

§535.228. Standards of Practice: Minimum Inspection Requirements for Structural Systems

(a) Foundations. The inspector shall:

(1) inspect slab surfaces, foundation framing components, subflooring, and related structural components;

(2) report:

(A) the type of foundation(s); and

Commentary -- While the inspector is required to note the type of foundation in the report, there are conditions under which the inspector may not be able to determine the exact type of foundation employed. For example, what appears to be a concrete slab on grade may be a concrete slab supported on drilled and under reamed concrete piers.

(B) the vantage point from which the crawl space was inspected; and

Commentary -- The intention of this requirement is that the inspector will enter and crawl the under floor areas of an above ground foundation system. Many crawl spaces are too low to the ground to enter or have obstructions or other conditions that prevent parts of the crawl space from being entered. If the crawl space was not entered, then the inspector must describe in the report the place from which the crawl space and its components were viewed. The inspector is required to state in the report where he was when he viewed the foundation framing components and other parts, components and systems contained in the under floor or crawl space area. The inspector is also required to report which parts, components and systems could not be accessed or properly inspected under the departure provision.

(3) generally report present and visible indications used to render the opinion of adverse performance, such as:

Commentary -- If, in the opinion of the inspector, the foundation has adverse performance, he is to render that as his opinion and state in the report what evidence he found that led him to that conclusion. Though he is not required to provide in the report an exhaustive list of adverse performance indicators, he is required to provide examples of these indicators such as concrete cracks, brick cracks and out of square doors, etc. He may choose to recommend that the client have the foundation further evaluated by an engineer or other specialist.

(A) open or offset concrete cracks;

(B) binding, out-of-square, non-latching, warped, or twisted doors or frames;

(C) framing or frieze board separations;

(D) out-of-square wall openings or separations at wall openings or between the cladding and window/door frames;

(E) sloping floors, countertops, cabinet doors, or window/door casings;

(F) wall, floor, or ceiling cracks;

(G) rotating, buckling, cracking, or deflecting masonry cladding;

(H) separation of walls from ceilings or floors; and

(I) soil erosion, subsidence or shrinkage adjacent to the foundation and differential movement of abutting flatwork such as walkways, driveways, and patios;

(4) report as Deficient:

(A) exposed or damaged reinforcement;

Commentary -- The purpose of reporting exposed reinforcement is so that the reinforcement can be cleaned and covered. As the reinforcing mild steel rods rust, the material expands which causes damage to the concrete. The purpose of covering the reinforcing material is to slow the rate of progression of the rust and to slow the rate of damage to the concrete foundation. The ends of post tensioned cables should be protected from the elements. If the end of a cable is left exposed the cable may rust. The rusting of the cable can cause the anchoring system to fail.

(B) a crawl space that does not appear to be adequately ventilated;

Commentary -- There is no expectation that the inspector will measure the ventilation openings in the chain wall and the square footage of the crawl space to determine if the sizing of the ventilation openings conforms to the requirements of the model building codes. The inspector should inspect the condition of the crawl space and its components to determine if the amount of air flow through the crawl space appears adequate. If the crawl space does not appear to be adequately ventilated conditions such as excessive moisture or deteriorated wood on the surface of the understructure members may occur.

(C) crawl space drainage that does not appear to be adequate;

Commentary: Water should not stand in a crawl space.

(D) deteriorated materials;

(E) damaged beams, joists, bridging, blocking, piers, posts, pilings, or subfloor;

(F) non-supporting piers, posts, pilings, columns, beams, sills, or joists; and

(G) damaged retaining walls related to foundation performance; and

Commentary -- The inspector must use reasonable judgment in determining whether a retaining wall is close enough to the foundation to affect the performance of the foundation.

(H) render a written opinion as to the performance of the foundation.

Commentary -- It is not enough to simply check the "Inspected" and/or the "Deficiency" box on the report. If, in the opinion of the inspector based on evidence obtained without the use of specialized tools or procedures, the foundation is deficient (in need of stabilization, adjustment of elevations or repairs or replacement of foundation components) the inspector must make some such statement in the report along with examples of the adverse performance indicators that the inspector found. On the other hand, if, in the opinion of the inspector, the foundation is not deficient, the inspector must make some such statement in the report. The information provided by the inspector is not intended to be interpreted or considered as an engineering report or evaluation. The inspector is not expected to design or supervise repairs to the foundation. While an inspector is required to render an opinion, the inspector may also choose to recommend that the client have the foundation further evaluated by an engineer or other specialist.

