IOWA MINIMUM HOUSING CONSTRUCTION STANDARDS

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Iowa Minimum Housing Construction Standards

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I. Preface

This document is intended to provide the minimum acceptable standards for single and multifamily household dwelling units acquired for rehabilitation or designed for new construction through the Iowa Finance Authority (IFA) federal HOME and NHTF program.

In addition to the requirements herein, the recipient shall meet local, state and federal standards that apply to the project. If requirements conflict between local jurisdictions and the requirements below, the stricter requirement shall be followed.

The current standards are:

1. 2015 International Building Code adopted and published by the International Code Council.
2. 2015 International Existing Building Code adopted and published by the International Code Council.
3. 2015 International Residential Code adopted and published by the International Code Council.
4. 2015 International Fire Code adopted and published by the International Code Council.
5. 2015 International Mechanical Code adopted and published by the International Code Council.
6. 2012 Uniform Plumbing Code adopted by the International Association of Plumbing and Mechanical Officials.
7. 2015 National Electric Code adopted by the National Electrical Code Committee and published by the National Fire Protection Association, Inc.
8. 2021 International Energy Conservation Code adopted by the International Code Council (up to 3-stories)
9. 2019 ASHRAE 90.1 Energy Standard for Buildings Except Low-Rise Residential Buildings (4-stories plus)
10. Iowa Administrative Code, including but not limited to the following Chapters: 300 (Administration), 301 (General Provisions), 302 (Accessibility of Building), 303 (Energy Conservation), and 350 (State Historic Building), and 25 (State Plumbing Code).
11. Uniform Federal Accessibility Standards provided in 24 CFR Part 8 and delineated in the American National Standards Institute Standard 2009 A117.1.
12. The Americans with Disabilities Act 1990 provided by the Federal Department of Justice.
13. Title VI of the Civil Rights Act of 1964, Section 109 of the Housing and Community Development Act of 1974, Title VIII of the Civil Rights Act of 1968, Section 3 of the Housing and Urban Development Act of 1968, Executive Order 11063, Section 504 of the Rehabilitation Act of 1973.
14. For adaptive reuse/rehabilitation, the Lead Base Paint Poisoning Prevention Act, the Department of Housing and Urban Development (HUD) Guidelines for the Evaluation and Control of Lead Based Paint Hazards, Environmental Protection Administration (EPA) and Occupational Safety and Health Act (OSHA) provisions shall apply when applicable. Every dwelling is required to meet applicable provisions of the HUD Lead Safe Housing Rule found at 24 CFR part 35.
15. Energy Star Rated, where indicated, shall refer to Energy Star MFNC v1.1 (Rev. 5) for multifamily projects and Energy Star SFNH v3.1 (Rev. 14) for single family and townhome projects.

For adaptive reuse/rehabilitation, State Historic Preservation Office (SHPO) clearance, Section 106 of the National Historic Preservation Act, 36 CFR Part 800 for Projects receiving any grant or affecting properties listed in the National Register of Historic Places, or in a designated historic preservation district or zone.

Energy audits shall be conducted on all properties to be rehabilitated prior to generating the project specifications.

II. Inspections

A. HUD Inspections:

All buildings must conform to HUD's Uniform Physical Condition Standards or National Standards for the Physical Inspection of Real Estate for Multifamily and Single Family Housing Rehabilitation. Inspections must verify that applicable conditions of the UPCS and NSPIRE have been met.

A knowledgeable, independent inspector must thoroughly inspect each dwelling to verify the presence and condition of all components, systems and equipment of the dwelling. All components, systems and equipment of a dwelling referenced in this document shall be in good working order and condition and be capable of being used for the purpose in which they were intended and/or designed. Components, systems and/or equipment that are not in good working order and condition shall be repaired or replaced. When it is necessary to replace items (systems, components or equipment), the replacement items must conform to these standards. These standards also assume that the inspector will take into account any extraordinary circumstances of the occupants of the dwelling (e.g., physical disabilities) and reflect a means to address such circumstances in their inspection and in the preparation of a work write-up/project specifications for that dwelling.

All interior ceilings, walls and floors must not have any serious defects such as severe bulging or leaning, large holes, loose surface materials, severe buckling, missing components or other serious damage. The roof must be structurally sound and weather resistant. All exterior walls (including foundation walls) must not have any serious defects such as leaning, buckling, sagging, large holes, or defects that may result in the structure not being weather- resistant or that may result in air infiltration or vermin infestation. The condition of all interior and exterior stairs, halls, porches, walkways, etc. must not present a danger of tripping or falling. Outbuildings must conform to these standards or be removed from the property.

