City of Houston

NSP SINGLE FAMILY MINIMUM PROPERTY STANDARDS FOR REHABILITATION, RECONSTRUCTION & NEW CONSTRUCTION

Revised November 5, 2012

City of Houston Minimum Housing Rehabilitation, Reconstruction & New Construction Standards

Table of Contents

I. Preface .....

II. Definitions.....

III. Minimum Standards for Basic Equipment and Facilities.....

IV. Minimum Standards for Ventilation.....

V. Minimum Standards for Electrical Service.....

VI. Minimum Standards for Heating Systems.....

VII. Energy Conservation.....

VIII. Minimum Standards for the Interior of Structures.....

IX. Minimum Standards for the Exterior of Structures.....

X. Minimum Space, Use and Location Requirements.....

XI. Minimum Standards for Plumbing Systems.....

XII. Minimum Standards for Portable Water Supply.....

XIII. Minimum Standards for Connection to Sanitary Sewer.....

XIV. Rights to Alter Design.....

City of Houston Housing and Community Development Department Minimum Property Standards for

New Construction, Re-Construction or Rehabilitation for Single-Family Housing

OVERVIEW

The standards contained in this document establish the minimum property standards for new construction, re-construction and rehabilitation under the City of Houston's (COH) Single Family Housing Program that receives assistance through federal funding from U.S. Department of Housing and Urban Development (HUD).

APPLICABILITY

These minimum standards apply to single-family housing units that currently receive federal assistance or acquired/developed/rehabilitated using federal assistance.

*** All properties must meet these minimum requirements or City code, whichever is more stringent***

PURPOSE

This document is intended to provide the minimum acceptable standards for existing single household dwelling units rehabilitated or reconstructed in whole with the City of Houston, Housing and Community Development Department. These standards apply to all communities within the incorporated City of Houston. These standards are not intended to reduce or exclude the requirements of any local, county or state building or housing codes, standards, or ordinances that may apply a more stringent requirement. In any case, this standard will serve as the minimal requirement. In addition to these standards all units must comply with the following:

- The International Building Code (IBC) 2006 adopted by the City of Houston or the latest edition of the IBC and any applicable code required by the pertaining Municipality.
- The International Residential Code (IRC) 2000 adopted by the City of Houston or the latest edition of the IRC and any applicable code required by the pertaining Municipality.

- The International Energy Conservation Code (IECC) 2006 adopted by the City of Houston or the latest edition of the Model Energy Code (MEC) and any applicable code required by the pertaining Municipality.
- The Lead Based Paint regulations as described in 24 CFR, Part 35 for units built before 1978.
- HUD 24 C.F.R Part 91 and 92 HOME Investment Partnership Program
- HUD 24 C.F.R Part 91 and 92 HOME Investment Partnership Program: Improving Performance and Accountability; and Updating Property Standards
- The requirements from other governing entities such as Homeowners Associations and Local and Federal regulations pertaining to zoning, traffic, drainage, flood plains and fire prevention (NFPA)

I. Preface

The City of Houston's Minimum Housing Rehabilitation / Reconstruction Standards are designed to include and to expand on the requirements of the HUD Section 8 Housing Quality Standards (HQS) (CDBG funded activities) and the Minimum Property Standards (MPS) (HOME funded activities). Many of the requirements and standards of this document exceed the requirements of the HUD Section 8 Housing Quality Standards and/or the Minimum Property Standards, and are determined necessary to further define the intent or outcome of these standards and to expand on the common definitions of "safe, decent, and sanitary" housing; "non-luxury, suitable amenities" housing; and "good quality, reasonably priced" housing, that is affordable to persons that are low or low and moderate income. These standards are also designed to assist in achieving consistency throughout the City for single-family and duplex reconstruction activities funded with the Federal and State Funds.

Through the City of Houston Minimum Housing Rehabilitation / Reconstruction Standards, "sustainable design" principles have been incorporated, intended to minimize negative environmental impacts and to promote the health and comfort of the occupants of housing reconstructed to these standards. Included herein are measures to reduce consumption of non-renewable resources, minimize waste, and to create healthy productive environments. Standard measures have been incorporated herein relating to energy conservation, energy efficiency, water conservation, and indoor air quality.

