



CONNECTICUT
HOUSING FINANCE
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The Key To Affordable Housing

Connecticut Housing Finance Authority

Construction
Guidelines:
Environmental &
Hazardous Materials
Review

2023

These Guidelines are effective January 2023

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CHFA Construction Guidelines: Environmental & Hazardous Materials

January 2023

The “Construction Guidelines: Environmental & Hazardous Materials” outlines the CHFA environmental review process. These Guidelines shall be followed when CHFA is providing construction financing and/or tax credits for multifamily developments pertaining to both new construction and the rehabilitation of existing buildings and properties. CHFA may select and commission an outside, third-party CT Licensed Environmental Professional (CT LEP) (at the applicant’s expense), from a CHFA approved list to review environmental reports for conformance to these Guidelines. When required, the applicant will make a non-refundable payment for such environmental reviews.

The third-party environmental consultant hired for the project shall clearly understand the proposed scope of work for the project which will inform the review by providing context. This scope of work for the project shall be included in the fee proposal submitted by the third-party environmental consultant to verify an understanding of the building(s) and site(s) which are included in the project and scope.

Building materials, components, fabrications, assemblies and equipment for all proposed development projects – rehabilitations and new construction – should comply with the applicable sections of the current “Multifamily Design, Construction and Sustainability Standards-CHFA” (the Standards). The “Construction Guidelines: Project Planning & Technical Services Review” and the Standards define the design process and the specific recommendations for multifamily housing financed through CHFA. All applicants should strive to meet the Standards and Guidelines, must comply with CHFA Procedures and the requirements of the CHFA/DOH Consolidated Application and all current federal, state and local environmental laws and regulations.

I. Environmental Consultant Qualifications

Environmental consultants shall be licensed in the State of Connecticut with a current and active license. The Connecticut Department of Energy and Environmental Protection (CT DEEP) maintains the roster of Connecticut licensed environmental professionals (CT LEP) which can be accessed on their website. The Connecticut Department of Public Health (CT DPH) also maintains the roster for qualified parties for their Lead Program and Asbestos Program, if required. For asbestos and lead based paint issues, CT DPH requires the project consultants be on the approved lists as noted below:

- Licensed lead abatement consultants and contractors;
- Licensed asbestos consultants and contractors;
- In-state approved commercial environmental laboratories;
- Out-of-state approved commercial environmental laboratories; and
- Approved non-commercial environmental laboratories

The owner/developer shall contract with a CT LEP to investigate proposed development sites and existing buildings, in order to identify environmental concerns that need to comply with federal and/or state regulations. The Owner’s LEP should ensure that the investigation, testing and reporting for hazardous materials is performed by qualified licensed consultants, contractors and laboratories. Based on the nature/conditions of the site and the types of environmental concerns initially identified by the environmental consultants, additional investigation and/or testing may be required. Based on the results of investigation and testing, site and/or building remediation and/or abatement may be required. The licensed environmental professional shall evaluate the site thoroughly via Environmental Site Assessments to give a sound and reasonable opinion regarding the findings, including whether additional site investigation and testing is warranted.

II. Types of Environmental Site Assessments

An Environmental Site Assessment (ESA) is an investigation conducted of a specific site of either vacant land or a developed piece of property. The ESA’s are generally presented in three major phases of investigation:

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Phase I, II and III. For certain sites, it may be cost effective to combine Phase I and Phase II or Phase II and Phase III. Environmental Site Assessments shall comply with current federal National Environmental Policy Act (NEPA), CT DEEP's Site Characterization Guidance Document (SCGD) and ASTM Standards E1527.

A. Phase I Site Assessment (ESA): A Phase I Site Assessment investigation of the current and historic uses of a site for the purpose of identifying all areas on a site at which pollutants may have been released into the environment is required for all projects seeking financing through CHFA. A completed Phase I ESA includes the findings of factual information and the conclusions of the environmental professional regarding identification of AOCs. A complete Phase I ESA describes current and historical site operations and processes; current and historical storage, handling, and disposal practices; site development history, including historical fill placement; the location and nature of AOCs; substances and constituents of concern; potential for release; potential release mechanisms; environmental setting; potential migration pathways; and potential receptors. A complete Phase I ESA includes the environmental professional's preliminary Conceptual Site Model (CSM).

While other published guidance documents, such as the current American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment, E-1527 and the USEPA's "All Appropriate Inquiries" rule under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) provide some useful protocols to complete a Phase I ESA, they are not inclusive of the key components to complete a Phase I ESA in accordance with the SCGD.