If an inspector determines that specific individual standards of this document cannot be achieved on any single dwelling due to it being structurally impossible and/or cost prohibitive, the inspector shall document the specific item(s) as non-conforming with these standards. The inspector shall prepare a list of any and all non-conforming items or non-conforming uses along with his/her recommendation to waive, or not-to-waive, the individual non-conforming items.

B. IFA Inspections:

1. An IFA representative shall attend a contractor/developer construction meeting at or near the beginning of construction. Notify IFA Construction Analyst at least 2-weeks prior to the pre-construction meeting.
2. Provide timely notifications to IFA for inspections throughout the project. Plan on at least 3 to 4 separate inspections throughout the course of the project, typically around foundation or demolition, MEP installations, cabinetry and appliance installation, and final punch list.

III. Definitions

A. Egress: A permanent and unobstructed means of exiting from the dwelling in an emergency escape or rescue situation.

B. Habitable Space (Room): Space (rooms) within the dwelling for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, storage or utility spaces, and similar areas (rooms) are not considered habitable spaces (rooms).

C. Energy Star Rated: Includes all systems, components, equipment, fixtures and appliances that meet strict energy efficiency performance criteria established, as a joint effort, by the federal Environmental Protection Agency, the U.S. Department of Energy and the U.S. Department of Housing and Urban Development and that carry the Energy Star label as evidence of meeting this criteria.

D. WaterSense: Products labeled as WaterSense are guaranteed to meet EPA's specifications for water efficiency and performance, and are backed by independent, third-party certification. WaterSense labeled products are required when replacing faucets, showerheads, and toilets.

IV. Minimum Standards for Basic Equipment and Facilities

A. Kitchens: All new refrigerators, dishwashers, washers and range hood exhaust fans must be Energy Star rated. Every dwelling shall have a kitchen room or kitchenette equipped with the following:

1. Kitchen Sink. The dwelling shall have a kitchen sink, connected to both hot and cold potable water supply lines under pressure and to the sanitary sewer waste line. When replacing such components, water supply shut off valves shall be installed. Faucets shall meet EPA WaterSense standards. Units without dishwashers shall have double-bowl sinks. Units with single-bowl sinks shall be a minimum of 20″ x 30″ in size.

2. Oven and Stove or Range. The dwelling shall contain an oven and a stove or a range and a microwave oven supplied by the owner. Appliances, either gas or electric, connected to the source of fuel or power, in good working order and capable of supplying the service for which it is intended.

3. Refrigerator. The dwelling shall contain a refrigerator, connected to the power supply, in good working order and capable of supplying the service for which it is intended.

4. Counter Space Area. Every kitchen or kitchenette shall have a minimum storage area of 8 sq. ft. with a minimum vertical clearance of 12” and a minimum width of 12”. Every kitchen or kitchenette shall have a minimum of 4 sq. ft. of counter space. Countertops shall be durable plastic laminate or equivalent.

B. Toilet, Lavatory, and Bathrooms: Every dwelling shall contain a room which is equipped with a flush toilet, a lavatory, and bathtub and/or shower. Toilets, showers, baths, and faucets shall be connected to a water supply, under pressure, and drain to a sanitary sewer. When replacing such components, water supply shut off valves shall be installed. Toilet and lavatory faucets shall meet EPA WaterSense standards.

Toilet and lavatory rooms shall include at a minimum:

1. A towel bar, ring, or hook near the sink.

2. Toilet paper holder.

3. Wall mirror.

4. Cabinet with drawers, dedicated shelf space, or a storage cabinet for medicine storage.

C. Bathroom: Every dwelling shall contain a bathtub and/or shower.

1. The bathtub and/or shower unit(s) may be located in a separate room from the toilet and lavatory room.

2. Every bathroom shall be contained in a room that affords privacy to a person and have doors equipped with a privacy lock or latch in good working order.

3. The bathtub and/or shower unit shall be connected to both hot and cold potable water supply lines, under pressure, and shall be connected to the sanitary sewer. All shower heads must meet EPA WaterSense standards. Shut off valves shall be installed on the water supply lines. All faucets, when replaced, shall be water balancing scald guard type faucets.

