



Oregon

John A. Kitzhaber, MD, Governor

Department of Consumer and Business Services
Building Codes Division
1535 Edgewater Street NW
P.O. Box 14470
Salem, OR 97309-0404
503-378-4133
Fax: 503-378-2322
www.bcd.oregon.gov

Residential and Manufactured Structures Board

Regular meeting agenda

Friday, January 9, 2015, 9:30 a.m.

Conference Room A

Board meetings are broadcast live via the Internet at

<http://bcd.oregon.gov/>

Click on "View live meetings"

I. Board business

- A. Call to order
- B. Roll call
- C. Approval of agenda and order of business
- D. Approval of the May 9, 2014, board meeting minutes
- E. Date of the next scheduled meeting: April 10, 2015
- F. 2015 board meeting dates

II. Public comment

*This time is available for individuals wanting to address the board on **non-agenda items only**. The board will not take action on non-agenda items raised under public comment at this meeting. Testimony on agenda items will be heard when the item is called. (See "Issues to remember when addressing theboard" at the end of this agenda).*

III. Reports

- A. Building Codes Division report
- B. Residential structures program update
- C. Manufactured structures program update

IV. Communications - None

V. Appeals - None

VI. Unfinished business - None

VII. New business

- A. Board review and provide a recommendation to the Administrator for revisions to Section R202 and the addition of Section R325 Group R Accessory Buildings in the 2014 Oregon Residential Specialty Code
- B. Board review and provide a recommendation to the Administrator for the proposed solar photovoltaic provisions of the 2014 Oregon Residential Specialty Code and modifications addressing the fastening of arrays

- C. Board recommendation for the technical and scientific facts of Statewide Alternate Method No. 15-02 for use of the Oregon 2013 Electronic Snow Load Map to the snow load provisions in the 2014 Oregon Residential Specialty Code
- D. Board approve the low-rise plumbing provision of the 2014 Oregon Residential Specialty Code related to Oregon Plumbing Specialty Code proposal 14-12 Removable fixture traps

VIII. Announcements - None

IX. Adjournment

Issues to remember when addressing the board:

- All public participation is subject to the discretion of the board Chair for order of testimony, length and relevance.
- Speakers are generally limited to five minutes.
- Please register on the attendance registration form and on the public testimony registration form, listing the appropriate agenda item.
- The board Chair will call you to the front testimony table.
- Please state your name and the organization you represent (if any).
- Always address your comments through the Chair.
- If written material is included, please provide 20 three-hole-punched copies of all information to the boards coordinator prior to the start of the meeting and, when possible, staff respectfully requests an electronic copy of materials 24 hours prior to the meeting.

Interpreter services or auxiliary aids for persons with disabilities are available upon advance request. Persons making presentations including the use of video, DVD, PowerPoint, or overhead projection equipment are asked to contact boards coordinator 24 hours prior to the meeting. For assistance, please contact Debi Barnes-Woods at (503) 378-6787.

Please do not park vehicles with "E" plates in "customer only" spaces.

Note: For information regarding re-appointments or board vacancies, please visit the Governor's website.

**State of Oregon
Draft**

Agenda Item I.D

**Residential and Manufactured Structures Board
Regular board meeting minutes
May 9, 2014**

Members present: Jan Lewis, Chair, residential structural contractor
Bruce Dobbs, Vice-chair, utility/energy supplier
Richard Bonheimer, seller or distributor of new manufactured dwellings
John Chmelir, multi-family contractor
Kathryn Gray, home designer
Tonya Halog, structural engineer
Emily Kemper, public member
Douglas Lethin, remodeler residential structural contractor
Rebai Tamerhoulet, building official
Rick Torgerson, manufacturer of manufactured dwellings

Members absent: John Mills, residential building trade sub-contractor

Staff present: Andrea Simmons, manager, Policy and Technical Services
Shane Sumption, manager, Statewide and Field Services sections
Steve Judson, facility engineer and code specialist
Richard Rogers, chief building official
Tony Rocco, building code specialist
Mark Heizer, P.E., technical policy analyst
Shawn Haggin, electrical program assistant chief
Richard Baumann, policy analyst
Debi Barnes-Woods, boards coordinator

Guests present: Genoa Ingram, Oregon Manufactured Housing Association (OMHA)
Jessica Carpenter, OMHA
G.F. Scheuermann, IAPMO
David Mills, Oregon State Fire Marshal (OSFM)
Howard Asch, Oregon Home Builders Association (OHBA)
James Bela, Oregon Earthquake Awareness

I. Board business

A. Call to order

Chair Jan Lewis called the Residential and Manufactured Structures Board meeting to order at 9:30 a.m. The meeting was held at the Building Codes Division in Conference Room A, 1535 Edgewater Street NW, Salem, Oregon.

B. Roll call

John Mills was absent excused. Vice-chair Bruce Dobbs and Tonya Halog were connected by teleconference. All other members were present in Conference Room A.

C. Approval of agenda and order of business

Chair Lewis **RULED** the agenda approved.

D. Approval of the board meeting minutes of March 14, 2014

Chair Lewis **RULED** the meeting minutes of March 14, 2014, approved as written.

E. Date of the next regularly scheduled meeting

The next meeting date is scheduled for July 11, 2014.

II. Public comment - None

III. Reports

A. Building Codes Division report

Andrea Simmons, manager, Policy and Technical Services, explained that the 2013 Oregon Legislature passed a series of bills that impacted how inspectors are trained and obtain their continuing education classes. The division has filed administrative rules to change the training process for inspectors. The division is taking a more direct role in providing both the training and continuing education of inspectors. A Training Program has been created, which is responsible for developing and providing training for building officials and inspectors. In order to assist building officials and inspectors meet the new state code-change training requirements, the division has developed a new curriculum and will be offering code-change classes for the electrical, energy, mechanical, plumbing, residential and structural codes.

Manager Simmons demonstrates live training and its capabilities.

Manager Simmons introduced the new Deputy State Fire Marshal, David Mills.

B. Residential program update

Shane Sumption, manager, Statewide Services section, discussed ready build plans program using an example from the division website

http://www.cbs.state.or.us/external/bcd/programs/ready_build_plans.html

IV. Communications - None

V. Appeals - None

VI. Unfinished business - None

VII. New business

- A. Board review and provide a recommendation to the Administrator on the low-rise plumbing provisions of the 2014 Oregon Residential Specialty Code**
Andy Skinner, plumbing program chief, discussed the plumbing provisions of the 2014 ORSC, he reviewed 18 changed provisions of the code.

