



Oregon

Kate Brown, 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

bcd.oregon.gov

Building Codes Structures Board

Late submission meeting agenda to include new business item

Wednesday, November 4, 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 January 15, 2015, board meeting minutes
- E. Date of the next regularly scheduled meeting: February 3, 2016
- F. 2016 Board meeting dates
- G. Formal farewell to Board Chair: Terry Dieter, architect
- H. Welcome new Board member: Eric Sandoval, architect

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 the Board" at the end of this agenda.)*

III. Reports

- A. Building Codes Division report
- B. Program update

IV. Communications

Statewide Code Interpretation No. 15-02; Craft Distillery Occupancy Classification

V. Appeals - None

VI. Unfinished business - None

VII. New business

Board review and provide a recommendation to the Administrator for a code change to discontinue the use of low frequency alarms for single- and multiple-station applications in the 2014 Oregon Structural Specialty Code and move to public hearing

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.

**Building Codes Structures Board
Regular meeting minutes
January 15, 2015**

Members present: Terry Dieter – Chair, architect
Dan Carlson, building official
Gregory Nelson, energy supplier
Thomas Sjostrom, owner/manager of commercial office building
Ted Wenk, disabilities commission representative

Members absent: Rene Gonzalez, three-plus stories general contractor
Bill Kissleburg, building trade representative
Vacancy - Fire protection agency representative
Vacancy - Heavy industry construction contractor

Staff present: Brett Salmon, manager, Policy and Technical Services
Richard Rogers, chief building official, Policy and Technical Services
Rex Turner, structural program chief, Policy and Technical Services
Steve Judson, facilities engineer and code specialist, Policy and Technical Services
Tony Rocco, code specialist, Policy and Technical Services
Richard Baumann, policy analyst, Policy and Technical Services
Debi Barnes-Woods, boards administrator, Policy and Technical Services

Guests Present:

I. Board business

A. Call to order

Chairman Terry Dieter called the Building Codes Structures Board meeting of January 15, 2015, to order at 9:30 a.m. The meeting was held at Building Codes Division in Conference Room A, 1535 Edgewater Street NW, Salem, Oregon.

B. Roll call

Rene Gonzalez and Bill Kisselburg were both absent excused.

This Board has two vacancies for the following positions: A contractor specializing in construction for heavy industry, and fire protection agency representative.

C. Approval of agenda and order of business

After publication, a late submission item was added to the agenda: Item VII.G. B. Also, the agenda was amended to hear Agenda Item VII.E., before Agenda Item VII.A.

Chair Dieter **RULED** all changes to the agenda and order of business approved.

D. Approval of the November 5, 2014, board meeting minutes

Chair Dieter **RULED** the minutes of November 5, 2014, approved as written.

E. Date of the next regularly scheduled meeting: May 6, 2015.

II. Public comment - None

III. Reports

A. Building Codes Division report

Brett Salmon, manager, Policy and Technical Services, announced that he has recently accepted the position as manager of the section.

B. Program update

Rex Turner, structural program chief, Policy and Technical Services, discussed the following items:

- Development of a new residential inspector training program
- Synopsis of each new business agenda item

IV. Communications - None

V. Appeals - None

VI. Unfinished business - None

(The agenda was amended to hear New Business Item E., before A.)

VII. New business

E. Board recommendation for the technical and scientific facts of Statewide Alternate Method No. 15-01 for the use of the Cross-Laminated Timber within the Type IV Heavy Timber construction provisions in the 2014 Oregon Structural Specialty Code

Richard Rogers, chief building official, Policy and Technical Services, noted that Oregon's, first cross-laminated timber project is currently being constructed at the Oregon Zoo. Pictures were distributed.

Steve Judson, facilities engineer, Policy and Technical Services, explained the engineering portion of the Statewide Alternate Method.

Motion by Chair Dieter to approve the technical and scientific facts of Statewide Alternate Method No. 15-01.

Motion carried unanimously

(Agenda back in order)

A. Board review and provide a recommendation to the Administrator for the proposed code change that revises the Solar Photovoltaic Panels/Modules wind speed criteria to align with the 2014 Oregon Structural Specialty Code design requirements

Steve Judson, facilities engineer, said that the Division is moving the location of the solar provisions into the Structural Specialty Code. He also explained that the current language related to the installation of the panels of the wind speeds are not captured in the way the code is intended.

Motion by Tom Sjostrom to approve the photovoltaic array wind speed code change in the 2014 OSSC as proposed by the Division 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 for the request to make changes related to the proposed requirements for I-4 Daycare facilities that fall under the automatic sprinkler system requirement exception of 2014 Oregon Structural Specialty Code Section 903.2.6

Tony Rocco, building codes specialist, Policy and Technical Services, identified a conflict that existed in both the 2012 International Building Code and the 2014 Oregon Structural Specialty Code regarding I-4 Daycare facilities. The automatic sprinkler system exception in Section 903.2.6 for I-4 Daycare facilities does not work with Tables 1016.2 and 1018.1.

