air handling system serving the work area.
				2. The air handling system will not be restarted until approval of the post-abatement tests following the last cleaning.
				3. Cover and seal all fin-tube radiator covers, diffusers, duplex outlets, speakers, smoke and heat detectors, etc. Use temporary plasticized partitions as required.

Prevent lead containing dust from entering hard to clean areas within the dust containment area.

Items judged to be too difficult to protect may be disconnected, removed and replaced at contractor’s option.

* + - * 1. Remove or encase all movable equipment in the work area with two layers of six mil fire retardant polyethylene sheeting.
				2. Cut and altar existing materials as required to perform the work. Limit cutting to the smallest amount necessary. Core drill round holes and saw cut other openings where possible for removal work. Flame cutting, high speed grinding or welding is prohibited on lead painted surfaces.
			1. HEALTH AND SAFETY
				1. Where in the performance of the work, workers, supervisory personnel or sub-contractors may encounter, disturb, or otherwise function in the immediate vicinity of contaminated items and materials, all personnel shall take appropriate continuous measures as necessary to protect all ancillary building occupants from the potential lead exposure.

Such measures shall include the procedures and methods described herein and shall be in compliance with all applicable regulations of Federal, State and Local agencies.

* + - 1. FIRE PROTECTION, EMERGENCY EGRESS AND SECURITY
				1. Establish emergency and fire exits from the lead dust control work area containment. Provide first aid kits and two full sets of protective clothing and respirators for use by qualified emergency personnel outside of the work area.
				2. Provide a logbook throughout the entire term of the project. All persons who enter the regulated lead dust control work area or containment shall sign the logbook. Document any intrusion or incident in the log book.
			2. PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT
				1. Workers must wear protective suits, protective gloves, eye protection and a minimum of half-face respirator with new HEPA filter cartridge for all projects. Respiratory protection shall be in accordance with OSHA regulation 1910.134 and ANSI Z88.2.
				2. Workers must be trained as per EPA, OSHA and DOL requirements, have medical clearance and must have recently received pulmonary function test (PFT) and respirator fit tested by a trained professional.

A personal air sampling program shall be in place as required by OSHA.

The use of respirators must also follow a complete respiratory protection program as specified by OSHA.

1. PRODUCTS
	* + 1. PAINT REMOVAL PRODUCTS
				1. Chemical Paint Removal Products: Provide products that will not produce noxious fumes and does not contain Methylene Chloride.
				2. Mechanical Paint Removal: Provide UL 586 labeled, high efficiency particulate air (HEPA) filter system, and shrouded tools certified as being capable of trapping and retaining mono-dispersed particles as small as 0.3 micrometers at a minimum efficiency of 99.97 percent.
			2. RESPIRATORS
				1. Type: Approved by the Mine Safety and Health Administration (MSHA), Department of Labor, or the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services.
			3. VACUUM CLEANERS
				1. Type: Vacuums equipped with new HEPA filters.
			4. PLASTIC SHEETS
				1. Type: Minimum 6 mil., clear, fire retardant polyethylene sheets.
				2. Floor Protective Layer: Minimum 10 mil., reinforced polyethylene sheets.
			5. DISPOSAL BAGS
				1. Type: Minimum 6 mil thick, clear polyethylene bags with preprinted Caution Label. Properly containerize/drum prior to disposal.
			6. EQUIPMENT
				1. Temporary lighting, heating, hot water heating units, ground fault interrupters, and all other equipment on site shall be UL listed and shall be safe, proper, and sufficient for the purpose intended.
				2. All electrical equipment shall be in compliance with the National Electric Code, Article 305 - Temporary Wiring.
2. EXECUTION
	* + 1. NOTIFICATION
				1. Notify the Director’s Representative a minimum of 5 working days prior to the start of any paint removal work.
			2. PRE-ABATEMENT WIPE TESTING
				1. The Director will employ the services of an independent testing laboratory to perform pre-abatement testing of surfaces within the lead dust control work area and areas adjacent to the lead dust control work area.

The testing laboratory will be New York State Department of Health, Environmental Laboratory Approval Program certified (NYS ELAP).

* + - 1. EMPLOYEE PROTECTION
				1. Comply with all applicable Occupational Safety and Health Administration (OSHA) Requirements.
			2. WORK AREA PROTECTION
				1. Lead Dust Control Work Area Requirements: Provide a lead dust control work area where lead-containing paint removal operations will be performed in accordance with the approved Work Plan.
				2. Protection of Existing Construction: Perform paint removal work without damage or contamination of adjacent areas and existing construction.
			3. LEAD-CONTAINING MATERIAL REMOVAL
				1. Perform removal of lead-containing materials in accordance with approved lead-containing material removal work plan.