Motion by John Chmelir to approve the committee's and State Plumbing Board's proposed 2014 Oregon Plumbing Specialty Code provisions applicable to low-rise residential structures and recommend them to the Administrator for public hearing and subsequent adoption, with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.

Motion carried unanimously

- B. Board review and provide a recommendation to the Administrator on the adoption of the 2014 Oregon Residential Specialty Code**
(Rebai Tamerhoulet left the meeting at 10:45 am without voting on this item)

Steve Judson, facilities engineer, reported that the Oregon Residential Structural Code Committee met once on February 19, 2014, and has proposed eight substantive structural and mechanical code changes. The committee recommended that the board adopt the 2011 ORSC with the proposed changes as the 2014 Oregon Residential Specialty Code.

Mr. Judson said the 2014 ORSC is a modification of the 2011 ORSC. This process is a three-year interim code amendment process that focused entirely on existing Oregon code. The 2017 ORSC update will be based on national model code with Oregon amendments and that review will be considered a six-year national model code-cycle.

Motion by John Chmelir to approve the committee's proposed code language and recommend to the Administrator to move the proposed residential structural and mechanical code provisions of the 2014 ORSC for public hearing and subsequent adoption, with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.

Motion carried

C. Board review and provide a recommendation to the Administrator on the technical code requirements for low-rise apartments.

Richard Rogers, chief building official, said the division is eliminating the printing of Appendix “N” in the Oregon Structural Specialty Code (OSSC) and placing those requirements, which are under the purview of the Residential and Manufactured Structures Board within the body of the OSSC. This change will not impact the statutory responsibility of the board to approve technical code requirements for low-rise apartments that fall within the definition of a low-rise residential dwelling.

(During the discussion, Bruce Dobbs disconnected from teleconference and was not available for the vote)

Motion by Chair Jan Lewis to approve the apartment construction standards proposed by division as the required standard for low-rise apartments for public hearing and subsequent adoption with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.

Motion carried

VIII. Announcements – None

IX. Adjournment

The Residential and Manufactured Structures Board meeting was adjourned at 11:30 a.m.

Respectfully submitted by Debi Barnes-Woods
Boards Administrator/Coordinator

Board meeting dates 2015

Electrical &

Elevator Board

Meets the fourth Thursday of every other month:

January 22, 2015
March 26, 2015
May 28, 2015
July 23, 2015
September 24, 2015
November 19, 2015 Holiday schedule

Mechanical Board

Meets the first Wednesday of The 3rd, 6th, 9th, and 12th months:

March 4, 2015
June 3, 2015
September 2, 2015
December 2, 2015

Board of Boiler Rules

Meets the first Tuesday of The 3rd, 6th, 9th, and 12th months:

March 3, 2015
June 2, 2015
September 1, 2015
December 1, 2015

State Plumbing

Board

Meets the third Thursday of every other month:

February 19, 2015
April 16, 2015
June 18, 2015
August 20, 2015
October 15, 2015
December 17, 2015

Building Codes Structures Board

Meets the first Wednesday of the 2nd, 5th, 8th, and 11th months:

February 4, 2015 **Rescheduled to January 15, 2015**
May 6, 2015
August 5, 2015
November 4, 2015

Residential & Manufactured Structures Board

Meets the second Friday of each quarter:

January 9, 2015
April 10, 2015
July 10, 2015
October 9, 2015

Construction Industry

Energy Board

Meets twice a year:

April 23, 2015
October 29, 2015

Due to the passage of [Senate Bill 440](#) licensing boards are required to meet no less than four times a year and non-licensing boards no less than two times a year [ORS 705.250](#)

Meetings are held in BCD Conference Room A
1535 Edgewater Street NW Salem OR 97304

Meetings begin at 9:30 a.m. Meetings may be canceled or rescheduled.

The calendar adjustments are to accommodate holidays and code adoptions. All board information is posted at the [BCD Web site](#)

State of Oregon

Board memo

Building Codes Division

January 9, 2015

To: Residential & Manufactures Structures Board

From: Rex Turner
Structural Program Chief

Subject: Consider Proposed Change to Revise Section R202 and Add Section R325 Related to Area Increases for Detached Group R Accessory Buildings

Action requested:

The division requests that the board consider and make changes related to the proposed requirements for tabulated allowable area increases based on the availability of “open spaces” between adjacent buildings and/or property lines.

Background:

With the passage of Senate Bill 582 (SB 582) in the 2013 Regular Session of the Oregon Legislature, Oregon Building Codes Division (BCD) was directed to give special consideration to the unique needs of construction in rural or remote parts of the state when promulgating building codes.

In response, the division has identified circumstances where strict code compliance is not necessary provided reasonable safeguards for occupants are in place.

One of the first areas identified for consideration was to develop a rational path which would allow detached Group R, accessory buildings regulated under the Oregon Residential Specialty Code (ORSC), to exceed the 3,000 square foot area limitation imposed by the definition without the use of sprinkler systems.

Accordingly, the following code change (new Section R325) was developed to provide for tabulated allowable area increases based on the availability of “open spaces” between adjacent buildings and/or property lines. The “Rationale section” provides the analysis for justification. In addition, the division believes the code change warrants consideration beyond rural locations and is so scoped to be applicable to any detached, single-story Group R, accessory structure.

Due to timing constraints, the 2014 ORSC code update process was allowed to continue knowing that any SB 582 concepts would have to be considered separately. The division believes the code change under consideration is consistent with the directives of SB 582 and merits inclusion in the 2014 ORSC.

Proposal:

Suggested changes (~~strikeout text~~ denotes deletion, **bold/underline denotes addition**)

**SECTION R202
DEFINITIONS**

ACCESSORY STRUCTURE. A structure not greater than 3,000 square feet (279 m²) in floor area, and not over two stories in height, the use of which is customarily accessory to and incidental to that of the dwelling(s) and which is located on the same *lot*. Accessory structures include, but are not limited to garages, carports, cabanas, storage sheds, tool sheds, playhouses and garden structures. **See section R325 for allowable area increases.**

New Section R325

**SECTION R325
DETACHED GROUP R ACCESSORY STRUCTURES (GROUP U)**

R325.1 Purpose: The purpose of this section is to provide for tabulated allowable area increases for detached Group R *accessory structures* (Group U) based on the availability of open spaces between adjacent buildings and/or property lines.