Whenever possible and practical, contractors are encouraged to specify materials or products that are made from recycled materials (such as crushed concrete, carpeting or flooring made from recycled materials, etc.) or specify materials and products produced from rapidly renewable materials (such as cork or bamboo). To the extent possible and practical, avoid using products from non-renewable resources (such as vinyl siding, windows and flooring; asphalt roofing materials; etc.).

All components, systems and equipment of a dwelling referenced in this document shall be in good working condition as well as capable of being used for the purpose in which they were intended. Components, systems and/or equipment that are not in good working order and condition shall be repaired or replaced. When installing such items (systems, components or equipment), the items must conform to these standards. These standards also 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 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.

II. 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. **FAIR HOUSING ACT (24CFR§100.25)** — Federal law that prohibits discrimination by direct providers of housing, such as landlords and real estate companies as well as other entities, such as municipalities, banks or other lending institutions and insurance companies whose discriminatory practices make housing unavailable to persons because of race or color, religion, sex, national origin, family status or disability.

E. **GROUND COVER** — Suitable material applied to the ground to prevent erosion of the soil and includes concrete, flagstone, gravel, asphalt, grass or other form of landscaping.

F. **MINIMUM PROPERTY STANDARDS (MPS)** — The standards for the maintenance and occupancy prescribed for a multi-family property. Using these standards as a baseline for monitoring, a housing inspector identifies the physical deficiencies of a property and dwelling unit that need to be repaired.

G. **PEST**— Any mouse, rat, bed bug, flea, wasp, hornet or cockroach, but does not include and domesticated mouse or rat

H. **REPAIR** — Includes the provision of facilities, the making of additions or alterations or the taking of any other action that may be required to ensure that a property conforms to the standards established in a by-law passed under this section. All repairs shall be made in a good workmanlike manner with materials that are suitable and sufficient for the purpose and free from defects. The requirement that repairs be made in a "good workmanlike manner" includes, ensuring the component repaired can perform its intended function and finishing the repair in a manner reasonably compatible in design and color with adjoining decorative finishing materials. Repairs shall be made with "materials that are suitable and sufficient for the purpose" includes a requirement for materials reasonably compatible in design and color with adjoining decorative finishing materials.

I. **SEWAGE SYSTEM** — The City sanitary sewer system or a private sewage disposal system approved by the City.

J. **SPECIFICATIONS** — Sometimes referred to as "written rehabilitation standards" or "specs," that identify the minimum acceptable grades and types of materials to be used and to provide the basis for how materials and equipment shall be installed.

K. **WORKMANSHIP** — refers to the quality of the work performed by a craftsman.

III. Minimum Standards for Basic Equipment and Facilities

A. **Kitchens** – 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 installing such components, water supply shut off valves shall be installed.

2. **Oven and Stove or Range**. The dwelling shall contain an oven and a stove or range (and/or microwave oven), supplied by the owner, 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 eight (8) square feet with a minimum vertical clearance of twelve inches (12") and a minimum width of twelve inches (12"). Every kitchen or kitchenette shall have a minimum of four (4) square feet of counter space.

B. Toilet Room: Every dwelling shall contain a room which is equipped with a flush toilet and a lavatory. The flush water closet shall be connected to the cold potable water supply, under pressure, and to the sanitary sewer. The lavatory shall be connected to both a hot and cold potable water supply, under pressure, and connected to the sanitary sewer. When installing such components, water supply shut off valves shall be installed. When installing toilets, these will have a flush valve that use less than or equal to 1.6 gallons per flush. Toilet throat size will be no less than 2 inches and glazed smooth.

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

1. The bathtub and/or shower unit(s) need not be located in the same room as the flush water closet and lavatory. The bathtub and/or shower unit may be located in a separate room.

