HTF REHABILITATION STANDARDS

Updated 2016

In May 2016, the U.S. Department of HUD issued Frequently Asked Questions (FAQs) on the rehabilitation standards to be established by state allocating agencies for rental or homebuyer housing with HTF assistance. Although the Massachusetts Department of Housing and Community Development (DHCD) has had extensive experience in establishing and implementing rehabilitation standards for programs including HOME and the Low Income Housing Tax Credit, DHCD has modified its existing rehabilitation standards in order to conform as closely as possible to the guidance published by HUD in the May 2016 FAQs.

During the first implementation year for HTF, DHCD will allocate the new funds only to multifamily rental projects. All sponsors of multifamily rental projects seeking HTF assistance must ensure that their projects conform to all the rehabilitation standards identified in this memorandum.

I. Health and Safety In Occupied Rehabilitation Projects

As part of the funding application to DHCD, each sponsor of an occupied project must provide a narrative describing the existing condition of the property and must identify any life-threatening deficiencies and a plan for addressing such deficiencies prior to commencement of renovation activities. The sponsor must describe how residents who will remain in structures under renovation will be assured of safe egress, protection from fire hazards, noxious fumes, exposure to hazardous materials, and loss of security for themselves and their possessions. This narrative is a mandatory requirement for occupied rental projects whose sponsors are seeking HTF. The narrative will be reviewed by DHCD's architects as well as other Department staff, and DHCD will conduct an inspection of the property prior to making a funding decision.

Certain health and safety issues must be addressed immediately when a unit is already occupied. These items include:

- Air Quality - Propane/Natural Gas/Methane Gas Detected
- Blocked Egress/Ladders
- Electrical Hazards - Exposed Wires/Open Panels
- Electrical Hazards - Water Leaks on/near Electrical Equipment
- Emergency Fire Exits - Emergency/Fire Exits Blocked/Unusable
- Missing Outlet Covers
- Missing/Damaged/Expired Extinguishers
- Misaligned Chimney/Ventilation System
- Outlets/Switches/Cover Plates - Missing/Broken
- Smoke Detector - Missing/Inoperable
- Windows - Security Bars Prevent Egress

For a complete list of health and safety requirements, please see Attachment D.

II. Major Systems

The HUD FAQs from May 2016 identify major systems as structural support; roofing; cladding and weather proofing (e.g., windows, doors, siding, gutters); plumbing; electrical; heating, ventilation, and air conditioning. As part of the application to DHCD for HTF, each sponsor – regardless of the size of the project – must commission a capital needs study to be performed by a third party entity acceptable to DHCD. The capital needs study must address all major systems as defined by HUD as well as other components of the proposed project including fire suppression and/or detection, security, tel/data, stormwater management systems, basic livability requirements mandated by the Massachusetts State Sanitary Code, as well as requirements of the Massachusetts Architectural Access Board and applicable Federal accessibility standards. In addition, each sponsor's architect must complete a systems checklist identifying each major system, its current condition, the proposed scope of rehabilitation, and the expected useful life of the system following rehabilitation. DHCD's reviewing architects will evaluate the capital needs assessment as well as the systems checklist and all other components of the sponsor's design and scope submission.

The term of affordability for all DHCD-funded HTF projects will be at least 30 years. If DHCD and its reviewing architects conclude that the useful life of one or more major systems in the proposed project does not meet the minimum period of affordability, the Department will require the sponsor to establish an appropriately-funded replacement reserve. If the project is funded, the Department will monitor the performance of the various systems over time and the sponsor's response to systems deficiencies. Every DHCD-funded HTF project must meet health and safety standards as well as all applicable code requirements throughout the term of HTF affordability.

III. Energy Conservation and Green Design

DHCD has a long history of encouraging and requiring sponsors of affordable housing projects to incorporate energy conservation measures and other thoughtful approaches to green design into their projects. Sponsors of rehabilitation projects seeking HTF will be required to provide information on energy efficiency and green design in their applications to DHCD, in particular, aspects of developments that exceed requirements of the base Massachusetts Building Code, or the "Stretch Code" if adopted by the locality

- The project sponsor must address how the site layout and site design adequately address environmental issues; vehicular and pedestrian circulation, parking needs; stormwater management; trash management, appropriate open space requirements; landscaping, outdoor amenities appropriate for the target population, accessibility to public ways and common amenities, visitability, etc.

