

Interior Containment: Limit Access and Post Signs



- **Notify residents to stay away from the work area.**
- **Do not allow residents or pets near the work area.**
- **Do not allow eating, drinking, or smoking in the work area.**
- **Post warning signs.**

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Restrict access to the work area and notify residents to stay away while work is underway.

- Restricting access to the work area will protect residents, especially children and pregnant women, from unnecessary exposures to leaded dust and will minimize the spread of dust to non-work areas.
- Before the job starts, notify the residents not to enter the work area and to stay away from the vicinity of the entrance to the work area as much as possible. Residents and pets coming and going can easily track lead-contaminated dust into non-work areas throughout the home. Non-work areas will likely not be cleaned up promptly or properly.
- Restricting exposure is especially important for small children under 6 years old and for pregnant women. Be sure to explain to residents that restricting access is for their own protection, and that small children and pregnant women are most at risk of health problems from exposure to lead.
- You must provide an indication of how long you will be working in a particular area so that residents can plan ahead to obtain items that they may need from the work area before you begin working.

Do not allow eating, drinking, or smoking in the work area.

- This is primarily for worker protection, but is also important if residents are living near the work area. Post signs that discourage eating, drinking and smoking in the work area. Dust in the air can land on food or be inhaled when smoking. If food is set on a dust-contaminated surface, it can easily pick up the lead-contaminated dust, which is then ingested when the food is consumed.

Post warning signs.

- Before beginning the renovation, post a sign in the residents' native language to warn them and other persons not involved in renovation activities to remain outside of the work area. Signs must remain in place and be readable through completion of the renovation and the post-renovation cleaning verification.
- A warning sign must be posted: at each entry to a work area; or, at each main and secondary entryway to a building from which occupants have been relocated; or, for exterior work, where it is easily read 20 feet (6 meters) from the edge of the worksite.

Interior Containment: Remove or Cover Belongings



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- **Remove belongings.**
- **Cover immovable objects in protective sheeting, including:**
 - Furniture;
 - Carpet; and,
 - Lamps and other fixtures.
- **Seal edges and seams.**



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Where Practicable Remove Belongings and Furniture from the Work Area.

- It is desirable to remove all objects from the work area including furniture, rugs and window coverings. Removal is the best option for protecting occupant items from contamination and for reducing post-renovation cleanup time (and cost).

If It Can't Be Moved Out of the Work Area, Cover It.

- Cover all objects that were not removed from the work area in protective sheeting. Seal the seams and edges with tape. Completely cover all immovable fixtures, furniture, carpets and other personal items with protective sheeting.
- Secure protective sheeting to the floor with tape so that no dust can get onto the covered items.
- Protective sheeting such as disposable heavy-duty plastic sheeting is commonly used in many remodeling jobs. Protective sheeting can be bought at most hardware stores.

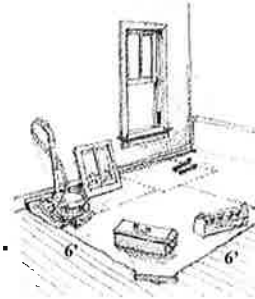
Interior Containment: Cover Floors

Required:

- Cover all work area floors with plastic sheeting.
- Cover floors a minimum of 6 feet in all directions around the paint being disturbed.

Recommended:

- Lay plastic sheeting in high traffic areas.
- Take special precautions for carpets.
- Use a disposable tack pad at the edge of protective sheeting.
- If using chemical stripper, add 2nd plastic layer.