4. Bathrooms shall include, at a minimum, a towel bar within reach of the tub/shower and a curtain rod (if applicable).

D. Hot Water Supply: Every dwelling shall have supplied water-heating equipment (water heater and hot water supply lines) that is free of leaks, connected to the source of fuel or power, and is capable of heating water to be drawn for general usage.

1. Water heaters (except point-of-use water heaters) shall not be allowed in the toilet rooms or bathrooms, bedrooms or sleeping rooms. Gas water heaters are not allowed in closets where clothes will be stored.

2. All gas water heaters shall be vented in a safe manner to a chimney or flue leading to the exterior of the dwelling. Unlined brick chimneys must have a metal B-vent liner installed to meet manufacturer's venting requirements. If metal chimney venting cannot be added, a power vented water heater may be installed. Size of the B-vent is critical for proper venting. Install according to manufacturer's recommendations.

3. All water heaters must be installed to manufacturer's installation specifications be equipped with a pressure/temperature relief valve possessing a full-sized (non-reduced) rigid copper or steel discharge pipe to within 6" of the floor. The steel discharge pipe shall not be threaded at the discharge end.

4. Gas and electric water heaters shall meet or exceed Energy Star ratings at the time of installation.

5. Where feasible, tankless water heaters may be installed in accordance with manufacturer's guidelines and sized to provide adequate hot water supply to all fixtures. Gas supply lines and electrical capacity must be evaluated before installing tankless water heaters. Before installing, careful consideration should be made regarding supply and water temperature to owners.

E. Exits: Every exit from every dwelling shall comply with the following requirements:

1. In all houses and duplexes and any building with floors below the 3rd level having only one (1) means of egress, every habitable room shall have two (2) independent and unobstructed means of egress. This is normally achieved through an entrance door and an egress window.

2. All above grade egress windows from habitable rooms shall have a net clear opening of 5.7 square feet. The minimum net clear opening width dimension shall not be less than twenty inches (20") wide, and the minimum net clear opening height dimension shall not be less the twenty-four inches (24") wide. Note that the combination of minimum window width and minimum window height opening size does not meet the 5.7 square feet requirements. Therefore, the window size will need to be greater than the minimum opening sizes in either width or height. Where windows are provided as a means of escape or rescue, they shall have a finished sill height of not more than forty-four inches (44") above the floor. Egress windows with a finished sill height of more than forty-four inches (44") shall have a permanently installed step platform that is in compliance with stair construction standards.

   All at grade egress windows from habitable rooms may be reduced in size to 5.0 square feet of operable window area, but the area must meet the minimum width and/or and height requirement restrictions of all egress windows.

   When windows are being replaced within existing openings, the existing window size shall be determined to be of sufficient size even if current window sizes do not meet current egress standards. However, if the specification writer determines that changing the window size is beneficial; such egress widow size modification will be allowed but not required. If new construction windows are being installed, these windows must meet all egress window requirements.

3. Habitable basements (or habitable rooms within a basement) where one means of egress i s a window; the window shall have a net clear opening of 5.0 square feet. The window shall open directly to the street or yard, or where such egress window has a finished sill height t h a t is below the adjacent ground elevation shall have an egress window/area well. The egress window/area well shall provide a minimum accessible net clear opening of nine square feet that includes a minimum horizontal dimension of thirty-six inches (36") from the window. Egress window/area wells with a depth of more than forty-four inches (44") shall be equipped with an affixed ladder or stairs that are accessible with the window in the fully opened position. Such ladder will have rungs at twelve inches (12") on-center and projecting out a minimum of three inches from the side of the window well.

F. Stairs: All new stairways in new construction or replacement stairs in rehabs shall comply with current codes and meet the following requirements:

1. All stairways and steps of four (4) or more risers shall have at least one (1) handrail. All stairways and steps which are five (5) feet or more in width shall have a handrail on each side.

2. All handrails shall be installed not less than thirty-four inches (34") nor more than thirty-eight inches (38"), measured plumb, above the nosing of the stair treads. Handrails adjacent to a wall shall have a space of not less than one and one-half inches (1 1/2") between the wall and the handrail. All handrails shall be turned back into the wall on railing ends. The size of a round railing must be a minimum of one and one quarter inches (1.25"), but not more than two inches (2"). Railings must be continuous from the top riser to the bottom riser.

3. Porches, balconies or raised floor surfaces, including stairway riser and/or landing, located more than thirty inches (30") above the floor or the grade, shall have guardrails installed that are not less than forty-two inches (42") in height. Open guardrails and stair railings shall have intermediate rails or ornamental pattern such that a sphere four inches (4") in diameter cannot pass through.