2. 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 be equal to or less than 2.0 (GPM) water flow. Shut off valves shall be installed on the water supply lines. All faucets shall be water balancing scald guard type faucets.

D. Privacy in Room(s) Containing Toilet and/or Bath: Every toilet room and/or every bathroom (the room or rooms containing the bathtub and/or shower unit) shall be contained in a room or rooms that afford privacy to a person with said room or rooms.

1. Every toilet room and/or bathroom shall have doors equipped with a privacy lock or latch in good working order.

E. 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. No water heaters (except point-of-use water heaters) shall be allowed in the toilet rooms or bathrooms, bedrooms or sleeping rooms. No gas water heaters shall be allowed in a clothes closet(s).

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. Size of the B-vent is critical for proper venting. Install according to manufacturer's recommendations.

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

4. All water heaters must be installed to manufacturer's installation specifications.

5. All water heaters shall have internal foam insulation that is a minimum of R-10. Gas water heaters shall have an EF rating of .62 or higher and a recovery efficiency of .75 or better and/or meet Energy Star requirements at the time of installation. Electric water heaters shall be Energy Star Rated.

6. Where feasible, tank-less 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 or electrical capacity must be evaluated before installing tank-less water heaters. Before installing, careful consideration should be made regarding supply and water temperature to owners.

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

1. 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.

G. **Stairs:** Stairs shall confirm to the requirement of 2006 IRC. All newly constructed stairs (interior and exterior stairways) shall comply with 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 1.25 inches, but not more than 2 inches. 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 (30) inches above the floor or the grade, shall have guardrails installed that are not less than thirty-six inches (36") 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"). All newly constructed stairs shall have a riser height of not more than seven and three quarters (7 3/4") and a tread depth of not less than ten inches (10"). Risers and treads cannot be different in size by more than 3/8 of an inch from the top to the bottom of the stairs.

H. **Walkways & Entry**: All walkways and entry points to the dwelling structure shall be a minimum of thirty-six inches wide (36") with an access point from the driveway to the dwelling entrance and/or an access point to the road.

I. **Smoke Detectors**: All smoke detectors shall be hard-wired with battery back-up and interconnected with all other alarms. There shall be a minimum of one (1) smoke detector per floor (including the basement) and a smoke detector shall be located adjacent to all bedrooms/sleeping rooms and adjacent to the central heating source. A smoke detector shall be installed in each sleeping room. All smoke detectors shall be installed per manufacturer's installation instructions.

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 with 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.

IV. Minimum Standards for Ventilation

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

B. Every 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 window hardware. All operable exterior windows shall be provided with screens. Half screens on windows are allowable.

C. Bathrooms, including toilet rooms, shall be provided with a mechanical means of ventilation that is rated at 50 CFM or greater or a window to serve as ventilation. Fans shall be ducted to the outside of the dwelling. All bathroom fans will be installed on a separate switch from the light.

D. **Attic Ventilation:**

1. When using roof vents without soffit vents and without a ceiling vapor barrier, sufficient vents shall be used to provide one 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 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%), and no 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.

V. Minimum Standards for Electrical Service

A. Minimum Electrical Service:

1. Every dwelling unit, at a minimum, shall have a 150 ampere breaker controlled electrical panel. All electrical work shall be in compliance with adopted electrical code requirements in accordance with any local, county or state requirements having jurisdiction. 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 GFCI protected.

2. All electrical outlets used in bathrooms and toilet rooms, all outlets within six foot (6'-0") of a water source (excluding designated simplex 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. All kitchen receptacles serving the countertop area shall be ground fault circuit interrupter (GFCI) protected. All exterior receptacles shall be covered by a receptacle cover 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., window air conditioning units, central air-conditioning units where they exist, refrigerators, freezers, electric stoves, microwaves, clothes washing machines, dish washing machines, electric clothes dryers, furnaces, etc.) shall be simplex receptacles on a separate circuit of the proper amperage and wire size.