The Phase I ESA provides the foundation for subsequent phases of investigation and for demonstrating that sufficient site-wide investigations have been completed to the extent necessary to characterize the environmental condition of a site. Therefore, the research, collection, evaluation, and presentation of data in the appropriate context are essential. The purpose, objectives, and guidance for conducting a Phase I ESA that is acceptable to the Commissioner are presented in the SCGD.

Based upon the owner's environmental consultant's findings, and/or the opinion of the CHFA third-party environmental consultant's review/opinion, a Phase II Site Assessment may be required. Any and all areas of concern as defined in the "Site Characterization Guidance Document" should be evaluated along with any and all Recognized Environmental Conditions as defined in ASTM E1527-21. Based on the information submitted and reviewed, additional phased site investigations, testing and/or reports, may be required. For applications submitted during a designated funding round with a submission deadline (such as the 9% LIHTC round), the Phase I ESA must have been completed within one (1) year prior to the application deadline. For applications for CHFA and DOH funding outside of a specific funding round (such as 4% LIHTC, TEB, etc.), the Phase I ESA must have been completed within one (1) year prior to the submission of a full application.

Given the recent guidance from the EPA on PFAS (Per- and Polyfluoroalkyl substances, ie the "Forever" chemicals), PFAS testing may be required. Please be sure to address this in the Phase I ESA reports. (NEW)

B. Phase II Site Assessment: A Phase II Site Assessment is an investigation of each "Area of Concern", "Potential Release Area" or "Recognized Environmental Condition" to determine whether or not pollutants have been released to the site soils or groundwater. Based upon the owner's environmental consultant's findings, and/or the opinion of the CHFA third-party environmental consultant's review/opinion, a Phase III Site Assessment may be required.

C. Phase III Site Assessment: A Phase III Site Assessment is an investigation that fully characterizes the nature and extent of contamination resulting from any release which has occurred on a site. While remedial

actions to abate pollution may be taken at any time in the course of characterizing a site, a final remedial action plan can only be developed after a complete Phase III investigation.

D. Soil Management Plan: On sites where complete cleanup is not feasible and/or cost prohibitive, residual contamination may remain, and environmental restrictions are required to be applied to the property. These restrictions must be recognized during development and construction activities. Most commonly, soil disturbance cannot be performed without following an appropriate Soil Management Plan (SMP). SMPs may include (among others):

- Maps showing topsoil and subsoil types and areas to be stripped
- Methods for stripping, stockpiling, re-spreading and improving the soils
- Remedial activities
- Haul routes
- Location and content of each soil stockpile
- Schedules of volumes for each material
- Expected after-use for each material
- Designated responsibilities for supervising soil management

All Risk Based Corrective Actions (RBCAs) must be based on the appropriate combination of ASTM Guides and Practices, and meet the requirements of any Local, State, Tribal or Federal (LSTF) regulatory authority for restricted residential criteria levels. Whether or not remedial activities are subject to the State of Connecticut's Remediation Standard Regulations (RSRs), the RSRs should be utilized as a standard of care, and for guidance for proposed remedies. Projects utilizing HUD funding must also comply with the environmental review and requirements included in the current editions of the HUD Multifamily Accelerated Processing (MAP) Guide and Appendices. For federally-funded projects where contaminated soils will be consolidated and remain on-site, a minimum cover of 4' of clean soil must be provided.

III. Hazardous Materials

Hazardous materials include materials such as asbestos, lead-based paint, lead in water, lead in soil, polychlorinated biphenyls (PCBs), mercury, radon, mold, and others. Hazardous materials surveys can be classified into three (3) major types; a general survey, a renovation impact survey and a pre-demolition survey. In all cases, a licensed inspector (asbestos and/or lead based paint) shall oversee the survey and provide direction as needed.

A general survey is an examination of the materials used in building construction documenting the existing known hazardous materials. This survey typically does not involve destructive sampling within wall cavities, above ceilings, below flooring tiles, etc.

A renovation impact survey is an investigation of building materials when a structure will be undergoing a renovation or rehabilitation. In this survey, destructive sampling may be required to uncover any hidden hazardous materials. This type of survey is required when hazardous materials are suspected to be present and the scope of work should be utilized to inform the extent of the required testing.

The final type of survey is the pre-demolition survey which is an investigation done prior to a building or structure slated for complete demolition. This type of survey is also required prior to any demolition work occurring.

IV. Types of Hazardous Materials

A. Lead-based paint requirements

Multifamily residential developments are prone to frequent turnovers of occupants, and there is a strong likelihood that apartments that are not currently child-occupied could become child-occupied, at any time. In addition, elderly grandparents in low-income families may provide day care for their grandchildren on a regular basis. As such, it is recommended all units be considered child-occupied units, and be subjected to the same protocols for abatement purposes. A lead-based paint abatement plan for all existing units built prior 1978 that are planned to be rehabilitated, regardless of whether the units are currently occupied by a child under the age of six or not, should be provided. Since dwelling units in affordable multifamily residential developments are prone to frequent turnover, and residents of affordable units in elderly developments may provide child care for children under the age of six, it is recommended that all units be considered child-occupied, and follow the same protocols for testing and abatement purposes.