4. All stairs and steps shall have a riser height of not more than eight inches (8") and a tread depth of not less than nine inches (9").

I. Smoke Detectors: All smoke detectors shall be dual sensor detectors and installed per manufacturer's installation instructions. They shall be hard-wired with a 10-year lifetime battery back-up and interconnected with building fire alarm systems where those occur. Smoke detectors shall be located as follows:

1. On the ceiling or wall outside of each separate sleeping area in the immediate vicinity of bedrooms,
2. In each room used for sleeping purposes, and
3. In each story within a dwelling unit, including basements but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

J. Carbon Monoxide Detectors: Where a heating system source, other than solid fuel burning appliances (e.g., wood stoves), and/or water heater that burns solid, liquid or gaseous fuels is located horizontally adjacent to any habitable room, a hard-wired with battery back-up carbon monoxide detector is required and is to be installed per the manufacturer's instructions. Any dwelling that has a fuel source heating system (not electric), other solid fuel burning appliances (e.g., wood stoves, pellet, or corn stoves), and/or fuel source water heater (not electric), a hard-wired battery back-up combination smoke alarm/carbon monoxide detector is required to be installed per the manufacturer's instructions on the main living area floor.

V. Minimum Standards for Ventilation

In general, sufficient ventilation shall be present to ensure adequate air circulation in each dwelling unit.

A. Habitable Rooms: each habitable room shall have at least one (1) exterior operable window. All operable windows shall be capable of being easily opened and held in an open position by widow hardware. All operable exterior windows shall be provided with screens if none exist.

B. Bathrooms and Toilet Rooms: each room shall provide a mechanical means of ventilation that is rated at 100 CFM or greater. Fans shall be Energy Star rated and shall be ducted to the outside of the dwelling.

C. Attic Ventilation:

1. When using roof vents without soffit vents and without a ceiling vapor barrier, sufficient vents shall be used to provide one (1) square foot of free vent area for each one hundred fifty (150) square feet of ceiling area.

2. When using roof vents without soffit vents with a ceiling vapor barrier, sufficient vents shall be used to provide one square foot of free vent area for each three hundred (300) square feet of ceiling area.

3. When using a combination of roof and soffit vents and no ceiling vapor barrier, sufficient vents shall be used to provide one (1) square foot of free vent area for each three hundred (300) square feet of ceiling area. Vents shall be installed with no less than fifty percent (50%) nor more than eighty percent (80%) of the total vent area in the roof near the peak with the balance of vents in the soffit.

4. To conserve energy, power roof ventilation systems will be used only as a method of last resort. Roof ventilation should be accomplished through correctly sized gable vents, ridge vents, and/or roof pod ventilation systems, and soffit vents.

VI. Minimum Standards for Electrical and Broadband Services

Iowa Code 103 requires electricians and electrical contractors to have an electrical contractor, class A master electrician or a class B master electrician license to plan, lay out, or supervise the installation of wiring, apparatus, or equipment for electrical light, heat, power, and other purpose. Persons licensed as Class A journeymen electricians or Class B journeymen electricians must be employed by an electrical contractor or work under the supervision of a class A master electrician or a class B master electrician. A person who is not licensed pursuant to Chapter 103 may plan, lay out, or install electrical wiring, apparatus, and equipment for components of alarm systems that operate at seventy (70) volt/amps (VA) or less, only if the person is certified to conduct such work pursuant to Chapter 100c.

A. Minimum Electrical Service:

Every dwelling unit, at a minimum, shall have a 100-ampere breaker controlled electrical panel. All electrical work shall be in compliance with adopted State electrical code requirements. The panel, service mast, etc. shall also be installed to local utility company requirements.

B. Convenience Outlets:

1. Every habitable room within the dwelling shall contain at least two (2) separate duplex, wall-type electrical outlets. Placement of such outlets shall be on separate walls. All newly installed receptacles shall be grounded duplex receptacles or ground fault circuit interrupter (GFCI) protected. New construction shall comply with the applicable code for spacing of receptacles. All receptacles in new construction shall be a minimum of 15″ off the floor.

2. All electrical outlets used in bathrooms and toilet rooms, all outlets within six foot (6'-0") of a water source (excluding equipment circuits for clothes washing machines and sump pumps), outlets located on open porches or breezeways, exterior outlets, outlets located in garages and in non-habitable basements, except those electrical outlets that are dedicated appliance outlets and all kitchen receptacles serving the countertop area shall be GFCI protected. All exterior receptacles shall be covered by a receptacle cover such that when a cord is plugged in, the GFCI outlet will stay covered and protected.

