



***Texas Residential
Construction Commission***
Quality Construction for Texans

**LIMITED STATUTORY WARRANTY AND
BUILDING AND PERFORMANCE STANDARDS**

Effective June 1, 2005

Subchapter A. General Provisions.

§304.1. General Provisions.

(a) Scope.

This chapter describes the minimum standards of performance for the various elements or components of a home as described. Third-party inspectors appointed pursuant to §313.11 of this title will make recommendations for repair or replacement of those elements or components of a home that do not meet these standards during the applicable warranty period based upon the expected level of performance described in these standards for residential construction to which the standards apply. If an element or component of a home is not described particularly in this chapter, the element or component shall be constructed in accordance with any written agreement or, if there is no agreement, in accordance with usual and customary residential construction practices and the element or component shall perform for the purpose for which it is intended for the period of the applicable warranty. All home construction shall comply with applicable Codes.

(b) Effective Date.

The provisions of this chapter shall apply to all applicable residential construction projects that must be registered with the commission pursuant to chapter 303, subchapter B, of this title if the construction commences on or after June 1, 2005. Construction commences on the earlier of the date that the parties enter into an agreement for a transaction governed by the Act or the date that work commences.

(c) Definitions.

The following words and terms when used in this chapter shall have the following meanings, unless the context clearly indicates otherwise.

- (1) ***Adverse effect*** -- A tangible condition that substantially impairs the functionality of the habitable areas of the home.
- (2) ***Builder Responsibility*** -- A statement of the corrective action required by the builder to repair the construction defect and any other damage resulting from making the required repair. Parties may agree to an alternative remedy.
- (3) ***Code*** -- The International Residential Code or, if the context requires, the National Electrical Code.
- (4) ***Electrical Standard*** -- a standard contained in the version of the National Electrical Code (NEC), as follows:
 - (A) for residential construction located in a municipality or the extraterritorial jurisdiction of a municipality, the version of the NEC applicable to electrical aspects of residential construction in the municipality under Local Government Code §214.214 and which is

effective on the date of commencement of construction of the home;

- (B) for residential construction located in an unincorporated area not in the extraterritorial jurisdiction of a municipality, the version of the NEC applicable to electrical aspects of residential construction in the municipality that is the county seat of the county in which the construction is located and which is effective on the date of commencement of construction of the home; and
 - (C) for residential construction located in an unincorporated area in a county that does not contain an incorporated area, the version of the NEC that existed on May 1, 2001.
- (5) **Excessive or excessively** -- a quantity, amount or degree that exceeds that which is normal, usual or reasonable under the circumstance.
- (6) **Exclusion** – items, conditions or situations not warranted or not covered by a performance standard.
- (7) **Extreme Weather Condition(s)** -- weather conditions in excess of or outside of the scope of the design criteria stated or assumed for the circumstance or locale in the Code.
- (8) **The International Residential Code (IRC)** -- substantial compliance with the non-electrical standards contained in the version of *the IRC for One- and Two-Family Dwellings* published by the International Code Council (ICC) as follows:
- (A) for residential construction located in a municipality or the extraterritorial jurisdiction of a municipality, the version of the IRC applicable to non-electrical aspects of residential construction in the municipality under Local Government Code §214.212 and which is effective on the date of commencement of construction of the home;
 - (B) for residential construction located in an unincorporated area not in the extraterritorial jurisdiction of a municipality, the version of the IRC applicable to non-electrical aspects of residential construction in the municipality that is the county seat of the county in which the construction is located and which is effective on the date of commencement of construction of the home; and
 - (C) for residential construction located in an unincorporated area in a county that does not contain an incorporated area, the version of the IRC that existed on May 1, 2001.
- (9) **Habitable Area** -- a living space as defined in §301.1(14) of this title.
- (10) **Homeowner Responsibility** -- an action required by the homeowner for proper maintenance or care of the home or the element or component of

the home concerned. A homeowner's failure to substantially comply with a stated homeowner responsibility creates an exclusion to the warranty for the performance standard.

- (11) **Major Structural Components** – the load-bearing portions of the following elements of a home:
- (A) Footings and Foundations;
 - (B) Beams;
 - (C) Headers;
 - (D) Girders;
 - (E) Lintels;
 - (F) Columns (other than a column that is designed to be cosmetic);
 - (G) Load-Bearing portions of walls and partitions;
 - (H) Roof framing systems, to include ceiling framing;
 - (I) Floor systems; and
 - (J) Masonry Arches.
- (12) **Manufactured Product** -- a component of the home that was manufactured away from the site of the home and that was installed in the home without significant modifications to the product as manufactured. Manufactured products commonly installed in residential construction include but are not limited to dishwashers, cook tops, ovens, refrigerators, trash compactors, microwave ovens, kitchen vent fans, central air conditioning coils and compressors, furnace heat exchangers, water heaters, carpet, windows, doors, light fixtures, fireplace inserts, pipes and electrical wires. For purposes of this chapter, a manufactured product includes any component of a home for which the manufacturer provides a warranty, provided that the manufacturer permits transfer of the warranty to the homeowner.
- (13) **Original Construction Elevations** – actual elevations of the foundation taken prior to substantial completion of the residential construction project. Such actual elevations shall include elevations of porches and garages if those structures are part of a monolithic foundation. To establish original construction elevations, elevations shall be taken at a rate of approximately one elevation per 100 square feet showing a reference point, subject to obstructions. Each elevation shall describe the floor. If no such actual elevations are taken then the foundation for the habitable areas of the home are presumed to be level +/- 0.75 inch (three-quarters of an inch) over the length of the foundation.

- (14) **Performance Standard(s)** -- the standard(s) to which a home or an element or component of a home constructed as a part of new home construction or a material improvement or interior renovation must perform.
- (15) **Span** -- the distance between two supports.
- (16) **Substantial Completion** -- the later of:
 - (A) the stage of construction when a new home, addition, improvement, or alteration to an existing home is sufficiently complete that the home, addition, improvement or alteration can be occupied or used for its intended purpose; or
 - (B) if required, the issuance of a final certificate of inspection or occupancy by the applicable governmental authority.

(d) Resolving conflicts among standards.

When an inconsistency exists between the Code, manufacturer's instructions and specifications, the standard required by the United States Department of Housing and Urban Development for Federal Housing Administration or Veterans Administration programs, ANSI/ASHRAE Standard (62.2-2003) or the commission-adopted performance standards, the most restrictive requirement shall apply.

§304.2. General Provisions Applicable to all Residential Construction for New Homes, Material Improvements and Interior Renovations.

(a) Builder Responsibilities for Compliance with Performance Standards and Repair Obligations.

- (1) **Builder's Work.** The builder is responsible for all work performed under the direction of the builder for the period of the applicable warranty. The builder is only responsible for construction defects about which the builder receives notice on or before the second anniversary of the date of discovery of the alleged construction defect but in no event later than thirty days following the applicable warranty period stated in §304.3(a) of this subchapter, unless otherwise expressly stated herein.
- (2) **Repair of a construction defect.** Any repair shall be performed in a manner and using such materials and methods as recommended by the third-party inspector in accordance with the inspector's duties under §313.14 of this title and consistent with the Code, the performance standard or in accordance with §304.2(a). In the event a third-party inspector determines that a construction defect is present but the inspector does not make a recommendation as to the procedure or method of repair, then the repair shall be in accordance with usual and customary building practices or as agreed by the parties. If the third-party

inspector's report is appealed, then any repairs shall be performed in a manner and using such materials and methods as recommended by the appellate panel. If the appellate panel does not make a recommendation as to the procedure or method of repair, then the repair shall be made in accordance with the usual and customary business practices or as agreed by the parties.

- (3) Repair Condition. In connection with a repair of a construction defect, any repairs performed by the builder will include those components of the home that have to be removed or altered in order to repair the construction defect. Repair shall be made so that the condition is returned to its condition as it existed at the time immediately preceding the construction defect.
- (4) Finish. Surfaces altered incident to any repair will be finished or touched up to match the surrounding area as closely as practical. In connection with the repair of finish or surface material, such as paint, wallpaper, flooring or a hard surface, the builder will match the standard and grade as closely as reasonably possible. Builder will attempt to match the finish, but will not be responsible for discontinued patterns or materials, color variations or shade variations. When the surface finish material must be replaced and the original material has been discontinued, the builder is responsible for installing replacement material substantially similar in appearance to the original material.
- (5) Manufactured Products. The builder shall install all manufactured products in accordance with the manufacturer's instructions and specifications.
 - (A) The builder shall use only new manufactured products and parts unless otherwise agreed in writing by the parties. If the builder did not install a manufactured product in accordance with the manufacturer's specifications or use newly manufactured parts as required, the builder shall take such action as is necessary to bring the variance within the standard.
 - (B) The homeowner shall notify the builder of a known construction defect not later than the second anniversary of the date of discovery of the construction defect or not later than thirty days following the applicable warranty period provided in §304.3(a) of this subchapter.
- (6) Specialty Feature. Notwithstanding a performance standard stated in this chapter, a specialty feature, which is work performed or material supplied incident to certain design elements shown on the construction plans and specifications and agreed to in writing by the builder and the homeowner, shall be deemed to be compliant with the performance standards stated in this chapter so long as all items are compliant with the Code.

(b) Exceptions and Exclusions from Builder's Responsibilities.

- (1) The builder is not responsible for repair, loss or damage to a component or that part of a component of a home caused by or made worse by any of the following:
 - (A) Work performed or material supplied incident to construction, modification or repair to the home performed by anyone other than the builder or persons providing work or material at the direction of the builder.
 - (B) The negligence, improper maintenance, misuse, abuse, failure to follow manufacturer's recommendations, failure to take reasonable action to mitigate damage, failure to take reasonable action to maintain the residence or other action or inaction of anyone other than the builder or persons providing work or material at the direction of the builder.
 - (C) Failure of the homeowner to comply with the homeowner's responsibilities as set forth in subsection (c) of this section or as may be stated separately elsewhere in this chapter.
 - (D) Alterations to the grade of the soil that are not in compliance with the Code or applicable governmental regulations.
 - (E) Normal wear and tear or normal deterioration to any component of the home.
 - (F) Extreme weather conditions.
 - (G) Riot, civil commotion, war, terrorism, vandalism, aircraft, vehicle or boat.
 - (H) Fire, smoke or water damage unless such loss or damage is a direct result of a construction defect.
 - (I) Change in the underground water table that exerts pressure on, seeps, or leaks under the home, sidewalk, driveway, foundation or other structure or causes subsidence or sinkholes.
 - (J) Erosion or accretion of soils unless such loss or damage is a direct result of a construction defect.
 - (K) Insects, birds, rodents, vermin or other wild or domestic animals unless such loss or damage is a direct result of a construction defect.
 - (L) The quality and potability of water unless caused by a construction defect.