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Cover Floors

- Use protective sheeting to cover all work area floors including installed carpet. The protective sheeting must extend a minimum of 6 feet to the left, right and front – and in some cases to the back – of the area where work will be performed. It should be tightly secured to baseboard or flooring using duct tape (where appropriate), painters tape or masking tape. The corner edge of the protective sheeting should be reinforced using duct tape or a staple.
Note: If vertical containment is used floor containment measures may stop at the edge of the vertical containment.
- Take special precautions with carpets in the work area. Carpets are a major dust collection medium and it is very difficult to clean the dust out of them once contaminated. When the work area includes carpets, you must cover all carpeted areas that are in the work area with at least one layer of sealed plastic sheeting.
- Consider covering shoes with removable shoe covers, wiping off the tops and soles of shoes with a damp paper towel each time you step off the sheeting, and/or using a disposable tack pad that removes dust from the soles of shoes. Immediately place used paper towels in a covered garbage bin. Disposable tack pads can be found at many hardware stores or bought through a supply catalog. A tack pad is a sticky pad that you walk on to remove dust from the soles of your shoes. The disposable tack pad can be taped to an outer corner of the sheeting. Replace disposable tack pads at least daily.
- You may find that using a HEPA vacuum to clean off shoes and clothing is necessary in controlling carry-away dust when personnel leave the work area. This is called a “dry decon” and works well.
- A second smaller layer of protective sheeting should be used with chemical strippers. This second layer should be taped to the top of the first layer. Place the second layer immediately below the work area. This layer will capture splashes and waste, and allows the mess made by chemical strippers to be cleaned up immediately after use.
- Use precautions to ensure that all personnel, tools and other items, including the exteriors of waste containers, are free of dust and debris before removing them from the work area. A container of cheap hand or baby wipes is quite useful for such cleaning.

Interior Containment: Close Windows, Doors, HVAC

Depending on what work is to be done:

- **Close all windows in the work area.**
- **Close and seal all doors in the work area.**
- **Close and seal all HVAC vents in the work area.**
- **Turn off the HVAC unit (recommended).**

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Close Windows

- Close all windows within the work area.
- When conducting window replacements from the inside, consider attaching plastic sheeting to the exterior of the window to prevent spread of dust and debris to the ground and other surfaces under the window. If window replacement affects both interior and exterior surfaces, then setup containment for both the interior and exterior work areas.
- For dusty jobs, it is strongly recommended that you seal work area windows with protective sheeting to prevent dust from getting into the trough or on the sill, making it harder to clean.
- When sealing windows, cut plastic sheeting layer slightly larger than the window that you are covering.
- Attach the plastic sheeting with tape over the window to completely seal it.
- Make sure that the tape or the sheeting does not cover part of the area on which you are working.

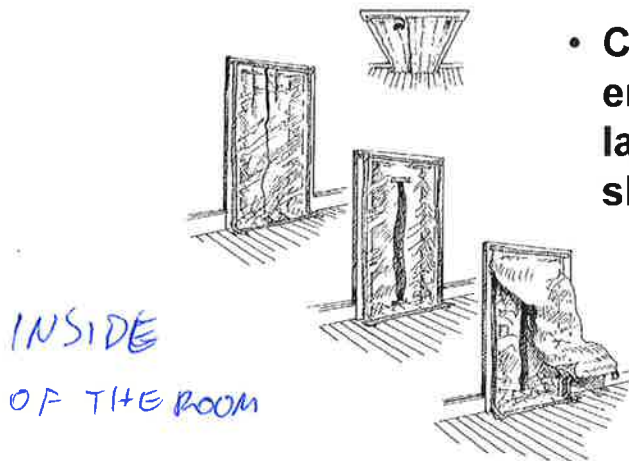
Close and Seal Doors

- Close all doors including closet and cabinet doors in the work area, and cover with plastic sheeting.
- Doors used as an entrance to the work area must be covered with plastic sheeting or other impermeable material in a manner that allows workers to pass through while confining dust and debris to the work area.
- As an alternative to putting up plastic, doors may be shut and then sealed closed with painter's tape.

Close and Seal HVAC Vents

- Heating ventilating and air conditioning (HVAC) systems distribute air throughout the building and thus can also carry dust to other rooms. If possible, turn off the HVAC system for the work area. Close the HVAC supply and return vents in the work area and then cover them tightly with plastic sheeting to prevent air from blowing the dust out of the contained work area and to prevent dust from getting into the HVAC system.