3. All electrical outlets carrying heavy appliance loads (i.e., air-conditioning units, refrigerators, freezers, electric stoves, microwaves, clothes washing machines, dishwashing machines, electric clothes dryers, furnaces, etc.) shall be on a dedicated circuit of the proper amperage and wire size.

4. Unfinished basements shall have a minimum of one (1) GFCI wall-type electrical receptacle. Such receptacle shall be within twenty feet (20') of the furnace.

5. All knob and tube wiring shall be removed or abandoned and replaced with type NM cable (Romex) or as required by code.

6. All broken, damaged or nonfunctioning switches or outlets shall be replaced. All fixtures and wiring

shall be adequately installed to ensure safety from fire so far as visible components are observed.

7. All missing or broken switch and outlet covers (including junction boxes) shall be replaced. Each receptacle or switch located on an exterior wall shall have a foam seal placed under the cover.

C. Lighting:

1. Every habitable room and every bathroom (including toilet room), laundry room, furnace or utility room, and hallway shall have at least one (1) ceiling or wall-type electric light fixture, controlled by a remote wall switch. Habitable rooms (except kitchens or kitchenettes) may have a wall-type electrical outlet controlled by a remote wall switch in lieu of a ceiling or wall-type light fixture. Energy efficient fixtures that meet Energy Star ratings and compact florescent or LED bulbs shall be installed in all new fixture installations.

2. Basements with no habitable rooms shall have a light illuminating the stairs with a switch controlling the light located at the top of the stairs. Basements with habitable rooms shall have at least one light fixture controlled by a remote wall switch at the top and bottom of the stairs. If new fixtures are being installed, Energy Star rated fixtures shall be installed with compact florescent or LED bulbs.

3. Porcelain type fixtures with pull chains are acceptable for use in unfinished basements (except for the one controlled by a remote wall switch), cellars and attics.

4. All pendant type lighting fixtures that are supported only by the electrical supply wire shall be removed or replaced. If replaced, replace with Energy Star rated fixtures.

5. All closet lights shall be covered.

VII. Minimum Standards for Heating Systems

A. Heating System: All heating systems (and central air-conditioning systems where they exist) shall be capable of safely and adequately heating (or cooling as applicable) for all living space.

B. Cooling System: Non-working or improperly functioning central air conditioning systems shall be replaced as part of the rehabilitation work. The installation of a central air conditioning system, where it currently does not exist, is permissible where feasible and practical.

C. Requirements for Heating and Cooling Systems:

1. All existing heating systems, including but not limited to, chimneys and flues, cut-off valves and switches, limit controls, heat exchangers, burners, combustion and ventilation air, relief valves, drip legs and air, hot water, or steam delivery components (ducts, piping, etc.) that are not being replaced, shall be inspected by competent personnel with the proper certifications to perform the required inspections. Components inspected must be determined to be in a safe and proper functioning condition at the time of inspection, by means of written project file documentation.

2. Every heating system burning solid, liquid or gaseous fuels shall be vented in a safe manner to a chimney or flue leading to the exterior of the dwelling. The heating system chimney and/or flue shall be of such design to ensure proper draft and shall be adequately supported.

3. No heating system source burning solid, liquid or gaseous fuels shall be located in any habitable room or bathroom, including any toilet room.

4. Every fuel burning appliance (solid, liquid or gaseous fuels) shall have adequate combustion air and ventilation air. All new furnaces will have sealed combustion with combustion air brought in from the exterior of the house and installed in accordance with manufacturer's guidelines.

5. Every heat duct, steam pipe and hot water pipe shall be free of leaks and shall function such that an

adequate amount of heat is delivered where intended. All accessible duct joints m u s t be sealed. Newly installed ductwork must also be sealed. All accessible steam piping and hot water piping must be installed and sealed with approved materials.

6. Every seal between any of the sections of the heating source(s) shall be air-tight so that noxious gases and fumes will not escape into the dwelling.

7. No space heater shall be of a portable type.

8. Minimum requirements for new forced air furnaces shall meet Energy Star requirements and have a digital programmable thermostat installed. Condensate lines shall drain to a floor drain or have a condensate pump installed and piped to discharge. All furnace duct work shall be equipped with an air filter clean out location that has a tight-fitting cover installed over it.