- The project sponsor must address whether the project complies with energy efficient building envelope guidelines such as EPA's Energy Star standards (including regular quality control inspections during construction), for

appliance and light fixture selection as well as air sealing and insulation measures.

- The project sponsor must address how the project will incorporate materials and equipment consistent with promoting a healthful interior environmental quality, including mechanical ventilation measures to provide fresh air, control humidity, exhaust bathrooms and kitchens, and generally promote good indoor air quality.

- The project sponsor must confirm that the project will provide interior CO detectors as mandated by state regulations.

- The project sponsor must confirm that the proposed project, at a minimum, will conform to state and local code-mandated regulations for water conservation (low flush volume. toilets, low-flow faucet and showerhead devices, etc.) as well as storm water management. The sponsor should identify all water conservation measures that go beyond state/local regulations.

- The project sponsor must confirm that there will be sufficient construction oversight, building envelope testing, and building system commissioning to ensure that all systems are properly installed, adjusted, and meet all specified performance criteria. .

- The project sponsor must confirm that he/she has employed effective cost management techniques in the design process, including but not limited to Integrated Project Delivery methods, and significant involvement by contractors or other cost estimation professionals early on, and throughout the design process. In rehabilitation (as in new construction), DHCD strongly prefers project designs that incorporate site planning, exterior envelope, detailing, and mechanical system technologies to achieve energy efficiency. DHCD strongly encourages demolition and rehabilitation processes that result in waste reduction and conservation of resources. DHCD also encourages the use of building materials that are local in origin and durable and that incorporate recycled context. DHCD also strongly encourages sponsors to avoid the use of toxic materials.

IV. Lead-Based Paint

Sponsors of rehabilitation projects seeking HTF from DHCD must conform to all applicable provisions of 24 CFR Part 35 regarding lead-based paint. Sponsors also must conform to all Massachusetts laws and regulations, as well as EPA requirements regarding lead-based paint, including protection of workers who may be exposed to lead paint during the construction process. .

V. Accessibility

Sponsors of all rehabilitation projects seeking HTF must conform to all accessibility requirements of 24 CFR Part 8 (http://www.ecfr.gov/cgi-bin/text-idx?rgn=div5&node=24:1.1.1.1.8) implementing Section 504 of the Rehabilitation Act of 1973) and Titles II and III of the Americans with Disabilities Act implemented at 28 CFR Parts 35 and 36)

For "covered multifamily dwellings", as defined at 24 CFR 100.205 (http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title24/24cfr100_main_02.tpl), DHCD will require sponsors to meet the design and construction requirements at 24 CFR 100.205.

In addition, sponsors must conform to any and all applicable Massachusetts laws and regulations regarding accessibility, including, in renovation projects, obtaining all necessary variances from the Massachusetts Architectural Access Board. Sponsors must complete the DHCD accessibility checklist appended to this memorandum.

VI. Disaster Mitigation

Sponsors must ensure that projects conform or exceed all federal and state requirements and best practices to mitigate the potential impact of disasters or disruptions, such as extended power outages, earthquakes, hurricanes, floods, and wildfires in accordance with state or local codes, ordinances, and requirements. Sponsors shall submit a "resiliency narrative" that describes all such measure incorporated into the project.

VII. State and Local Codes

All sponsors seeking HTF from DHCD must meet all applicable Massachusetts state and local codes, ordinances, and requirements including but not limited to the following:

- Local Zoning Ordinances
- Massachusetts State Building Code
- National Electrical Code
- Massachusetts Fuel Gas and Plumbing Code
- Massachusetts Fire Regulations
- Massachusetts Elevator Regulations
- Massachusetts Sanitary Code
- Massachusetts Department of Public Health Requirements
- Massachusetts Historic Commission Regulations
- U.S. Department of Energy Regulations
- Massachusetts Department of Environmental Protection Regulations
- HUD Rehabilitation Guidelines
- HUD Section 8 Housing Quality Standards
- Americans with Disabilities Act
- Massachusetts Architectural Access Board Regulations
- Local, State and Federal Requirements Related to Sewage/Septic Systems
- Requirements for Housing Trust Fund Environmental Provisions

VIII. Uniform Physical Condition Standards (UPCS)

DHCD will require all sponsors to ensure that HTF-assisted housing will be decent, safe, sanitary, and in good repair as described in 24 CFR 5.703 (http://www.ecfr.gov/cgi-bin/text-idx?rgn=div5&node=24:1.1.1.1.5). As it monitors HTF-assisted projects, DHCD will include the UPCS inspectable items and observable deficiencies for the site, building exterior, building systems (multifamily housing only), common areas (multifamily housing only), and units identified on the following. Sponsors should review the HTF FAQ appendices: Uniform Physical Condition Standards for Multifamily and Single Family Housing Rehabilitation (/onecpd/assets/File/HTF-FAQ-Appendices-UPCS-for-Multifamily-and-Single-Family-Housing-Rehabilitation.pdf) as well as Attachment E to the HTF Allocation Plan, Uniform Physical Condition Standards for Multifamily Housing Rehabilitation - August 2016.