Interior Containment: Work Area Entry Doorway



- **Cover work area entry doors with two layers of protective sheeting.**

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- A physical barrier, such as a cone or warning tape, can be placed outside the entry to remind residents to stay away from the work area, especially in buildings where more than one family lives. The double layers of plastic on the entry door and other barriers serve as a reminder to residents that people and pets should not enter the work area, and also signals that the area has not yet been cleaned up.

When the work area boundary includes a door used to access the work area, cover the door with two layers of protective sheeting as described below.

- Set up a two-layer entry barrier with closable flaps at the entry to the work area so that workers can pass through but dust and debris stay in the work area. Covering the door with this two-layer system will help contain the dust within the work area. Follow the steps below.
 - Cut the first plastic sheeting layer slightly wider and longer (three inches) than the door frame.
 - Make a small “S” fold at the top of the sheeting and tape it to the top of the door frame. Make a similar “S” fold at the bottom of the sheeting and tape it to the floor. This will ensure that the plastic is not taut.
 - Secure the top corners to the door frame for reinforcement.
 - For exiting and entering the room, tape a vertical line about the size of a man from floor to header on both sides of the plastic. Cut a long vertical slit through the tape, in the middle of the protective sheeting. Leave about 6 inches at the top and bottom uncut. Reinforce the top and bottom of the slit with tape to prevent the plastic from tearing.
 - Tape a second layer of protective sheeting to the top of the door frame. This layer is cut slightly shorter than the door frame so that it will hang down flat against the first sheet of plastic.
 - Tape and secure the top corners of the second layer to the door frame and the first layer. Leave it to hang over the first layer. Weight the bottom of the flap with a dowel to keep it in place. If needed, another weighted flap can be added to the other side of the door to provide a third layer of plastic sheeting.
- **See Appendix 5 Steps to LEAD SAFE Renovation, Repair and Painting for more information on how to put the two layer system in place.**

Overview of Interior Containment Steps

The goal of these interior containment practices is to prevent dust and debris from escaping the work area.

- **Limit access and post signs.**
- **Remove (preferred) or cover belongings.**
- **Cover floors.**
- **Close windows, close and seal doors and HVAC system.**
- **Construct a work area entry doorway.**

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RRP Rule: Interior Containment General Requirements:

- **Posted signs:** These must be posted on all sides of the work area to define the work area, must be in the primary language of occupants, must be posted before the beginning of the renovation, and must remain until cleaning verification is achieved.
- **Contain the work area:** Before renovation, isolate the work area to prevent the escape of dust. During work, maintain the containment integrity and ensure that containment does not interfere with occupant and worker egress from the home or work area.
- **Remove or cover furniture/objects:** Remove (preferred) objects like furniture, rugs, window coverings; or cover them with plastic sheeting with all seams and edges taped.
- **Cover floors:** Cover floors including carpets in the work area with taped down plastic sheeting or other impermeable material to 6 feet beyond the perimeter of surfaces undergoing renovation or to a distance sufficient to contain dust, whichever is greater. Remember, if vertical containment is used floor containment measures may stop at the edge of the vertical containment.
- **Close windows, close and seal doors:** Close windows, close and seal doors in the work area with plastic sheeting or other impermeable material. Doors used as entrances to the work area must be covered with plastic sheeting that allows workers to pass through while confining dust to the work area.
- **Cover duct opening:** Close and cover all HVAC vents in the work area with taped down plastic sheeting or other impermeable materials (e.g., magnetic covers).
- **Remove dust and debris from everything leaving the work area:** Use precautions to ensure that all personnel, tools and all other items are free from dust and debris before being removed from the work area.