Motion by Tom Sjostrom to approve the Division proposal to modify Table 1016.2 and Section 1018.1 for adoption 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.

Motion carried unanimously

C. Board review and provide a recommendation to the Administrator for the request for code change in exception 2902.2; Separate Facilities

Tony Rocco said the Division discovered that the methodology for determining the minimum number of required plumbing fixtures per occupant in the OSSC has limited the allowance for a single, unisex restroom. The Division proposed to modify an exception and add an exception to reduce the threshold when separate plumbing facilities are required for each sex.

Motion by Dan Carlson to approve the Division proposed recommendation to modify Section 2902.2 for adoption in the 2014 Oregon Structural Specialty Code, 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

D. Board review and provide a recommendation to the Administrator for the request to revise Section 1008.1.10; Panic and Fire Exit Hardware in the Oregon Structural Specialty Code, correlating the requirements with the 2014 Oregon Electrical Specialty Code

Currently, the 2014 Oregon Electrical Specialty Code and the 2014 Oregon Specialty Code have conflicting requirements for panic hardware on doors serving an electrical room with equipment rated at given amperes, which contain overcurrent devices, switching devices or control devices. In order to align the provisions and defer to the appropriate governing codes, the Division has proposed to do the above.

Motion by Dan Carlson to approve the proposed code change revisions to Section 1008.1.10 for adoption in the 2014 Oregon Structural Specialty Code, 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

(Agenda Item E., was heard before Item A.)

F. 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 Structural Specialty Code

Steve Judson, facilities engineer, explained that the Structural Engineer's Association of Oregon reported that the 2013 Electronic Snow Load Map corrects the under-predicted snow load values at mid-elevations from the 2007 map. The committee made other snow load revisions that provided for more accurate snow load values due to the refined field data and analysis.

Motion by Chair Terry Dieter to approve the technical and scientific facts of the proposed alternate method.

Motion carried unanimously

(This item was added to the agenda as late submission)

G. Board review and provide a recommendation to the Administrator to the proposed code change that revises shower control requirements in skilled nursing facilities, assisted living facilities and residential care facilities in the 2014 Oregon Specialty Code

Steve Judson, facilities engineer, said this change would allow the controls in the showers of these types of facilities to be installed on the side wall of showers and not the back wall. It also allows for the elimination of the fold-down seat requirement.

Motion by Gregory Nelson to approve the proposed code change as is 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

VIII. Announcements

Richard Baumann, policy analyst, Policy and Technical Services, said that the proposed public hearing date for Agenda Items VII.A., B., C., D. and G., is scheduled for February 17, 2015.

IX. Adjournment

Chair Dieter adjourned the meeting at 10:45 a.m.

Respectfully submitted by Debi Barnes-Woods
Division Boards Administrator/Coordinator

Board meeting dates 2016

Electrical &

Elevator Board

Meets the fourth Thursday of every other month:

January 28, 2016
March 24, 2016
May 26, 2016
July 28, 2016
September 22, 2016
November 17, 2016 **Holiday schedule**

Mechanical Board

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

March 2, 2016
June 1, 2016
September 14, 2016 **Holiday schedule**
December 7, 2016

Board of Boiler Rules

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

March 1, 2016
June 7, 2016
September 13, 2016 **Holiday schedule**
December 6, 2016

State Plumbing

Board

Meets the third Thursday of every other month:

February 18, 2016
April 21, 2016
June 16, 2016
August 18, 2016
October 20, 2016
December 15, 2016

Building Codes Structures Board

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

February 3, 2016
May 4, 2016
August 3, 2016
November 2, 2016

Residential & Manufactured Structures Board

Meets the first Wednesday of each quarter:

January 6, 2016
April 6, 2016
July 13, 2016 **Holiday schedule**
October 5, 2016

Construction Industry

Energy Board

Meets twice a year:

April 26, 2016
October 25, 2016

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](#)



No. 15-02

Craft Distillery Occupancy Classification

**Agenda
Item
IV.**

Code Edition: 2014 Oregon Structural Specialty Code (OSSC)
2014 Oregon Mechanical Specialty Code (OMSC)
2014 Oregon Fire Code (OFC)

Code Section: OSSC Sections 306, 307, 311, 414 and 415
OMSC Section 502.9.5 and 511
OFC Sections 5001 and 5701

Date: August 12, 2015

Subject: Occupancy classification for various uses within craft or micro distilleries.