4. Every habitable room within such dwelling shall contain:

   a. **at a minimum**, 2 separate and remote wall type electric convenience outlets. Habitable rooms over 120 square feet, shall contain,

   b. **at a minimum**, 3 separate and remote wall type electric convenience outlets. All newly installed outlets shall be grounded type outlets.

   c. Temporary wiring or extension cords **shall not be used as permanent wiring**.

5. All fixtures and wiring shall be adequately installed to ensure safety from fire so far as visible components are observed.

6. 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 bulbs shall be installed in all new fixture instillations.

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. Energy Star rated fixtures shall be installed with compact florescent bulbs.

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

4. All closet lights shall be covered.

VI. Minimum Standards for Heating Systems

A. Heating System: All heating systems shall be capable of safely and adequately heating for all living space.

B. Cooling System: All central air-conditioning systems shall be capable of safely and adequately cooling for all living space.

C. Requirements for Heating and or Cooling Systems:

1. 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 assure proper draft and shall be adequately supported.

2. No heating system source burning solid, liquid or gaseous fuels shall be located in any habitable room, bathroom, toilet room, storage closet, and sealed attic space.

3. Every fuel burning appliance (solid, liquid or gaseous fuels) shall have adequate combustion air and ventilation air. All solid and liquid furnaces will have sealed combustion with combustion air brought in from the exterior of the house and installed in accordance with manufacturer's guidelines. Combustion air for gas furnaces shall be in accordance with 2006 IRC. 2006 IRC allows combustion air from inside of building as well for gas furnaces.

4. 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 duct joints must be sealed with mastic or any other acceptable product. All ductwork must be sealed. All steam piping and hot water piping must be installed with an approved material.

5. 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.

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

7. Minimum requirements for forced air furnaces, when installed, will be no less than a 92% AFUE, or the minimum AFUE, if greater than 92%, to obtain a local utility rebate (Energy Star rated for Southern climates). Also install a digital programmable thermostat. Condensate lines will 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.

8. All boilers will have an "A" rating and be no less than 87% AFUE rating. 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.

9. A/C units shall not be less than 15 SEER or the lowest SEER rating that is available at the time of installation but not less than 15 SEER. 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.

10. Venting and combustion air must be installed in accordance with manufacturer's requirements.

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

VII. Energy Conservation

1. 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:

   a. The provision of insulation at various locations and at the following recommended resistance factors (r-values). Insulation shall be primarily made from recycled glass or newspaper when available.

      i. Ceilings – R-30 or as close as possible to these requirements where sloped ceilings exist.
      ii. Walls - R-13
      iii. Crawl Spaces (floors or walls) – R-19
      iv. Band Joists – R–19

   b. Exterior walls are to be provided with insulation and the minimum R factor shall be R-19 or R-13 plus R-5 foam. In addition, an air infiltration barrier, such as Tyvek or approved equal, shall be installed on all exterior walls. The installation of fan-fold foam or foam sheathing may be added to increase household R-ratings.

   c. 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) of R-13, or that which 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.

   d. The installation of fan-fold foam or foam sheathing may be added to increase household R-ratings.

   e. The installation of weather stripping at all exterior doors, windows, ground-entry basement doors, etc. is required. Doors shall be a metal clad insulated door (energy star rated for Southern climates). Storm doors are encouraged, but not required. Door jams will be sealed and thresholds will be caulked.

   f. The provision of caulking around exterior doors and windows, at the foundation/sill plate union, and at other air infiltration areas.

   g. Windows must be current Energy Star rated for Southern climate to obtain local window rebates. All windows will have the window jamb sealed. Where Historic Preservation requirements will restrict the installation of vinyl or aluminum windows, the specifications will be written to come as

close as possible to achieving Energy Star requirements. In these such cases where the restrain exist, all rope weight openings will be insulated and all windows will have the window jamb sealed.

h. 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 are located in unheated spaces. Similarly, distribution piping for general use hot water shall also be protected from heat loss where such piping is located in unheated spaces. All water distribution piping shall be protected from freezing.