The following are requirements and additional information regarding lead-based paint testing and remediation per the CT Department of Public Health (DPH):

CT LEPs performing services for CHFA grant applications and/or for CHFA funded projects shall ensure that properly credentialed Environmental Firms and individuals are used for lead consulting and lead abatement activities.

If during a Phase I ESA, a CT LEP identifies defective paint in a pre-1978 residential dwelling, a comprehensive lead inspection shall be conducted during Phase II ESA. The comprehensive lead inspection shall be performed by a CT DPH licensed lead consultant which employs a CT DPH certified lead inspector and/or CT DPH certified lead inspector risk assessor.

The comprehensive lead inspection shall include testing of painted surfaces on the interior/exterior of the building (single family house, multi-family house, buildings expected to be used for residential occupancy), as well as common areas. In addition, dust, water and bare soil shall be tested.

The CT DPH licensed lead consultant shall provide the owner's CT LEP with a lead inspection report summarizing the lead testing findings.

Owners and/or CT LEP/Environmental Firm shall use the following:

- Pre-Project Checklist for Lead Abatement Projects
- Pre-Project Checklist for Lead Safe Work Practices of Lead Hazard Remediation

1. **When there is a child under the age of six years old in residence:**

- a. The CT DPH licensed lead consultant shall report their findings to CT DPH and the local director of health through the submission of the CT DPH Lead Inspection and Testing Summary Form.
- b. This reporting of the CT DPH Lead Inspection and Testing Summary Firm will trigger the CT Department of Public Lead Poisoning Prevention and Control Regulations.
- c. The local director of health shall issue an Order letter to the property owner to abate all lead hazards.

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- d. All defective lead surfaces and bare soil shall be abated by a CT DPH licensed lead abatement contractor.
- e. Before lead abatement work begins, the property owner and/or the CT LEP/Environmental Firm shall hire a CT DPH Licensed Lead Consultant, employing a CT DPH certified planner-project designer, to develop a lead abatement plan and a lead management plan.

The lead abatement plan shall describe how all lead hazards and defective lead-based paint surfaces will be abated. The lead management plan shall identify all lead-based paint that is intact and abated soil which will be checked by the property owner on a regular basis to ensure it remains hazard free. Both plans shall be submitted to the local health department for their approval.

- f. Once the lead abatement plan is approved, lead abatement work can begin.
- g. The CT DPH licensed lead abatement contractor shall employ a CT DPH certified lead abatement supervisor to oversee the lead abatement work which shall be performed by CT DPH certified lead abatement workers.
- h. Before lead abatement work begins, the property owner shall notify the residents 5 days in advance, as this ensures that they are safely relocated (relocation may not be necessary in all situations, this will be decided by the director of health).
- i. When lead abatement is complete, a final clearance shall be conducted by a CT DPH licensed lead consultant.
- j. Once final clearance criteria are achieved, the local health department shall conduct a visual assessment of the property to ensure compliance with the lead abatement plan.
- k. The local health department shall then issue a post abatement inspection report and letter of compliance to the property owner.

2. If there is no child under the age of six years old in residence:

- a. The property owner and/or the CT LEP/Environmental Firm shall hire an EPA Renovation, Repair and Painting (RRP) certified firm to make all defective lead-based surfaces intact or alternatively the property owner may hire a CT DPH licensed lead consultant to perform lead abatement.
- b. Before lead hazard remediation work begins, the property owner and/or the CT LEP/Environmental Firm shall hire a CT DPH licensed lead consultant, employing a CT DPH certified planner project designer, to complete a lead hazard remediation plan.

The lead hazard remediation plan shall describe how all lead hazards and defective lead-based paint surfaces will be remediated. The lead management plan shall identify all lead-based paint that is intact and abated soil which shall be checked by the property owner on a regular basis to ensure it remains hazard free.

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A director of health does not need to approve these plans as there are no children under the age of six years old in residence. CT DPH is available to provide technical assistance as needed.

- c. Once the lead hazard remediation plan is approved, lead hazard remediation can begin.
- d. The EPA RRP certified firm shall employ at least one EPA certified renovator (who oversees the work, completes necessary paperwork and teaches other workers how to do job specific tasks).
- e. When lead hazard remediation is complete, the CT DPH licensed lead consultant shall conduct final clearance.
- f. Once final clearance criteria are achieved, the CT DPH licensed lead consultant shall issue a letter of compliance to the property owner.

