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DOCUMENTS

SPECIFICATION DIVISION 2

NUMBER SECTION DESCRIPTION

DIVISION 02 EXISTING CONDITIONS

SECTION 028333 – LEAD REMEDIATION – RENOVATION, REPAIR AND PAINTING IN CHILD-OCCUPIED FACILITIES AND TARGET HOUSING

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1. DIVISION 02 EXISTING CONDITIONS
	1. SECTION 028333 – LEAD REMEDIATION – RENOVATION, REPAIR AND PAINTING IN CHILD-OCCUPIED FACILITIES AND TARGET HOUSING

Decemeber 2011

This SEction is to be used for removal and disposal of lead containing materials (LCm) during Renovation, repair and painting (RRP) work in child care facilities, family housing, residential properties and hall director/other apartments within residence halls. Lead work within residence hall Student rooms and other spaces within residence Halls is covered by the construction lead Specification, section 028300. For lead abatement work (NOt RRP work) in child care facilities etc. contact UM OSEH-IH&S (Danielle sheen 734-647-1142) for project specific lead abatement Specification Development.

survey all building components which may contain lead or be covered with lead-based paint (lbp). The survey must be conducted by a certified lead renovator. contact oseh early during the design phase for a lead-paint survey to determine extent and concentration of lead-based paint, if any. Brett Goecke (734-647-2306) is the oseh contact for lead paint SAMPLING.include oseh in any pre-construction meetings for projects involving lbp disturbance.

If areas of lead paint disturbance are below six square feet (SF) for interior work and 20 sF for exterior work, the EPA rule does not apply. Consult OSEH to determine if the rule applies. This exception does not apply to window replacement, demolition or any Prohibited activities lsited below in the specification.

* + 1. general
			1. summary
				1. This section specifies requirements when renovating, repairing or painting in target housing and child occupied facilities built before 1978. Activities impacting lead-based paint (LBP) that are subject to the requirements of this section include but are not limited to:

Remodeling and repair/maintenance.

Electrical work.

Plumbing repairs or improvements.

Painting.

Carpentry.

Window replacement.

Demolition of painted walls or ceilings.

Re-plastering.

Any other activities which disturb painted surfaces.

* + - * 1. This section does not apply to lead abatement projects in housing and child occupied facilities. Lead abatement is work designed to permanently eliminate lead based paint hazards.
				2. Extent of LBP is as follows:

select one of the following three items regarding extent of work or modify to reflect project scope.

As shown on drawings.

All existing paint.

Marked at the site during the pre-bid inspection "walk through."

* + - * 1. Prohibited Activities:

Prohibited activities include open flame burning/torching, using a heat gun above 1,100 degrees Fahrenheit (oF) and sanding, grinding, planing, needle gunning or blasting without a shroud and HEPA vacuum attachment.

* + - 1. RELATED SECTIONS
				1. Demolition and removal of items not containing lead as a component are included in Division 02 Section "Selective Demolition."
			2. DEFINITIONS
				1. The term "Abatement" signifies any measure or set of measures designed to permanently eliminate lead-based paint hazards from the target housing or child-occupied facility as defined in 40 CFR part 745, subpart L. Abatement includes, but is not limited to:

The removal of lead-based paint and lead-contaminated dust, the permanent enclosure or encapsulation of lead-based paint, the replacement of lead-painted surfaces or fixtures, and the removal or covering of lead-contaminated soil.

Preparation, cleanup, disposal, and post-abatement clearance testing activities associated with such measures.