Questions:

1. Is the barrel storage room for a craft distillery required to be classified and constructed as an H-3 occupancy if the amount of distilled spirits stored in wooden barrels exceeds the OSSC Table 307.1(1) Maximum Allowable Quantity (MAQ) for Class 1B or 1C liquid?
2. Is the barrel storage room required to have hazardous exhaust?
3. Does the barrel storage room require hazardous classification for electrical wiring?
4. Does grain handling trigger an H-2 occupancy for areas where:
 - a. Pre-bagged grain is handled or stored?
 - b. Milling of grain occurs?

Answers:

1. No, not when the storage is in a separate control area constructed per OSSC 414.2.1 and 414.2.4.
2. No.
3. No.
4.
 - a. No.
 - b. Varies depending on analysis per OSSC 414.1.3

In accordance with OAR 918-008-0110, the information contained in this statewide code interpretation is legally binding on any party involved in activities regulated by applicable Oregon law, applicable Oregon regulations or the state building code. If the information contained in this statewide code interpretation is cited as a basis for a civil infraction, a representative of the jurisdiction must cite the interpretation number found in this document.



Analysis:

OCCUPANCY CLASSIFICATION:

A distillery is typically classified as an F-1 occupancy (OSSC 306). This designation applies to craft distilleries where the quantities of flammable liquids in the remainder of the facility are within those allowed for the F-1 classification.

More specific construction requirements for the storage of distilled spirits in wooden barrels and casks are found in Chapters 50 (Hazardous Materials – General Provisions) and 57 (Flammable and Combustible Liquids) of the Oregon Fire Code (OFC). The **storage** of distilled spirits and wines in wooden barrels and casks is specifically excluded from consideration both as a hazardous material and under the scoping language for flammable liquids (OFC Section 5001.1, Exception 10 and OFC 5701.2, Exception 10.)

When quantities of a 1B or 1C liquid over 240 gallons stored in barrels (in a sprinklered space) exceed the MAQ under OSSC Section 307 (Table 307.1(1)), a potential outcome is classification of the barrel storage room as an H-3 occupancy. However, the more specific construction requirements found in the OFC exempt storage of distilled spirits in barrels and casks from MAQ limits.

Barrel Storage. In order to meet the exceptions found under the OFC, barrel storage must be in a separate control area requiring a 1-hour fire barrier between the storage area and the remainder of the facility.

Barrel storage located in a storage control area is considered separated, has no MAQ, and thus would not be included in the total MAQ quantities in processing areas. During the distillation process and filling of the barrel, processing areas where a standard wooden barrel (53 gallons) is filled can expose more than 30 gallons of 1B or 1C liquids to “open use”. To remain under the MAQ limits for open use, the building must be sprinklered throughout to maintain a 60 gallon open use maximum per OSSC Table 307.1(1). Some distilleries use barrels under 30 gallons or have specialized collection and transfer methods that can maintain the process within a “closed use” that allows a higher MAQ without sprinklers. The required hazardous material report must include this information.

The H-3 flammable liquid storage requirements found in OSSC Sections 414.2 through 414.5, 414.7, 415.9 and 415.8.2, reference construction in accordance with the *Fire Code*, which exempts these sections. When there are sprinklers and 1-hour separation, there are no significant differences for the required safeguards between S-1 storage in an F-1 occupancy and the requirements for H-3 storage in wooden barrels. ⁱ

Barrel Processing. Barrels in processing areas are not considered “**in storage**” and would count toward the MAQ limits in the processing area. The MAQ limit for any sprinklered control area is 60 gallons of open use and 240 gallons of closed use/storage (which includes any open use quantities). Any barrels in the process area are considered in-use (not stored), if not in a separate storage area. Barrels filled or used for mixing, bottling, etc. are not distinguished from barrels “stored”. Thus, the barrel quantities are counted toward the space MAQ. The potential classification of the process area would be an H-3 occupancy.

HAZARD MATERIAL VENTILATION:

Mechanical hazardous material ventilation is addressed in the OMSC. OMSC 502.9.5 shows the more specific requirements for flammable and combustible liquids and exempts hazardous ventilation requirements where exempted from the *Fire Code*.

ELECTRICAL CLASSIFICATION:

Special electrical classification requirements are listed in OFC Section 5701.5. However, this section does not apply because 5701.2 exempts barrel storage locations from Chapter 57. Because a special classification is not assigned for this space, no special electrical requirements are required under the Oregon Electrical Specialty Code (OESC).

COMBUSTIBLE DUSTS:

In areas where Class 1B or 1C liquids or combustible dusts are processed or handled, special measures or hazard classification may apply based on OSSC Section 414.1.3. This code section requires a hazardous material report identifying the maximum expected quantities of hazardous materials stored, used in a closed system, and used in an open system. This report determines whether or not the processing areas exceed MAQs and require "H" occupancy. When the distillation and bottling processes are not performed simultaneously, many smaller operations can remain below the MAQs for an H-3 classification. The hazardous material report must also identify how the process will or will not exceed the MAQs and how ventilation systems will maintain flammable vapor levels below 25% of the lower flammable limit (LFL) levels or whether hazardous material exhaust is required.