3. Clearance dust wipe sampling protocol:

Clearance dust wipe sampling shall be performed at a CT DPH licensed lead consultant which employs a CT DPH certified lead inspector and/or CT DPH certified lead inspector risk assessor

Samples of dust shall be collected on the floor, a window sill and a window well in in each room or area where lead-based paint has been abated or remediated.

Additionally, if only a portion of a dwelling unit has been abated or remediated, a sample shall be collected from the floor outside the containment within ten (10) feet of the entrance to the abatement or remediation area upon completion of abatement or remediation activities.

All dust wipe samples shall meet the following clearance criteria for occupancy/re-occupancy to be allowed:

Floors – 40 $\mu\text{g}/\text{ft}^2$

Window Sills – 250 $\mu\text{g}/\text{ft}^2$

Window Wells – 400 $\mu\text{g}/\text{ft}^2$

All areas that fail clearance dust wipe sampling, shall be cleaned and resampled.

4. The following templates are available through the CT DPH:

- a. Lead hazard remediation template
- b. Lead abatement plan template
- c. Lead management plan template
- d. Pre-Project Checklist for Lead Abatement Projects
- e. Pre-Project Checklist for Lead Safe Work Practices or Lead Hazard Remediation

5. Federally Funded Projects

All target housing, or a building expected to be used for residential occupancy that is receiving federal assistance through CHFA, Department of Housing (DOH) and/or any other entity must follow the requirements for lead paint evaluation and remediation detailed in the Code of Federal Regulations at 24 CFR 35. In cases where the State of Connecticut, tribal or local jurisdiction has laws, ordinances, codes or

regulations governing evaluation or hazard reduction that are more protective than the federal regulation, the more protective standard shall apply. Since the Department of Housing reserves the right to restrict project funding based on the availability of federal and state resources, project teams should plan for the use of Federal funds and the corresponding requirements such as, but not limited to, procurement, environmental requirements and design and building standards.

Per the State of CT Department of Housing, please see the following links and resources for more information:

<https://www.hudexchange.info/programs/environmental-review/>

<https://www.hudexchange.info/programs/environmental-review/noise-abatement-and-control/>

Resources

[WISER: Noise Abatement and Control Online Module](#)

[HUD Noise Guidebook](#)

[Day/Night Noise Level Electronic Assessment Tool \(DNL Calculator\)](#)

[Barrier Performance Module](#)

[Sound Transmission Classification Assessment Tool](#)

[FAA Noise Map Archive: Airport Noise Exposure Maps](#)

[Federal Railroad Administration Railroad Operations Data Sources: Railroad Operational Data](#)

[View Additional Resources](#)

Additionally, i Low Income Housing Tax Credits (LIHTC) are included in the project funding, Public Housing Standard 24 CFR shall be used.

B. Lead in Water

All renovations, regardless of development type (family/elderly/supportive housing), that plan to reuse existing piping systems that are non-plastic and installed before 1986, will be required to provide testing for Lead in Water. Testing must be performed by a CT DPH licensed lead consultant who employs a CT DPH certified lead inspector and/or CT DPH certified lead inspector risk assessor. The minimum number of apartments to be tested shall be at least twenty-five percent of randomly selected units, but no less than one unit in each building. Testing is to include, but not limited to, the visual inspection of readily accessible components of the building's plumbing system (i.e. water supply lines, fittings, fixtures, etc.). Of particular importance is identification and condition of lead supply lines, lead solder on piping, and brass fixtures & fittings.

If Lead in water contamination exceeds the EPA lead action level, the CT LEP will provide an accurate identification of the source(s) of the Lead-in-Water contamination. Additional testing and a plan to remove/remediate all sources of Lead in Water must be part of the scope of work.

CHFA does not consider Point of Use filters (POU) for use as a permanent solution for the remediation of Lead in Water.

In the case of Gut Rehabilitations, where existing laterals are being maintained; if testing is not possible prior to construction, Lead in Water testing will be required as soon as service is restored and testing is possible. If Lead in Water contamination exceeds the EPA lead action level, identification of the source(s) and removal/remediation of the contamination will be required.

Follow-up testing of the water after the renovations are complete shall be required to ensure that no samples exceed the EPA lead action level. If safe levels are still not achieved, efforts to solve the problem must continue until safe levels are attained.

C. Asbestos

All current, applicable federal, state and local laws and regulations shall be followed. An asbestos renovation impact survey is an investigation of any asbestos containing building materials when a structure will be undergoing a renovation or rehabilitation. In this survey, destructive sampling may be required to uncover any hidden asbestos. This type of survey is required when hazardous materials are suspected to be present and the scope of work should be utilized to inform the extent of the required testing.