IX. Additional DHCD Standards for Multifamily Rehabilitation Projects

As indicated, the Department has maintained design and scope standards for multifamily rental rehabilitation projects for many years. DHCD encourages sponsors of multifamily rental projects to follow its standards as closely as possible and to discuss their projects -- prior to submission -- with Department staff.

Overall Unit Size:

- SRO: 120 square feet (sf)
- Enhanced SRO: 175 sf (includes food preparation area and bathroom)
- One-bedroom unit: 600 sf (or applicable HUD program standards; for example for Section 202)
- Two-bedroom unit: 850 sf
- Three-bedroom unit: 950 sf
- Four- or more bedroom unit: 1,100 sf

Minimum Room Size:

Rooms in rehabilitation projects shall meet the following minimums (including a dimensional minimum):

- Primary bedrooms: 120 sf (10.5 ft.)
- Secondary bedrooms: 100 sf (9.5 ft.)
- Living room: 150 sf (12 ft.)
- Dining room: 100 sf (10 ft.)
- Living/dining room combo: 200 sf (12 ft.)
- Full bathroom: 40 sf (5 ft.)

If a room has a sloped ceiling, any portion of the room measuring less than 5 feet from the finished floor to the finished ceiling shall not be included in the measurements of the floor area.

Closets and storage cannot be included in the measurement of the floor area.

Kitchen:

The size of the unit should determine the amount of counter space to be provided:

	counter space length	*minimum circulation width*
• One-bedroom unit	6 linear feet	4 feet
• Two-bedroom unit	8 linear feet	4 feet
• Three or more bedroom unit	10 linear feet	4 feet

The minimum total linear feet of counter cannot include the space occupied by the sink, stove, and refrigerator.

Bathrooms:

The number of bedrooms within the unit determines the number of bathrooms:

• One-bedroom unit	One bathroom
• Two-bedroom unit	One bathroom
• Three bedroom unit	One-and-a-half bathrooms (minimum)
• Four or more bedroom units	Two bathrooms

Reusable and Sustainable Material Use:

Sponsors are asked to:

- Use fewer building materials thorough advanced framing techniques or other systems approach to building construction.
- Use recycled content such as:
  - High fly ash content concrete in foundations, wall systems and finish floors.
  - Cementitious siding or stucco with high fly ash content.
- Composite framing such as engineered joists instead of dimensional lumber:
  - Light-gauge steel in whole house or interior walls. (Verify that thermal bridging is avoided if steel is used in exterior walls.)
  - Rapidly renewable resource materials for flooring and finishes, such as wheat straw board.
  - Insulation made of renewable, easily recyclable material or recycled content such as recycled newspaper (cellulose), soy-based foam, cotton fiber, or other when appropriate.
- Use locally available building materials, such as:
  - Locally produced masonry
  - Recycled lumber or locally milled timber or Forest Stewardship Council (FSC) certified lumber or other recycled materials.

- Recycled aggregate from demolition of existing site work or structure or nearby source.

Energy Efficiency:

Sponsors are asked to:

- Use properly sized and designed sealed combustion boilers or furnaces and distribution systems or other low-energy use heating.
- Use tankless water heaters, indirect water heaters, sealed combustion water heaters, or solar hot water heaters.
- Specify LED fixtures.
- Specify insulation as required by Energy Star standards and above code where feasible and contributing to significant energy savings.
- If possible, avoid or minimize air-conditioning with natural ventilation or other passive cooling strategy. Ensure that adequate cooling is included in all elderly developments.
- Consider renewable energy sources such as solar thermal collectors, photovoltaics (or pre-wire and provide adequate roof structure so that systems can be added when feasible), or wind turbines, using research grants and rebates when possible.