R325.2 Scope: The provisions of this section are limited to detached Group R *accessory structures*, which are not more than one story above grade plane in height. Mezzanines may be included within detached *accessory structures* but shall be limited to an aggregate floor area of not more than one-third of the area of the room or space in which the level is located.

R325.3 Definitions: The following words and terms shall, for the purposes of this section, have the meanings shown herein.

Separation Distance. The distance measured from the detached *accessory structure* exterior face to one of the following:

1. The closest interior *lot line*;
2. To the centerline of a street, an alley or *public way*; or
3. To residences or other *accessory structures* on the same property.

The distance shall be measured at right angles from the face of the wall.

R325.4 Allowable area. The 3,000 square (279 m²) foot area limitation imposed by definition for residential *accessory structures*, shall be permitted to be increased where *separation distances* are provided on all sides of a detached *accessory structure* in accordance with Table R325.4.

Exceptions: Where a *separation distance* of 10 feet (3048 mm) or more is provided, 1-hour fire-resistance-rated construction may be substituted for the *separation distance* noted in Table R325.4 for one side of a detached *accessory structure* subject to the following conditions:

1. A minimum *separation distance* of 10 feet (3048 mm) must be provided adjacent to the 1-hour fire-resistance-rated exterior wall.
2. Openings in the 1-hour fire-resistance-rated exterior wall are limited to 15% of the area of the wall.

R325.4.1 Residential *accessory structures* on same lot. For the purposes of this section, two or more detached residential *accessory structures* on the same lot shall be regulated as separate buildings or shall be considered as portions of one building if the aggregate area of the buildings is within the limitations of Table R325.4.

Where aggregate building areas are being considered as portions of one building, the *separation distances* specified in Table R325.4 shall be applicable to all exterior building faces which establish the aggregate building perimeter.

R325.4.2 Projections. Projections of exterior walls shall comply with Table R302.1 of this code.

**Table R325.4
Allowable Area Increase
Detached Group R Accessory Buildings**

Separation Distance (In feet)	Allowable Area (In square feet)
5	3,500
10	4,000
15	4,500
20	5,000
25	5,500
30	6,000
35	7,000
40	8,000
45	9,000
50	10,000
55	11,000
60 or greater	12,000

Rationale:

The justification for this proposal closely mirrors that provided for in the ICC Commentary for:

- ❖ OSSC TABLE 503, Allowable Building Heights and Areas
- ❖ OSSC Section 503.2, Building Area Modifications, Frontage Increase

Per the Commentary; “*Table 503 is the foremost code table used in establishing equivalent risk (offsetting a building’s inherent fire hazard—represented by occupancy—with materials and construction features).*” In consideration of this proposal, the division noted that Group R, Accessory Buildings are often used in a manner more consistent with Group S-2 occupancies than Group U and are typically constructed of Type III-B or V-B materials. The proposed allowable areas captured in “Table A” are “congruous” with OSSC Table 503 given the “residential attributes” of the intended end use.

In the discussion of OSSC 506.2 the Commentary notes; “*The allowable area of a building is permitted to be increased when it has a certain amount of frontage on streets or open spaces since this provides access to the structure by fire service personnel, a temporary refuge area for occupants as they leave the building in a fire emergency and a reduced exposure to and from adjacent structures.*” Likewise, the proposed “Table A” provides for increased allowable areas commensurate with the availability of adjacent open spaces on all sides of an accessory structure. While Section 506.2 of the OSSC allows for individual analysis of open spaces available to *each side of a structure*, this proposal takes a much more prescriptive approach in requiring the specified open spaces to be present *on all sides of a structure*. The single concession is noted in the exception where a 1-hour fire-resistance-rated wall is provided.

In addition, OSSC Table 705.8 restricts the area of openings which are unprotected and where no sprinkler system is provided to 15% of the area of the wall where “fire separation distances” of 10 to 15 feet are provided. Appropriately, the exception to the “Table A - separation distances” is limited to 15% and a minimum of 10 feet of separation must be maintained.

Options:

The board has the following options:

- Approve the division proposal to modify **Section R202** and add **Section R325** for adoption in the 2014 ORSC, with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.
- Amend and approve the division proposal to modify **Section R202** and add **Section R325** for adoption in the 2014 ORSC, with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.
- Disapprove the division proposal to modify **Section R202** and add **Section R325** and state the reason for the disapproval for the record.

Recommendation:

Approve the division's proposal to modify **Section R202** and add **Section R325** for adoption in the 2014 ORSC, with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.

State of Oregon

Board memo

Building Codes Division

January 9, 2015

To: Residential and Manufactured Structures Board

From: Steven W. Judson
Facilities Engineer

Subject: 2014 Oregon Residential Specialty Code (ORSC) - Solar photovoltaic provisions

Action requested:

The division requests that the board review and approve the proposed solar photovoltaic provisions of the 2014 ORSC and modifications addressing the fastening of arrays.

Background:

The solar photovoltaic provisions for the State of Oregon are currently located in the 2010 Oregon Solar Installation Specialty Code (OSISC). These provisions are being moved into the 2014 Oregon Structural Specialty Code (OSSC) and because this code covers both residential and commercial applications a new reference must be made in the Residential Code.

The Construction Industry Energy Board, which is comprised of members from each of the seven appointed governing boards, previously considered the provisions in the 2010 OSISC and approved them at the meeting on June 29, 2010.

Discussion:

To date, the photovoltaic solar system requirements of the Low-Rise Residential Dwelling Code have been printed in a stand-alone document known as the Oregon Solar Installation Specialty Code. The division plans to place those requirements, which are under purview of the board, into the body of the ORSC with references to the OSSC as appropriate. This change in printing location will not impact the statutory responsibility of the board to approve technical (code) requirements for structures that fall within the board's purview.

The division has chosen to print those previously adopted photovoltaic solar system requirements that align best with the OSSC in the OSSC to reduce confusion. The change in location for these provisions creates a new reference in Chapter 23, Solar Systems, of the 2014 ORSC directing the user to Section 3111 (Solar Photovoltaic Panels/Modules) in the 2014 OSSC.

The division is also requesting that the board approve a modification, which was necessary for prescriptive wind loading provisions and the fastening of arrays. When the OSISC was written, parameters for allowable wind speeds were set too low for prescriptive installations. These parameters prohibited roughly 85 percent of the state from being able to use the provisions under the maximum support spacing configurations in the code. By modifying the wording of the section to reflect the original intent of the code, prescriptive installations are now available to the majority of the users in the state. Details of the modification are attached below.