Grains in a craft distillery are crushed or rough milled, rather than processed into fine flour and do not produce combustible dust. A hazard report is not necessary for the use of bagged and palletized pre-milled grain.

Milling grain on-site, bulk storage of milled or un-processed grain in silos, and use of grain conveyor systems requires identification of the process in the hazardous materials report. A qualified person shall identify grain handling processes and whether the process requires a dust control system (OMSC Section 511). The report must identify whether the process produces dust in quantities that present an explosion hazard and H-2 occupancy classification.

Contact:

Steven W. Judson, P.E.
Facilities Engineer
503-378-4635
Steven.W.Judson@oregon.gov

Mark Heizer, P.E.
Mechanical Code Specialist
503-373-0205
Mark.R.Heizer@oregon.gov

Rex Turner
Structural Program Chief
503-373-7755
Rex.L.Turner@oregon.gov

ⁱ *Analysis of differences between F-1/S-1 storage and H-3:*

Under an H-3 occupancy, due to the exemption of barrel storage under the OFC, the following would be the only remaining special construction requirements:

- 1. 25% of the storage room on an exterior wall*
- 2. An approved manual emergency alarm system to notify on-duty occupants of a spill in the storage room; the alarm is monitored at a continuously supervised location (OSSC 414.7.1 & 414.7.3)*
- 3. The manual emergency alarm system requires stand-by power (414.5.3)*
- 4. Upgraded egress requirements under OSSC Ch. 10 for an H-3 occupancy:*
 - a. Limits on egress thru intervening spaces (1014.2)*
 - b. Common path limit of 25-ft (1014.3)*
 - c. Larger spaces require two doors (1015.1: max occupant load of 3 for H-3 to have one exit)*
 - d. Reduced travel distance allowed for H-3 vs. F-1 (1016)*
 - e. Panic hardware (fire door rated) on the exit door(s) from the H-3 storage room (1008.1.10)*

Elimination of these additional construction requirements does not lessen the relative safety of the building. Unlike the accidental release of some hazardous materials, a spill in a barrel storage room would not create an immediate toxic or explosive atmosphere. Speedy, unimpeded egress is not crucial (no toxic cloud). Given limited space and number of occupants, warning others to not re-enter the space is not essential.

State of Oregon

Board memo

Building Codes Division

November 4, 2015

To: The Building Codes Structures Board

From: Todd Smith, policy analyst, Policy and Technical Services

Subject: Low frequency alarm systems for single- and multiple-station applications

Action requested:

The Division requests that the Board review and approve amendments to the low frequency alarm requirements of the 2014 Oregon Structural Specialty Code (OSSC) for public hearing.

Background:

The 2014 OSSC, including referenced standards NFPA 72-13 and 720-12, was adopted on July 1, 2014. These standards require low frequency 520 Hz alarms in sleeping areas as referenced in OSSC Section 907.2.11 and Section 908.7. Subsequent to adoption, the Division was informed by stakeholders and industry representatives that while devices for central systems are available, low frequency smoke and carbon monoxide alarms for single- and multiple-station applications are not available to meet the OSSC requirements. Based on this feedback and to prevent further confusion, the Division is proposing an amendment to the 2014 OSSC.

Discussion:

The proposed amendments clarify that NFPA 72-13, Section 29.3.8, and NFPA 720-12, Section 9.4.2.2 are not adopted and are not part of the 2014 OSSC.

Options:

- Approve proposed amendments to the OSSC and remove requirements for the use of low frequency alarms for single- and multiple-station applications. Recommend the proposed amendments 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.
- Amend and approve proposed amendments to the OSSC and remove requirements for the use of low frequency alarms for single- and multiple-station applications. Recommend the proposed amendments 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.

- Disapprove proposed amendments to the OSSC to longer require the use of low frequency alarms for single- and multiple-station applications, and continue to use the current 2014 OSSC requiring the use of low frequency alarms.

Recommendation:

Approve proposed amendments to the OSSC and remove requirements for the use of low frequency alarms for single- and multiple-station applications. Recommend the proposed amendments 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.

2014 Oregon Structural Specialty Code (OSSC)
Building Codes Structures Board
11.4.15

Code Change:

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

[F] **907.2.11 Single- and multiple-station smoke alarms.** *Listed* single- and multiple-station smoke alarms complying with UL 217 shall be installed in accordance with Sections 907.2.11.1 through 907.2.11.4 and NFPA 72. **Section 29.3.8 of NFPA 72 is not adopted.**

908.7 Carbon monoxide alarms. Approved carbon monoxide alarms in new buildings and structures shall be provided in the locations described in Sections 908.7.1 and 908.7.2. **Section 9.4.2.2 of NFPA 720 is not adopted.**

DRAFT