- (M) While the home is being used primarily for nonresidential purposes.
 - (N) Use for which the home or the component of the home was not designed.
 - (O) Use that exceeds the normal design loads prescribed by the Code or the engineer of record.
 - (P) Homeowner delay in reporting a known construction defect or failing to take reasonable action necessary to prevent further damage to the home.
 - (Q) For remodeling projects, improvements, alterations or additions to an existing residence where the performance standard cannot be achieved due to an existing condition.
 - (R) Abuse or misuse of a home component or manufactured product by anyone other than the builder or persons providing work or material at the direction of the builder.
- (2) No Actual Physical Damage. The builder shall not be responsible for any condition that does not result in actual physical damage to the home, including, but not limited to the presence of radon gas, formaldehyde or other pollutants or contaminants, or the presence or effect of mold, mildew, toxic material, or volatile organic compound, unless such condition is a direct result of a construction defect.

(c) Homeowner's Responsibilities.

- (1) Home Maintenance. Maintenance of the home and the lot on which the home is located are essential to the proper functioning of the home. The homeowner is responsible for maintenance of the home and the lot on which it is located. The homeowner is responsible for maintenance items described in this paragraph and those maintenance items identified separately in the performance standards set forth in this chapter. Additionally, the homeowner is responsible for ongoing maintenance responsibilities that affect the performance of the home but that may not be expressly stated in this chapter. Such ongoing maintenance responsibilities include, but are not limited to, periodic repainting and resealing of finished surfaces as necessary, caulking for the life of the home, regular maintenance of mechanical systems, regular replacement of HVAC filters, cleaning and proper preservation of grading around the home and drainage systems to allow for the proper drainage of water away from the home.
- (2) Manufactured Products. The homeowner shall use and perform periodic maintenance on all manufactured products according to the manufacturer's instructions and specifications. The misuse, abuse, neglect or other failure to follow manufacturer's specifications with regard to manufactured products may void the manufacturer's warranty.

- (3) Landscape Planting. The homeowner shall take measures to prevent landscaping materials or plants from contacting the exterior surface of the home and from interfering with the proper drainage of water away from the foundation. The homeowner should not improperly alter the proper drainage pattern or grade of the soil within ten feet of the foundation so that it negatively impacts the home's performance or fails to comply with the Code.
- (4) Humidity or Dryness in the Home. The homeowner should take the following actions to prevent excessive moisture accumulation by:
 - (A) properly using ventilation equipment;
 - (B) preventing excessive temperature fluctuation; and
 - (C) taking any other action reasonably necessary to avoid excessive moisture, dampness, humidity or condensation in the home that may lead to damage due to excessive moisture or dryness.
- (5) Proper Maintenance and Care of Home Components. The homeowner shall properly maintain each component of the home including proper cleaning, care and upkeep of the home. The homeowner shall use home components for the purposes for which they are intended and shall not damage, misuse or abuse home components.
- (6) Self-Help. Upon observation of a circumstance that may cause further damage to the home or a component of the home, the homeowner shall take reasonable action necessary to prevent further damage to the home.

§304.3. Limited Warranties.

- (a) ***Warranty periods.*** The minimum warranty periods for residential construction and residential improvements are:
 - (1) one year for workmanship and materials;
 - (2) two years for plumbing, electrical, heating, and air-conditioning delivery systems;
 - (3) ten years for major structural components of the home; and
 - (4) ten years for the warranty of habitability.
- (b) ***Manufactured Product Warranties.***

The builder will assign to the homeowner, without recourse, the manufacturer's warranty for all manufactured products that are covered by a manufacturer's warranty. Any rights that inure to the homeowner provided under a manufacturer's warranty are the obligation of the manufacturer. The builder does not assume any of the obligations of the manufacturer resulting from a manufacturer's warranty, but shall coordinate with the manufacturer, suppliers or

agents to achieve compliance with the performance standard. If the manufacturer does not comply with the manufacturer's warranty within a reasonable period of time, the builder will make the affected condition comply with the performance standard and seek redress from the manufacturer.

(c) **Workmanship and Materials Warranty and Performance Standards.**

Workmanship and materials in residential construction or residential improvements are warranted to perform to the performance standards that are set forth in this chapter for the minimum period established in subsection (a) paragraph (1) of this section, unless a greater period of warranty is agreed to by the parties.

(d) **Delivery Systems Warranty and Performance Standards.**

Plumbing, electrical, heating and air-conditioning delivery systems in residential construction and residential improvements shall be warranted to perform to the performance standards that are set forth in this chapter for the minimum period established in subsection (a) paragraph (2) of this section, unless a greater period of warranty is agreed to by the parties.

(e) **Structural Components Warranty and Performance Standards.**

Major structural components in residential construction and residential improvements shall be warranted to perform to the performance standards set forth in this chapter for the minimum period established in subsection (a) paragraph (3) of this section, unless a greater period of warranty is agreed to by the parties.

(f) **Warranty of Habitability.**

(1) All residential construction shall include a warranty of habitability for the minimum period established in subsection (a) paragraph (4) of this section, unless a greater period of warranty is agreed to by the parties.

(2) The warranty of habitability is a builder's obligation to construct a home or a home improvement that:

(A) is in compliance with the performance standards; and

(B) is safe, sanitary and fit for humans to inhabit.

(3) An alleged construction defect under the warranty of habitability must have a direct adverse affect on the habitable areas of the home. The warranty applies to an alleged construction defect that would otherwise have been covered by the limited warranties of §304.3(a)(1) and (2), but arose after the termination of those warranty periods, and the alleged construction defect must not have been discoverable by a reasonable prudent inspection or examination of the home or home improvement within the applicable warranty periods.

- (4) A request to participate in the State-sponsored Inspection and Dispute Resolution Process (SIRP) for breach of the warranty of habitability must be filed with the commission within two years following the discovery of the condition but not later than thirty days after the tenth anniversary of the effective date of the warranty as determined by subsection (g) of this section.

(g) **Effective Date of Warranties.**

- (1) Unless otherwise provided by a written agreement between the builder and the initial homeowner or by a manufacturer, a warranty period as described in this section for a new home begins on the earlier of the date of occupancy or transfer of title from the builder to the initial homeowner.
- (2) Unless otherwise provided by a written agreement between the builder and the homeowner, a warranty period as described in this section for an improvement other than a new home or for a partially built home, which by agreement between the homeowner and the builder, someone other than the builder will complete, begins on the date the improvement is substantially completed or the terms of the construction contract are substantially fulfilled.

(h) **Exclusive Warranties.**

- (1) The warranties established by the commission in this chapter supersede all implied warranties for new residential construction or residential improvements that commence on or after the effective date of this chapter.
- (2) The warranties established by the commission in this chapter are the only warranties applicable to new residential construction unless a particular warranty is created by a statute that expressly refers to residential construction or residential improvements or is created by any express warranty set forth in writing by the builder.

(i) **Waiver By Contract Prohibited.**

A contract between a builder and a homeowner may not waive or modify to lessen the warranty of habitability or the limited statutory warranties and building and performance standards adopted under this chapter.

Subchapter B. Performance Standards for Components of a Home Subject to a Minimum Warranty of One Year for Workmanship and Materials.

§304.10. Performance Standards for Foundations and Slabs.

(a) Performance Standards for Raised Floor Foundations or Crawl Spaces.

(1) A crawl space shall be graded and drained properly to prevent surface run-off from accumulating deeper than two inches in areas 36 inches or larger in diameter. Exterior drainage around perimeter crawl space wall shall not allow water to accumulate within ten feet of the foundation for more than 24 hours after a rain except in a sump that drains other areas.

(A) If the crawl space is not graded or does not drain in accordance with the performance standard stated in paragraph (1) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

(B) The homeowner shall not modify improperly the existing grade or allow water from an irrigation system to cause water to accumulate excessively under the foundation. The homeowner shall not allow landscape plantings to interfere with proper drainage away from the foundation. The homeowner shall not use the crawl space for storage of any kind.

(2) Water shall not enter through the basement or crawl space wall or seep through the basement floor.

(A) If water enters the basement or crawl space wall or seeps through the basement floor, the builder shall take such action as is necessary to bring the variance within the standard stated in paragraph (2) of this subsection.

(B) The homeowner shall not modify improperly the existing grade or allow water from an irrigation system to cause water to accumulate excessively near the foundation. The homeowner shall not allow landscape plantings to interfere with proper drainage away from the foundation.

(b) Performance Standards for Concrete Slab Foundations, excluding Finished Concrete Floors.

(1) Concrete floor slabs in living spaces that are not otherwise designed with a slope for drainage, such as a laundry room, shall not have excessive pits, depressions or unevenness equal to or exceeding 3/8 of an inch in any 32 inches and shall not have separations or cracks that equal or exceed 1/8 of an inch in width or 1/16 of an inch in vertical displacement. If a concrete floor slab in a living space fails to meet the standard stated

in this paragraph, the builder shall take such action as is necessary to bring the variance within that standard.

- (2) Concrete slabs shall not have protruding objects, such as a nail, rebar or wire mesh. If a concrete slab has a protruding object, the builder shall take such action as is necessary to bring the variance within the standard stated in this paragraph.
- (3) A separation in an expansion joint in a concrete slab shall not equal or exceed 1/4 of an inch vertically or one inch horizontally from an adjoining section. If an expansion joint in a concrete slab fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

(c) Performance Standards for Exterior Concrete including Patios,(Stem Walls, Driveways, Stairs or Walkways.

- (1) Concrete corners or edges shall not be damaged excessively due to construction activities. If a concrete corner or edge is damaged excessively, the builder shall take such action as is necessary to bring the variance within the standard stated in this paragraph.
- (2) A crack in exterior concrete shall not cause vertical displacement equal to or in excess of 1/4 of an inch or horizontal separation equal to or excess of 1/4 of an inch.
 - (A) If an exterior concrete slab is cracked, separated or displaced beyond the standard of performance stated in paragraph (2) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
 - (B) The homeowner shall not over-water surrounding soil or allow the surrounding soil to become excessively dry. The homeowner shall not allow heavy equipment to be placed on the concrete.
- (3) The finish on exterior concrete shall not be excessively smooth, so that the surface becomes slippery.
 - (A) If the finish on exterior concrete is excessively smooth so that the surface becomes slippery, the builder shall take such action as is necessary to bring the variance within the standard stated in paragraph (3) of this subsection.
 - (B) A concrete surface that has been designed to be smooth is excepted from this performance standard.
- (4) Exterior concrete shall not contain a protruding object, such as a nail, rebar or wire mesh. If an exterior concrete surface has a protruding object, the builder shall take such action as is necessary to bring the variance within the standard stated in this paragraph.