Use procedures and equipment as required to limit occupational and environmental exposure to lead when lead-containing paint is removed in accordance with referenced standards.

Limit the production and dissemination of dust as much as possible.

Perform manual wet sanding and scraping to the maximum extent feasible.

* + - 1. POST-ABATEMENT WIPE TESTING
				1. The Director will employ the services of an independent testing laboratory to perform post-abatement testing of surfaces within the lead dust control work area, and areas adjacent to the lead dust control work area.

The testing laboratory will be New York State Department of Health, Environmental Laboratory Approval Program certified (NYS ELAP).

USE PARAGRAPH BELOW IF MULTIPLE LEAD BASED PAINT CONTAINING SURFACES WILL BE ABATED DURING THE COURSE OF THE PROJECT

* + - 1. MULTIPLE WORK LOCATIONS

FILL THE REQUIRED NUMBER OF SAMPLE LOCATIONS

* + - * 1. The first \_\_\_\_\_\_work locations encountered shall be utilized to develop a method for an acceptable baseline approach for the lead dust control work area, pre abatement wipe samples, employee protection, lead paint removal method, post abatement wipe samples, cleaning criteria and disposal.

Once an acceptable method is developed and verified by the independent testing lab employed by the Director, subsequent wipe testing shall not be required.

Do not change the methodology of the verified work plan during the course of the entire project.

* + - 1. CLEANING CRITERIA
				1. Cleaning criteria is separated into 2 categories; surfaces within the lead dust control work area, and areas adjacent to the lead dust control work area:

Surfaces within the Lead Dust Control Work Area: In each area where the abatement has been performed, compare the post abatement wipe sample values with the pre abatement wipe sample values. If any of the sample values exceed the pre abatement values, clean again and schedule retesting until the lead levels are equal to or less than the pre abatement values or less than the HUD guidelines listed below. Any other surfaces inside the lead dust control work area that are not listed below shall be cleaned to the pre abatement values:

Floors: 10 micrograms of lead per square foot.

Window Sills: 100 micrograms of lead per square foot.

Window Wells: 800 micrograms of lead per square foot.

Soil: 400 ppm in play areas and 1,200 ppm in bare soil in the remainder of the yard

Areas Adjacent to the Lead Dust Control Work Area: In each area where the abatement has been performed, compare the post abatement wipe sample values with the pre abatement wipe sample values. If any of the sample values exceed the pre abatement values, the area has been contaminated by the abatement process and cleaning is mandatory.

Clean all affected surfaces and schedule retesting. If results still exceed pre-abatement wipe sample values, clean again and schedule retesting until the following criteria is met or until the lead wipe values are equal to or lower than the pre-abatement wipe sample values. Any affected surfaces that are not listed below shall be cleaned to pre-abatement levels.

Floors: 10 micrograms of lead per square foot.

Window Sills: 250 micrograms of lead per square foot.

Window Wells: 800 micrograms of lead per square foot.

Soil: 400 ppm in play areas and 1,200 ppm in bare soil in the remainder of the yard.

* + - 1. CERTIFICATION OF ABATEMENT
				1. Schedule visual inspection of the work area and dust wipe testing with the Director’s Representative at the site when work area is ready for clearance testing.
				2. Director’s Representative will employ the services of an independent testing lab to perform clearance testing.

Prior to removal of any isolation barrier, the Director’s Representative will obtain a written affidavit and a final assessment report from the lab stating that the tests conform to all standards set forth by all authorities having jurisdiction, mentioned in the references.

Schedule a walk-through inspection with the Director’s Representative and obtain his written approval.

* + - * 1. The Director’s Representative shall have final determination of an acceptable clearance level.
			1. PRE-DISPOSAL TESTING
				1. Prior to disposal, the Director’s Representative will employ the services of an independent testing lab to perform clearance testing of the removed materials for toxicity in accordance with EPA Method 1311, Toxicity Characteristic Leaching Procedure (TCLP).

Test results indicating a value greater that 5 ppm lead or 5mg/L classifies the removed material as Hazardous Waste.

* + - 1. DISPOSAL OF LEAD-CONTAINING MATERIAL AND RELATED DEBRIS
				1. Transport and dispose of lead-containing material classified as Hazardous Waste in accordance with the standards referenced in Part 1 of this Section.
				2. Transport and dispose of lead-containing material classified as Non-Hazardous Waste in accordance with standards referenced in Part 1 of this Section.
			2. RESTORATION
				1. Remove temporary decontamination facilities and restore area designated for these facilities to its original condition or better.
				2. Where existing construction is damaged or contaminated, restore work to its original condition or better.

END OF SECTION 028303

FACILITY WILL HAVE TO APPLY FOR A FEDERAL ID NUMBER WHICH ESTABLISHES THEM AS A HAZARDOUS MATERIAL WASTE GENERATOR.