* + - * 1. The term "Action Level" means an airborne concentration of lead of 30 micrograms per cubic meter of air calculated as an 8-hour time-weighted average (TWA).
				2. The term “Certified Inspector or Risk Assessor” means an individual who has been trained and is certified by the Environmental Protection Agency (EPA) or the Michigan Department of Community Health to conduct lead-based paint inspections or risk assessments.
				3. The term "Child-occupied Facility" means a building, or portion of a building, constructed prior to 1978, visited regularly by the same child, 6 years of age or under, on at least two different days within any week (Sunday through Saturday period), provided that each day’s visit lasts at least 3 hours and the combined weekly visit lasts at least 6 hours, and the combined annual visits last at least 60 hours. Child-occupied facilities may include, but are not limited to, day-care centers, preschools and kindergarten classrooms.
				4. The term “Cleaning Verification Card” means a card developed and distributed, or otherwise approved, by the EPA for the purpose of determining, through comparison of wet and dry disposable cleaning cloths with the card, whether post-renovation cleaning has been properly completed.
				5. The term “Common Area” means a portion of a building that is generally accessible to all residents or users. Common areas include (but are not limited to) hallways, stairways, laundry rooms, recreation rooms, playgrounds, community centers and fenced areas whether interior or exterior spaces.
				6. The term “Component” means a specific design or structural element or fixture distinguished by its form, function, and location. A component can be located inside or outside the dwelling. Examples include (but are not limited to) ceilings, wall, floors, shelves, crown molding, trim, fences, handrails window sills and soffits.
				7. The term "Containment" means a process to protect workers and the environment by controlling exposures to the lead-contaminated dust and debris created during a renovation, repair or painting project.
				8. The term "Critical Barrier" indicates the perimeter of the enclosure within which lead disruption/removal work takes place. Critical Barriers may include existing floor, wall, and ceiling structures, as well as constructed partitions, closures and seals.
				9. The term "Encapsulant” means a substance that forms a barrier between lead-based paint and the environment using a liquid-applied coating (with or without reinforcement materials) or an adhesively bonded covering material.
				10. The term "Enclosure" means the use of rigid, durable construction materials that are mechanically fastened to the substrate in order to act as a barrier between lead-based paint and the environment.
				11. The term "Exposure Assessment" means a determination of employee exposure for a given task measured by air sampling. The Assessment must meet the criteria for objective data as outlined in the MIOSHA/OSHA Lead in Construction Standard (MIOSHA Part 603, R325.51992 and 29 CFR 1926.62).
				12. The term "Hazardous Waste" refers to a listed waste or any solid or liquid waste with one or more of the following characteristics: toxic, corrosive, flammable, explosive, combustible, oxidizer, pyrophoric, unstable (reactive) or water - reactive. This definition includes lead paint that has been removed from the substrate and has failed the TCLP for any reason.
				13. The term "Inspection" means a surface-by-surface investigation to determine the presence of lead-based paint and the provision of a report explaining the results of the investigation.
				14. The term "Lead-Based Paint" (LBP) is identified as paint or other surface coatings that contain lead equal to or in excess of 1.0 milligrams per square centimeter or more than 0.5 percent by weight or lesser value as defined by EPA.
				15. The term "Non-Hazardous Waste" refers to any solid or liquid waste not exhibiting characteristics of Hazardous Waste. This definition includes lead-based paint not removed from substrate and not failing TCLP for other characteristics. It also includes lead paint chips that do not fail the TCLP for any reason.
				16. The term "EHS" refers to Owner's Environment, Health and Safety Department, 1239 Kipke Drive, Ann Arbor, MI 48109-1010, phone (734)647-1142.
				17. The term "OSHA PEL" stands for the Permissible Exposure Limit established by the Occupational Safety and Health Administration for lead exposure. The OSHA PEL refers to an airborne concentration of lead of 50 micrograms per cubic meter of air calculated as an 8-hour time-weighted average (TWA).
				18. The term “Renovation” refers to a modification of all or part of any existing structure that disturbs a painted surface, including (but not limited to) removal/modification of painted surfaces, components or structures, surface preparation activities and window replacement as defined in 40 CFR part 745, subpart E.
				19. The term “Renovator” means a person who either performs or directs workers who perform a renovation. A certified renovator is a renovator who has successfully completed a renovator course accredited by the EPA or the Michigan Department of Community Health. Note: because the term renovation is broadly defined by the EPA rule “Lead-Based Paint Renovation, Repair and Painting Program” contractors such as electricians and plumbers may be considered “renovators” under this rule.
				20. The term "Target Housing" refers to housing constructed before 1978, except for: housing for the elderly, dormitories, studio apartments, efficiencies, military barracks and rentals of individual rooms.
				21. The term "TCLP" stands for Toxicity Characteristic Leaching Procedure and refers to one of the tests to determine if waste is to be disposed as a Hazardous Waste or non-hazardous solid waste.
				22. The term “Wet Disposable Cleaning Cloth” refers to a commercially available, pre-moistened, white disposable cloth designed to be used for cleaning hard surfaces such as countertops and uncarpeted floors.
			1. SUBMITTALS
				1. All submittals must be directed to UM EHS. Submit documents requested in paragraphs B – E before start of project.
				2. Project Information:

Copy of Firm Certification from the EPA or the State of Michigan Department of Community Health.

Schedule of renovation, repair and painting activities.

Length and number of shifts.

Certified supervisor name, crew size, length and number of shifts.

* + - * 1. Written Compliance Plan: Submit to EHS a Written Compliance Plan incorporating all requirements in the MIOSHA Lead in Construction Standard. Also indicate type of containment and disposal to be established if water is utilized for removal.
				2. Health and Safety Requirements: Information must be provided for all workers that will conduct renovation, repair and painting activities on site, including the following for each employee that will conduct lead disturbance on the job site:

Exposure Assessment Documentation, if available.

Respiratory Protection Program.

Proof of current fit test for respirator that will be worn on Project Site.

Proof of medical surveillance for respirator usage and lead work.

Proof of certified renovator training and accreditation for each supervisor on-site.

Proof of lead awareness training and medical approvals for all workers on-site.

* + - * 1. Renovation Work Notification

Renovations in Housing or other Dwelling Units

Occupants of units where renovations will take place must be provided with EPA’s lead pamphlet “Renovate Right-Important Lead Hazard Information for Families, Child Care Providers and Schools”.

Obtain written acknowledgement from an adult occupant that the pamphlet has been received or certify in writing that the pamphlet has been delivered to the dwelling and the occupant refused to sign or was unavailable.

Obtain a certificate of mailing at least 7 days prior to the renovation.

The written certification must include the address of the unit undergoing renovation, the date and method of delivery of the pamphlet, name of person delivering the pamphlet, reason for lack of acknowledgement, the signature of a representative of the firm performing the renovation and the date of the signature.

Renovations in Common Areas

Where renovations take place in common areas, occupants of affected units must be notified in writing. Such notification shall be accomplished by distributing the written notification to each affected unit.

The notice shall describe the general nature and locations of the planned renovations activities, the expected start and ending dates and a statement of how the occupant can obtain the EPA lead pamphlet at no cost.

Obtain a certificate of mailing at least 7 days prior to the renovation.

In place of the written notification to each affected unit the renovator may, while the renovation is ongoing, post in an area likely to be seen by occupants of all the units, informational signs describing the general nature and locations of the work and anticipated completion date. Additionally post a copy of the EPA lead pamphlet or information on how to obtain a copy free of charge from the renovator.

Prepare sign and date a statement describing the steps performed to notify all occupants of the intended renovation activities and to provide the pamphlet.

If the scope, locations or expected starting and ending dates change, re-notify the occupants prior to beginning additional renovation work.

Renovations in Child-Occupied Facilities

Child-occupied facilities where renovations will take place must be provided with the EPA’s lead pamphlet “Renovate Right-Important Lead Hazard Information for Families, Child Care Providers and Schools”.

Obtain written acknowledgement from an adult representative of the child-occupied facility that the pamphlet has been received or certify in writing that the pamphlet has been delivered to the child-occupied facility and the adult representative refused to sign or was unavailable.

Obtain a certificate of mailing at least 7 days prior to the renovation.

The written certification must include the address of the unit undergoing renovation, the date and method of delivery of the pamphlet, name of person delivering the pamphlet, reason for lack of acknowledgement, the signature of a representative of the firm performing the renovation and the date of the signature.