- (5) A separation in an expansion joint in an exterior concrete shall not equal or exceed 1/2 of an inch vertically from an adjoining section or one inch horizontally, including joint material. If an expansion joint fails to perform in accordance with the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (6) A separation in a control joint shall not equal or exceed 1/4 of an inch vertically or 1/2 of an inch horizontally from an adjoining section. If a control joint fails to perform in accordance with the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (7) Concrete stair steepness and dimensions, such as tread width, riser height, landing size and stairway width shall comply with the Code. If the steepness and dimensions of concrete stairs do not comply with the Code, the builder shall take such action as is necessary to bring the variance within the standard for Code compliance.
- (8) Handrails shall remain securely attached to concrete stairs. If handrails are not firmly attached to the concrete stairs, the builder shall take such steps necessary as to attach the rails securely.
- (9) Concrete stairs or stoops shall not settle or heave in an amount equal to or exceeding 3/8 of an inch. Concrete stairs or stoops shall not separate from the home in an amount equal to or exceeding one inch, including joint material. If the stairs or stoops settle or heave or separate from the home in an amount equal to or exceeding the standard above builder shall take such action as is necessary to bring the variance within the standard stated in this paragraph.
- (10) A driveway will not have a negative slope unless due to site conditions, the lot is below the road. If a driveway has a negative slope due to site conditions, it shall have swales or drains properly installed to prevent water from entering into the garage. If a driveway has a negative slope that allows water to enter the garage in normal weather conditions, the builder shall take such action as is necessary to bring the variance within the standard stated in this paragraph.
- (11) Concrete floor slabs in detached garages, carports or porte-cocheres shall not have excessive pits, depressions, deterioration or unevenness. Separations or cracks in these slabs shall not equal or exceed 3/16 of an inch in width, except at expansion joints, or 1/8 of an inch in vertical displacement. If a concrete floor slab in a detached garage, carport or porte-cochere does not meet the standards stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

§304.11. Performance Standards for Framing.

(a) Building and Performance Standard for Walls.

- (1) Walls shall not bow or have depressions that equal or exceed 1/4 of an inch out of line within any 32-inch horizontal measurement as measured from the center of the bow or depression or 1/2 of an inch within any eight-foot vertical measurement. If a wall does not meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (2) Walls shall be level, plumb and square to all adjoining openings or other walls within 3/8 of an inch in any 32-inch measurement. If a wall does not meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (3) A crack in a beam or a post shall not equal or exceed 1/2 of an inch in width at any point along the length of the crack. If a crack in the beam or post fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (4) A non-structural post or beam shall not have a warp or twist equal or exceeding one inch in eight-feet of length. Warping or twisting shall not damage beam pocket. If a non-structural post or beam fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (5) Exterior sheathing shall not delaminate or swell.
 - (A) If exterior sheathing delaminates or swells, the builder shall take such action as is necessary to bring the variance within the standard stated in paragraph (5) of this subsection.
 - (B) The homeowner shall not make penetrations in the exterior finish of a wall that allow moisture to come in contact with the exterior sheathing.
- (6) An exterior moisture barrier shall not allow an accumulation of moisture inside the barrier.
 - (A) If an exterior moisture barrier allows an accumulation of moisture inside the barrier, the builder shall take such action as is necessary to bring the variance within the standard stated in paragraph (6) of this subsection.
 - (B) The homeowner shall not make penetrations through the exterior moisture barrier that permit the introduction of moisture inside the barrier.

(b) **Performance Standards for Ceilings.**

A ceiling shall not bow or have depressions that equal or exceed 1/2 of an inch out of line within a 32-inch measurement as measured from the center of the bow or depression running parallel with a ceiling joist. If a ceiling has a bow or depression that is greater than the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

(c) **Performance Standards for Sub-floors.**

- (1) Under normal residential use, the floor shall not make excessive squeaking or popping sounds. If the floor makes excessive squeaking and popping sounds under normal residential use, the builder shall take such action as is necessary to bring the variance within the standard stated in this paragraph.
- (2) Sub-floors shall not delaminate or swell to the extent that it causes observable physical damage to the floor covering or visually affects the appearance of the floor covering. Exposed structural flooring, where the structural flooring is used as the finished flooring, is excluded from the standard stated in this paragraph. If a sub-floor delaminates or swells to the extent that it affects the flooring covering as stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (3) Sub-flooring shall not have excessive humps, ridges, depressions or slope within any room that equals or exceeds 3/8 of an inch in any 32-inch direction. If the sub-flooring fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

(d) **Performance Standards for Stairs.**

- (1) Stair steepness and dimensions such as tread width, riser height, landing size and stairway width, shall comply with the Code. If stair steepness and dimensions do not comply with the Code, the builder shall take such action as is necessary to bring the variance within the standard stated in this paragraph.
- (2) Under normal residential use, stairs shall not make excessive squeaking or popping sounds. If stairs make excessive squeaking and popping sounds under normal residential use, the builder shall take such action as is necessary to bring the variance within the standard stated in this paragraph.

§304.12. Performance Standards for Drywall.

- (a) A drywall surface shall not have a bow or depression that equals or exceeds 1/4 of an inch out of line within any 32-inch horizontal measurement as measured from the center of the bow or depression or 1/2 of an inch within any eight-foot vertical measurement. If a drywall

surface fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

- (b) A ceiling made of drywall shall not have bows or depressions that equal or exceed $\frac{1}{2}$ of an inch out of line within a 32-inch measurement as measured from the center of the bow or depression running parallel with a ceiling joist or within $\frac{1}{2}$ of an inch deviation from the plane of the ceiling within any eight-foot measurement. If a drywall ceiling fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (c) A drywall surface shall not have a crack such that any crack equals or exceeds $\frac{1}{32}$ of an inch in width at any point along the length of the crack. If a drywall surface has a crack that exceeds the standard in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (d) Crowning at a drywall joint shall not equal or exceed $\frac{1}{4}$ of an inch within a twelve-inch measurement centered over the drywall joint. If crowning at a drywall joint exceeds the standards stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard. Crowning occurs when a drywall joint is higher than the plane of the drywall board on each side.
- (e) A drywall surface shall not have surface imperfections such as blisters, cracked corner beads, seam lines, excess joint compound or trowel marks that are visible from a distance of six feet or more in normal light. If a drywall surface fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (f) A drywall surface shall not be out of level (horizontal), plumb (vertical) or square (perpendicular at a 90-degree angle) such that there are variations in those measurements to wall or surface edges at any opening, corner, sill, shelf, etc. shall not equal or exceed $\frac{3}{8}$ of an inch in any 32-inch measurement along the wall or surface.
 - (1) If a drywall surface fails to meet the standard stated in subsection (f) of this section, the builder shall take such action as is necessary to bring the variance within the standard.
 - (2) This standard shall not apply to remodeling projects where existing conditions do not permit the builder to achieve the performance standard. At or about the time of discovery of such a preexisting condition, a remodeler shall notify the homeowner, in writing, of any existing condition that prevents achievement of the standard.

- (g) Nails or screws shall not be visible in a drywall surface. If nails or screws are visible, the builder shall take such action as is necessary to bring the variance within the standard.

§304.13. Performance Standards for Insulation.

- (a) Insulation shall be installed in the walls, ceilings and floors of a home in accordance with the building plan and specifications and the Code. If the insulation in walls, ceilings or floors is not in accordance with the building plans and specifications and the Code, the builder shall take such action as is necessary to bring the variance within the standard stated in this subsection.
- (b) Blown insulation in the attic shall not displace or settle so that it reduces the R-value below manufacturer's specifications, the building plans and the Code. If the blown insulation in the attic reduces, settles or is displaced to the extent that the R-value is below the manufacturer's specifications, the building plans and Code, the builder shall take such action as is necessary to bring the variance within the standard stated in this subsection.
- (c) A gap equal to or in excess of 1/4 of an inch between insulation batts or a gap between insulation batts and framing members is not permitted. If a gap equal to or greater than 1/4 of an inch occurs between insulation batts or a gap occurs between an insulation batt and a framing member, the builder shall take such action as is necessary to bring the variance within the standard stated in this subsection.
- (d) Insulation shall not cover or block a soffit vent to the extent that it blocks the free flow of air. If the insulation covers or blocks the soffit vent, the builder shall take such action as is necessary to bring the variance within the standard stated in this subsection.

§304.14. Performance Standards for Exterior Siding and Trim.

(a) **Performance Standards for Exterior Siding.**

- (1) Exterior siding shall be equally spaced and properly aligned. Horizontal siding shall not equal or exceed 1/2 of an inch off parallel with the bottom course or 1/4 of an inch off parallel with the adjacent course from corner to corner. If siding is misaligned or unevenly spaced and fails to meet the performance standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (2) Siding shall not gap or bow. A siding end joint shall not have a gap that equals or exceeds 1/4 of an inch in width. Siding end joint gaps shall be caulked. A bow in siding shall not equal or exceed 3/8 of an inch out of line in a 32-inch measurement. If siding has gaps or bows that exceed the standards stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

- (3) Nails shall not protrude from the finished surface of siding but nail heads may be visible on some products where allowed by the manufacturer's specifications. If a nail protrudes from the finished surface of siding, the builder shall take such action as is necessary to bring the variance within the standard stated in this paragraph.
- (4) Siding shall not have a nail stain. If siding has a nail stain, the builder shall take such action as is necessary to bring the variance within the standard stated in this paragraph.
- (5) Siding and siding knots shall not become loose or fall off. If siding or siding knots become loose or fall off, the builder shall take such action as is necessary to bring the variance within the standard stated in this paragraph.
- (6) Siding shall not delaminate. If siding fails to comply with the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (7) Siding shall not cup in an amount equal to or exceeding 1/4 of an inch in a six-foot run. If siding fails to comply with the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (8) Siding shall not have cracks or splits that equal or exceed 1/8 of an inch in width. If siding fails to comply with the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

(b) **Performance Standards for Exterior Trim.**

- (1) A joint between two trim pieces shall not have a separation at the joint equal to or exceeding 1/4 of an inch in width and all trim joints shall be caulked. If there is a separation at a trim joint that fails to comply with the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (2) Exterior trim and eave block shall not warp in an amount equal to or exceeding 1/2 of an inch in an eight-foot run. If exterior trim or eave block warps in excess of the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (3) Exterior trim and eave block shall not cup in an amount equal to or in excess of a 1/4 of an inch in a six-foot run. If exterior trim or eave block cups in excess of the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (4) Exterior trim and eave block shall not have cracks or splits equal to or in excess of 1/8 of an inch in average width. If exterior trim or eave block has cracks in excess of the standard stated in this paragraph, the builder

shall take such action as is necessary to bring the variance within the standard.