(b) Specific limitations for foundations. The inspector is not required to:

(1) enter a crawlspace or any area where headroom is less than 18 inches or the access opening is less than 24 inches wide and 18 inches high;

Commentary: These dimensions are generally accepted as an acceptable opening to the crawlspace area. While these dimensional requirements may not be met it is the expectation of these standards that the inspector will enter all crawlspaces that the inspector is capable of entering.

- (2) provide an exhaustive list of indicators of possible adverse performance; or
- (3) inspect retaining walls not related to foundation performance.

(c) Grading and drainage. The inspector shall report as Deficient:

- (1) improper or inadequate grading around the foundation (including flatwork);

Commentary -- In many areas there is not enough ground clearance above the street to allow for the amount of slope required by the model building codes. In older dwelling units, it may not be possible to provide the slope required for drainage around a foundation by the model building codes. Older dwelling units can be examined for indications of water penetration or for indications of adverse foundation performance or loss of support for the foundation caused by inadequate drainage. The consumer should be made aware if there are limitations in the areas immediately surrounding the dwelling unit to provide adequate drainage in the inspector's opinion. The report is of conditions present and visible at the time of the inspection and does not contemplate future rainfall amounts or drainage conditions of the area.

- (2) erosion;
- (3) water ponding; and

Commentary -- The inspector is not required to inspect the entire lot for depressions capable of ponding water in the yards however; such defects adjacent to the foundation should be reported. Water standing adjacent to the dwelling can cause movements or displacements in the soils supporting the foundation and may contribute to the deterioration of the cladding materials.

- (4) deficiencies in installed gutter and downspout systems.

(d) Specific limitations for grading and drainage. The inspector is not required to:

- (1) inspect flatwork or detention/retention ponds (except as related to slope and drainage);
- (2) determine area hydrology or the presence of underground water; or
- (3) determine the efficiency or operation of underground or surface drainage systems.

(e) Roof covering materials. The inspector shall:

- (1) inspect the roof covering materials from the surface of the roof;
- (2) report:
 - (A) type of roof covering(s);
 - (B) vantage point from where the roof was inspected

Commentary – It is the intent that the inspector walk the roof if in his opinion he can do so safely and without causing significant damage to the roof covering materials. If in the opinion of the inspector he cannot safely access the roof or if in doing so would cause significant damage to the roof, he must state in the report from what area the roof was

inspected such as from the edge of the roof on a ladder or from the ground. The intent is to protect the consumer from having unrealistic expectations of how thoroughly roof covering materials can be examined from other than the surface of the roof. As a note, minor granular loss is not considered to be significant damage.

(C) any levels or surfaces that were not accessed;

Commentary – Even if the inspector can access some areas of the roof, there may be areas that are not accessible due to conditions such as a steep pitch, roof height or wet surfaces. Those areas that were not accessible must be noted in the report. In complying with the Departure provision, the inspector must also make the appropriate notation in the report stating the reason that section of the roof was not inspected.

(D) evidence of previous repairs to roof covering materials, flashing details, skylights, and other roof penetrations; and

Commentary -- The reason for this requirement is that when a section of the roof has been repaired, it is more likely to leak again than those sections that have not been repaired. The buyer should be notified of that history so that the buyer may question the reasons for the repairs and that the repaired area may monitored after the purchase.

(E) evidence of water penetration; and

Commentary: The presence of visible water stains does not always mean that there are active leaks. The leaks may have been repaired but the evidence of water penetration may not have been treated and repainted. The inspector is not expected to be able to determine if the presence of stains means that there are active leaks.

(3) report as Deficient:

(A) a roof covering that is not appropriate for the slope of the roof;

Commentary -- While there are general requirements that provide for minimum slopes for the use of certain roof covering materials, there are exceptions. There are roofing felts made that allow the use of composition shingles on slopes as low as 1 unit vertical in 12 units horizontal. The inspector may choose to question the use of certain materials on low sloped roofs rather than to report the use of a roof covering material on a low sloped roof as improper as a fact.