Provide the parents or guardians of children using the child-occupied facility with the pamphlet and the information describing the general nature and locations of the renovation and the anticipated completion date by mailing or hand-delivering the information. Or, while the renovation is ongoing, post in an area likely to be seen by the parents or guardians of the children frequenting the child-occupied facility, informational signs describing the general nature and locations of the work and anticipated completion date. Additionally post a copy of the pamphlet or information on how to obtain a copy free of charge from the renovator.

Prepare sign and date a statement describing the steps performed to notify all parents and guardians of the intended renovation activities and to provide the pamphlet.

Any written acknowledgements required above must include the occupant’s name and acknowledgement that the pamphlet was received prior to the renovation, the address of the facility undergoing renovation and the dated signature of the occupant.

* + - * 1. Waste Drum Order: Submit order for waste drums to EHS not less than 10 working days prior to beginning LBP disruption/removal work. The following information should be submitted with the order:

Location.

Work activities/methods.

Estimated number of barrels/drums needed for both solid (paint chips) and liquid waste (wash water).

* + - * 1. Prior to application for final payment, submit a renovation report prepared by a certified renovator. The report should include the following:

Start and completion dates of project.

The name and address of each certified person conducting the renovation and the name of each supervisor assigned to the project.

A detailed written description of the project, including all of the following:

Renovation methods used.

Locations of rooms and components where renovation, repair and painting occurred.

Results of Visual Inspection and Cleaning Verification.

* + 1. PRODUCTS (NOT APPLICABLE)
		2. EXECUTION
			1. Lead RENOVATION, general
				1. Conduct lead renovation, repair and painting activities in accordance with all state and federal regulations and guidelines.
				2. Assign a Certified Renovator to the project who will remain on-site during all renovation, repair and painting work.
				3. Maintain at each job site and post the following documents:

Employee Respiratory Protection Program.

Michigan Right-To-Know poster.

Material Safety Data Sheet locator.

Company standard operating procedure.

This specification section.

Material Safety Data Sheets for products used on job.

EPA or Michigan Department of Community Health Renovator Certificates for each supervisor (initial and the most recent refresher).

Proof of lead awareness training and medical approvals for all workers on-site.

For renovations in common areas and child care facilities post a written notification detailing the general nature and locations of the work and anticipated completion date.

For renovations in common areas and child care facilities post a copy of the EPA lead pamphlet “Renovate Right-Important Lead Hazard Information for Families, Child Care Providers and Schools”.

* + - * 1. Open-flame burning or torching of lead-based paint is prohibited.
				2. Machine sanding, grinding, abrasive blasting and sandblasting of lead-based paint is prohibited, unless the sanding, grinding, blasting, or sandblasting is conducted using a shrouded tool with a high-efficiency particulate air (HEPA) exhaust control that removes particles of 0.3 microns or larger from the air at an efficiency of 99.97% or more.
				3. Dry scraping of lead-based paint is permitted only in conjunction with heat guns or around electrical outlets. Operating a heat gun on lead-based paint is permitted only if the temperature generated by the heat gun is less than 1,100 oF.
			1. Health and safety requirements
				1. General: Determine employee exposure to lead in air as required in MIOSHA Lead in Construction Standard.
				2. Exposure Assessment: If the Contractor has made a previous Exposure Assessment that is representative of the task to be performed on-site, the Contractor may rely on this data and determine the need for personal protective equipment and work practice controls based upon this data, if approved by EHS.
				3. Personal Air Monitoring: When the Contractor does not have an Exposure Assessment or the Assessment is determined to be insufficient, the Contractor must conduct personal air sampling in accordance with the MIOSHA Lead in Construction Standard and follow all State and Federal regulations and procedures as covered in Certification Training courses.
			2. PREPARATION

***DELETE PARGRAPH BELOW IF NO RENOVATION WORK ON THE EXTERIOR.***

* + - * 1. General: Prepare Work Areas in a manner that will protect Owner's personnel and property and contain the work area so that no dust or debris leaves the work area.
				2. Preparing Building Exteriors: Ensure adequate measures are in place to prevent dust and debris from escaping the work area and to limit airborne lead content below the Action Level of 30 ug/m3 (micrograms per cubic meter) adjacent to the Work Area.