- (5) Trim shall not have nails that completely protrude through the finished surface of the trim but nail heads may be visible on some products.
 - (A) If a nail protrudes from the finished surface of the trim, the builder shall take such action as is necessary to bring the variance within the standard within the standard stated in paragraph (5) of this subsection.
 - (B) Some products specify that the nails be flush with the trim surface. When these products are used, visible nail heads are not considered protruding nails as long as they are painted over.
- (6) Trim shall not have a nail stain. If trim has a nail stain, the builder shall take such action as is necessary to bring the variance within the standard stated in this paragraph.

§304.15. Performance Standards for Masonry including Brick, Block and Stone.

- (a) **A masonry wall shall not bow in an amount equal to or in excess of one inch when measured from the base to the top of the wall.**
 - (1) If a masonry wall fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
 - (2) The standard set forth in this subsection does not apply to natural stone products.
- (b) **A masonry unit or mortar shall not be broken or loose.** If a masonry unit or mortar fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (c) **A masonry mortar crack shall not equal or exceed 1/8 of an inch in width.** If a crack in masonry mortar fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (d) **A masonry unit or mortar shall not deteriorate.** If a masonry unit or mortar fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (e) **Masonry shall not have dirt, stain or debris on the surface due to construction activities.** If masonry fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (f) **A gap between masonry and adjacent material shall not equal or exceed 1/4 of an inch in average width and all such gaps shall be caulked.** If a gap

between masonry and adjacent material fails to meet the standards stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

(g) **Mortar shall not obstruct a functional opening, such as a vent, weep hole or plumbing cleanout.**

(1) If the mortar obstructs a functional opening, the builder shall take such action as is necessary to bring the variance within the standard stated in this subsection.

(2) The homeowner shall not put any material into weep holes. Weep holes are an integral part of the wall drainage system and must remain unobstructed.

§304.16. Performance Standards for Stucco.

(a) **Stucco surfaces shall not be excessively bowed, uneven, or wavy.**

(1) If a stucco surface fails to perform as stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

(2) This standard shall not apply to decorative finishes.

(b) **Stucco shall not be broken or loose.** If stucco is broken or loose, the builder shall take such action as is necessary to bring the variance within the standard stated in this subsection.

(c) **Stucco shall not have cracks that equal or exceed 1/8 of an inch in width at any point along the length of the crack.**

(1) If the stucco fails to perform as stated in subsection (c) of this section, the builder shall take such action as is necessary to bring the variance within the standard.

(2) The builder shall not be responsible for repairing cracks in stucco caused by the homeowner's actions, including the attachment of devices to the stucco surface, such as, but not limited to, patio covers, plant holders, awnings and hose racks.

(d) **Stucco shall not deteriorate excessively.**

(1) If the stucco deteriorates excessively, the builder shall take such action as is necessary to bring the variance within the standard.

(2) The homeowner shall not allow water from irrigation systems to contact stucco finishes excessively.

(e) **Stucco shall not have dirt, stain or debris on surface due to construction activities.** If the stucco fails to meet the standard stated in this subsection, the

builder shall take such action as is necessary to bring the variance within the standard.

- (f) **Stucco surfaces shall not have imperfections that are visible from a distance of six feet under normal lighting conditions that disrupt the overall uniformity of the finished pattern.** If the stucco fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (g) **The lath shall not be exposed.** If the lath is exposed, the builder shall take such action as is necessary to bring the variance within the standard stated in this subsection.
- (h) **A separation between the stucco joints shall not equal or exceed 1/16 of an inch in width.** If a separation between the stucco joints occurs in excess of the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (i) **A separation between a stucco surface and adjacent material shall not equal or exceed 1/4 of an inch in width and all separations shall be caulked.** If a separation occurs between a stucco surface and adjacent material occurs in excess of the standard stated in this subsection or if such a separation is not caulked, the builder shall take such action as is necessary to bring the variance within the standard.
- (j) **Stucco shall not obstruct a functional opening, such as a vent, weep hole or plumbing cleanout.** If stucco obstructs a functional opening, the builder shall take such action as is necessary to bring the variance within the standard stated in this subsection.
- (k) **Stucco screed shall have a minimum clearance of at least 4 inches above the soil or landscape surface and at least 2 inches above any paved surface.** If the stucco screed clearance does not meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (l) **Exterior Installation Finish Systems (EIFS) stucco screed shall clear any paved or unpaved surface by 6 inches.** If the EIFS stucco screed clearance does not meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

§304.17. Performance Standards for Roofs.

- (a) **Flashing shall prevent water penetration.**
 - (1) If the flashing fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

- (2) The builder shall not be responsible for leaks caused by extreme weather.
- (b) **The roof shall not leak.**
- (1) If the roof fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (2) The builder shall not be responsible for leaks caused by extreme weather.
- (3) The homeowner shall perform periodic maintenance to prevent leaks due to build-up of debris, snow or ice. The homeowner shall take such action as is necessary to prevent downspouts and gutters from becoming clogged.
- (c) **A vent, louver or other installed attic opening shall not leak.**
- (1) If a vent, louver or other installed attic opening fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (2) The builder shall not be responsible for leaks caused by extreme weather.
- (d) **A gutter or downspout shall not leak or retain standing water.** After cessation of rainfall, standing water in an unobstructed gutter shall not equal or exceed 1/2 of an inch in depth.
- (1) If a gutter or downspout fails to meet the standard in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (2) The builder shall not be responsible for leaks caused by extreme weather.
- (3) The homeowner shall maintain and clean gutters and downspouts to prevent buildup of debris or other obstructions.
- (e) **Shingles, tiles, metal or other roofing materials shall not become loose or fall off in wind speeds less than those set forth in the manufacturer's specifications.** If the shingles, tiles, metal or other roofing materials fail to meet the standard in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (f) **A skylight shall not leak.** If a skylight fails to meet the standard in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (g) **Water shall drain from a built-up roof within two hours after cessation of rainfall.** The standard does not require that the roof dry completely within the time period. If the built-up roof fails to meet the standard in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

- (h) **A roof tile shall not be cracked or broken.** No shingle shall be broken so that it detracts from the overall appearance of the home. If roof tiles or shingles fail to meet the standard in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (i) **A pipe, vent, fireplace or other object designed to penetrate the roof shall not be located within the area of roof valley centerline without proper “cricketing” or other Code-approved water diversion methods.** If a pipe, vent, fireplace or other object designed to penetrate the roof is not correctly located as provided in the performance standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (j) **The exterior moisture barrier of the roof shall not allow moisture penetration.**
 - (1) If the exterior moisture barrier fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
 - (2) The homeowner shall not make penetrations through exterior moisture barrier of the roof.

§304.18. Performance Standards for Doors and Windows.

- (a) **Performance Standards for Both Doors and Windows.**
 - (1) When closed, a door or window shall not allow excessive infiltration of air or dust. If a door or window fails to meet the performance standard stated in this paragraph the builder shall take such action as is necessary to bring the variance within the standard.
 - (2) When closed, a door or window shall not allow excessive accumulation of moisture inside the door or window.
 - (A) If a door or window fails to meet the performance standard stated in paragraph (2) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
 - (B) The homeowner shall keep weep holes on windows and doors free of dirt buildup and debris, thereby allowing water to drain properly.
 - (C) Most door and window assemblies are designed to open, close and weep moisture--allow condensation or minor penetration by the elements to drain outside.
 - (3) Glass in doors and windows shall not be broken due to improper installation or construction activities. If glass in a window or door is broken

due to improper installation or construction activities, the builder shall take such action as is necessary to bring the variance within the standard stated in this paragraph.

- (4) A screen in a door or window shall fit properly and shall not be torn or damaged due to construction activities. A screen shall not have a gap equal to or exceeding 1/4 of an inch between the screen frame and the window frame. If a screen in a door or window fails to meet the performance standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (5) There shall be no condensation between window and door panes in a sealed insulated glass unit.
 - (A) If a window or door fails to meet the performance standard stated in paragraph (5) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
 - (B) The homeowner shall not apply a tinted window film or coating to window or door panes in sealed insulated glass units.
- (6) A door or window latch or lock shall close securely and shall not be loose or rattle. If a door, window latch or lock fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (7) A door or window shall operate easily and smoothly and shall not require excessive pressure when opening or closing. If a door or window fails to meet the performance standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (8) A door or window shall be painted or stained according to the manufacturers' specifications. If a window or door fails to meet the performance standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

(b) **Performance Standards for Windows.**

A double hung window shall not move more than two inches when put in an open position. If a window fails to meet the performance standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

(c) **Performance Standards for Doors.**

- (1) A sliding door and door screen shall stay on track.
 - (A) If a sliding door or door screen fails to perform to the standard stated in paragraph (1) of this subsection, builder shall take such action as is necessary to bring the variance within the standard.