9. All boilers, when replaced shall be Energy Star rated. All combustion air will be from the exterior of the house. The addition of zone valves may be useful to reduce energy cost. Heat lines shall be insulated with approved material. Programmable thermostats will be installed.

10. A/C units and heat pumps if added or replaced shall be Energy Star rated. All units shall be installed, when possible, on either the north or east side of the dwelling or in an area that will provide shade for the unit. The correct coil will be installed that is compatible with both the furnace and A/C unit.

    No window units may be provided in new construction or may be purchased with HTF funds. Homeowners who use window air conditioners will be encouraged to purchase an Energy Star rated air conditioner.

11. All wood, pellet, corn, switch grass, hydrogen, or other biomass fuel stoves must be installed to manufacturer's guidelines. Where such guidelines are not available, the heating unit will be removed. Venting and combustion air must be installed in accordance with manufacturer's requirements.

12. The installation of Energy Star rated ceiling fans will be encouraged in general living areas. Fans must be installed to manufacturer's requirements.

D. Energy Conservation: All structures shall comply with certain energy conservation measures (U.S. Department of Energy recommendations). These measures include, but are not necessarily limited to, the following:

1. The provision of insulation at various locations and at the following recommended factors (R-values or U-Factors) from Section R402 of the 2021 IECC (ASHRAE 90.1-2019 for buildings 4-stories or higher).

2. When siding is being replaced and/or interior wall finishes of exterior walls are being replaced on a dwelling, such exterior walls are to be provided with insulation and at the recommended resistance factor (R-value) that is allowed by the stud cavity space. In addition, an air infiltration barrier, such as Tyvek or approved equal, shall be installed on all exterior walls. If new walls are being framed and insulated, use the minimum R factor prescribed in the 2021 IECC (ASHRAE 90.1-2019 for buildings 4-stories and higher).

3. The installation of weather stripping at all exterior doors, windows, ground-entry basement doors, etc. is required. Doors, when replaced, shall be metal clad insulated, thermally broken, and meet Energy Star requirements. Storm doors are encouraged for unit doors that open directly to the exterior of the building but are not required. Door jams will be sealed, and thresholds will be caulked.

4. Provide caulking in new work around exterior doors and windows, at the foundation/sill plate union, and at other air-infiltration areas.

5. Windows must meet current Energy Star Rated fenestration requirements. All storm windows will be removed from heated areas of the home when windows are replaced. All rope weight openings will be insulated and all new windows will have window jambs sealed.

6. All heat ducts and hot water or steam heat distribution piping shall be insulated or otherwise protected from heat loss where such ducts or piping runs through unheated spaces. Similarly, distribution piping for general use hot water shall also be protected from heat loss where such piping runs through unheated spaces. All water distribution piping shall be protected from freezing.

7. Attic access passageways (scuttle holes) shall be no less than twenty-two inches (22") by thirty inches (30") or the size of original construction for rehab projects. If it is impossible to conform to this standard, the largest attic access hole possible will be installed. Scuttle holes shall extend a minimum of fourteen inches (14") above the ceiling. Weather stripping shall be installed at the top of this fourteen-inch (14") inch scuttle hole extension and shall be covered with three-quarter inch (¾") plywood or OSB covered by two inch (2"), R-10, foam. The gypsum opening on the ceiling will also be weather stripped and covered with four inches (4") of foam. Both doors will be made to sit tight against the weather stripping.

VIII. Minimum Standards for the Interiors of Structures

A. Interior Walls, Floors, Ceilings, Doors and Windows:

1. All interior walls, floors, ceilings, doors and windows shall be capable of being kept in a clean and sanitary condition by the occupant.

2. Every bathroom and/or toilet room and utility room floor surface shall be a sheet product, (vinyl or similar) impervious to water and can easily be kept in a clean and sanitary condition by the homebuyer. Kitchen floors may be VCT or LVT.

3. All interior doors shall be capable of affording the privacy for which they are intended.

4. The dwelling must have at least one (1) bedroom or living/sleeping room for each two (2) persons. Children of the opposite sex, other than very young children, shall not be required to occupy the same bedroom or living/sleeping room.

5. No dwelling containing two (2) or more bedrooms shall have a room arrangement that access to a bathroom, toilet room, or a bedroom can be achieved only by going through another bathroom, toilet room, or another bedroom.