Close all doors and windows within 20 feet of the renovation on the same floor and all doors and windows on floors below the renovation area.

Ensure that doors within the work area that will be used while the job is being performed are covered with plastic sheeting in a manner that allows workers to pass through while confining the dust and debris.

Erect barricades and install warning tape or signs as necessary to prevent inadvertent exposure of passersby to LBP in all forms, including, but not necessarily limited to dust, particles, and fumes.

Completely cover grounds and vegetation extending 10 feet beyond the perimeter or a sufficient distance to collect falling debris with minimum 8-mil thick polyethylene sheets with joints between sheets lapped and taped; with one edge taped to adjacent building surfaces below area of work; and with free ends secured in position with stakes, tie-down lines or weights. Cover sufficient ground area to capture wind-blown chips, dust and particles. Contractor is responsible for any paint debris found at project completion.

DELETE PARAGRAPH BELOW IF NO REnovation WORK WITHIN the BUILDING

* + - * 1. Preparing Building Interiors:

Discontinue building ventilation within the Work Area and seal off ventilation supply, return or exhaust diffusers, grilles or openings.

Remove all objects from the work area or cover with plastic sheeting with all seams and edges sealed.

Close windows and doors in the work area to form a Critical Barrier. Doors must be covered with plastic sheeting.

Cover the floor surface a minimum of six feet beyond the perimeter of the surfaces undergoing renovation or a sufficient distance to contain the dust, whichever is greater.

Post warning signs at all entrances to the Work Area that states the following, as required in MIOSHA Lead in Construction Standard:

**DANGER
LEAD WORK AREA
MAY DAMAGE FERTILITY OR THE UNBORN CHILD
CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM
DO NOT EAT, DRINK OR SMOKE IN THIS AREA**

* + - 1. WORK PRACTICES
				1. General: Perform renovation of LBP coated materials in compliance with the following requirements:

Restrict access to Work Area to essential personnel.

Use moist-removal methods where applicable. Do not over-saturate the Work Area.

Remove contaminated clothing and personal protective equipment before leaving the Work Area, or Work Area enclosure, as applicable.

If dust or debris is escaping the Work Area or if the Action Level is exceeded outside Work Area, discontinue work and modify Critical Barrier, or perform other modifications of methods or materials as required to prevent dust and debris from escaping.

Prohibit eating, drinking, and smoking in the Work Area.

Collect and contain all paint chips, debris, personal protective equipment and protective sheeting, daily. Seal in heavy duty bags or drums to prepare for proper disposal.

Use precautions (such as tack mats, shoe covers, HEPA vacuuming and or wet wiping) to ensure that all personnel, tools, waste containers and other items are free of dust and debris when leaving the area.

* + - 1. POst renovation cleanIng
				1. Upon completion of work, mist the plastic sheeting and fold the plastic containment sheeting dirty side inward, after misting and seal edges or dispose of plastic in sealed bags.
				2. Brushing, brooming and other dry methods that generate airborne dust are prohibited.
				3. Remove and dispose of all solid waste used for protection and clean-up as Non-Hazardous Waste as indicated in Disposal Article (2.6) below.
				4. Clean all objects and surfaces within project area, and two feet beyond, per the methods detailed below, always cleaning higher to lower.

Clean walls starting at the ceiling and working down to the floor by either vacuuming with a HEPA vacuum or wiping with a damp cloth.

Thoroughly vacuum all remaining surfaces and objects in the work area including furniture and fixtures, with a HEPA vacuum. The HEPA vacuum must be equipped with a beater bar when vacuuming carpets and rugs.

Wipe all remaining surfaces and objects in the area, except for carpeted and upholstered surfaces with a damp cloth. Mop uncarpeted floors thoroughly, using a mopping method that keeps the wash water separate from the rinse water, such as the 2-bucket mopping method or using a wet mopping system. Properly contain all wash water for testing to determine if it is hazardous. Dispose wash water as Hazardous Waste if testing indicates that it is hazardous. If testing indicates that it is non-hazardous filter for particulates and dispose of in a sanitary drain. Do not dispose of wash water in storm drains.