- (B) The homeowner shall clean and lubricate sliding door or door screen hardware as necessary.
 - (2) The spacing between an interior door bottom and original floor covering, except closet doors, shall not exceed 1.5 inches and shall be at least 1/2 of an inch. The spacing between an interior closet door bottom and original floor covering shall not exceed two inches and shall be at least 1/2 of an inch. If the spacing between a door bottom and the original floor covering does not meet the performance standards stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
 - (3) A door shall not delaminate. If a door becomes delaminated, a builder shall take such action as is necessary to bring the variance within the standard stated in this paragraph.
 - (4) A door panel shall not split so that light from the other side is visible. If a door panel fails to meet the performance standards stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
 - (5) A door shall open and close without binding. If a door fails to perform in accordance with the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
 - (6) A door shall not warp to the extent that it becomes inoperable. A warp in a door panel shall not equal or exceed 1/4 of an inch from original dimension measured vertically, horizontally or diagonally from corner to corner. If a door fails to perform in accordance with the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
 - (7) A storm door shall open and close properly and shall fit properly. If a door fails to perform in accordance with the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
 - (8) When a door is placed in an open position, it shall remain in the position it was placed, unless the movement is caused by airflow. If a door fails to perform in accordance with the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
 - (9) A metal door shall not be dented or scratched due to construction activities. If a metal door fails to comply with the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (d) **Performance Standards for Garage Doors.**

- (1) A metal garage door shall not be dented or scratched due to construction activities. If a metal garage door fails to comply with the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (2) A garage door opener, if provided, shall operate properly in accordance with manufacturer's specifications.
 - (A) If a garage door opener fails to perform in accordance with the standard stated in paragraph (2) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
 - (B) A homeowner shall maintain tracks, rollers and chains and shall not block or bump sensors to electric garage door openers.
- (3) A garage door shall not allow excessive water to enter the garage and the gap around the garage door shall not equal or exceed 1/2 of an inch in width. If a garage door allows excessive water to enter the garage or the gap around the garage door equals or exceeds 1/2 of an inch, the builder shall take such action as is necessary to bring the variance within the standard stated in this paragraph.
- (4) A garage door spring shall operate properly and shall not lose appreciable tension, break or be undersized. If a garage door spring fails to perform in accordance with the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (5) A garage door shall remain in place at any open position, operate smoothly and not be off track. If a garage door fails to perform in accordance with the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

§304.19. Performance Standards for Interior Flooring.

(a) Performance Standards for Carpet, Vinyl Flooring and Wood Flooring.

Performance standards for ceramic tile, flagstone, marble, granite, slate, quarry tile other hard surface floors, except finished concrete floors, are located in §304.20 of this subchapter.

(b) Performance Standards for Carpet.

- (1) Carpet shall not wrinkle and shall remain tight, lay flat and be securely fastened. If the carpet fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

- (2) Carpet seams shall be smooth without a gap or overlap. If the carpet fails to meet the standards stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (3) Carpet shall not be stained or spotted due to construction activities. If the carpet fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

(c) **Performance Standards for Finished Concrete Floor.**

- (1) A finished slab, located in a living space that is not otherwise designed for drainage, shall not have pits, depressions or unevenness that equals or exceeds 3/8 of an inch in any 32 inches.
 - (A) If a finished concrete slab in a living space fails to meet the standard stated in paragraph (1) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
 - (B) Finished concrete slabs in living spaces that are designed for drainage, such as a laundry room, are excepted from the standards stated in paragraph (1) of this subsection.
- (2) Finished concrete slabs in living spaces shall not have separations, including joints, and cracks that equal or exceed 1/8 of an inch in width or 1/16 of an inch in vertical displacement. If a finished concrete slab in a living space fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

(d) **Performance Standards for Wood Flooring.**

- (1) Wood flooring shall not have excessive humps, depressions or unevenness that equals or exceeds 3/8 of an inch in any 32-inch direction within any room. If wood flooring fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (2) Wood flooring shall remain securely attached to the foundation or sub-floor unless the wood flooring is designed to be installed without nails, glue, adhesives or fasteners. If wood flooring fails to meet the standards of this, the builder shall take such action as is necessary to bring the variance within the standard.
- (3) Wood flooring shall not have open joints and separations that equal or exceed 1/8 of an inch.
 - (A) If wood flooring fails to meet the standards of paragraph (3) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

- (B) These standards do not apply to non-hardwood species that contain greater moisture and may shrink after installation or structural floors that are designed to serve as the finished floor. If the floor is designed as a structural finish floor, the builder must provide a written explanation of the characteristics of that floor to the homeowner prior to the execution of the contract.
 - (4) Strips of floorboards shall not cup in an amount that equals or exceeds 1/16 of an inch in height in a three-inch distance when measured perpendicular to the length of the board.
 - (A) If the wood flooring fails to meet the standard stated in paragraph (4) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
 - (B) This standard does not apply to non-hardwood species that typically shrink after installation or structural floors that are designed to serve as the finished floor. If the floor is designed as a structural finish floor, the builder must provide a written explanation of the characteristics of that floor to the homeowner.
 - (5) Unless installed as a specialty feature, wood flooring shall not have excessive shade changes or discoloration due to the construction activities of the builder. If the wood floor fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
 - (6) Unless installed as a specialty feature, wood flooring shall not be stained, spotted or scratched due to construction activities of the builder. If wood flooring fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (e) **Performance Standards for Vinyl Flooring.**
- (1) Vinyl flooring shall be installed square to the most visible wall and shall not vary by 1/4 of an inch in any six-foot run. If the vinyl flooring fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
 - (2) The seam alignment in vinyl flooring shall not vary such that the pattern is out of alignment in an amount that equals or exceeds 1/8 of an inch. If the vinyl flooring fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
 - (3) Vinyl flooring shall remain securely attached to the foundation or sub-floor. If the vinyl flooring fails to meet the standard stated in this

paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

- (4) A vinyl floor shall not have a depression that equals or exceeds 1/2 of an inch in any six-foot run. If a vinyl floor has a depression that exceeds the standard stated in this paragraph and the depression is due to construction activities, the builder shall take such action as is necessary to bring the variance within the standard.
- (5) A vinyl floor shall not have a ridge that equals or exceeds 1/2 of an inch when measured as provided in this paragraph. The ridge measurement shall be made by measuring the gap created when a six-foot straight edge is placed tightly three inches on each side of the defect and the gap is measured between the floor and the straight edge at the other end. If a vinyl floor has a ridge that fails to comply with the standard stated in this paragraph and the ridge is due to construction activities, the builder shall take such action as is necessary to bring the variance within the standard.
- (6) Vinyl floor shall not be discolored, stained or spotted due to the construction activities of the builder. If the vinyl floor fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (7) Vinyl flooring shall not be scratched, gouged, cut or torn due to construction activities. If the vinyl flooring fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (8) Debris, sub-floor seams, nails and/or screws shall not be detectable under the vinyl floor from a distance of three feet or more in normal light. If the vinyl flooring fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (9) Sub-flooring shall not cause vinyl flooring to rupture. If vinyl flooring fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (10) A seam in vinyl flooring shall not have a separation that equals or exceeds 1/16 of an inch in width. Where dissimilar materials abut, there shall not be a gap equal to or greater than 1/8 of an inch. If vinyl flooring fails to meet the standards stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

§304.20. Performance Standards for Hard Surfaces, including Ceramic Tile, Flagstone, Marble, Granite, Slate, Quarry Tile, Finished Concrete or Other Hard Surfaces.

- (a) **Performance Standards for Hard Surfaces Generally.**

- (1) A hard surface shall not break or crack due to construction activities. If a hard surface is cracked or broken due to construction activities, the builder shall take such action as is necessary to bring the variance within the standard.
- (2) A hard surface shall remain secured to the substrate. If a hard surface fails to perform in accordance with the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (3) A surface imperfection in floor hard surface shall not be visible from a distance of three feet or more in normal light. A surface imperfection in non-floor hard surface shall not be visible from a distance of two feet or more in normal light. If a hard surface fails to meet the standards stated in this paragraph due to construction activities, the builder shall take such action as is necessary to bring the variance within the standard.
- (4) Color variations between field hard surfaces and trim hard surfaces should not vary excessively due to construction activities.
 - (A) If color variations between field and trim hard surfaces are excessive and are due to construction activities, the builder shall take such action as is necessary to bring the variance within the standard stated in paragraph (4) of this subsection.
 - (B) Natural products such as flagstone, marble, granite, slate and other quarry tile will have color variation.
- (5) Hard surface areas shall not leak. If a hard surface area fails to perform in accordance with the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (6) The surfaces of two adjacent hard surfaces shall not vary in an amount equal to or exceeding 1/16 of an inch displacement at a joint, with the exception of transition trim pieces. If a joint between two hard surfaces fails to meet the performance standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (7) Hard surface layout or grout line shall not be excessively irregular.
 - (A) If hard surface layouts or grout lines fail to meet the performance standard stated in paragraph (7) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
 - (B) Natural products such as flagstone, marble, granite, slate, and other quarry tile will have size variations that may create irregular layouts or grout lines.
- (8) Hard surface countertops shall be level to within 1/4 of an inch in any six-foot measurement. If a hard surface countertop is not level to within the

standards stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

(b) Performance Standards for Grout.

- (1) Grout shall not crack or deteriorate. If grout fails to meet the performance standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (2) Grout shall not change shade or discolor excessively due to construction activities. If grout fails to perform to the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

(c) Performance Standards for Concrete Countertops.

- (1) A concrete countertop shall not have excessive pits, depressions, or unevenness that equal or exceed 1/8 of an inch in any 32-inch measurement. If a concrete countertop fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (2) A concrete countertop shall not have separations or cracks equal to or exceeding 1/16 of an inch in width or 1/64 of an inch in vertical displacement. If a concrete countertop fails to meet the standards stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (3) A finished concrete countertop shall not be stained, spotted or scratched due to construction activities. If a concrete countertop fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (4) A concrete countertop shall not have a chipped edge that extends beyond 1/16 of an inch from the edge of the countertop due to construction activities. If a concrete countertop fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (5) A concrete countertop shall not change shade or discolor excessively due to construction activities. If a concrete countertop fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

§304.21. Performance Standards for Painting, Stain and Wall Coverings.

(a) Performance Standards for Caulking. Interior caulking shall not deteriorate or crack excessively.