An asbestos pre-demolition survey shall be done prior to a building or structure slated for complete demolition. This type of survey is also required prior to any demolition work occurring. It is recommended that a licensed asbestos inspector or consultant be included as part of the project team to oversee and advise on any issues related to asbestos documentation and/or abatement.

D. Radon

Provide radon testing of properties where buildings will be used for residential occupancy. In the case of multiple buildings within a development, it is preferred that all residential units with occupied rooms at or below ground level shall be tested in each building. However, the minimum number of apartments to be tested should be at least twenty-five percent of randomly selected ground level units, but no less than one unit in each building.

Upper levels shall only be tested if there are frequently occupied rooms located above untested ground contact areas. The building being tested shall have all windows and doors shut twelve hours prior to and during the entire test period.

Routine ingress and egress is allowed. The most ideal time period for testing is between the colder months of November through March. Testing shall not be conducted during abnormal weather conditions or during any structural changes to the building or HVAC system. Radon tests shall be placed where they are least likely to be disturbed and in accordance with the following: (1) minimum of 20 inches above floor, (2) three feet away from exterior walls, doors, or windows, (3) one foot away from interior walls, (4) four inches from other objects, (5) away from any vents, appliances, and potential drafts, and (6) away from any heat source including direct sunlight and areas of high humidity.

If an initial radon level in an existing building is at or above the United States Environmental Protection Agency action level of 4.0 picocuries per liter (pCi/L), a confirmatory test shall be done in the same location for the same amount of time. If the confirmatory test is at or over 4.0 pCi/L, all remaining ground floor units must be tested, and a radon mitigation system shall be installed by nationally-certified radon mitigation professionals to reduce the radon levels to below 4.0 pCi/L. A list of these professionals can be found on the CT DPH website: www.ct.gov/dph/radon.

If radon testing is not possible, as in cases of gut rehabs and new construction, a passive radon mitigation system shall be incorporated into the design specifications of the construction project.

This system includes the following features:

- A gas permeable layer, such as 4-inch gravel, placed beneath the slab to allow soil gases to move freely underneath the building
- Plastic sheeting over the gas permeable layer and under the slab to help prevent soil gases from entering the home
- Sealing and caulking all openings in the foundation floor to reduce soil gas entry
- A vent pipe, such as 6 inch PVC pipe, to run from the gas permeable layer through the building to the roof to safely vent soil gases above the building
- Electrical roughing to junction box(es) in the attic as required to allow installation of in-line mechanical ventilation fan(s)

The new building should be tested for radon after construction is completed and is ready for occupation. If radon results are at or above 4.0 pCi/L, the existing system should be activated by installing an in-line fan. Further information about Radon Resistant New Construction may also be found at www.ct.gov/dph/radon.

Post-construction radon re-testing and reporting shall be provided for all rehabilitation projects that include exterior envelope improvements. For minor projects where exterior envelope improvements are minimal to none, post-construction radon re-testing and reporting shall be provided at CHFA's discretion.

E. Polychlorinated biphenyls (PCBs) in Building Materials

CHFA follows the EPA's and CT DEEP's recommendations with regard to testing and remediation and abatement of PCBs in building materials.

For buildings constructed and/or renovated between 1950 and 1979, CHFA recommends an applicant follow a presumptive approach to PCB remediation/abatement planning. This will include the identification of all suspect materials presumed to contain PCBs, and the preparation of a cost estimate based on the proposed project scope. Cost estimates and all reports are to be provided to CHFA with the project application.

If a project is awarded funding, CHFA will require representative testing of the suspect materials as warranted by the proposed scope. Remediation/abatement plans and cost estimates are to be revised as required by the results. All testing, reports and estimates will be required prior to CHFA Board approval.

Encapsulation is not an acceptable approach for PCBs per the CT DEEP. Because each site will present unique circumstances, CHFA requires the applicant and their LEP to consult with their EPA Regional PCB Coordinator and CT DEEP regarding the acceptable approach to remediate PCBs prior to the submission of a funding application..

For applications including the complete demolition of a building, CHFA recommends the applicant follow a similar procedure. CHFA would require testing of all suspect materials within the property to provide the most accurate cost estimate for remediation/abatement of PCBs.

F. Mold and Moisture

Damp indoor environments have been shown to negatively impact health. Inspections shall be conducted for visual evidence of dampness, moisture incursion, moisture damage, and mold. Moisture meters may be used as an inspection aid as long as the meter to be used is designed to measure moisture content on the substrate of interest. Water sources resulting in indoor dampness must be located and remediated. Moldy building materials and/or porous personal belongings furnishings must be discarded. Indoor relative humidity should be maintained below 60% at all times to minimize indoor mold growth. Air testing for mold is NOT recommended by the CT Department of Public Health and most nationally recognized health authorities.

