

Housing Quality Standards in DHCD Housing Rehabilitation Programs

July 1, 2015

I. General

The eligibility of all rehabilitation work must be documented by the Section 8 Checklist and these DHCD Supplemental Standards.

All houses shall be inspected using the Section 8 checklist by **both** the Project Administrator and the Rehabilitation Specialist. DHCD staff will look for two pre-rehabilitation and two post rehabilitation checklists signed by the Project Administrator and Rehabilitation Specialist and placed in the client file.

During this inspection incipient violations may be present. Include these in your inspection and work write-up to be repaired.

Replacement of appliances, fixtures and housing components may take place **only** after it has been documented that repair is not possible or cost effective.

*** DHCD requires all appliances to be Energy Star rated, if the appliance does not have an Energy Star rating then replace.**

All work must relate to the health, safety, and energy efficiency of the household, and must be cost effective and be able to last for at least ten (10) years.

No cosmetic improvements shall be made.

All work to be performed shall be reviewed for eligibility, prior to bidding construction or approval of change orders, by the Project Administrator.

*** The condition of the house after rehabilitation must comply with the minimum standards set forth here.**

II. Preliminary Inspection Procedures

The Project Administrator and the Rehabilitation Specialist shall use DHCD's Field Inspection Checklist to review and determine the need and eligibility of rehab work to be done on each house.

1. All work specified in the work write-up must relate to a specific violation cited on the Checklist.
2. All violations noted in the Checklist must be addressed by repairs in the write-up.
3. Where replacement of components is specified, the justification must be provided in the "Comments" column of the Checklist and, if relevant, documentation must be attached.
4. The Project Administrator and the Rehab Specialist should conduct the inspection in a routine manner consistent in each house.
5. Inspections must be conducted "room by room" and by major component. The inspection must include the exterior, yard, roof, chimney, attic, basement or crawl space, and out buildings.
6. The electrical system must be inspected by a licensed Journeyman, certified by the Virginia Department of Professional and Occupational Regulation (DPOR), who is independent from the contractor doing electrical work, or by a Building Official certified by DHCD to do electrical inspections. This inspection must be completed prior the work write-up being put out to bid.
7. All houses must be inspected by a professional exterminator for infestation of wood-boring insects, vermin and roaches, and be treated if infested. This inspection must be completed prior the work write-up being put out to bid.
8. Certifications of thorough chimney inspection and of Blower Door test and weatherization measures are required by the Rehab Specialist.
9. Housing built prior to 1978 will be presumed to contain lead-based paint (LBP). All repairs will be designed (upon recommendation of a DPOR licensed Risk Assessor) to eliminate LBP hazards using interim control measures, more specifically ***standard treatments***, and the house must pass a Clearance Examination as documented by the Risk Assessor.

III. DHCD Supplemental Standards

A. Living Room and Bedrooms

- 1. Electrical:** The living room must be free of electrical hazards (uncovered outlets, bare or exposed wire, or overloaded extension cords). Circuits and outlets must be able to carry the proposed load. At least four (one per wall) duplex outlets must be properly installed. Permanent light bulbs and switches must be covered by appropriate fixtures.
- 2. Security:** All doors and windows which are accessible from the ground must be equipped with a properly-working locking device.
- 3. Windows:** At least one operable window must be present in living room and bedrooms. All windows must form a reasonably tight weather seal, be free of signs of severe deterioration, be able to be opened and closed by the occupant (if so designed) and be free of missing or broken (not cracked) panes.

All non-passable windows must be repaired rather than replaced unless it is demonstrated that repair will exceed 75% of replacement cost.

- ☒ If replacing windows for better energy efficiency make sure they have a U-factor less than or equal to 0.35; and solar heat-gain co-efficient of less than or equal to 0.32.
- 4. Walls and Ceilings:** All walls and ceilings in habitable areas of the dwelling must be free of severe damage from friction, impact, moisture, insects, or fatigue. Any holes, unkeyed surfaces, severe buckling, or structural weakness must be repaired. Doorstops must be installed at each doorway to prevent wall impact at the knob.