Indoor Environmental Quality – Healthy Buildings:

Sponsors are asked to:

- Detail building envelope to shed water with adequate flashing and a continuous drainage plane (rain-screen). Design walls to be able to dry to the interior, exterior, or both as appropriate.
- Provide operable windows with screens to take advantage of natural cross-ventilation when possible.
- Provide continuously running, dual-speed exhaust fans in all bathrooms.
- Provide kitchen range hoods that are ducted to the outdoors, preferably exhausted at roof level.
- Use air sealing techniques during construction to compartmentalize units to minimize unwanted air transmission.
- Provide mechanical ventilation to remove excess moisture and indoor pollutants from living spaces and to provide an adequate amount of outside air, preferably individually supplied to each dwelling unit.
- Specify sealed combustion boilers, furnaces, and water heaters.
- Use only low volatile organic compound (VOC) paints, sealants, and finishes.
- Use paperless gypsum board or cement board substrates at all damp areas.
- Install flooring with low or no off-gassing such as concrete, ceramic tile, FSC certified wood flooring, linseed-oil based resilient flooring, or bamboo with

low urea formaldehyde content. If wood flooring is finished on site, use low VOC water-based polyurethane finish.

- Minimize the use of carpeting, which can hold dirt, mold, and other allergens. If carpeting is necessary, specify carpet with low VOCs recyclable fiber and backing content. If available, install carpeting that can be recycled.
- Install carbon monoxide detectors in living areas as well as garages.
- Perform fresh air flushing before occupancy.
- Educate tenants or owners by providing user manuals on use of systems, their required maintenance such as changing of filters and batteries. Use filters that remove allergens in forced-air units.
- Protect onsite building materials from rain during construction to prevent mold growth.
- Design wall and ceiling assemblies to mitigate impact sound and air-borne sound transmission between units, preferably at a level that exceeds building code requirements. .

Additional Design Considerations for Multifamily Rehabilitation Projects:

Sponsors should note:

- Rehabilitation projects funded with federal funds must be demonstrably improved in order to mitigate the impact of potential natural disasters or service disruptions (e.g., significant power outages, earthquakes, hurricanes, floods) in accordance with applicable state and local ordinances.
- Kitchens must be designed with a pantry or broom closet.
- All applicable appliances must be Energy Star* rated.
- Range hood vented to outdoors.
- Garbage disposal, ¾ HP minimum.
- 30” range with self-cleaning oven.
- Dishwasher, if the unit includes a full kitchen and is larger than one-bedroom.
- Refrigerator sized for maximum energy savings.
- Storage space within units or in central storage spaces should be provided wherever possible.
- The design should optimize the use of space. Unit size and layout should maximize efficiency and minimize circulation (hallways), provide spacious furnishable main living areas and provide adequate storage.
- For all buildings under rehabilitation, designs shall include durable, low maintenance, energy efficient systems and materials. Electric heat is not acceptable.
- Cementitious siding materials, such as Hardi-plank or Cem-plank is the preferred exterior siding, as opposed to vinyl cladding for residential buildings.

- Specifications should include fiberglass/asphalt roofing shingles with a minimum of a 25-year warranty or light-colored TPO membrane for flat roofs. All pitched roofs must have a ridge and soffit venting system when appropriate.
- Window guards, window sash limiters, and heavyweight screening must be installed in windows of housing units where a child age 6 or under may live or regularly visit.
- Painted finishes should have a one-coat primer and two finish coats.
- Bathroom floors must be tiled with a floor grade, non-slip glazed or unglazed ceramic tile or sheet vinyl. VCT is not approved for bathrooms. If carpeting is installed, 26 oz. minimum fabric face weight per square yard is the standard. Specify carpet with low VOCs and recyclable fiber and backing content. If available, install carpeting that can be recycled.
- Stacked plumbing with suitable shut-offs to facilitate maintenance is strongly recommended in order to reduce material and construction costs, centralize water supply and drain lines.
- All outdoor mechanical equipment should be located and installed so that it cannot be seen from the surrounding street. Special attention must be given to adhere to all standards promulgated to prevent excessive noise or other kinds of annoyance from any mechanical equipment.
- As previously indicated, if the useful life of one or more major systems (including structural support, roofing, cladding, weatherproofing, plumbing, electrical and HVAC) is less than the applicable period of affordability, the sponsor must ensure that a replacement reserve is established to replace systems as needed.

Any proposed deviations from design recommendations should include a narrative describing why an alternative approach/material is preferred.