G. Other Potential Environmental Concerns

Environmental surveys should also be performed for each of the following environmental concerns based on the date building construction, the proposed scope of work, and/or other specific issues related to the development. The input and recommendations of the project LEP is also important since they are aware of the regulations and requirements for the testing of the materials noted below.

1. PCBs in soil;
2. Universal Waste;
3. Urban Fill/polycyclic aromatic hydrocarbons (PAHs)/heavy metals;
4. Flood classification and/or flood zone; and,
5. Wetland classification and designated areas.

H. Abatement and Mitigation

Design and construction documents (drawings and specifications) shall incorporate work necessary to mitigate environmental concerns identified by CHFA and the owner's consultants unless these concerns are addressed prior to construction start and are outside the limits of the construction documents. Mitigation methods shall be in accordance with a plan prepared in conformance with applicable state and federal regulations and accepted by CHFA.

I. Connecticut Transfer Act Opinion Statement

The owner's environmental attorney needs to confirm review of environmental reports prepared by consultants to insure that all applicable environmental regulations specific to the property will be met, including an opinion regarding the applicability of the CT Transfer Act and whether the site meets the definition of an "Establishment" per the Act. The opinion-statement from the owner's environmental attorney will be required prior to initial closing.

On October 2, 2020 Gov. Ned Lamont signed House Bill No. 7001, "An Act Revising Provisions of the Transfer Act and Authorizing the Development and Implementation of a Release-Based Remediation Program" (the "Act").

The act includes immediate changes to the Connecticut Transfer Act (the "Transfer Act"). More importantly, however, the Act includes an eventual transition from remediation under the Transfer Act to a new release-based reporting and remediation program.

J. Abatement/Remediation Costs

Upon completion of all testing, and the determination of the scope of possible abatement and/or remediation work, cost information shall be submitted for review. Cost estimates shall be prepared/verified by the Connecticut Licensed Environmental Professional ("LEP") assigned to the project. Costs for testing and abatement must be included in the project cost summary and exploded trade payment breakdown on the appropriate individual line items of Testing and Environmental.

K. Hazardous Material Notification Clause

In all developments involving demolition or rehabilitation, specifications shall be written to include the following:

"In carrying out the work of this contract, should the contractor encounter asbestos or other toxic materials the contractor shall:

- 1. Notify all parties to this contract;*
- 2. Notify applicable State and local authorities; and (if the cleanup is to be carried out under the direction of the contractor);*
- 3. Make application for permits necessary for removal (or other methods of mitigating the potential harmful effects) of such materials; and,*
- 4. Upon receipt of required permits mitigate potential harmful effects of such materials in accordance with permits and applicable codes and laws."*

If the contractor is not to be responsible for mitigation, the sponsor/developer/owner shall carry out mitigation in accordance with the requirements as stated above.

L. Flood zones

1. CHFA and DOH may fund development of properties where a portion lies in a flood zone, if a flood management plan acceptable to CT DEEP is provided.
2. For adaptive re-use/gut rehab developments, CHFA and DOH will not fund the development of critical activities (elderly housing and other residential units) at or below the 500-year flood elevation.

V. On-Site Sewage Systems

An estimated 40% of Connecticut residents, close to 1.5 million people, live in homes that are not connected to sewers. These homes are served by on-site sewage systems also known as septic systems. Septic systems serve single-family homes, duplexes, apartment buildings, schools, restaurants, and other commercial buildings in non-urban areas.

Local Health Departments have property files that may contain important septic system information such as copies of permits, design plans, as-built drawings, and soil test data. Septic system inspections are not currently required by law at the time of property transfer, but are strongly recommended. The Department of Public Health recommends septic system inspections be performed by individuals that are licensed by the department to install or clean (pump) septic systems. Licensed Cleaners can pump and inspect the septic tank and associated piping, licensed Installers can pump, inspect the tank, associated piping, distribution box(s) and the leaching system.

Runback or backflow from the leaching system into the septic tank after pumping is an indication that the leaching system is surcharged, and the inspection report must document the backflow conditions and note the system was “malfunctioning” at the time of inspection. Other signs of system malfunction include wastewater overflowing outlet baffle and back-up into building sewer or riser.

If a malfunctioning or failure (e.g., sewage breakout) is noted the building served should be checked for leaking plumbing fixtures that could be adding to the daily discharge. Sewage overflowing onto the ground surface warrants immediate attention. Septic systems that discharge sewage onto the ground surface, into an open watercourse, or otherwise cause health hazards or nuisance conditions is identified as “failing” and should be reported to the Local Director of Health for investigation and abatement actions.