All non-passable walls and ceilings must be repaired, rather than replaced, unless more than 40% of surface area is damaged or structurally unstable.
 - 5. Floors:** Floors must be structurally sound, able to withstand normal walking and stationary loads without buckling or bouncing, and contain no holes or damaged or missing structural parts.

Carpeting may only be installed if flooring must be replaced and carpeting will be laid directly upon sub-flooring.
 - 6. Paint/Surface Treatment:** Repaired or replaced surfaces may be finished or painted to match surrounding surfaces. Where existing surfaces are significantly damaged (scaled paint, exposed subsurface), the surface treatment shall be as follows:

- a. Where children aged 6 years and under are present, contractor shall wet scrape all loose paint and/or cover with a cost-efficient covering using interim control measures as identified in the “Lead Safe Work Practices” course required of all contractors.
 - b. Where the sole inhabitants are handicapped and/or 65 years of age or older, contractor shall prepare surface appropriately and cover with cost-efficient covering.
 - c. Where an able-bodied person between the ages of 16 and 65 is present, and no child aged 6 or under is present, the family shall be provided with sufficient paint to repaint.
- 7. Smoke Detector:** At least one working hard-wired and one battery- operated smoke detector must be permanently installed at a location audible to occupants of all sleeping rooms in the event of fire.

B. Kitchen

A separate room or a definitive area for storage and preparation of food must be present.

- 1. Electrical:** There must be at least four (4) working outlets and one working, permanently-installed light fixture.
 - a. The kitchen must be free of electrical hazards (uncovered outlets, bare or exposed wire, and overloaded extension cords). Circuits and outlets must be able to carry the proposed load. GFI outlets are required within 6ft. of the sink.
 - b. Permanent light bulbs, outlets and switches must be covered by appropriate fixtures.
- 2. Security:** All doors and windows which are accessible from the ground must be equipped with a properly-working locking device.
- 3. Windows:** If present at least one operable window must open in the kitchen. All windows must form a reasonably tight weather seal, be free of signs of severe deterioration, be able to be opened and closed by the occupant (if so designed), and be free of missing or broken (not cracked) panes.

All non-passable windows must be repaired rather than replaced unless it is demonstrated that repair will exceed 75% of replacement cost.

- ☒ If replacing windows for better energy efficiency make sure they have a U-factor less than or equal to 0.35 or lower; and solar heat-gain co-efficient of less than or equal to 0.32.

- 4. Walls and Ceilings:** All walls and ceilings in habitable areas of the dwelling must be free of severe damage and be protected from friction, impact, moisture, insects, or fatigue. Contractor shall provide water proof and grease proof treatment where needed. Any holes, unkeyed surfaces, severe buckling, or structural weakness must be repaired. Doorstops must be installed at each doorway to prevent wall impact at the knob.

All non-passable walls and ceilings must be repaired, rather than replaced, unless more than 40% of surface area is damaged or structurally unstable.

- 5. Floors:** Floors must be structurally sound, able to withstand normal walking and stationary loads without buckling or bouncing, and contain no holes or missing structural parts.

- a. Kitchen flooring must be easily cleanable and resistant to water damage.

- b. Linoleum is acceptable for flooring which does not pass.

- c. New carpeting cannot be installed.

- 6. Stove:** Kitchens must be equipped with a stove which has at least two top burners. All top burners must work and be controlled by knobs to turn them off and on.

- a. The stove must contain an oven which is capable of baking food at 400°F.

- b. Stove shall be free of any gas leaks or electrical hazards and be equipped with an oven door which opens and closes properly.

- c. The kitchen shall have a properly-functioning and ventilated range hood.

- ☒ All range hoods should be ducted to the exterior when possible.

- 7. Refrigerator:** Kitchens must be equipped with a refrigerator which is adequately sized for the number of persons in the household. The refrigerator must be able to maintain a temperature of 40°F or lower. It must be equipped with a sealed door which opens and closes properly.

The maximum size for new refrigerators shall be: 14 cubic feet for 1-4 persons; and 17 cubic feet for 5 or more persons.