(B) deficiencies in:

(i) fastening of roof covering material, as determined by a random sampling;

Commentary -- Fastening of the roof covering materials may include fasteners and the sealing of composition shingles to each other. Fasteners on composition shingles are required to be located below the sealing adhesive strip and the ends of the shingles are supposed to have fasteners at about one inch from each end of the shingle. These fasteners, if properly located, can be seen by raising the edges of the shingles without damaging the sealing of the shingles. According to industry publications, the sealing of the shingles to each other is as important, if not more important, than the location and number of fasteners. A random number of composition shingles should be checked to see that the shingles are sealed. The purpose of this section of the standards is to make

clear that the inspector is responsible for inspecting the attachment of the roof covering materials. The method the inspector uses to fulfill this purpose is left to the reasonable judgment of the inspector. It is not the intention of this section or of the standards to require an inspector to damage the fastening, sealing or adhesion of the roof covering materials.

(ii) roof covering materials;

(iii) flashing details;

Commentary: Proper flashing materials, their location and proper installation techniques are provided by the model building codes and are provided by the shingle manufacturer. Local customs do not take precedence over the requirements of the model building codes or of the manufacturer for the purposes of a real estate inspection.

(iv) skylights; and

Commentary: Most skylights lack adequate clearance above the surface of the roof to prevent water from collecting on upper side of the skylight and from defeating the flashing of the skylight. The use of sealants or re-flashing skylights does not often prevent leaks.

(v) other roof penetrations.

(g) Specific limitations for roof covering. The inspector is not required to:

- (1) determine the remaining life expectancy of the roof covering;
- (2) inspect the roof from the roof level if, in the inspector's reasonable judgment, the inspector cannot safely reach or stay on the roof or significant damage to the roof covering materials may result from walking on the roof;

Commentary -- This section implies that if in the inspector's reasonable judgment, the inspector can safely reach or stay on the roof or that significant damage to the roof covering materials would not result from walking on the roof, then the inspector is expected to walk the roof to inspect it. As a note, minor granular loss is not considered to be significant damage.

- (3) determine the number of layers of roof covering material;
- (4) identify latent hail damage; or
- (5) provide an exhaustive list of locations of water penetrations or previous repairs.

Commentary -- If it is determined by the inspector that the roof had experienced water penetration in numerous areas or that previous repairs had taken place in numerous areas, then the inspector is not required to provide a complete list of all of those areas. He may instead, provide a summary statement describing the roof as having experienced water penetration "in numerous areas" or having been repaired in "several areas" or simply provide examples.

(g) Roof structure and attic. The inspector shall:

- (1) report:
 - (A) the vantage point from which the attic space was inspected;

Commentary -- It is the intent of these standards that the inspector enter the accessible attic areas and that the inspector view the various components that form the attic structure or that are contained in the attic from as near the parts and components as possible whether the attic is floored or not. There is no expectation that an inspector will take unreasonable risks in inspecting the attic. If the attic cannot be entered, the inspector is required to follow the provisions of the departure provision.

(B) the presence of and approximate average depth of attic insulation and thickness of vertical insulation, when visible; and

(C) evidence of water penetration; and

(2) report as Deficient:

(A) attic space that does not appear to be adequately ventilated;

Commentary -- There is no expectation that the inspector will measure the ventilation openings in the soffit and roof openings and the volume of the attic space to determine if the sizing of the ventilation openings conforms to the requirements of the model building codes. The inspector should determine from observation if the amount of air flow through the attic space appears adequate in the reasonable opinion of the inspector.

(B) deficiencies in installed framing members and decking;

(C) deflections or depressions in the roof surface as related to the adverse performance of the framing and the roof deck;

Commentary -- The intent is that deficiencies are to be reported. The lumber used to frame older homes was generally stronger than lumber milled today. It is unlikely that lumber used in joists and rafters in older homes will conform to current building code or span table requirements. It should be understood that older lumber likely had greater spanning and load transferring capabilities than modern lumber of the same dimensions and grade. Allowable deflection ratios have been fairly uniform over a long period of time. It is the deflections or obvious damage to framing members that determine the need of notation in the inspectors report. Purlins are not required to be installed to support rafters. Purlins are allowed to be used if the designer decides to use smaller dimension or lower grade lumber. Rafter ties are required to form a continuous tie between the bottoms of the rafters across or as near to the floor of the attic as possible when the joists are perpendicular to the rafters. Rafter ties prevent the exterior walls from rotating out from the house from the loads imposed by the roof. Collar ties are high wind load members. Collar ties are installed in the upper third of the attic and are intended to prevent the framing from separating in high wind loads.