6. All paints, stains, varnishes, lacquers and other finishes used shall be low or no VOC paint finishes and installed as required by the manufacture. All interior paints and primers shall comply with Green Seal standards for low VOC limits. All adhesives shall comply with Rule 1168 of the South Coast Air Quality Management District. All caulks and sealants shall comply with Regulation 8, Rule 51 of the Bay Area Air Quality Management District.

IX. Minimum Standards for the Exterior of Structures

A. Foundations, Exterior Walls, Roofs, Soffits and Fascia:

1. Every foundation, exterior wall, roof, soffit and fascia shall be made weather resistant. Products for exterior walls, roofs, soffits, and fascia shall be installed in accordance with the manufacturer's guidelines. For new construction, thermal bridging measures shall be maintained at the building envelope with slab insulation is required as follows: R-10, 4' Deep, Flush with the top of the Slab.

2. **Roofs:** Replacement roofs shall be installed in accordance with the manufacturer's requirements. When installing asphalt or fiberglass shingles, a minimum of a 30-year shingle shall be used. Other products such as metal roofing may be considered.

3. **Exterior Siding and Design:** All siding should be reviewed for damaged and corrected accordingly. For new construction, building design should be appealing and appropriate for the community and neighborhood, including varied facades, rooflines, and exterior materials. Any new exterior siding shall be durable and impact resistant.

B. Drainage:

1. All rainwater shall be conveyed and drained away from every roof so as not to cause wetness or dampness in the structure. Roof drainage systems shall not be connected to a sanitary sewer.

2. The ground around the dwelling shall be sloped away from foundation walls to divert water away from the structure.

3. Gutter downspouts shall be designed to drain away from foundation walls and allow water to drain away from walkways or places where freezing walkways can cause slip hazards.

C. Windows, Exterior Doors and Basement Entries (Including Cellar Hatchways): Every window, exterior door, basement entry and cellar hatchway shall be tight fitting within their frames, be rodent-proof, insect-proof and be weatherproof such that water and surface drainage is prevented from entering the dwelling. In addition, the following requirements shall also be met:

1. All exterior doors and windows shall be equipped with security locks. Provide a one-inch (1") throw deadbolt and lockset at entry doors and other exterior swing doors.

2. Every window sash shall be fully equipped with glass window panes which are without cracks or holes. Every window sash to be replaced shall use Energy Star rated glass for northern climate windows. Stained or leaded glass found to be historically significant may be protected by a fixed low-E glass storm window. Every window sash shall fit tightly within its frame, and be secured in a manner consistent with the window design. All window jambs will be sealed. All rope weight openings shall be insulated before installing the new window. Window coverings are required in each unit.

3. Storm doors, when installed, shall be equipped with a self-closing device.

4. Every exterior door, when closed, shall fit properly within its frame and shall have door hinges and security locks or latches. All exterior doors will be no less than metal clad insulated (foam filled) doors. All jambs and thresholds will be sealed.

5. Every required exterior exit door shall be not less than three feet (3'-0") in width and not less than six feet, six inches (6'8") in height. Existing door sizes will be grandfathered, but at least one exterior door that is not less than thirty-six inches (36") wide and no less than six feet, eight inches (6'8") high shall be provided.

X. Minimum Space, Use and Location Requirements

A. Room Space Minimums:

1. No habitable room in a dwelling shall have a ceiling height of less than seven feet, six inches (7'6"). The floor area of any room where the ceiling height is less than five feet (5'0") in height shall not be considered floor area in computing the total floor area of the room.

2. Minimum ceiling height of seven feet (7'0") is acceptable in bathrooms, laundry and storage rooms.

3. Minimum habitable room width, except kitchens and/or kitchenettes, shall be seven feet (7'0").

B. **Basement Space:** No basement space shall be used as habitable space unless all habitable space requirements are met, and all the following requirements are met:

1. The floor and walls are waterproof or damp-proof construction.

2. Such habitable space has a hard surface floor of concrete or masonry.

3. Such space shall have a minimum of two (2) exits. In addition to the stairs, this would normally consist of one (1) egress window.

XI. Minimum Standards for Plumbing Systems

A. **Dwelling plumbing systems:** All systems shall be capable of safely and adequately providing a water supply and wastewater disposal for all plumbing fixtures. Every dwelling plumbing system shall comply with the following requirements.

1. All existing plumbing systems and plumbing system components shall be free of leaks. When repairing or adding to such systems, any type of pipe allowed by the State plumbing code shall be allowed. Where local codes are stricter, those must be followed.