Options:

- Approve the adoption of the modifications as presented in this memorandum regarding the solar photovoltaic provisions in the 2014 ORSC with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.
- Amend and approve the adoption of the modifications as presented in this memorandum regarding the solar photovoltaic provisions in the 2014 ORSC with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.
- Disapprove the adoption of the modifications as presented in this memorandum regarding the solar photovoltaic provisions in the 2014 ORSC, which would continue use of the un-amended 2014 ORSC.

Recommendation:

Approve the adoption of the new language for the solar photovoltaic provisions in the 2014 ORSC and the modifications to the provisions in the 2014 OSSC, with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.

Modifications to ORSC Chapter 23:

CHAPTER 23 SOLAR SYSTEMS

SECTION M2301 SOLAR ENERGY SYSTEMS

M2301.1 General. This section provides for the design, construction, installation, alteration, and repair of equipment and systems using solar energy to provide **power through photovoltaic systems**, nonpotable space heating or cooling, and swimming pool heating. Equipment and systems using solar energy to directly or indirectly heat potable water are regulated under the *Plumbing Code*.

M2301.2 Installation. Installation of solar energy systems shall comply with Sections M2301.2.1 through ~~M2301.2.9~~ **M2302**.
M2302 Photovoltaic Systems. Photovoltaic (PV) systems shall be installed in conformance with Section 3111 of the Building Code. All electrical PV installations shall comply with the Electrical Code.

OSSC Solar Provisions:

SECTION 202 DEFINITIONS

APPROVED FIELD EVALUATION FIRM. An organization primarily established for purposes of testing to approved standards and approved by the Authority Having Jurisdiction.

ARRAY. A mechanically integrated assembly of modules or panels with a support structure and foundation, tracker, and other components, as required, to form a power-producing unit.

~~**AUTHORITY HAVING JURISDICTION (AHJ).** An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.~~

BUILDING INTEGRATED PHOTOVOLTAICS. Photovoltaic cells, devices, modules, or modular materials that are integrated into the outer surface or structure of a building and serve as the outer protective surface of that building.

CUTOOUT. An area adjacent to a pathway for use by firefighters to cut a vent if needed. Cutouts shall not be less than 30 inches (762 mm) in any dimension.

EXISTING WORK. Existing work is a PV system or any part thereof which has been installed prior to the effective date of this Code.

MODULE. A complete, environmentally protected unit consisting of solar cells, optics, and other components, exclusive of tracker, designed to generate power when exposed to sunlight.

NON-OCCUPIED ACCESSORY STRUCTURE. A structure normally not occupied such as a garage, carport, shed, or agricultural building.

NRTL. A Nationally Recognized Testing Laboratory.

PATHWAY. Unobstructed route provided within or around the PV array to provide unimpeded access and egress for firefighting purposes.

PHOTOVOLTAIC (PV). Relating to electricity produced by the action of solar radiation on a solar cell.

PHOTOVOLTAIC (PV) SYSTEM. The total components and subsystems that, in combination, convert solar energy into electric energy suitable for connection to a utilization load.

RACKING. A system of components that directly supports the PV modules and transfers the applied loads to the building structure or ground-supported structure.

SOLAR ROOF. A roof in which a solar array is installed.

SUPPORTS. Supports, hangers, and anchors are devices for properly supporting and securing pipe, appurtenances, fixtures, and equipment.

SECTION 3111 SOLAR PHOTOVOLTAIC PANELS/MODULES

3111.1 Scope. The provisions of this section shall govern the installation of photovoltaic (PV) components including location, materials and structural support. Where the installation of PV systems is not covered by this section the installation shall be in compliance with the applicable provisions of the *Building Code* as defined in ORS 455.020. For electrical installations see the *Electrical Code*.

Exception: Where applicable provisions are specified, compliance with the *Residential Code* shall satisfy the requirements of this section when the PV system is installed on;

1. Detached one and two family dwellings and townhouses classified as Group R-3, and Group U Occupancies; and
2. Residences used for family child care home or foster care in accordance with ORS Chapters 418, 443 and 657A; and
3. Detached congregate living facilities (each accommodating 10 persons or less) and detached lodging houses containing not more than five guest rooms.

3111.2 Definitions. The following terms are defined in Chapter 2.

ARRAY

BUILDING INTEGRATED PHOTOVOLTAICS.

CONVENTIONAL LIGHT-FRAME WOOD CONSTRUCTION.

CUTOUT.

DEAD LOAD.

EXISTING WORK.

LIVE LOADS (ROOF).

MODULE.

NRTL.

NON-OCCUPIED ACCESSORY STRUCTURE.

PATHWAY.

PHOTOVOLTAIC (PV).

PHOTOVOLTAIC (PV) SYSTEM.

RACKING.

SOLAR ROOF.

SUPPORTS.

TOWNHOUSE.

3111.3 Minimum Standards and Quality. Photovoltaic (PV) components, racking, support structures and attachments shall be in accordance with the provisions of this section. PV systems shall be designed and installed in accordance with this code and the manufacturer's installation instructions.

3111.3.1 Type of Construction. PV systems, including supporting structure, shall comply with the requirements of Chapter 6 of this code for the structures required to be of non-combustible type of construction or the *Residential Code* as applicable.

3111.3.2 Material Standards. PV modules shall be certified in accordance with UL 1703 and shall be installed in accordance with the manufacturer's installation instructions.

3111.3.3 Certification Requirements. PV racking and attachments shall comply with one of the following:

1. Certified to UL 1703 by a nationally recognized testing laboratory and installed in accordance with the manufacturer's installation instructions.
2. For exempt structures in accordance with Section 105.2, documentation demonstrating to the satisfaction of the building official, that the racking system has been designed to resist the applicable loads, and installed in accordance with the manufacturer's installation instructions.

3. Designed by an Oregon Licensed Engineer or Architect.
4. Field evaluation by an Approved Field Evaluation Firm.
5. Approval by the ~~Authority Having Jurisdiction~~ *building official*.

3111.3.4 Fire Classification. Rooftop mounted PV systems shall be non-combustible or have a fire classification that is equal to or greater than the roof assembly required by Section 1505.1 of this code.

3111.3.5 Weather Protection. All components of the PV system exposed to the weather shall be constructed of materials approved for exterior locations and protected from corrosion or deterioration.

3111.4 Location. The location of Photovoltaic (PV) components, racking, support structures and attachments shall be in accordance with the provisions of this chapter.