Commentary -- The intent is that the inspector report on deficiencies. Most older homes were built with a higher quality of lumber than recently built homes. The question the inspector must answer is not if older lumber meets the requirements of model building codes but if the framing materials are performing without visible evidence of excessive deflections due to adverse performance of the framing and the roof deck. If an older home has no apparent deficiencies, but was not built with purlins and struts, the lack of purlins does not need to be reported because it did not result in adverse performance.

On the other hand, if the roof had sagged and if, in the opinion of the inspector, those sags were caused by the lack of purlins, then that should be noted in the report as a deficiency.

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(D) missing insulation;

Commentary: The lack of insulating materials against conditioned air surfaces can cause the HVAC system to function improperly. This can reduce the comfortable habitability of the dwelling and can increase energy consumption. It should be understood that the required comments on the thicknesses and presence of insulation materials relates only to insulating materials that can be seen. The areas of visible insulation are often limited solely to the accessible attic areas.

(E) deficiencies in attic access ladder and access opening; and

Commentary: Deficiencies include the attic access ladder, openings, components and attachments. Inspection of the attic access ladder or opening should include separation requirements.

(F) deficiencies in attic ventilators.

(h) Specific limitations for roof structure and attic. The inspector is not required to:

(1) enter attics or unfinished spaces where openings are less than 22 inches by 30 inches or headroom is less than 30 inches;

Commentary: These dimensions are generally accepted as an acceptable opening to the attic space. While these dimensional requirements may not be met it is the expectation of these standards that the inspector will enter all attic spaces that the inspector is capable of entering.

(2) operate powered ventilators; or

(3) provide an exhaustive list of locations of water penetrations.

Commentary – See section (g) (5) for more information.

(i) Interior walls, ceilings, floors, and doors. The inspector shall:

(1) report evidence of water penetration; and

Commentary -- The inspector is required to report the presence of water stains or discolorations however, the inspector is not required to report these items as a deficiency. The presence of water stains or discolorations often indicate the presence of water penetration. While the inspector is not required to report or attempt to identify the nature of the stain or discoloration or to determine if the dwelling unit contains environmental hazards, the inspector is required to report the presence of water penetration. It is the consumer's responsibility to obtain information on the source(s) of the stains or discolorations.

(2) report as Deficient:

(A) doors and hardware that do not operate properly;

Commentary: Failure of doors or of locks and latches to operate properly can be a life-safety concern as someone could be trapped in a room or an area during an emergency.

(B) deficiencies related to structural performance or water penetration; and

There is some confusion in the building and inspecting professions concerning deflections in floor framing systems. Defects in the framing could include anything from improper design and/or installation, excessive spacing or spanning of the joists, improper boring or notching of joists or beams, failure to reinforce the structure for the loads imposed by mechanical equipment in the attic, use of inadequate materials, etc. As the framing was concealed by finish materials, it was not possible to determine what, if any, defects were present in the framing. In order to determine the exact cause(s) of the floor slopes, the floor framing system would have to be exposed. Floor slopes in second story and higher floors may not be related to any defect or differential movements in the foundation supporting the structure.

The model building codes and the span tables issued by lumber grading agencies allow deflections in floor framing that do not exceed the ratio of one part vertical deflection in a three hundred and sixty part span. The span is the horizontal distance between supports. This ratio is equated to a one inch vertical displacement in a 360 inch span. Since 360 inches is the same as 30 feet, the ratio is often stated as a one inch deflection in a 30 foot span. As this is a ratio, it could also be stated as a one-half inch deflection in a fifteen foot span or a one-quarter inch deflection in a seven and one-half foot span.

The deflection is the amount of deformation allowed after the floor framing system is fully loaded. The floor framing system is designed to support its own load and live loads of varying amount depending on the intended use of the roof. If the loads of a bedroom are considered, the floor framing system would be designed to carry the weight of the lumber used to create the floor frame and the floor covering materials. The floor framing system would also be designed to support loads from furniture and furnishings up to a total load of 30 pound per square foot.