- 8. Sink:** Kitchens must have a permanently-affixed sink with hot and cold running water from a faucet, and a properly-working and connected drain with a gas trap.
 - a. Sink must be supplied with a hot and cold shut-off valve which is accessible.
 - b. No rust below rim level.
 - c. Sink must be free of defects such as leaking faucet, slow drain, missing or broken stopper, or improper venting.
- 9. Space for Storage and Preparation of Food:** Kitchen shall have permanently space for the preparation and storage of food.
 - a. A minimum of 6 linear feet (LF) of enclosed base and wall cabinet space is required for 1 to 3 persons.
 - b. A minimum of 8 LF of enclosed base and wall cabinet space is required for 4 or more persons.
 - c. A minimum of 6 LF of surface area at least 18 inches deep shall be affixed for food preparation.
 - d. If new cabinets are necessary, they shall not exceed the minimums provided herein.
 - e. Shelving, cabinet doors, drawers and hardware must function properly.

C. Bathroom

An enclosed bathroom with a solid, hinged, and lockable door shall be present and accessible without traversing a bedroom. If a new bathroom is to be installed, it must be installed in an existing interior space whenever possible.

- 1. Electrical:** There must be at least one outlet and one permanently- installed light fixture. Outlets must be GFI. Outlets, fixtures and switches must be properly covered. Room shall be free of electrical hazards.
- 2. Walls and Ceilings:** All walls and ceilings in habitable areas of the dwelling must be free of severe damage and be protected from friction, impact, moisture, insects, or fatigue. Contractor shall provide waterproof wall treatment where needed. Any holes, unkeyed surfaces, severe buckling, or structural weakness must be repaired. Doorstops must be installed at each doorway to prevent wall impact at the knob.

All non-passable walls and ceilings must be repaired, rather than replaced, unless more than 40% of surface area is damaged or structurally unstable.

- 3. Floors:** Floors must be structurally sound, able to withstand normal walking and stationary loads without buckling or bouncing, and contain no holes or damaged or missing structural parts.
 - a. Bathroom flooring must be easily cleanable and resistant to water damage.
 - b. Linoleum is acceptable for flooring which does not pass.
 - c. Carpeting cannot be installed.
- 4. Sink:** Bathrooms must have a permanently-affixed sink with hot and cold running water from a faucet and a properly working and connected drain with a gas trap.
 - a. Sink must be supplied with a hot and cold shut-off valve which is accessible.
 - b. No rust below rim level.
 - c. Sink must be free of defects such as leaking faucet, slow drain, missing or broken stopper, or improper venting.
- 5. Toilet:** Bathroom must have a toilet connected to an approved disposal system which is not clogged. No water leakage or escape of gases shall occur.
 - a. Toilet must have a shut off valve which is accessible.
 - b. Constant running or slow draining shall be repaired.
 - c. If there is broken or cracked porcelain, the toilet shall be replaced.
- 6. Tub or Shower:** A tub and or shower with hot and cold water running properly. Functioning handles, faucet, trap and drain must be present.
 - a. Tub shall have functioning stopper and anti-back siphon drain.
 - b. No rust below rim level.
 - c. Repair if leaking, poor pressure, improper venting or trapping.
 - d. Replace if porcelain is broken.
 - e. Shower shall have either a rod and curtain or a shower door.

7. **Ventilation:** There must be an operable window in good repair, or a working mechanical vent system ducted to the exterior.
8. **Storage:** An enclosed medicine cabinet is required.
9. **Handicapped Accessibility:** If an occupant is physically handicapped or elderly, relevant improvements to make fixtures and accessories accessible must be made.
 - a. Grab bars for toilet and tub must be sized to carry full body weight and be permanently affixed to wall studs. Insulation around exposed hot water pipes and drains must be installed for persons in wheelchairs.
 - b. Clearances between fixtures must be observed for accessibility.

D. Rooms Other than Living Room and Permanently Used Bedrooms:

If a room is not used for normal living functions on a daily basis, repairs or improvements may not be made except for repairs to conditions which threaten the viability of the structure, the condition of other rooms, or the health and safety of occupants.