If the interior caulking fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

(b) **Performance Standards for Painting and Stain.**

- (1) Paint or stain shall not have excessive color, shade or sheen variation.
 - (A) If the paint or stain fails to meet the standard stated in paragraph (1) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
 - (B) This standard shall not apply to stained woodwork.
- (2) Paint shall cover all intended surfaces so that unpainted areas shall not show through paint when viewed from a distance of six feet in normal light. If the painting fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (3) Interior paint or stain shall not deteriorate. If paint or stain fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (4) Exterior paint or stain shall not deteriorate excessively. If paint or stain fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (5) Paint over-spray shall not exist on any surface for which it was not intended. If the paint is sprayed onto a surface for which it was not intended, the builder shall take such action as is necessary to bring the variance within the standard stated in this paragraph.
- (6) Interior varnish, polyurethane or lacquer finish shall not deteriorate. If an interior finish fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard. If an interior finish fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (7) Exterior varnish, polyurethane or lacquer finishes shall not deteriorate excessively.
 - (A) If an exterior finish fails to meet the standard stated in paragraph (7) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
 - (B) Exterior varnish, polyurethane or lacquer finishes that are subject to direct sunlight are excluded from this standard.
- (8) Interior painted, varnished or finished surface shall not be scratched, dented, nicked or gouged due to construction activities. If interior painted, varnished or finished surfaces fail to meet the standard stated in this

paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

- (9) A paint product shall perform as represented by the manufacturer to meet manufacturer's specifications for washability and/or scrubability. If the paint product fails to meet the standards of this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

(c) **Performance Standards for Wall Coverings.**

- (1) A wall covering shall be properly secured to the wall surface and shall not peel or bubble. If a wall covering fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (2) Pattern repeats in wall coverings shall match. Wall coverings shall be installed square to the most visible wall. Pattern repeats shall not vary in an amount equal to or exceeding 1/4 of an inch in any six-foot run. If the wall covering fails to meet the standards stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (3) A wall covering seam shall not separate or gap. If the wall covering fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (4) Lumps or ridges in a wall covering shall not be detectable from a distance of six feet or more in normal light. If the appearance of the wall covering fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (5) Wall coverings shall not be discolored, stained or spotted due to construction activities. If a wall covering fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (6) Wall coverings shall not be scratched, gouged, cut or torn due to construction activities. If a wall covering fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (7) Wall coverings shall perform as represented by the manufacturer to meet manufacturer's specifications for washability and/or scrubability. If a wall covering fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

§304.22. Performance Standards for Plumbing.

(a) **Performance Standards for Plumbing Accessories.**

(1) A fixture surface shall not have a chip, crack, dent or scratch due to construction activities. If a fixture fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

(2) A fixture shall not have tarnish, blemishes or stains unless installed as a specialty feature.

(A) If a fixture fails to meet the standard stated in paragraph (2) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

(B) Fixture finishes that are tarnished, blemished or stained due to high iron, manganese or other mineral content in water are excluded from this standard.

(3) A fixture or fixture fastener shall not corrode.

(A) If a fixture or fixture fastener fails to meet the standards of paragraph (3) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

(B) A builder is not responsible for corrosion caused by factors beyond the manufacturer's or the builder's control, including the homeowner's use of corrosive chemicals or cleaners or corrosion caused by water content.

(4) A decorative gas appliance shall be installed in accordance with manufacturer's specifications and when so installed shall function in accordance with manufacturer's representations. If a decorative gas appliance fails to meet the standards stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

(5) Fixtures shall be secure and not loose.

(A) If a fixture fails to meet the standard stated in paragraph (5) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

(B) The homeowner shall not exert excessive force on a fixture.

(6) A fixture stopper shall operate properly and shall retain water in accordance with the manufacturer's specifications. If a fixture stopper fails to meet the standards stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

- (7) The toilet equipment shall not allow water to run continuously.
- (A) If the toilet equipment fails to meet the standard stated in paragraph (7) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (B) If toilet equipment allows water to run continuously, the homeowner shall shut off the water supply or take such action as is necessary to avoid damage to the home.
- (8) A toilet shall be installed and perform in accordance with the manufacturer's specifications.
- (A) If a toilet fails to meet the standard stated in paragraph (8) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (B) In the event of water spillage, the homeowner shall shut off the water supply and take such action as is necessary to avoid damage to the home.
- (9) A tub or shower pan shall not crack. If a tub or shower pan fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (10) A tub or shower pan shall not squeak excessively. If a tub or shower pan fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (11) A water heater shall be installed and secured according to the manufacturer's specifications and the Code. If a water heater fails to meet the standards stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (12) A waste disposal unit shall be installed and operate according to the manufacturer's specifications. If a waste disposal unit fails to meet the standards stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (13) A faucet or fixture shall not drip or leak. This standard does not include drips or leaks due to debris or minerals from the water source, unless it is due to construction activities. If a faucet or fixture fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (14) A sump pump shall be installed in accordance with the manufacturer's specifications and shall operate properly when so installed. If a sump pump fails to meet the standards stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

(b) **Performance Standards for Pipes and Vents.**

- (1) A sewer gas odor originating from the plumbing system shall not be detectable inside the home under conditions of normal residential use.
 - (A) If a sewer gas odor is detected inside the home under conditions of normal residential use, the builder shall take such action as is necessary to bring the variance within the standard.
 - (B) The homeowner shall keep plumbing traps filled with water.
- (2) A vent stack shall be free from blockage and shall allow odor to exit the home. If a vent stack fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (3) A water pipe shall not make excessive noise such as banging or hammering repeatedly.
 - (A) If a water pipe fails to meet the standard stated in paragraph (3) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
 - (B) A water pipe subject to expansion or contraction of the pipe as warm or cool water flows through the pipe may cause a “ticking” sound temporarily. The standard stated in paragraph (3) of this subsection does not require a builder to remove all noise attributable to water flow and pipe expansion.

§304.23. Performance Standards for Heating, Cooling and Ventilation.

(a) **Performance Standards for Heating and Cooling.**

- (1) A condensation line shall not be obstructed due to construction activities.
 - (A) If a condensation line fails to meet the standard stated in paragraph (1) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
 - (B) The homeowner shall periodically check for the free flow of condensate (water) from the line and clear the line when necessary.
- (2) A drip pan and drain line shall be installed under a horizontal air handler as per the Code.

- (A) If a drip pan and drain line fails to meet the standard stated in paragraph (2) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (B) The homeowner shall periodically check for the free flow of condensate (water) from the line and clear the line when necessary.
- (3) Insulation shall completely encase the refrigerant line according to Code.
 - (A) If the refrigerant line insulation fails to meet the standard stated in paragraph (3) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
 - (B) The homeowner shall ensure that insulation on the refrigerant line is not damaged or cut due to home maintenance or landscape work.
- (4) An exterior compressor unit shall be installed on a stable pad that supports the unit and is no more than one inch out of level. The bottom of the exterior compressor unit support shall not be below ground level.
 - (A) If an exterior compressor unit pad or support fails to meet the standards stated in paragraph (4) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
 - (B) The homeowner shall ensure that settlement of the exterior compressor unit pad does not occur due to home maintenance, landscape work or excessive water from irrigation.

(b) **Performance Standards for Venting.**

- (1) An appliance shall be vented according to the manufacturer's specifications. If an appliance is not vented in accordance with the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (2) Back draft dampers shall be installed and function according to the manufacturer's specifications. If back draft dampers fail to meet the standards stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

(c) **Performance Standards for Ductwork. Ductwork shall not make excessive noise.**

- (1) If the ductwork fails to meet the standard stated in of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

- (2) The flow of air, including its velocity, or the expansion of ductwork from heating and cooling may cause "ticking" or "crackling" sounds.
- (3) The homeowner shall not place any object on the ductwork.

§304.24. Performance Standards for Electrical Systems and Fixtures.

- (a) Excessive air infiltration shall not occur around electrical system components or fixtures. If electrical system components or fixtures fail to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (b) A fixture or trim plate shall not be chipped, cracked, dented or scratched due to construction activities. If a fixture or trim plate fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (c) A fixture or trim plate finish shall not be tarnished, blemished or stained due to construction activities. If a fixture or trim fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (d) A fixture, electrical box or trim plate shall be installed in accordance with the Code and shall be plumb and level. If a fixture, electrical box or trim plate fails to meet the standards stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (e) Fixtures, such as lights, fans and appliances shall operate properly when installed in accordance with the manufacturer's specifications. The builder shall take such action as is necessary to bring the variance within the standard stated in this subsection.
- (f) A smoke detector shall operate according to the manufacturer's specifications and shall be installed in accordance with the Code. If a smoke detector fails to meet the standards stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (g) An exhaust fan shall operate within the manufacturer's specified noise level. If an exhaust fan fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

§304.25. Performance Standards for Interior Trim.

- (a) Performance Standards for Trim.
 - (1) An interior trim joint separation shall not equal or exceed 1/8 of an inch in width and all joints shall be caulked or puttied. If an interior trim joint fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

- (2) The interior trim shall not have surface damage, such as scratches, chips, dents, gouges, splits, cracks, warping or cupping that is visible from a distance of six feet or more in normal light due to construction activities. If the interior trim fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
 - (3) A hammer mark on trim shall not be visible from a distance of six feet or more when viewed in normal light. If the interior trim fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
 - (4) A nail or nail hole in interior trim shall not be visible from a distance of six feet or more when viewed in normal light. If the interior trim fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (b) **Performance Standards for Shelving.** Shelving, rods and end supports shall be installed in accordance with the measurements stated in this subsection. The length of a closet rod shall not be shorter than the actual distance between the end supports in an amount equal to or exceeding 1/4 of an inch and shall be supported by stud-mounted brackets no more than four feet apart. The length of a shelf shall not be shorter than the actual distance between the supporting walls by an amount equal to or exceeding 1/4 of an inch and shall be supported by stud-mounted brackets no more than four feet apart. End supports shall be securely mounted. If the closet rods, shelving or end supports fail to meet the standards stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

§304.26. Performance Standards for Mirrors, Interior Glass and Shower Doors.

- (a) A mirror, interior glass or shower door shall not be loose and shall be securely mounted or attached to the supporting surface. Fixtures, such as towel bars or door handles, shall be securely mounted. If a mirror, interior glass, shower door, fixture or component fails to meet the standards stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (b) A mirror, interior glass or shower door shall not be damaged due to construction activities. If a mirror, interior glass or shower door fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (c) A shower door shall not leak. If a shower door fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (d) Imperfections in a mirror or shower door shall not be visible from a distance of two feet or more when viewed in normal light. If a mirror or shower door fails to

meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

- (e) When opening and closing, a shower door shall operate easily and smoothly without requiring excessive pressure. If a shower door fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

§304.27. Performance Standards for Hardware and Ironwork.

(a) Performance Standards for Hardware.

- (1) Hardware finishes shall not be tarnished, blemished, corroded or stained due to construction activities, unless the finish is installed as a specialty feature.

- (A) If the hardware finish fails to meet the standard stated in paragraph (1) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

- (B) The builder is not responsible for tarnished, blemished, or stained hardware finishes that have been damaged by factors that are beyond the manufacturer's or the builder's control such as the homeowner's use of abrasive pads or cleaners, harsh chemicals, alcohol, organic solvents or deterioration caused by exposure to outdoor elements such as salt air or humidity.

- (2) Hardware shall function properly, without catching, binding or requiring excessive force to operate. If hardware fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

- (3) Hardware shall not be scratched, chipped, cracked or dented due to construction activities. If hardware fails to meet the standards stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

- (4) Hardware shall be installed securely and shall not be loose.