i. Attic access passage ways (scuttle holes) shall be no less than 22" by 30" Scuttle holes shall extend up a minimum 14 inches above the ceiling. Weather stripping shall be installed at the top of this 14 inch scuttle hole extension and shall be covered with ¾ inch plywood or OSB covered by 2 inch, R-10, foam. The gypsum opening on the ceiling will also be weather stripped and covered with 4 inches of foam. Both doors will be made to sit tight against the weather stripping.

j. Attic stairs units shall be an insulated manufactures design with weather stripping around the perimeter. Also, ladder design shall be a minimum capacity rating of 300lbs.

k. Tech Shield shall be used on roofs surfaces.

l. Entire structure shall be brick on all sides.

VIII. Minimum Standards for the Interior 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 owner.

2. Every bathroom and/or toilet room, kitchen or kitchenette, and utility room floor surface shall be constructed such that they are impervious to water and can easily be kept in a clean and sanitary condition by the owner.

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

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

5. No dwelling containing two 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 bedrooms shall be a minimum of ten feet (10'0) by eight feet (8'0) in size or 80 square feet.

7. All paints, stains, varnishes, lacquers and other finishes shall be durable with EPA acceptable levels of VOCs or no VOC paint finishes and installed as required by the manufacture.

8. Every occupant of every dwelling unit shall have unrestricted access to a toilet, to a bath, and to a kitchen sink and lavatory basin located within that dwelling unit. No dwelling or dwelling unit containing (2) or more sleeping rooms shall have such room arrangement that access to a bathroom or toilet room intended for use by the occupants can be had only by going through another sleeping room or bathroom or toilet room.

9. Carpets shall have a good quality underlay, be clean, of reasonable quality and free from all defects such as excessive wear, loose seams, and tainting, bare patches and so on. Carpeting in bathrooms is generally not considered an appropriate floor material.

10. Floor covering in bathroom and kitchen areas shall be vinyl type or tile and shall be free from defects. Floor finishes shall be slip resistant when wet and shall be sealed around their edges with silicone sealant. Any flooring material that permits water to seep into the sub floor is unacceptable.

IX. Minimum Standards for the Exterior of Structures

A. Texas Government Code Section 2306.514. Construction Requirements for Single Family Affordable Housing

§ 2306.514. CONSTRUCTION REQUIREMENTS FOR SINGLE FAMILY AFFORDABLE HOUSING.

(a) If a person is awarded state or federal funds by the State of Texas to construct single family affordable housing for individuals and families of low and very low income, the affordable housing identified on the person's funding application must be constructed so that:

(1) at least one entrance door, whether located at the front, side, or back of the building:

(A) is on an accessible route served by a ramp or no-step entrance; and

(B) has at least a standard 36-inch door;

(2) on the first floor of the building:
(A) each interior door is at least a standard 32-inch door, unless the door provides access only to a closet of less than 15 square feet in area;
(B) each hallway has a width of at least 36 inches and is level, with ramped or beveled changes at each door threshold;
(C) each bathroom wall is reinforced for potential installation of grab bars;
(D) each electrical panel or breaker box, light switch, or thermostat is not higher than 48 inches above the floor; and
(E) each electrical plug or other receptacle is at least 15 inches above the floor; and

(3) each breaker box is located inside the building on the first floor.
(A) A person who builds single family affordable housing to which this section applies may obtain a waiver from the department of the requirement described by Subsection (a)(1)(A) if the cost of grading the terrain to meet the requirement is prohibitively expensive.

(4) all exterior walls will be brick

Added by Acts 1999, 76th Leg., ch. 1581, § 1, eff. Sept. 1, 1999.
Last modified: August 10, 2007

B. 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. The content of fly ash in the concrete that are exposed to weather shall be controlled to the extent that no rust stains or dark spotting will appear year years after installation.

2. Roofing 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.

C. Drainage:

1. All rainwater shall be conveyed and drained away from every roof so as not to cause wetness or dampness in the structure. No roof drainage systems shall 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. If present, all rainwater draining devices such as gutters and downspouts shall be kept in a state of maintenance and repair.
4. Nowhere on the property shall there be standing water that causes a public health hazard. Run off shall not encroach on adjacent property to create a hazard or drainage issue.
5. If feasible, the collection of roof water is encouraged.