2. All new plumbing system piping and layout shall comply with the Uniform Plumbing Code. Existing to remain shall be of adequate size to deliver water to plumbing fixtures and to convey wastewater from plumbing fixtures (including proper slope of wastewater piping).

3. All plumbing fixtures shall be in good condition, free of cracks and defects, and capable of being used for the purpose in which they were intended.

4. The plumbing system shall be vented in a manner that allows the wastewater system to function at atmospheric pressure and prevents the siphoning of water from fixtures. Venting by mechanical vents WHERE accepted by local jurisdictions is OK as an alternative to exterior atmospheric venting.

5. All fixtures that discharge wastewater shall contain, or be discharged through, a trap that prevents the entry of sewer gas into the dwelling.

6. All plumbing system piping and fixtures shall be installed in a manner that prevents the system, or any component of the system, from freezing. Plumbing in exterior walls should be avoided. When it can't be avoided, pipes in exterior walls must be protected from freezing with heat tape or other measures.

7. All plumbing fixtures and water connections shall be installed in such a way as to prevent the backflow of water from the system into the plumbing system's water source.

8. All faucets, showerheads, and toilets shall meet WaterSense standards. Regulators may be installed in existing units to meet these standards.

9. Valves shall be installed with the valve in the upright position. When replacing valves, the use of a full port ball-valve shall be encouraged.

B. **Radon System.** All new construction projects shall install a passive radon system, including a drain tile loop below the building slab along with vertical vent pipes and junction boxes. Passive radon systems shall be designed to be upgraded to active systems if radon tests conducted post construction exceeds permissible thresholds. Rehab projects shall test for radon prior to construction to determine if an active radon system is warranted and forgo installation if test is found to be below permissible thresholds. Refer to Appendix F of the 2015 IRC and ASTM E1465-08a for installation instructions.

XII. Minimum Standards for Potable Water Supply and Sanitary Sewer

A. Every dwelling shall be connected to an approved (by the jurisdiction having authority) sanitary sewer system and potable water source.

B. All potable water fixtures and equipment shall be installed in such a manner as to make it impossible for used, unclean, polluted or contaminated water, mixtures or substances to enter any portion of the potable water system piping. All equipment and fixtures shall be installed with air gaps (traps) to prevent back siphoning. All outlets with hose threads (except those serving a clothes washing machine) shall have a vacuum breaker for use with the application. W ater piping supplied by a private water supply system shall not be connected to any other source of water supply without the approval of the jurisdiction having authority over the installation.

C. All unused wells on the property shall be abandoned and plugged in accordance with any local, county or State requirements having jurisdiction. All cisterns shall be drained and filled, and if applicable, in accordance with any local or county requirements having jurisdiction.

XIII. Minimum Standards for Accessible Units

Projects shall adhere to guidance set forth through Section 504 of the Rehabilitation Act of 1973, as amended, regarding accessible Unit requirements for dispersal, new construction, and alteration of housing. Specific requirements call for projects to design at a minimum 5% of their total units to be fully accessible and an additional 2% of units as accessible to individuals with sensory impairments.

Design guidance for fully accessible units shall follow Uniform Federal Accessibility Standards (UFAS) and sensory impairments shall follow Section 1006 of the American National Standard institute (ANSI) 2009 ICC A117.1.

XIV. Minimum Standards for Health and Safety

A. In addition to the above minimum standards, the work must address minimum standards for health and safety. The physical inspection protocol that IFA utilizes for this purpose is the Uniform Physical Condition Standards (UPCS) and National Standards for the Physical Inspection of Real Estate (NSPIRE). HUD has produced a Dictionary of Deficiency Definitions for the UPCS that explains what exact deficiencies are considered noncompliant. The UPCS Dictionary then defines very specific severity levels for physical problems on a scale from 1 to 3 (with 3 being the most severe). The Dictionary also defines issues that are “Hazards (Health and Safety)” concerns. Every dwelling shall be free of “Hazards (Health and Safety)”, which must be addressed in the work write-up and cured immediately if the housing is occupied at the time of rehabilitation.

In addition to addressing all “Hazards (Health and Safety)”, all Level 2 deficiencies must be addressed in the work write-up and cured by the completion of the rehabilitation. The decision to include Level 1 deficiencies in the work write-up will require discretion by the inspector and the IFA project manager based upon knowledge of the property use, specific conditions, and financial resources available to the project.