X. Required Architectural Submission (Multifamily Rental Rehabilitation Projects)

This section outlines the type of drawings and other documentation that sponsors must submit for rehabilitation projects that fall within these guidelines. DHCD requires that an architect and/or construction cost estimator prepare the plans and construction budgets for each project.

Site Plan: Indicate the location of the building, property lines, access to the building from the street, landscape, curb cuts, driveways, orientation (north arrow), at an appropriate scale**.**

Existing Floor Plan: Include plans for each floor, including basement and roof. Drawings should be drawn at an appropriate scale. The existing floor plans should include the following information:

- Structural elements such as existing bearing walls, columns (indicate this with a note or graphically, e.g.: shade in the structural walls).

- Direction of floor joists if structural changes are being made.
- Existing plumbing, ventilation chase, fireplaces and any other information that affects design.

Proposed Floor Plans: Drawings should address changes of layout, removal of walls or structural elements, or any other changes. The proposed floor plans should include the following information:

- Unit Floor Area (i.e., the total area within the unit exterior walls).
- Room Areas (i.e., the area within the perimeter wall of the room excluding storage and closet space).
- Critical overall and interior dimensions.
- Vertical structural elements.
- Wall thickness to scale.
- Location and size of windows, indicating the window-sill height (measured from the finished floor).
- Ceiling heights.
- Location of mechanical equipment, meters, and electric service panels.
- Location of water, gas, sewer, and electric services.
- In the case of attic renovation, drawings should be provided indicating ceiling heights, knee wall heights, dormers location, etc.
- All units should be built with internet connectivity, COAX cable for TV and CAT5e or better for tel/data.

Elevations: Drawings should include all elevations impacted by the scope of work. .

XI. Landscaping Guidelines

This section outlines suggestions for site improvements and landscaping for projects that all under these guidelines.

Site Design:

- Where possible and feasible, provide usable areas such as the following where the community can meet and gather:
  - Safe play areas for children in multifamily developments.
  - Community garden areas, including planters for vegetables, herbs, flowers. .
  - Semi-public open spaces.
  - Patios, front yards, porches, or balconies to encourage community interaction and provide eyes-on-the-street surveillance.
- Provide for alternative transportation, e.g., bike paths and storage, pedestrian links, car shares.
- Provide all required accessible routes of travel, and in general, avoid use of stairs, wherever the terrain permits.

Prioritize pedestrian over vehicular traffic and use traffic calming devices. Incorporate attractive well-lit pedestrian paths wherever possible

Site Demolition and Clearing:

- Remediate all hazardous materials such as asbestos (ACMs), lead (LCMs), PCB's, VOC's, Arsenic, etc. carried out in accordance with all applicable local, state and federal regulations.
- Provide a summary and accurate estimate of the site remediation plan, if applicable, along with grading plans.

Tree/Shrub Pruning and Removal:

- Remove trees that originate at foundation wall of building or present a hazard to the structure.
- Remove dead trees.
- Trim stump to below grade.
- Prune back branches that overhang roof or brush walls of building.
- Prune branches that may threaten utility connections.
- Clean up and properly dispose of brush and wood.
- Remove shrubs that are diseased, those that obstruct walkways, drives and pathways, and those that obstruct windows.

Grading: Restore grade to include, when appropriate, a 6" minimum deep planting bed of clean loam/topsoil. New grade should slope away from buildings and fit the existing neighboring grades, particularly at street or sidewalk. Grades for usable lawn areas should not exceed twenty percent. The grade across paved areas should not exceed four percent, or any applicable maximum slope required by accessibility or applicable site engineering standards.

Paving, Fencing and Walls:

- Restore walks and driveways to good condition.
- Fences should generally never exceed a height of 6 feet. Material and style should be appropriate to surrounding neighborhood.

Lawns:

- Sod or seed new lawns. If seeded, pegged cloth or salt hay should be used to prevent erosion on slopes in excess of six percent. If lawn area is shady, seed or sod should include appropriate mix of fescues or other low-maintenance grasses, which will tolerate shade.
- Require general contractor to maintain all lawns throughout applicable warranty periods.

Plantings: Select hardy, maintainable, regional stock. All plantings should be placed in a manner that enhances the appearance of the property and is in keeping with the surrounding neighborhood.

All sponsors and/or other development team members should contact DHCD staff in advance of submitting applications for HTF assistance. DHCD staff members are available to answer questions on rehabilitation standards as well as other aspects of HTF.