D. Windows, Exterior Doors and Egress (Including Cellar Hatchways):

1. Every window, exterior door, basement entry and cellar hatchway shall be tight fitting within their frames, be pest, 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:

   a. All exterior doors and windows shall be equipped with security locks.

   b. Every window sash shall be fully equipped with glass window panes which are without cracks or holes. Every window sash shall use Energy Star rated for Southern climate windows. 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. Energy Star rated for Southern climate.
   c. Storm doors, when installed, shall also be equipped with a self-closing device.
   d. 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 shall to be painted and sealed. Thresholds will be zero step entry clearance and sealed.
   e. Every exterior door shall be not less than thirty-two inches (2'8") in width and not less than six foot-six inches (6'-6") in height. At least one exterior door shall not be less than 36 inches wide and no less than 6'-8" high.

X. Minimum Space, Use and Location Requirements

A. No main floor habitable room in a dwelling shall have a ceiling height of less than eight feet (8'). At least one-half of the floor area of every habitable room located above the first floor shall have a minimum ceiling height of eight feet (8'). The floor area of any room where the ceiling height is less than four feet in height shall not be considered floor area in computing the total floor area of the room.

B. A minimum ceiling height of eight feet (8') is acceptable in bathrooms, toilet rooms, habitable basement space, and hallways.

C. All habitable rooms, except kitchens and/or kitchenettes, shall have a minimum width of seven feet (7').

D. Single bedrooms shall be at least 100 square feet in area with the room having a minimum dimension on one side of 8'-0". Bedrooms accessed off another bedroom shall not count as a separate room.

E. Living rooms shall be at least 80 square feet in area and large enough to comfortably contain a sofa, 2 armchairs and a television. Rooms of less than 50 square feet cannot be used as living rooms or bedrooms.

F. All bedrooms must have access to closets for storage of clothing. On existing housing, closets in adjoining hall areas are acceptable.

G. Lot Dimensions. Land use shall follow all City, State and Federal requirements.

1. All lot shall be a minimum of forty feet (40') by one hundred feet (100') or 4000 square feet in size. Exceptions will be reviewed on a case by case basis with approval by HCCD.

2. Lot use and structure will conform to neighborhood esthetics.

3. All new construction homes will have a minimum of 3 bedrooms. HCDD has discretion to require more bedrooms in design.

XI. Minimum Standards for Plumbing Systems

A. All dwelling plumbing 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 plumbing systems and plumbing system components shall be free of leaks. Any type of pipe allowed by the plumbing code shall be allowed in accordance with any local, county or state requirements having jurisdiction.

2. All plumbing system piping shall be of adequate size to deliver water to plumbing fixtures and to convey wastewater from plumbing fixtures (including proper slope of wastewater piping (as designed by the fixture manufacturer). CPVC or equivalent pipes shall be used for water distribution. Steel pipe shall be used for gas distribution.

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 is accepted 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.

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 shall have aerators that restrict water flow to about 2 GPM. Toilets shall only use 1.6 gallons per flush, or less.

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.

XII. Minimum Standards for Potable Water Supply

A. Every dwelling shall be connected to an approved (by the jurisdiction having authority) 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 siphon age. All outlets with hose threads (except those serving a clothes washing machine) shall have a vacuum breaker for use with the application. No water piping supplied by a private water supply system shall 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 city or state requirements having jurisdiction. All cisterns shall be drained and filled, and if applicable, in accordance with any city or state requirements having jurisdiction.

XIII. Minimum Standards for Connection to Sanitary Sewer

A. Every dwelling shall be connected to an approved (by the jurisdiction having authority) sanitary sewer system or properly operating septic a system.

XIV. Rights to Alter Design

The City of Houston reserves the right to alter plans to accommodate site specific design or elements to accommodate end user for accessibility or program requirements.