E. Other Rooms Used Daily (Must be Specified):

1. **Electrical:** The room must be free of electrical hazards (uncovered outlets, bare or exposed wire, and overloaded extension cords). Circuits and outlets must be able to carry the proposed load.
 - a. Permanent light bulbs and switches must be covered by appropriate fixtures.
 - b. If a room is necessary for ingress/egress, a permanently-installed light fixture is required.
2. **Security:** All doors and window which are accessible from the ground must be equipped with a properly-working locking device.
3. **Windows:** Windows must be operable. All windows must form a reasonably-tight weather seal, be free of signs of severe deterioration, be able to be opened and closed by the occupant (if so designed), and be free of missing or broken (not cracked) panes.

✱ All non-passable windows must be repaired rather than replaced unless it is demonstrated that repair will exceed 75% of replacement cost.

✱ **If the room is used as a bedroom at least one window must be designed for egress.**

☑ If replacing windows for better energy efficiency make sure they have a U-factor less than or equal to 0.35; and solar heat-gain co-efficient of less than or equal to 0.32.

- 4. Walls and Ceilings:** All walls and ceilings in habitable areas of the dwelling must be free of severe damage from friction, impact, moisture, insects, or fatigue. Any holes, unkeyed surfaces, severe buckling, or structural weakness must be repaired. Doorstops must be installed at each doorway to prevent wall impact at the knob.

All non-passable walls and ceilings must be repaired, rather than replaced, unless more than 40% of surface area is damaged or structurally unstable.

- 5. Floors:** Floors must be structurally sound, able to withstand normal walking and stationary loads without buckling or bouncing, and contain no cracks or damaged or missing structural parts.

Carpeting may only be installed if flooring must be replaced and carpeting will be laid directly upon sub-flooring.

- 6. Paint/Surface Treatment:** Repaired or replaced surfaces may be finished or painted to match surrounding surfaces. Where existing surfaces are significantly damaged (scaled paint, exposed subsurface), the surface shall be as follows:

- a. Where children aged 6 years and under are present, contractor shall wet scrape all loose paint and/or cover with a cost-efficient covering using interim controls as identified in the “Lead Safe Work Practices” course required of all contractors.
- b. Where the sole inhabitants are handicapped and/or 65 years of age or older, contractor shall prepare surface appropriately and cover with cost-efficient covering.
- c. Where an able-bodied person between the ages of 16 and 65 is present, and no child aged 6 or under is present, the family shall be provided with sufficient paint to repaint.

F. Building Exterior

- 1. Foundation:** Foundation must be structurally capable of supporting the entire house. It must be enclosed with skirting or masonry units, vented, and capable of keeping water from under the structure and free from hazards.

Replacement must be made only if it is documented that significant structural damage is present which would make repair not possible or cost effective.

2. **Stairs, Rails and Porches:** Stairs, porches, balconies and decks must be free of severe structural defects or missing and broken boards or steps.

✱ **Maximum riser height shall be 8-1/4 inches and the minimum tread depth shall be 9 inches. The greatest tread depth or rise within any flight of stairs shall not exceed the smallest by more than 3/8 inch.**

A secure handrail shall be present on each side of a run of steps with four or more risers, and around a porch or balcony more than 30 inches above the ground.

✱ **Handrails shall not be less than 30 inches in height or more than 42 inches in height measured vertically above the nosing of the tread or above the finished floor of the landing or walking surfaces. Guards shall not be less than 30 inches in height above the floor of the landing, balcony, porch, deck, or ramp or other walking surface (2012 Virginia Property Maintenance Code).**

No porch may be repaired where the cost of repairs will exceed 75% of the cost of replacement. Replacement or new porches shall not exceed 48 square feet.

Decks or balconies may not be built or replaced.

3. **Roof and Gutters:** Roof shall be free of serious defects such as buckling, serious sagging, holes, leaks, unkeyed or curling shingles, or missing roofing elements such as shingles, underlayment, flashing and sufficient joists.

Gutters, downspouts, soffit and fascia shall be free of defects which allow water, air or vermin into the interior of the structure, or to damage the surface or foundation of the structure.

☒ Check to make sure there are no tree limbs that are resting on the roof or that could damage the roof by falling. If these situations are encountered we recommend removal of that hazard.