If we consider the loads that the bedroom floor framing system would be designed to support, assume that the bedroom is sized 10 feet by 15 feet. The square footage of the floor would be 10 feet multiplied by 15 feet which equals 150 square feet. To obtain the total, reasonable well distributed load imposed by furniture and furnishings that the floor framing system is designed to carry without exceeding the allowed deflection ratio of 1/360, multiple 150 square feet by 30 pounds per square foot which equals 4,500 pounds.

The floor framing system is, therefore, designed to carry its own weight plus 4,500 pounds, reasonably well distributed across the surface of the floor, without exceeding the allowable deflection expressed by the ratio of one part vertical displacement over a 360 part span.

Should a floor framing system deform in excess of that ratio without having the loads imposed on the floor framing system exceed the designed minimum load for that type room, the floor framing system is deficient.

If the floor slopes are created during the construction of the house, this is indicative of poor construction practices, an inadequate design and/or the use of inadequate framing materials. Deformation of the floor framing system in excess of the allowable deformation under full design loading likely indicates a significant framing problem.

If the floor framing system of this house did not appear to have been overloaded, the presence of the excessive deformations of the floor framing systems indicates that the causes of the deformations should be determined and corrected. The floor framing system may need to be exposed and analyzed by a competent structural engineer before proper repairs to the framing system can be designed and installed.

(C) lack of fire separation between the garage and the residence and its attic space.

Commentary: Items installed in the walls or ceilings between the house and the garage must be fire rated. These items include but are not limited to electrical devices and boxes, panel boards and water distribution manifolds, attic access openings, and ladders. These areas also include breezeways between detached garages and dwellings. Electrical conductors and pipes are often run through these breezeways. The presence of the conductors or pipes almost always breaks the fire separation requirement.

(j) Specific limitation for interior walls, doors, ceilings, and floors. The inspector is not required to:

- (1) report cosmetic damage or the condition of floor, wall, or ceiling coverings; paints, stains, or other surface coatings; cabinets; or countertops, or
- (2) provide an exhaustive list of locations of water penetrations.

(k) Exterior walls, doors, and windows. The inspector shall:

- (1) report evidence of water penetration; and
- (2) report as Deficient:

(A) the lack of functional emergency escape and rescue openings in all sleeping rooms;

Commentary -- While specifications on the sizing of emergency escape and rescue openings may be obtained from such publications as the International Residential Code, the inspector should be aware of the general requirements and the intent of providing emergency escape routes from sleeping rooms regardless of the code requirements in effect at the time of the construction of the house. While an inspector cannot mandate changes to the structure, the inspector can make the consumer aware of an inherently hazardous condition.

(B) the lack of a solid wood door not less than 1-3/8 inches in thickness, a solid or honeycomb core steel door not less than 1-3/8 inches thick, or a 20-minute fire-rated door between the residence and an attached garage;

- (C) missing or damaged screens;
- (D) deficiencies related to structural performance or water penetration; and

Commentary -- The proper installation of flashing, seals and drains for cladding systems have become more important with the increasing of the tightness of the building envelop to reduce air infiltration. There are a number of sources that provide information to the

inspector as to the type of flashings, seals and drain openings, the location of these components and their purpose. Some of these publications contain photographs and/or drawings that assist the inspector in understanding these concepts and components. Some publications provide information on how water penetration and transference of water vapor occur and the consequences of water intrusion. These publications include such publications and industry resources as the International Residential Code, the commentary to the International Residential Code, the American Society for Testing and Materials, section seven of the technical notes in the website of the Brick Industry Association, Inc. (www.bia.net), information from the "build a better home" articles on the website of the American Plywood Association, Inc. (www.apawood.net), best practices for flashing details at Owens Corning's Cultured Stone website (www.culturedstone.com), etc.

(E) deficiencies in:

- (i) claddings;
- (ii) water resistant materials and coatings;
- (iii) flashing details and terminations;

Commentary: Through wall flashing materials are required to be installed so that the terminations of the flashing materials extend through the cladding system and terminate on the exterior of the cladding. Most through wall flashing materials are required to be terminated with a drip ledge. Information on the types of flashing materials and their installation and termination requirements can be found in many publications including the IRC, the Commentary to the IRC, the American Plywood Association, Inc, the Brick Industry Association, Inc., James Hardie Products, Inc., and Owens-Corning, Inc, etc.