- (A) If hardware fails to meet the standards stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

- (B) The homeowner shall not exert excessive force on hardware.

(b) Performance Standards for Interior Ironwork.

- (1) Interior ironwork shall not rust.

- (2) If interior ironwork fails to meet the standard stated in paragraph (1) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (3) The builder is not responsible for ironwork finishes that rust due to factors that are beyond the manufacturer's or the builder's control such as the homeowner's use of abrasive pads or cleaners, harsh chemicals, alcohol, organic solvents or deterioration caused by exposure to humidity.

§304.28. Performance Standards for Countertops and Backsplashes.

(a) Performance Standards for Countertops and Backsplashes Generally.

- (1) A countertop or backsplash shall be secured to substrate in accordance with manufacturer's specifications. If countertop or backsplash materials are not secured to the substrate in accordance with the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (2) For non-laminate countertops and backsplashes, the joints between countertop surfaces, between the countertop surface and the backsplash or side-splash and between adjoining backsplash panels may be visible, but shall not separate. If joints between non-laminate surfaces fail to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (3) Countertops shall be level to within 1/4 of an inch in any six-foot measurement. If a countertop surface fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (4) A countertop surface or edge shall not be damaged, broken, chipped or cracked due to construction activities. If a countertop surface or edge fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (5) A countertop shall not bow or warp in an amount equal to or exceeding 1/16 of an inch per lineal foot. If a countertop fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

(b) Performance Standards for Laminate Countertops and Backsplashes.

- (1) Laminate countertops and backsplashes shall not delaminate and shall remain securely attached to the substrate. Delamination is the separation of the finish surface veneer from the substrate material. If a countertop fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

- (2) A seam in a laminate countertop or backsplash may be visible but shall not be separated or displaced. If a laminate countertop or backsplash fails to meet the standard stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.
- (3) A surface imperfection in a laminate countertop or a backsplash shall not be visible from a distance of three feet or more when viewed in normal light due to construction activities. If a laminate surface fails to meet the standards stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

§304.29. Performance Standards for Fireplaces.

- (a) **A refractory panel shall not crack or separate.**
 - (1) If the fireplace refractory panel fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
 - (2) The homeowner shall not use synthetic logs or other materials if not approved by the manufacturer.
- (b) **A fireplace door shall operate properly.** Fireplace doors shall meet evenly and shall not be out of alignment from one another in an amount equal to or exceeding 1/8 of an inch in any direction. If a fireplace door fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (c) **A fireplace shall not have a gas leak.** If a fireplace has a gas leak, the builder shall take such action as is necessary to bring the variance within the standard stated in this subsection.
- (d) **Gas logs shall be positioned in accordance with the manufacturer's specifications.**
 - (1) If a gas log fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
 - (2) The homeowner shall not incorrectly reposition or relocate the logs after the original placement. The homeowner shall not place the logs in a manner that does not allow the flame to flow through the logs according to the manufacturer's specifications.
- (e) **A crack in masonry hearth or facing shall not be equal to or exceed 1/4 of an inch in width.** If the masonry hearth or facing of the fireplace fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

- (f) **A fireplace or chimney shall draw properly.** If a fireplace or chimney fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (g) **A firebox shall not have excessive water infiltration under normal weather conditions.** If a firebox fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (h) **A fireplace fan shall not exceed the noise level established by the manufacturer's specifications.** If a fireplace fan fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

§304.30. Performance Standards for Irrigation Systems.

- (a) **An irrigation system shall not leak, break or clog due to construction activities.** If an irrigation system fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (b) **An irrigation system shall be installed such that sprinkler coverage shall be complete and water shall not spray an unintended area due to construction activities.** If an irrigation system fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (c) **The irrigation system control shall operate in accordance with manufacturer's specifications.**
 - (1) If an irrigation system fails to operate in accordance with manufacturer's specifications, the builder shall take such action as is necessary to bring the variance within the standard stated in this subsection.
 - (2) The builder shall provide the homeowner with instructions on the operation of the irrigation system at closing.

§304.31. Performance Standards for Fencing.

- (a) **A fence shall not fall over and shall not lean in excess of two inches out of plumb due to construction activities.** If the fencing fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (b) **A wood fence board shall not be broken due to construction activities.** Wood fence board shall not become detached from the fence due to construction activities of the builder. If the fencing fails to meet the standards stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

- (c) **A masonry unit or mortar in a fence shall not be broken or loose.** A crack in a masonry unit shall not occur. A crack in the mortar shall not equal or exceed 1/8 of an inch in width. If a masonry unit or mortar in a fence fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
- (d) **A masonry wall shall have adequate weep holes in the lowest course as required by the Code to allow seepage to pass through the wall.** If a masonry retaining wall fails to meet the standards of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

§304.32. Performance Standards for Yard Grading.

- (a) Yards shall have grades and swales that provide for proper drainage away from the home in accordance with the Code or other governmental regulations.
 - (1) If the grades or swales fail to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
 - (2) The homeowner shall maintain the drainage pattern and protect the grading contours from erosion, blockage, over-saturation or any other changes.
- (b) **Settling or sinking of soil shall not interfere with the drainage patterns of the lot or have a vertical depth of six inches or more.** If the soil fails to meet the standard stated in this subsection, the builder shall take such action as is necessary to bring the variance within the standard.

§304.33. Performance Standards for Pest Control.

Eave returns, truss blocks, attic vents and roof vent openings shall not allow rodents, birds, and other similar pests into home or attic space. If an eave return, truss block, attic vent or roof vent opening that allows rodents, birds, and other similar pests into home or attic space, the builder shall take such action as is necessary to bring the variance within the standard state

Subchapter C. Performance Standards for Plumbing, Electrical, Heating and Air-conditioning Delivery Systems Subject to a Minimum Warranty Period of Two Years.

§304.50. Performance Standards for Electrical Delivery Systems.

(a) Performance Standards for Electrical Wiring.

- (1) Electrical wiring installed inside the home shall be installed in accordance with the Code and any other applicable electrical standards and shall function properly from the point of demarcation, as determined by the respective utility.
 - (A) If electrical wiring inside the home is not functioning properly or is not installed in accordance with the Code and any other applicable electrical standards, the builder shall take such action as is necessary to bring the wiring to the standard of performance required in paragraph (1) of this subsection.
 - (B) The builder shall not be responsible for utility improvements from the meter/demarcation point to the utility poles or the transformer.
- (2) Electrical wiring shall be capable of carrying the designated load as set forth in the Code.
 - (A) If the electrical wiring fails to carry design load, the builder shall take such action as is necessary to bring the variance within the standard set forth in paragraph (2) of this subsection.
 - (B) All electrical equipment shall be used for the purposes and/or capacities for which it was designed and in accordance with manufacturer's specifications.

(b) Performance Standards for the Electrical Panel, Breakers and Fuses.

- (1) The electrical panel and breakers shall have sufficient capacity to provide electrical service to the home during normal residential usage.
 - (A) If the electrical panel or breakers do not have sufficient capacity to provide electrical service to the home during normal residential usage, the builder shall take such action as is necessary to bring the variance within the standard set forth in paragraph (1) of this subsection.
 - (B) The builder is not responsible for electrical service interruptions caused by external conditions such as power surges, circuit overloads and electrical shorts.
- (2) The electrical panel and breakers shall have sufficient capacity to provide electrical service to the home during normal residential usage such that a circuit breaker shall not trip and fuses shall not blow repeatedly under normal residential electric usage.
 - (A) If a circuit breaker repeatedly trips or fuses repeatedly blow under normal residential electric usage, the builder shall take such action as is necessary to bring the variance within the standard set forth in paragraph (2) of this subsection.

- (B) The builder is not responsible for circuit breaker trips or blown fuses that have functioned as designed to protect the home from external conditions such as power surges, circuit overloads and shorts.

(c) Performance Standards for Electric Outlets with Ground Fault Interrupters.

- (1) Electrical outlets with ground fault interrupters shall be installed and operate in accordance with the Code and manufacturer's specifications.
 - (A) If ground fault interrupters trip repeatedly under normal residential usage, the builder shall take such action as is necessary to ensure that the electrical outlets with ground fault interrupters are installed in accordance with the Code and manufacturer's instructions and specifications and that they operate properly during normal residential electrical usage.
 - (B) The homeowner shall not plug appliances that require constant electrical flow, such as refrigerators and freezers, into an outlet with a ground fault interrupter.

(d) Performance Standards for Fixtures, Outlets, Doorbells and Switches.

- (1) An outlet, doorbell or switch shall be installed in accordance with the manufacturer's specifications and the Code and shall operate properly when installed in accordance with the manufacturer's specifications and the Code. If an outlet, doorbell or switch is not installed in accordance with the manufacturer's specifications and the Code or does not operate properly when so installed, the builder shall take such action as is necessary to bring the variance within the standard stated in this subsection.
- (2) A fixture, electrical box or trim plate shall be installed in accordance with the Code and manufacturer's specifications and shall be properly secured to the supporting surface. If a fixture, electrical box or trim plate is not installed in accordance with the Code and manufacturer's specifications or is not properly secured to the supporting surface, builder shall take such action as is necessary to bring the variance within the standard state in this subsection.
- (3) A light shall not dim, flicker or burn out repeatedly under normal circumstances. A lighting circuit shall meet the Code. If a light or a lighting circuit fails to meet the standards stated in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

(e) Performance Standards for Wiring or Outlets for Cable Television, Telephone, Ethernet or Other Services.

- (1) Wiring or outlets for cable television, telephone, ethernet or other services shall be installed in accordance with the Code and any applicable manufacturer's specifications.
 - (A) If wiring or outlets for cable television, telephone, ethernet or other services are not installed in accordance with the Code or any applicable manufacturer's specifications, the builder shall take such action as is necessary to bring the variance within the standard set forth in paragraph (1) of this subsection.
 - (B) A builder is not responsible for the failure of wiring or other utility service connectors or conduits that begin before the point at which the service enters the home.
- (2) Wiring or outlets for cable television, telephone, ethernet or other services inside the home or on the home side of the meter/demarcation point shall function properly when installed in accordance with the performance standard in paragraph (1) of this subsection.
 - (A) If wiring or outlets for cable television, telephone, ethernet or other services are not functioning, the builder shall take such action as is necessary to bring the variance within the standard set forth in paragraph (2) of this subsection.
 - (B) A builder is not responsible for the failure of wiring or other utility service connectors or conduits that begin before the point at which the service enters the home.