4. **Exterior Siding:** The exterior of the structure shall be completely covered by suitable weatherproof materials which have a surface treatment which adequately protects against water damage. Siding materials shall be free of major material defects and be properly secured to framing members.

a. Where wood siding is present with inadequate, degraded or seriously peeling paint, the entire house may be repainted using interim control measures as

needed to protect occupants and workers from lead paint hazards. If less than 25% of existing siding needs to be replaced, the exterior shall be repaired with similar siding materials.

- b. If more than 25% of the existing siding material needs to be replaced, the nature and extent of the damage must be documented and vinyl or other cost-effective siding may be installed.

- 5. **Chimney:** All chimneys must be adequately lined and secure, with no unkeyed or loose structural members. All missing or loose mortar joints shall be repaired. Draft, dampers, flaking and blockage shall be inspected. Rehab Specialist shall certify inspection of all components, including a roof and attic inspection.
- 6. **Mobile Home Tie Downs:** All mobile homes must be secured by properly placed and installed tie downs.
- 7. **Handicapped Accessibility:** If physically handicapped or elderly persons with limited mobility are present, the exterior must provide for relevant accessibility from the street or parking areas to the interior of the structure.

Examples include: sidewalk or ramp no more than a 1-inch to 1-foot rise in slope from street or parking to point of entry; a railing along sidewalk or ramp, door threshold flush with internal and external entry/egress surface. Door handles which can be pulled rather than turned.

G. Heating and Plumbing

- 1. **Heating Equipment:** Heating equipment shall be safe, free of defects, able to heat the entire living area to 70°F, at 0°F outside temperature, and cost effective as compared to other heating sources.
 - ☒ A preferred method of achieving this requirement would be the installation of a ducted or forced air system.
 - ☒ If heating equipment is safe and not being replaced, for better efficiency order a tune-up preformed on the equipment which should include an inspection and cleaning.

Heaters using fossil fuels shall be properly vented to the exterior. Fossil fuel heaters shall have an emergency cutoff which is accessible, with its use and location familiar to occupants. No unvented space heaters using fossil fuels shall be necessary or present.

- 2. **Electric baseboard heating shall not be installed** unless it is documented that it is justified by long term cost efficiency, is acceptable to residents, and is easily

turned off and on by the current occupants. Contact your Community Development Specialist should this option be needed.

3. **Ventilation:** The entire living area shall have adequate cross ventilation and cooling by means of operable windows or by mechanical ventilation.
4. **Water Heater:** A water heater with all components in working condition, which does not leak and is capable of heating water to 120°F, shall be present.
 - a. The heater shall have a temperature pressure relief valve and discharge line directed outside the living area. If discharge line is directed to outside of living area the drainage line should terminate 6" to 24" above grade.
 - b. If replacement is necessary, a **40-gallon heater** shall be installed in a non-daily living area, or be enclosed. If installing a new water heater, make sure that the water heater has a catch pan under its base and can be drained.
 - c. Water heaters must be located in an area that is accessible for the purpose of making repairs, if located in a non-conditioned space the water heater shall be insulated. If located in a daily living area (kitchen or bath) the water heater must be covered with a vented enclosure.
5. **Water Source/Sewer Discharge:** The plumbing system shall be legally served by an approved water source with full-flow shut-off valve and approved discharge and sewage disposal system.

✱ All plumbing fixtures shall be properly connected to either a public sewer system or to an *approved private sewage disposal system (2012 Virginia Property Maintenance Code)*.
6. **Plumbing:** Main water feed and drain pipes shall be free from leaks and deliver potable water from a municipal system or by a drilled well on the property. If drilling a well is part of the work writ-up, the water must be tested and deemed potable by a certified laboratory. All hot water lines in non-conditioned spaces shall be insulated.

H. General Health and Safety

1. **Access/Exits:** The living area must have two safe and easily-accessible points of access and exit which current occupants may use.
 - a. Door exits must be illuminated.
 - b. Access doors must be solid and lockable.