Exterior Containment: Establish the Work Area



- **Cover the ground with protective sheeting.**
 - If space permits, extend a minimum of 10 feet from the work area.
 - Play special attention and cover nearby vegetable gardens and children's play areas.
 - **Limit access, place signs.**
 - Establish a 20 foot perimeter around the work area if space permits.
- Erect a vertical containment.**
- Vertical containment must be erected if renovations occur within 10 feet of the property line

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Cover the ground with protective sheeting

- Lay protective sheeting on the ground below the work area to at least 10 feet from the house, unless the property line prevents 10 feet of such ground cover in which case the firm must erect vertical containment. Extend the work area farther if needed to collect dust and debris; for example, when paint on the second story of a building is being disturbed. Note: Black and clear disposable plastic sheeting can kill plants by making them too hot. Consider using white plastic sheeting instead.
- **Remove toys and other items from the work area** and cover all play areas including sandboxes. Protect items that cannot be moved with plastic sheeting.
- **Staple or tape the protective sheeting to the wall** of the building, or use a 2x4 wrapped in protective sheeting to hold the material next to the wall. Use heavy objects (e.g., rocks) to weight the other edges of the protective sheeting to the ground so that it won't blow in the wind.
- **When using ladders on plastic sheeting** consider placing a sturdy piece of plywood on the plastic and then set the ladder on the plywood. This will prevent the ladder from puncturing the plastic and will provide a stable surface for the ladder. If plywood is used, take special care to secure it to the ground so that it does not move. This could be done by staking the plywood and later sealing the holes in the plastic with duct tape.

Note: Remember children often play in the dirt and may put their hands in their mouths while playing. Dirt, dust or debris on their hands will go into their mouths and may be swallowed.

Limit work area access

- Limit access to the work area by placing orange cones or saw horses and warning tape around a 20 foot perimeter of the work area. Ropes with signs at regular intervals could also be used instead of barrier tape. This will help to discourage residents and passersby from entering the work area. Keep pets out of the work area.

Erect a vertical containment

- If the renovation is within 10 feet of a property line vertical containment or equivalent extra precautions in containing the work area must be used.
- In addition firms are permitted to erect vertical containment closer to the renovation activity than the minimum ground containment distance, in which case the ground containment may stop at the edge of the vertical containment.

Exterior work area daily cleaning

- Cleaning the exterior work area is crucial to prevent the spread of dust and debris. Picking up all debris throughout the day and the use of temporary, plastic-sheeting drop cloths can facilitate easy cleanup. Note that the plastic drop cloths do not take the place of protective sheeting on the ground.

Disposal – Federal, State and Local Information

- According to Federal law:
 - In housing: Waste can be disposed of as normal household waste.
 - In non-residential child-occupied facilities: If hazardous waste exceeds 220 lbs, dispose of as hazardous waste.
- Always check local requirements!

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Waste Disposal Issues

Because EPA considers most residential renovation and remodeling as “routine residential maintenance”, the waste generated during these activities is classified as solid, non-hazardous waste, and should be taken to a licensed solid waste landfill. **This does not apply to commercial, public or other non-residential child-occupied facilities.**

- If you generate any hazardous waste, you should determine whether you generate more than 220 pounds of hazardous waste per job site per month. If you have less than 220 pounds of hazardous waste per location per month, manage the waste as solid, non-hazardous waste. If you generate more than 220 pounds of hazardous waste, you should contact your state and local regulators to find out how to properly dispose of it.
- Some **possible** examples of **hazardous waste** include: paint chips; vacuum debris; sludge or chemical waste from strippers; and, HEPA filters.
- Some **possible** examples of **non-hazardous waste** may include: disposable clothing; respirator filters; rugs and carpets; protective sheeting; and, solid components with no peeling paint.
- All waste should be sealed in heavy duty heavy duty plastic bags and handled carefully.
- Large architectural components should be wrapped and sealed in plastic sheeting, and disposed of along with other waste.
- Always check Federal, state and local requirements before disposing of waste. Some states have enacted more stringent waste management and disposal requirements than Federal regulations. You need to become aware of how Federal, state and local requirements affect the management and disposal of renovation waste in your area.