3111.4.1 Zoning Requirements. The installation of PV systems shall comply with the requirements of the zoning requirements of the ~~Authority Having Jurisdiction (AHJ)~~ *municipality*.

3111.4.2 Flood Hazard Areas. Installation of PV systems within flood hazard areas, as defined by the ~~AHJ~~ *Flood Plain Administrator*, shall comply with this code or the *Residential Code*, Section R322 as applicable.

3111.4.3 Building Egress. PV systems shall not be installed in locations that would restrict, or otherwise prevent the use of, the required means of egress and emergency escape and rescue. The means of egress shall comply with Chapter 10 of this code or the *Residential Code*, Section R310 and R311 as applicable.

3111.4.4 Light and Ventilation. PV systems shall not be installed in locations that would restrict the required light and ventilation. Light and ventilation shall comply with Chapter 12 of this code or the *Residential Code*, Section R303 as applicable.

3111.4.5 Rooftop Vent and Drain Clearances. PV systems shall not be installed in locations that would restrict the function of plumbing or mechanical vents, skylights, drains or other rooftop features.

Exception: Non-operable skylights in one- and two-family dwellings.

3111.4.6 Mechanical Equipment Clearances. PV systems shall be installed with not less than a 30 inch (762 mm) clearance around mechanical equipment requiring service or maintenance. The specific provisions of the *Mechanical Code* and *Electrical Code* apply to installations of PV systems.

3111.4.7 Roof Drainage. PV systems shall not be installed in a manner that would obstruct roof drainage. No vertical supports or roof penetrations shall be allowed within 12 inches (305 mm) of each side of the low point of the valley. The PV modules or racking may extend into the valley no more than 6 inches (152 mm) from the valley low point provided that a minimum 3 inch (76 mm) clearance above the surface of the roof is maintained.

3111.4.8 Fire Fighter Access and Escape. To provide access and escape for Fire Fighters the location of roof-mounted PV modules shall comply with the requirements of this section.

3111.4.8.1 General Pathway Requirements. All PV installations shall include a 36 inch wide (914mm) pathway maintained along three sides of the solar roof. The bottom edge of a roof with a slope that exceeds 2:12 shall not be used as a pathway. All pathways shall be located over a structurally supported area and measured from edge of the roof and horizontal ridge to the solar array or any portion thereof.

Exception:

1. On structures with a PV array area of 1,000 square feet (92.90 m²) or less installed on a roof with a slope that exceeds 2:12 and with an intersecting adjacent roof and where no section is larger than 150 feet (45720 mm) measured in length or width:
 - 1.1 Where the PV array does not exceed 25% as measured in plan view of total roof area of the structure, a minimum 12 inch (305mm) unobstructed pathway, shall be maintained along each side of any horizontal ridge.
 - 1.2 Where the solar array area exceeds 25% as measured in plan view of total roof area of the structure, a minimum of one 36 inch (914 mm) unobstructed pathway from ridge to eave, over a structurally supported area, must be provided in addition to a minimum 12 inch (305 mm) unobstructed pathway along each side of any horizontal ridge.
2. Pathways are not required on *non-occupied accessory structures* provided they are separated from occupied structures by a 6 feet (3048 mm) minimum separation distance or by a minimum two-hour fire rated assembly.
3. Townhouses providing fire separation as required by the applicable code at the time of construction may be considered one structure and comply with the provisions of Section 3111.4.8.1(1.1).

Where *townhouses* are separated by real property lines and pathways cross real property lines, the building official shall review, approve and maintain a record of all easements for access related to the PV system installation. Easements may be general in nature or they may describe specific locations. The applicant shall provide a copy of the recorded easement to the building official prior to issuance of the building permit. Easements shall be recorded for each affected dwelling unit and the book and page number provided to the jurisdiction having authority.

3111.4.8.2 Intermediate Pathway Locations. Systems that include a solar array section that is larger than 150 feet (45720 mm) measured in length or width shall have additional intermediate pathways. An intermediate pathway not less than 36 inches (914 mm) wide separating the array shall be provided for every 150 feet (45720 mm) of array including offset modules or angled installations. The maximum square footage of an array shall not exceed 22,500 ft² (2090 m²) without the installation of an intermediate pathway.

3111.4.8.2.1. Where a system is required to have intermediate pathways, all pathways shall have one or more cutouts located adjacent to the pathway. No point on the pathway shall be more than 25 feet (7620) from a cutout.

3111.4.8.3 Prohibited Locations. Pathways shall not be located within 12 inches of the low point of a valley.

3111.4.8.4 Smoke and Heat Vents. In structures where smoke and heat vents have been installed to comply with the requirements of the *Fire Code*, Chapter 9 Smoke and Heat Vents and Chapter ~~2332~~ High Piled Storage, a 36 inch (914 mm) wide path- way to and around each vent shall be provided for fire department access, maintenance and testing of these vents.

3111.4.8.5 Electrical Component Location.

3111.4.8.5.1 Disconnects, j-boxes, combiner boxes or gutters shall not be located in any required pathway or cutout.

3111.4.8.5.2 Raceways on flat roofs that cross a required pathway shall be bridged to avoid tripping hazards. Raceways shall not be permitted in required pathways on roofs with a slope that exceeds 2:12 (17-percent slope).

3111.4.9 Alternate Installations. In accordance with Section 104.11 of this code, an alternative material, design, location, method of construction, or means of safe fire fighter access and egress may be approved by the building official.

3111.5 Structural. Photovoltaic (PV) components, racking, support structures and attachments shall be in accordance with the provisions of this section.

3111.5.1 Module Attachment. PV modules shall be attached in accordance with the manufacturer's installation instructions and to account for all loads, including dead loads, snow loads, wind loads and seismic loads, as prescribed by ~~the Building Code~~ this code.

3111.5.2 Racking. Racking shall comply with this section.

3111.5.2.1 Building Penetrations. All penetrations shall be flashed or sealed in a manner that prevents moisture from entering the wall and roof.