2. **Infestation:** The property must be inspected by a licensed exterminator. If infestation is discovered, treatment must be provided for thorough extermination. This inspection must be completed prior the work write-up being put out to bid.
 - a. Any seriously-damaged structural elements must be repaired.
 - b. All openings to exterior must be properly covered with framed insect screening.
 - c. Any access routes for rodents or other vermin must be permanently closed.
3. **Garbage and Debris:** All debris, junk, inoperable vehicles and appliances, and dilapidated structures on the exterior of the property shall be removed to a legally-acceptable location outside of the neighborhood prior to the initiation of rehabilitation.
 - a. The household shall be responsible for any and all physical removal that they are physically able to accomplish.
 - b. All debris, garbage, and accumulated belongings not necessary for daily living shall be removed from the living area by the household (if physically able) prior to rehabilitation.
 - c. The property shall have at least one 30-gallon trash container in good condition. If more than 3 persons inhabit the property, a second 30-gallon trash container shall be present.

I. Overcrowding

There must be an adequate sleeping room (passable bedroom or living room) for every two persons living full time in the household. However, no non-spousal persons of different gender may be required to share a sleeping room if both persons are 6 years of age or older.

J. Weatherization

- a. All homes must be weatherized with at least R-38 ceiling insulation. All windows and doors must be caulked and weather-stripped.
- b. Exterior doors must be equipped with a **storm door** unless a manufacturer's warranty will be voided on an entry door if the storm door is installed. In the case of a voided warranty, a screen door may be installed.
- c. All homes must be tested before and after rehabilitation for air infiltration by means of a Blower Door. Air infiltration through sidewalls and bypasses must

be mitigated where found. Weatherization measures should be designed to have a documentable reduction in air flow.

The following table is from the 2012 Virginia Energy Code for Residential Construction and the 2012 Virginia Residential Code. If these items are completed air infiltration within a house will be reduced. These measures serve as “best practices” in designing an energy efficient set of specifications.

**TABLE N1102.4.1.1 (R402.4.1.1) AIR BARRIER AND
INSULATION INSTALLATION**

COMPONENT	CRITERIA
Air barrier and thermal barrier	<p>A continuous air barrier shall be installed in the building envelope.</p> <p>Exterior thermal envelope contains a continuous air barrier.</p> <p>Breaks or joints in the air barrier shall be sealed.</p> <p>Air-permeable insulation shall not be used as a sealing material.</p>
Ceiling/attic	<p>The air barrier in any dropped ceiling/soffit shall be aligned with the insulation and any gaps in the air barrier sealed.</p> <p>Access openings, drop down stair or knee wall doors to unconditioned attic spaces shall be sealed.</p>
Walls	<p>Cavities within corners and headers shall be insulated by completely filling the cavity with a material having a minimum thermal resistance of R-3 per inch.</p> <p>The junction of the foundation and sill plate shall be sealed.</p> <p>The junction of the top plate and top of exterior walls shall be sealed.</p> <p>Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier.</p> <p>Knee walls shall be sealed.</p>
Windows, skylights and doors	<p>The space between window/door jambs and framing and skylights and framing shall be sealed.</p>
Rim joists	<p>Rim joists shall be insulated and include the air barrier.</p>
Floors (including above-garage and cantilevered floors)	<p>Insulation shall be installed to maintain permanent contact with underside of subfloor decking.</p> <p>The air barrier shall be installed at any exposed edge of insulation.</p>
Crawl space walls	<p>Where provided in lieu of floor insulation, insulation shall be permanently attached to the crawlspace walls.</p> <p>Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.</p>

COMPONENT	CRITERIA
Shafts, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be sealed.
Narrow cavities	Batts in narrow cavities shall be cut to fit, or narrow cavities shall be filled by insulation that on installation readily conforms to the available cavity space.
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be air tight, IC rated, and sealed to the drywall.
Plumbing and wiring	Batt insulation shall be cut neatly to fit around wiring and plumbing in exterior walls, or insulation that on installation readily conforms to available space shall extend behind piping and wiring.
Shower/tub on exterior wall	Exterior walls adjacent to showers and tubs shall be insulated, and an air barrier shall be installed on the interior side of the exterior wall, adjacent to the shower or tub.
Electrical/phone box on exterior walls	The air barrier shall be installed behind electrical or communication boxes or air-sealed boxes shall be installed.
HVAC register boots	HVAC register boots that penetrate building thermal envelope shall be sealed to the subfloor or drywall.
Fireplace	An air barrier shall be installed on fireplace walls. Fireplaces shall have gasketed doors or tight-fitting flue dampers.

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