(iv) the condition and operation of exterior doors, garage doors, and hardware; and

Commentary: Failure of doors or of locks and latches to operate properly can be a life-safety concern as someone could be trapped in the dwelling during an emergency. Locks must be operable without a key or special knowledge. Doors should open and close with reasonable ease so that a small child or aged person could reasonably operate the door, in the inspectors reasonable judgment.

(v) window operation and components.

Commentary: Windows in bedrooms are often emergency escape and rescue openings. Sill heights above the floor and opening dimensions should be verified.

(l) Specific limitations for exterior walls, doors, and windows. The inspector is not required to:

(1) report the condition or presence of awnings, shutters, security devices, or systems;

(2) determine the cosmetic condition of paints, stains, or other surface coatings;

or

(3) operate a lock if the key is not available.

(m) Exterior and interior glazing. The inspector shall:

(1) inspect the window and door glazing; and

(2) report as Deficient:

- (A) insulated windows that are obviously fogged or display other evidence of broken seals;
- (B) deficiencies in glazing, weather stripping, and glazing compound in windows and exterior doors; and
- (C) the absence of safety glass in hazardous locations.

(n) Specific limitation for exterior and interior glazing. The inspector is not required to:

- (1) exhaustively observe insulated windows for evidence of broken seals;

Commentary -- The inspector should visually inspect all accessible windows for lost seals. However, since the evidence of seal problems may vary with temperature and humidity changes, and since preliminary seal problems are often difficult to see, the inspector is not required to dedicate the amount of time it would take to exhaustively analyze every square inch of each window.

- (2) exhaustively observe glazing for identifying labels; or

Commentary -- The inspector should try and locate identifying labels on doors as well as on windows which are located in hazardous locations. However, many times the labels have faded or were worn off. As a result, the inspector is not required to dedicate the amount of time it would take to exhaustively analyze every square inch of every pane in each door and window.

- (3) identify specific locations of damage.

(o) Interior and exterior stairways. The inspector shall report as Deficient:

- (1) spacing between intermediate balusters, spindles, or rails for steps, stairways, guards, and railings that permit passage of an object greater than 4 inches in diameter, except that on the open side of the staircase treads, spheres less than 4-3/8 inches in diameter may pass through the guard rail balusters or spindles; and
- (2) deficiencies in steps, stairways, landings, guardrails, and handrails.

Commentary -- Information on the specifications for stairways can be found in the IRC and at www.stairways.org.

(p) Specific limitation for stairways. The inspector is not required to exhaustively measure every stairway component.

(q) Fireplace and chimney. The inspector shall report as Deficient:

- (1) built-up creosote in visible areas of the firebox and flue;
- (2) the presence of combustible materials in near proximity to the firebox opening;
- (3) the absence of fireblocking at the attic penetration of the chimney flue, where accessible;
- (4) an inoperative circulating fan; and
- (5) deficiencies in the:
 - (A) damper;
 - (B) lintel, hearth, hearth extension, and firebox;
 - (C) gas log lighter valve and location;
 - (D) combustion air vents; and
 - (E) chimney structure, termination, coping, crown, caps, and spark arrestor.

(r) Specific limitations for fireplace and chimney. The inspector is not required to:

- (1) verify the integrity of the flue;
- (2) perform a chimney smoke test; or
- (3) determine the adequacy of the draft.
- (s) Porches, Balconies, Decks, and Carports. The inspector shall:
 - (1) inspect balconies, attached carports, and attached porches and abutting porches, decks, and balconies that are used for ingress and egress; and

Commentary -- Attached or abutting porches or decks is understood to mean a porch or deck that is or can be used as a means of ingress or egress from a dwelling unit.

- (2) report as Deficient:
 - (A) on decks 30 inches or higher above the adjacent grade, spacings between intermediate balusters, spindles, or rails that permit passage of an object greater than four inches in diameter;
 - (B) deficiencies in visible footings, piers, posts, pilings, beams, joists, decking, water proofing at interfaces, flashing, surface coverings, and attachment points of porches, decks, balconies, and carports; and
 - (C) deficiencies in, or absence of required, guardrails and handrails.
- (t) Specific limitation for porches, balconies, decks, and carports. The inspector is not required to:
 - (1) exhaustively measure the porch, balcony, deck, or attached carport components; or
 - (2) enter any area where headroom is less than 18 inches or the access opening is less than 24 inches wide and 18 inches high.