VI. Remediation/Re-use of Existing Brownfield Sites

The re-use and redevelopment of abandoned or underutilized commercial and industrial sites, is encouraged where redevelopment and re-use has not occurred due to the presence or potential presence of pollution in the buildings, soil and/or groundwater, which requires remediation before, or in conjunction with, the restoration, redevelopment and re-use of the property.

A Phase I ESA is required and most likely, a Phase II and III would also be needed as well as a Remediation Action Plan (RAP). After the site investigations and subsequent reports, the developer, contractor, environmental consultant and architect shall estimate the costs necessary to remove the contamination provide the appropriate environmental remediation and restore the property to a “buildable” site.

VII. Environmental Clearance for All RAD Conversion Proposals Seeking CHFA Financing

For RAD Conversion applications seeking CHFA financing, evidence of federal environmental clearance must be submitted with the financing application. Additionally, an estimate of any related remediation cost prepared by a Connecticut Licensed Environmental Professional (“LEP”) must be included in the development budget.

VIII. Reduction/Release of Retainage – Environmental Requirements

Environmental requirements for the reduction/release of retainage may be found published within the current edition of CHFA’s Pre-Construction Guidelines; available at www.CHFA.org

The retainage will not be released until all environmental remediation issues have been addressed to CHFA’s satisfaction.

Pre-Project Checklist for Lead Abatement Projects

(child < 6 years of age in residence)

Paperwork to review

The lead consulting activities (inspection, assessment, lead abatement plan and scope of work) shall be conducted by a person employed by a current DPH Licensed *Lead Consultant* (verify through DPH e-licensing <https://www.elicense.ct.gov/Lookup/LicenseLookup.aspx>)

- Copy of DPH Lead Consultant License: blue card with company name and license type
- License #: _____

The person who will conduct the lead inspection or lead risk assessment shall hold a current certification issued by the DPH as a *Lead Inspector* or *Lead Inspector Risk Assessor* (verify through DPH e-licensing <https://www.elicense.ct.gov/Lookup/LicenseLookup.aspx>)

- Copy of DPH Inspector or Inspector/Risk Assessor Certification: blue card with person's name and credential
- Certification #: _____
- Latest annual 8 hours refresher training certificate showing that the person is up-to-date
- Photo ID
- *Lead Inspection Report Form submitted to the Director of Health (if the property is the residence of a child under the age of six)

The person who will prepare the lead abatement plan and lead management plan shall hold a current certification issued by the DPH as a *Lead Planner-Project Designer* (verify through DPH e-licensing <https://www.elicense.ct.gov/Lookup/LicenseLookup.aspx>)

- Copy of DPH Lead Planner-Project Designer Certification: blue card with person's name and credential title
- Certification #: _____
- Latest annual 8 hours refresher training certificate showing that the person is up-to-date
- Photo ID

***The lead abatement plan shall be submitted to the local Director of Health for review and approval prior to the start of lead abatement work, when a child under the age of six is in residence** (LHD Directory, contact information by town <https://portal.ct.gov/DPH/Local-Health-Admin/LHA/Local-Health-Administration---Site-Map>)

- Lead abatement plan submitted to the local health department (date: _____)
- Lead abatement plan approval received by local health department
- Lead management plan submitted to the local health department (date: _____)
- Lead management plan approval received by local health department

The company that will conduct lead abatement shall be a current DPH Licensed Lead Abatement Contractor. The employees carrying out the work shall be current DPH Certified Lead Abatement

Supervisor(s) or Lead Abatement Worker(s). (verify through DPH e-licensing

<https://www.elicense.ct.gov/Lookup/LicenseLookup.aspx>)

- Copy of DPH Lead Abatement Contractor License: blue card with company name and license type
- License #: _____
- Copy of DPH Certification as Abatement Supervisor: blue card with person's name and credential title
- Certification #: _____
- Latest annual 8 hours refresher training certificate showing that the person is up-to-date
- Photo ID
- Copies of all Lead Abatement Worker certificates and training refreshers for employees on-site who actually do the work

The person that will conduct final clearance of the worksite shall be a current DPH certified lead inspector or lead inspector risk assessor, and shall be employed by a current DPH licensed Lead Consultant in order to perform final clearance activities. The licensure and certification credentials must be verified again to ensure that the licenses, certifications and refreshers are still current. (verify through DPH e-licensing

<https://www.elicense.ct.gov/Lookup/LicenseLookup.aspx>)