3111.5.2.2 Structural Support and Attachment. Racking and racking supports shall be positively attached to the structural components or blocking in accordance with this section. Racking and racking supports installed in accordance with manufacturer's specifications or be designed in accordance with ~~the Building Code~~ this code and shall be mounted in accordance with one of the following:

1. Installed in accordance with manufacturer's specifications and be designed in accordance with the ~~Building Code~~ this code.
2. Installed in accordance with Section 3111.5.3.
3. Positively attached to the structural components or blocking through the use of screws, bolts, j-bolts, or other approved means. Such attachment shall not be accomplished by the use of toenails or nails subject to withdrawal. Racking and racking supports shall be mounted to structural components and shall not be attached to wall or roof coverings, trim or structural sheathing as a means of structural support.
4. Attached to standing seam metal roofs with connectors in accordance with manufacturer's installation instructions.
5. Certified non-penetrating or minimally penetrating systems installed in accordance with the manufacturer's installation instructions.

3111.5.2.3 Roof Mounted Racking. Roof-mounted supporting structures shall be certified in accordance with Section 3111.3.3, and shall be designed in accordance with accepted engineering practice, constructed and installed to safely

support all loads, including dead loads, snow loads, wind loads and seismic loads as prescribed by ~~the Building Code or this code~~ and in accordance with Section 3111.5.3.

3111.5.2.4 Ground Mounted Racking. Ground-mounted supporting structures, and all parts thereof, shall be designed, constructed and installed to safely support all loads, including dead loads, flood loads, snow loads, wind loads and seismic loads as prescribed by ~~the Building Code~~ this code.

The bottom of modules shall be at least 18 inches (457 mm) clear from ground level.

3111.5.3 Prescriptive Installations. Roof installations on conventional light-frame construction which complies with this section shall qualify as prescriptive and shall not require an engineered design if all of the following criteria are met:

1. Roof Structure: The supporting roof framing shall be conventional light framed wood construction with pre-engineered trusses or roof framing members at a spacing of 24 inch (610 mm) on center maximum that comply with the applicable allowable spans in Table 2308.7.2(1-6) for the specific loads including ground snow loads not exceeding 50 psf and wind loads that do not exceed **Risk Category II, Ultimate Wind Speed of 120 mph [95 mph three-second gust in the Residential Code]** in exposure C or **Risk Category II, Ultimate Wind Speed of 135 mph [105 mph three-second gust in the Residential Code]** in exposures A or B as defined in 1609 of the *Building Code*. Where the grade cannot be verified it is assumed to be #2 Douglas-Fir Larch.

Exception: Roof framing in compliance with the applicable allowable spans in Tables 2308.7.2(1-6) **of this code and Tables R802.5.1(7-8) of the Residential Code** for the specific loads including ground snow loads not exceeding 70 psf and wind exposure limited to exposure A, B or C shall satisfy the requirements of this section when the PV system is installed on;

1. Detached one and two family dwellings and townhouses classified as Group R-3, and Group U Occupancies; and
2. Residences used for family child care home or foster care in accordance with ORS Chapters 418, 443 and 657A; and
3. Detached congregate living facilities (each accommodating 10 persons or less) and detached lodging houses containing not more than five guest rooms.

2. Roof materials. Roofing material shall be metal, single layer wood shingle or shake, or not more than two layers of composition shingle.

3. Loading: Installation shall comply with Figures 3111.5.3(1) and (2). The combined weight of the PV modules and racking shall not exceed 4.5 pounds per square foot (2.0412 kPa). PV modules or racking shall be directly attached to the roof framing or blocking. Attachments must be spaced no greater than 48 inches (1219 mm) on center in any direction. Attachments shall be spaced no greater than 24 inches (609.6 mm) on center in any direction where:

- 3.1. Ground snow loads exceed 25 psf; or
- 3.2. Located within 3 feet (91.44 cm) of a roof edge, hip, eave or ridge; or
- 3.3. Wind exposure is B or ~~more~~ **greater** and **Risk Category II, Ultimate Wind Speed exceeds 120 mph [95 mph three-second gust in the Residential Code]; or** ~~or wind exposure is exposure C and wind speed is 85 MPH or more.~~

3.4 Wind exposure is C or greater and the Risk Category II, Ultimate Wind Speed exceeds 110 mph [85 mph three-second gust in the Residential Code].

Exception: PV modules or racking may be attached directly to standing seam metal panels using clamps and roofing materials which meet the following:

1. The allowable uplift capacity of clamps shall not be less than 115 pounds for clamps spaced at 60 inches (1525 mm) on center or less as measured along the seam or not be less than 75 pounds for clamps spaced at less than 48 inches (1219 mm) on center.
2. Clamp spacing between seams shall not exceed 24-inches (610 mm). Spacing of clamps along a seam shall not exceed 60-inches.
3. Roofing panels shall comply with all of the following:
 - 3.1. Shall be a minimum of 26 gage steel,

- 3.2. Shall be a maximum of 18-inches (457 mm) in width,
 - 3.3. Shall be attached with a minimum of #10 screws at 24-inches (610 mm) on center,
 - 3.4. Shall be installed over minimum ½-inch (12.7 mm) nominal wood structural panels attached to framing with 8d nails at 6-inches (153 mm) on center at panel edges and 12-inches (305 mm) on center field nailing.
- 4. Height:** Maximum module height above roof shall be 18 inches (457 mm) from top of module to roof surface and in accordance with Figures ~~305.4(1)~~ **311.5.3(1) and (2)**.
- 5. Submittal Requirement.** See ~~Section 105.2~~ Chapter 1 for requirements.

State of Oregon

Board memo

Building Codes Division

January 9, 2014

To: Residential and Manufactured Structures Board

From: Steven W. Judson
Facilities Engineer

Subject: Use of the Oregon 2013 Electronic Snow Load Map as a Statewide Alternate Method to the snow load provisions in the 2014 Oregon Residential Specialty Code (ORSC)

Action requested:

Provide a board recommendation to the division as to the technical and scientific facts for use of the Oregon 2013 Electronic Snow Load Map as an acceptable alternate method to the 2014 ORSC.

Background:

Shortly after publication of the 2007 edition of the *Snow Load Analysis of Oregon* book and map, areas of Northwestern Oregon experienced record setting snowfall. The SEAO Snow Load Committee began reviewing the data in early 2009 to see if it would affect the 50-year mean recurrence interval (MRI) snow load at certain sites. After researching the snowfall from that winter, the committee found that the snowfall from that year at a number of mid-elevation sites exceeded those predicted on the map and realized the 50-year MRI Station values for some locations were much lower than the surrounding snow load contour lines.

Based on research of the methods used for development of the 2007 map, the committee published a white paper explaining where the methodology needed to be revised and suggested an interim method to enable the use of the 2007 map. This was sent to everyone who purchased the 2007 Manual and Map. The 2013 Electronic Map is the result of the 2007 Map modified by the white paper recommendations.