* + - * 1. After cleanup is complete a Certified Renovator must perform a visual inspection to determine if dust, debris or residue is present. If dust, debris or residue is present the area must be re-cleaned and the visual inspection repeated.
				2. After the visual inspection has passed, exterior areas are considered clean. Cleanup of interior areas must be further verified. Start the post renovation cleaning verification process with windows sills and then proceed to uncarpeted floors and countertops, cleaning higher to lower as detailed below:

The Certified Renovator must wipe, with a wet disposable cleaning cloth that is damp to the touch, each window sill, uncarpeted floor and countertop within the work area and compare the cleaning cloth to the cleaning verification card. If the cleaning cloth is darker than the verification card cleaning must be repeated. If it is not, then cleaning is complete.

Each window sill in a project area must be wiped with a separate cleaning verification cloth.

Uncarpeted floors and countertops in the project areas must be less than 40 square feet (sf). If the surface is larger than 40 sf, the work area must be divided into roughly equal sections less than 40 sf.

Wipe each section separately with a new wet disposable cleaning cloth.

Floors must be wet wiped with an application device with a long handle and a head to which the cloth is attached.

For any areas that failed, repeat cleaning, wet wipe again and compare cloth again to the verification card. If the cleaning cloth is darker than the verification card, cleaning must be repeated. If the cleaning cloth is not darker than the verification card, cleaning is complete.

For any areas that have failed two wet wipes, wait until the area has dried completely or 1 hour has passed, whichever is longer. Once dry, wipe that area with a dry disposable cleaning cloth and consider the area adequately cleaned.

* + - * 1. Contractor is responsible for re-cleaning any areas that do not pass applicable cleaning verification standards. The Owner or Owners Consultant may dictate the method of cleaning to reach clearance.
				2. The Owner reserves the right to perform dust clearance sampling to determine if a renovated area is free of lead hazards.
				3. Remove all warning signs and tape after proper cleaning has been verified.
			1. DISPOSAL
				1. Disposal of Non-Hazardous Lead-Based Paint or Lead-Based Paint Components: Collect Non-hazardous LBP waste in a covered dumpster and dispose of the waste at a landfill.
				2. Project Waste (LBP paint and wash water only): Coordinate testing, collection, and removal of waste from the Project Site with EHS. Where testing of waste indicates waste is Non-Hazardous, dispose as in Paragraph above, "Disposal of Non-Hazardous LBP or LBP Components. If waste is classified as Hazardous, comply with the following requirements:

Keep lead waste segregated from other waste and from other Projects. Do not co-mingle waste. Collect and place solid and liquid waste in Owner-provided drums. DO NOT MIX LIQUID AND SOLID WASTE.

Store containers in the Work Area within the Project Site, protected from physical damage, weather, fire hazard and vandalism. Ensure that soil, ground water, and drains or sewers within the storage area are protected from possible contamination. Keep containers secure and tightly closed at all times, except when adding waste.

Place appropriate labels on all containers. Provide all information required on the label; mark labels using indelible ink. The name of the "Waste Generator" is as follows: “Building Name” 1655 Dean Road, Ann Arbor, Michigan 48109.

Mark the side of each drum with the name and phone number of Owner’s Representative knowledgeable about the type of waste contained.

Prepare a complete and accurate State of Michigan Hazardous Waste Manifest. Obtain approval from Owner’s Representative (EHS) to assure correct Generator Name and US EPA Identification Number.

* + - * 1. Disposal of LBP waste shall be done in coordination with EHS- Hazardous Materials Management (HMM).

Contact EHS-HMM at least one week in advance to request pick-up of the containers.

EHS-HMM will pickup and dispose of properly packaged and staged LBP waste at no cost to the contractor. Call the EHS-HMM Program at 734-763-4568 to schedule a pickup immediately after LBP waste has been staged.

END OF SECTION 028333