§304.51. Performance Standards for Plumbing Delivery Systems.

(a) Performance Standards for Pipes including Water and Gas Pipes, Sewer and Drain Lines, Fittings and Valves but not including pipes included in a Landscape Irrigation System.

- (1) Pipes shall be installed and insulated in accordance with the Code and manufacturer's specifications.
 - (A) If a water pipe bursts, the builder shall take such action as is necessary to bring the variance within the standard stated in paragraph (1) of this subsection.
 - (B) The homeowner is responsible for insulating and protecting exterior pipes and hose bibs from freezing weather and for maintaining a reasonable temperature in the home during periods of extremely cold weather. The homeowner is responsible for maintaining a reasonable internal temperature in a home

regardless of whether the home is occupied or unoccupied and for periodically checking to ensure that a reasonable internal temperature is maintained.

- (2) A water pipe shall not leak.
 - (A) If a water pipe is leaking, the builder shall take such action as is necessary to bring the variance within the performance standard stated in paragraph (2) of this subsection.
 - (B) The homeowner shall shut off water supply immediately if such is required to prevent further damage to the home.
- (3) A gas pipe shall not leak, including natural gas, propane or butane gas.
 - (A) If a gas pipe is leaking, a builder shall take such action as is necessary to bring the variance within the standard stated in paragraph (3) of this subsection.
 - (B) If a gas pipe is leaking, the homeowner shall shut off the source of the gas if the homeowner can do so safely.
- (4) Water pressure shall not exceed 80 pounds per square inch in any part of the water supply system located inside the home. Minimum static pressure at the building entrance for either public or private water service shall be 40 pounds per square inch in any part of the water supply system.
 - (A) This standard assumes the public or community water supply reaches the home side of the meter at 40 pounds per square inch. The builder is not responsible for water pressure variations originating from the water supply source.
 - (B) If the water pressure is excessively high, the builder shall take such action as is necessary to bring the variance within the standard stated in paragraph (4) of this subsection.
- (5) A sewer, drain, or waste pipe shall not become clogged or stopped up due to construction activities.
 - (A) The builder shall take such action as is necessary to unclog a sewer, drain or waste pipe that is clogged or stopped up due to construction activities.
 - (B) The homeowner shall shut off water supply immediately if such is required to prevent damage to the home.

(b) Performance Standards for Individual Wastewater Treatment Systems.

A wastewater treatment system should be capable of properly handling normal flow of household effluent in accordance with the Texas Commission on Environmental Quality requirements.

- (1) The builder shall take such action as is necessary for the wastewater treatment system to perform within the standard stated in this subsection.
- (2) The builder is not responsible for:
 - (A) system malfunctions or damage due to the addition of a fixture, equipment, appliance or other source of waste or water into the septic system by a person other than the builder or a person working at the builder's direction; or
 - (B) malfunctions or limitations in the operation of the system attributed to a design restriction imposed by state, county or local governing agencies; or
 - (C) malfunctions caused by freezing, soil saturation, soil conditions, changes in ground water table or any other acts of nature.

§304.52. Performance Standards for Heating, Air Conditioning and Ventilation Delivery Systems.

(a) A refrigerant line shall not leak.

- (1) If a refrigerant line leaks, the builder shall take such action as is necessary to bring the variance within the standard stated in subsection (a) of this section.
- (2) Condensation on a refrigerant line is not a leak.

(b) Performance Standards for Heating and Cooling Functions.

- (1) A heating system shall produce an inside temperature of at least 68-degrees Fahrenheit as measured two feet from the outside wall of a room at a height of three feet above the floor under local outdoor winter design conditions as specified in the Code.
 - (A) If a heating system fails to perform to the standard stated in paragraph (1) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
 - (B) Temperatures may vary up to 4-degrees Fahrenheit between rooms but no less than the standard set forth above in paragraph (1) of this subsection. The homeowner's changes made to the size or configuration of the home, the heating system or the ductwork shall negate the builder's responsibility to take measures to meet this performance standard.

- (2) An air-conditioner system shall produce an inside temperature of at most 78-degrees Fahrenheit as measured in the center of a room at height of five feet above the floor, under local outdoor summer design conditions as specified in the Code.
 - (A) If the air-conditioner system fails to perform to the standard stated in paragraph (2) of this subsection, the builder shall take such action as is necessary to bring the variance within the standard.
 - (B) This standard does not apply to evaporative or other alternative cooling systems or if the homeowner makes changes to the size or configuration of the home, the air-conditioning system or the ductwork. Internal temperatures may vary up to 4-degrees Fahrenheit between rooms but no more than the standard set forth above in paragraph (2) of this subsection.
- (3) A thermostat reading shall not differ by more than 4-degrees Fahrenheit from the actual room temperature taken at a height of five feet above the floor in the center of the room where the thermostat is located. The stated performance standard is related to the accuracy of the thermostat and not to the performance standard of the room temperature. If the thermostat reading differs more than 4-degrees Fahrenheit from the actual room temperature taken at a height of five feet above the floor in the center of the room where the thermostat is located, the builder shall take such action as is necessary to bring the variance within the standard.
- (4) Heating and cooling equipment shall be installed and secured according to the manufacturer's instructions and specification and shall not move excessively. If the heating or cooling equipment is not installed and secured in accordance with manufacturer's instructions and specifications or moves excessively, the builder shall take such action as is necessary to properly install and secure the equipment.

(c) Performance Standards for Vents, Grills or Registers.

- (1) A vent, grill or register shall operate easily and smoothly when applying normal operating pressure. If a vent, grill or register does not operate easily and smoothly when applying normal pressure when adjusting, the builder shall repair the vent, grill or register so that it operates with ease of use when applying normal operating pressure.
- (2) A vent, grill or register shall be installed in accordance with the Code and manufacturer's instructions and specifications and shall be secured to the underlying surface. If a vent, grill or register is not installed and secured in accordance with the performance standard in this paragraph, the builder shall take such action as is necessary to bring the variance within the standard.

(d) Performance Standards for Ductwork.

- (1) Ductwork shall be insulated in unconditioned areas according to Code. If ductwork is not insulated in unconditioned areas in accordance with the Code, the builder shall take such action as is necessary to bring the variance within the standard stated in this paragraph.
- (2) Ductwork shall be secured according to the manufacturer's instructions and specifications and it shall not move excessively. If the ductwork is not secured according to the manufacturer's instructions and specifications or moves excessively, the builder shall take such action as is necessary to bring the variance within the standard stated in this paragraph.
- (3) Ductwork shall be sealed and shall not separate or leak in excess of the standards set by the Code. If the ductwork is not sealed, is separated or leaks in excess of the standards set by the Code, the builder shall take such action as is necessary to bring the variance within the standard stated in this paragraph.

Subchapter D. Performance Standards for Foundations and Major Structural Components of a Home Subject to a Minimum Warranty Period of Ten Years.

§304.100. Performance Standards for Major Structural Components.

(a) Performance Standards for Slab Foundations.

- (1) Slab foundations should not move differentially after they are constructed, such that a tilt or deflection in the slab in excess of the standards defined below arises from post-construction movement. The protocol and standards for evaluating slab foundations shall follow the "Guidelines for the Evaluation and Repair of Residential Foundations" as published by the Texas Section of the American Society of Civil Engineers (2002), hereinafter referred to as the "ASCE Guidelines" with the following modifications:
 - (A) Overall deflection from the original construction elevations shall be no greater than the overall length over which the deflection occurs divided by 360 ($L/360$) and must not have more than one associated symptom of distress, as described in Section 5 of the ASCE Guidelines, that results in actual observable physical damage to the home.
 - (B) The slab shall not deflect after construction in a tilting mode in excess of one percent from the original construction elevations resulting in actual observable physical damage to the components of the home.
- (2) If measurements and associated symptoms of distress show that a slab foundation does not meet the deflection or tilt standards stated in

paragraph (1) of this subsection, a third-party inspector's recommendation shall be based on the appropriate remedial measures as described in Section 7 of the ASCE Guidelines.

(b) Performance Standards for Major Structural Components of a Home other than Slab Foundations.

- (1) Floor over pier and beam foundations.
 - (A) A floor over pier and beam foundation shall not deflect more than $L/360$ from its original construction elevations and have that movement create actual observable physical damage to the components of the home identifiable in Section 5.3 of the ASCE Guidelines.
 - (B) If a floor over pier and beam foundation deflects more than $L/360$ from its original construction elevation and the movement has created actual observable physical damage to the components of a home identifiable in Section 5.3 of the ASCE Guidelines, a third-party inspector's recommendation shall be based on applicable remedial measures as described in Section 7 of the ASCE Guidelines.
- (2) Structural components.
 - (A) A defined structural component shall not crack, bow, become distorted or deteriorate, such that it compromises the structural integrity of a home or the performance of a structural system of the home resulting in actual observable physical damage to a component of the home.
 - (B) If a structural component of a home cracks, bows, is distorted or deteriorates such that it results in actual observable physical damage to a component of the home, the builder shall take such action as is necessary to repair, reinforce or replace such structural component to restore the structural integrity of the home or the performance of the affected structural system.
- (3) Deflected structural components.
 - (A) A structural component shall not deflect more than the ratios allowed by the Code.
 - (B) If a structural component of the home is deflected more than the ratios allowed by the Code, the builder shall to repair, reinforce or replace such structural component to restore the structural integrity of the home or the performance of the affected structural system.

- (4) Damaged structural components.
 - (A) A structural component shall not be so damaged that it compromises the structural integrity or performance of the affected structural system.
 - (B) If a structural component is so damaged that it compromises the structural integrity or performance of a structural system of the home, the builder shall take such action as is necessary to repair, reinforce or replace such structural component to restore the structural integrity of the home or the performance of the affected structural system.
- (5) Separated structural components.
 - (A) A structural component shall not separate from a supporting member more than $\frac{3}{4}$ of an inch or such that it compromises the structural integrity or performance of the system.
 - (B) If a structural component is separated from a supporting member more than $\frac{3}{4}$ of an inch or separated such that it compromises the structural integrity or performance of a structural system of the home, the builder shall take such action as necessary to repair, reinforce or replace such structural component to re-establish the connection between the structural component and the supporting member and to restore the structural integrity of the home and the performance of the affected structural system.
- (6) Non-performing structural components.
 - (A) A structural component shall function as required by the Code.
 - (B) If a structural component does not function as required by the Code, the builder shall take such action as is necessary to bring the variance within the standard stated in subparagraph (A) of this paragraph.