The mapping procedures for the 2013 Snow Load revisions provided for more accurate snow load values due to the refined field data and analysis. Snow data in the 2007 approach used a constant depth to density conversion whereas the revised 2013 mapping uses the ASCE-7 method where density increases as depth increases. This made for small changes at lower and higher elevations but resulted in increases for the predicted snow load values at mid elevation sites.

The Structural Engineer's Association of Oregon 2013 Electronic Snow Load Map is a more direct way to determine the snow loads from the combination of the 2007 map and the 2011 White Paper. The use of the 2007 map and 2011 white paper loads are already required by the OSSC and in footnote "a" of Table R301.2(1) of the ORSC. All information required for the proper use of the map is contained on the SEAO website. The 2013 map is based on analysis procedures that better follow current snow load development standards. The 2013 map corrects the under-predicted snow load values at mid-elevations from the 2007 Map. There are still some areas within the state with micro climates that need to be reviewed at the local level.

Options:

The board has the following options:

- Approve the technical and scientific facts of the proposed alternate method.
- Amend and approve the technical and scientific facts of the proposed alternate method.
- Disapprove the technical and scientific facts of the proposed alternate method.

Recommendation:

Approve the technical and scientific facts of the proposed alternate method.



No. 15-02
Electronic Snow Load Locator
(Ref.: ORS 455.060)

Statewide Alternate Methods are approved by the Division administrator in consultation with the appropriate advisory board. The advisory board's review includes technical and scientific facts of the proposed alternate method. In addition:

- *Building officials shall approve the use of any material, design or method of construction addressed in a statewide alternate method;*
- *The decision to use a statewide alternate method is at the discretion of the designer; and*
- *Statewide alternate methods do not limit the authority of the building official to consider other proposed alternate methods encompassing the same subject matter.*

Code Edition: 2014 Oregon Structural Specialty Code (OSSC)
2014 Oregon Residential Specialty Code (ORSC)

Code Section: OSSC Section 1608, Snow Load
ORSC Section R301.2.3, Snow Loads, and Table R301.2(1)

Date: TBD

Initiated by: Structural Engineer's Association of Oregon (SEAO)

Subject:

Use of the Oregon 2013 Electronic Snow Load Map as created by the Structural Engineer's Association of Oregon as an alternate method to the snow load provisions in the 2014 OSSC and the 2014 ORSC.

Background:

Shortly after publication of the 2007 edition of the *Snow Load Analysis of Oregon*, areas of Northwestern Oregon experienced record setting snowfall. The SEAO Snow Load Committee began reviewing the data in early 2009 to see if it would affect the 50-year mean recurrence interval (MRI) snow load at certain sites. After researching the snowfall from that winter, the committee found that the snowfall from that year at a number of mid-elevation sites exceeded those predicted on the map. They realized the 50-year MRI Station values for some locations were much lower than the surrounding snow load contour lines.

After researching the methods used for development of the 2007 map, the committee published a white paper explaining where the methodology needed to be revised and suggested an interim method to enable the use of the 2007 map. This was sent to everyone who purchased the 2007 Manual and Map. The 2013 electronic map is the result of the 2007 map modified by the white paper recommendations.



Discussion:

The mapping procedures for the 2013 Snow Load revisions provided for more accurate snow load values due to the refined field data and analysis. Snow data in the 2007 approach used a constant depth to density conversion, whereas the revised 2013 mapping uses the ASCE-7 method where density increases as depth increases. This made for small changes at lower and higher elevations but resulted in increases for the predicted snow load values at mid elevation sites.

Most of Northern Oregon saw record setting snow fall in 2007-2008. The station snow load and snow depth values are included in the new information. The recorded snow load data is used in the modeling program to give ground snow loads occurring in the state by dividing it into 4 kilometer square cells and calculating specific load values for each cell. The program accounts for elevation, rain shadows, coastal proximity, terrain configuration, temperature inversions and cold air pooling on precipitation and temperature. Provisions for dealing with micro climates within the state are included which involves submission of data and engineering analysis..

Conclusion:

The Structural Engineer's Association of Oregon 2013 Electronic Snow Load Map is a more direct way to determine the snow loads from the combination of the 2007 map and the 2011 white paper. The use of the 2007 map and 2011 white paper loads are already required by the OSSC and in footnote "a" of Table R301.2(1) of the ORSC. All information required for the proper use of the map is contained on the web site. The 2013 map is based on analysis procedures that better follow current snow load development standards. The 2013 map corrects the under-predicted snow load values at mid-elevations from the 2007 Map.

Ground Snow Loads. The ground snow loads to be used in determining the design snow loads for buildings and other structures can be determined using the online lookup tool <http://snowload.seao.org/lookup.html> or the online map at <http://snowload.seao.org/mapserver.phtml>, published by the Structural Engineers Association of Oregon.

The design roof snow load shall not be less than 20 psf x Importance factor plus rain on snow (where applies).

Exception: Based on local knowledge, the ground snow load may be adjusted by the building official when a registered design professional submits data substantiating the adjustments. The data shall be adjusted for a 50-year recurrence and shall include measured water equivalent of snow. This snow load data may then be used in potential accumulation calculations, however in no case shall the adjusted ground snow load used for design be less than 20 psf.

Contact:

Steve Judson P.E.
Facilities Engineer
503-378-4635
Steven.W.Judson@state.or.us

The technical and scientific facts for this Statewide Alternate Method are approved.

Mark Long, Administrator
Building Codes Division

Date

State of Oregon

Board memo

Building Codes Division

January 9, 2015

To: Residential and Manufactured Structures Board

From: Andy Skinner
Plumbing Program Chief

Subject: Code Amendment

Action requested:

Approve the OPSC 14-12 code proposal related to “removable fixture traps”.

Background:

On January 15, 2014, the plumbing code committee began reviewing code changes for the 2014 OPSC. The committee reviewed and voted on each code proposal with recommendations to the board. Code proposal applications are recommended as approved or denied. The State Plumbing Board approved the committee’s recommendations at the board’s April 17, 2014, meeting and recommended to the Administrator to move forward to public hearing. The Residential and Manufactured Structures Board recommended approval of the low-rise plumbing provisions at its May 9, 2014, meeting.

The 2014 Oregon Plumbing Specialty Code went into effect on October 1, 2014.