- Copy of DPH Lead Consultant License: blue card with company name
- License #: _____
- Copy of DPH Inspector or Inspector/Risk Assessor Certification: blue card with person's name and credential
- Certification #: _____
- Latest annual 8 hours refresher training certificate showing that the person is up-to-date
- Photo ID

Waste disposal records for lead-based paint waste must be recorded to show that it was disposed of properly. The household hazardous waste exemption applies to contractor-generated waste only if:

- There are less than 10 cubic yards of lead waste (if volumes of waste exceed 10 cubic yards, CT DEEP Hazardous Waste Regulations apply)
- The homeowner agrees in writing to accept the waste material for disposal
- The homeowner is informed of the amount and nature of the waste being left behind
- The homeowner must have a means to legally and safely store the waste and a viable outlet to dispose of the waste in the near future

Upon completion of a lead abatement project, a code enforcement official employed by a local health department shall issue a post-abatement inspection report. A DPH Licensed Lead Consultant shall perform clearance activities and issue a letter of compliance. This may be performed concurrently with a code enforcement official. All documents shall be received and filed. (LHD Directory, contact information by town

<https://portal.ct.gov/DPH/Local-Health-Admin/LHA/Local-Health-Administration---Site-Map>)

- Acceptable clearance dust wipe sample results for all work areas
- Letter of compliance that states the work was done according to the lead abatement plan and unit is free of lead hazards

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- Documentation of a lead management plan for the ongoing management of intact lead based paint, and lead based paint by abatement methods of liquid encapsulation or enclosure and management of soil areas
- * Reinspection by code enforcement official required within 10 days of completion of the work when abatement being carried out in child-occupied residence or EBLL residence

* Local health department is actively involved because lead abatement work falls under the scope of the Lead Poisoning Prevention and Control Regulations sections 19a-111-1 through 19a-111-11

Pre-Project Checklist for Lead Safe Work Practices or Lead Hazard Remediation

(no child in residence or child > 6 in residence)

Paperwork to review

The lead consulting activities (inspection, assessment, lead remediation plan and scope of work) shall be conducted by a person employed by a current DPH Licensed *Lead Consultant* (verify through DPH e-licensing <https://www.elicense.ct.gov/Lookup/LicenseLookup.aspx>)

- Copy of DPH Lead Consultant License: blue card with company name and license type
- License #: _____

The person who will conduct the lead inspection or lead risk assessment shall hold a current certification issued by the DPH as a *Lead Inspector* or *Lead Inspector Risk Assessor* (verify through DPH e-licensing <https://www.elicense.ct.gov/Lookup/LicenseLookup.aspx>)

- Copy of DPH Inspector or Inspector/Risk Assessor Certification: blue card with person's name and credential
- Certification #: _____
- Latest annual refresher showing that the person is up-to-date
- Photo ID

The person who will prepare the lead hazard remediation plan shall hold a current certification issued by the DPH as a *Lead Planner-Project Designer* (verify through DPH e-licensing <https://www.elicense.ct.gov/Lookup/LicenseLookup.aspx>)

- Copy of DPH Lead Planner-Project Designer Certification: blue card with person's name and credential title
- Certification #: _____
- Latest annual refresher showing that the person is up-to-date
- Photo ID

The company that will conduct the lead hazard remediation work shall be an EPA RRP Certified Firm. Individuals carrying out the work must meet lead-safe work practices training requirements. (verify through EPA <https://cfpub.epa.gov/flpp/pub/index.cfm?do=main.firmSearch>)

- Copy of the EPA RRP Firm
- Certification #: _____
- Copy of RRP training course certificate

The person that will conduct final clearance of the worksite shall be a current DPH certified lead inspector or lead inspector risk assessor and shall be employed by a current DPH licensed Lead Consultant in order to perform final clearance activities. The licensure and certification credentials must be verified again to ensure that the licenses, certifications and refreshers are still current. (verify through DPH e-licensing <https://www.elicense.ct.gov/Lookup/LicenseLookup.aspx>)

- Copy of DPH Lead Consultant License: blue card with company name
- License #: _____

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- Copy of DPH Inspector or Inspector/Risk Assessor Certification: blue card with person's name and credential
- Certification #: _____
- Latest annual 8 hours refresher training certificate showing that the person is up-to-date
- Photo ID

Waste disposal records for lead-based paint waste must be recorded to show that it was disposed of properly. The household hazardous waste exemption applies to contractor-generated waste only if:

- There are less than 10 cubic yards of lead waste (if volumes of waste exceed 10 cubic yards, CT DEEP Hazardous Waste Regulations apply)
- The homeowner agrees in writing to accept the waste material for disposal
- The homeowner is informed of the amount and nature of the waste being left behind
- The homeowner must have a means to legally and safely store the waste and a viable outlet to dispose of the waste in the near future