Discussion:

The division recently discovered that a code change related to “removable fixture traps” (OPSC 14-12) was accidentally not approved during the recent code adoption process. This code amendment was voted on and the committee’s recommendation was to “approve”. However, the provision was mistakenly placed on the matrix as “denied”. The State Plumbing Board revisited code proposal OPSC 14-12 at its October 16, 2014, meeting and recommended approval to set the record straight. The division now requests reconsideration and approval of this code proposal to go forward to rulemaking. Once rulemaking is complete, the division intends to issue errata upon board approval.

Options:

- Approve the committee’s recommendation to adopt the proposed language in OPSC 14-12 with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources

- Amend and approve the committee's recommendation to adopt the amended language in OPSC 14-12 with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.
- Disapprove the committee's recommendation regarding the proposed language in OPSC 14-12, which would not adopt this provision.



Code Amendment Proposal Application

Department of Consumer & Business Services
 Building Codes Division
 1535 Edgewater NW, Salem, Oregon
 Mailing address: P.O. Box 14470, Salem, OR 97309-0404
 Phone: 503-378-4133, Fax: 503-378-2322
 Web: bcd.oregon.gov

STAFF USE ONLY	
Application no.:	OPSC14-12
<input checked="" type="checkbox"/> Approved	
<input type="checkbox"/> Denied	

Instructions: Fill in all the following information, attach any supplementary information you relied on, and mail to the address listed above. For more information, please refer to the Building Codes Division website, bcd.oregon.gov.

APPLICANT INFORMATION		
Name: Mike Ditty	Date: Oct. 23, 2013	
Representing: Self	Phone: 503-624-6848	
Address (Street or P.O. Box): 9100 SW McDonald St.	Fax: 503-624-6848	
City: Tigard	State: OR	ZIP: 97224
E-mail address: mditty@comcast.net		
PROPOSED CODE LANGUAGE		
This proposed code amendment (check one):		
<input type="checkbox"/> Amends (code, edition, section): _____		
<input type="checkbox"/> Adopts a new section (code, edition): _____		
<input checked="" type="checkbox"/> Repeals (code, edition, section): 707.4		

You must provide language for review by the division. Failure to provide language will invalidate the application.

Please use the following format to show additions and deletions from the code — strike through ~~deleted text~~, underline and bold **new text**.

Use arrow keys to advance to the next text box.

Proposed language:

707.4 Each horizontal drainage pipe shall be provided with a cleanout ~~or removable fixture trap~~ at its upper terminal, and each run of piping, that is more than one-hundred (100) feet (30,480 mm) in total developed length, shall be provided with a cleanout for each one-hundred (100) feet (30,480 mm), or fraction thereof, in length of such piping. An additional cleanout shall be provided in a drainage line for each aggregate horizontal change of direction exceeding 135 degrees (2.36 rad). ~~Removable fixture traps drain size shall meet Section 707.10.~~

APPLICATION CRITERIA

Attach to this application written responses to the following questions. If needed, include in the response an explanation why a question does not apply to your proposed code amendment. The division may reject an incomplete application. You must provide a thorough and complete response to all questions, or your application may be considered incomplete.

Questions:

1. What does this code proposal do? **Delete portions of Section 707.4 that allows for the use of removable fixture traps in lieu of cleanouts.**
2. What problem in the code does this proposal intend to address? **Using fixtures such as urinals and water closets (per interpretation) for cleanouts is extremely insanitary and dangerous to public health. While it is common practice to remove a sink ptrap in order to clean out a smaller line, this code section inadvertently allows a water closet or urinal to be the only upper terminal cleanout. It is one thing to remove a water closet in order to clean a blocked line because of choice, but it is extremely insanitary when a water closet overflowing with product is the ONLY cleanout available. This was never the intention of the plumbing code. The model code does not and never has allowed this. Approved, properly sized cleanouts serve an important purpose. They provide access to the drainage piping in a manner that lessens potential damage to the system and are easy to make gas and water tight after use. Another problem with this code section is that it allows unlicensed persons to remove a water closet for hire. By calling a removable fixture trap an approved cleanout, unlicensed people are allowed to unstop a line.**
3. Is the problem a fire or life safety matter? If so, explain. **Yes. Insanitary conditions are a danger to life safety.**
4. Does the problem cause delays in the cost of construction or inconsistency in application of the code? If so, how? **No**
5. How does this proposal solve the problem? **Restores original code language to require a proper cleanout fitting to serve as a cleanout in a drainage system. Aligns Oregon Plumbing Code with model code language.**
6. Are there other alternatives to this proposal that solve the problem? If so, why is this proposal the best solution? **Unknown.**
7. Does this proposal require a change in statute or administrative rule? **No**
8. What fiscal impact does this proposal have? Explain. **None**
9. If there is a fiscal impact, who is affected? **N/A**
10. Does this proposal enhance statewide consistency and predictability? If so, how? **Yes, it restores original code language and promotes uniformity. Installers, Inspectors, and Service persons do not have to guess where the cleanouts are.**
11. Does this proposal reduce or streamline regulation under the code? If yes, explain how. **Yes, see 10.**
12. Has this been proposed at the national model code level? If not, why not? If so, what happened and why was it not adopted there? **Unknown. Never has been part of the national code.**
13. Does this proposal add to the cost of construction? If so, explain how the added cost contributes to the health and safety of occupants, or is necessary to conserve scarce resources. **No**
14. If this proposal will affect the cost of development of a detached single-family dwelling, please indicate the cost. For the purposes of illustrating the change on the cost, please use a 6,000-square-foot parcel and the construction of a 1,200-square-foot detached single-family dwelling on that parcel. The information on the cost must be sufficient to assist the division in preparing a housing cost impact statement. **N/A**
15. What assumptions affect the projected costs or savings associated with this proposal? **This should be cost neutral.**
16. It is important that proposals be shared with people and organizations that will be impacted by them. Was this proposal developed with people or organizations likely to be affected by it? Has it been reviewed or shared with people or organizations likely to be affected by it? If so, who? If not, why not? **This has been discussed at many continuing education seminars for journeyman plumbers.**

APPLICANT SIGNATURE

Signature:

Mike Ditty

Date:

11-9-13

Copyright notice: By signing this proposed code amendment application, I understand and acknowledge that the work contained in this application is original, or if not original, I have the right to copy the work. By signing this work, I understand that any rights I may have in this work, including any form of derivative works and compilations, are assigned to the Department of Consumer and Business Services. I also understand that I do not retain or acquire any rights once this work is used in a Department of Consumer

