



Oregon

Tina Kotek, Governor



Department of Consumer
and Business Services

Building Codes Structures Board

Meeting agenda **that includes Executive Session**
Amended Agenda
Agenda Items I.F & V.B

Meeting date: May 1, 2024

Time: 9:30 a.m.

In-person attendance: Building Codes Division Salem office in Conference Room A

Virtual connection and online streaming: View the live meeting or access the connection information for the Zoom meeting at: Oregon.gov/bcd/Pages/bcd-video.aspx

I. Board business

- A. Call to order
- B. Roll call
- C. Approval of agenda and order of business
- D. Approval of the draft board meeting minutes of [February 7, 2024](#)
- E. Date of the next scheduled meeting: August 7, 2024
- F. Welcome new member Jean Root

II. Public comment

The board will hear public testimony, including testimony from individuals who have signed up in advance.

III. Executive session

Chair will read a script announcing executive session

(Break to clear audience from the room and via internet connection)

Executive session pursuant to [ORS 192.660\(2\)\(f\)](#) to consider information or records that are exempt from disclosure by law

(Allow time to return to open session)

Chair will read a script announcing the close of executive session

IV. Reports and updates

- A. Structural Program update
- B. Energy Program update



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V. Communications

- A. Housing Accountability and Production Office (HAPO) Update
- B. Legislative [update](#)

VI. Appeals

There are no appeals for this meeting.

VII. Unfinished business

There is no unfinished business at this time.

VIII. New business

- A. [Code Review Committee](#) selection for the 2025 OSSC process
- B. [SAM 24-03](#) Multi-Period Response Spectrum
- C. [SAM 24-04](#) Reinforced Concrete Ductile Coupled Walls

IX. Announcements

The Board Chair or board members can make announcements during this time.

X. Adjournment

Board meetings are generally adjourned by the Board Chair.

Interpreter services or auxiliary aids for persons with disabilities are available upon advanced request. For assistance, please contact Kaydi Milton at 503-428-4169.



State of Oregon
Building Codes Structures Board
Meeting Minutes
February 7, 2024

Agenda Item I.D.

- Members Present:** Eric Schmidt, chair, building official
Brenda Hartzog, energy supplier
Gary Heikkinen, owner/ manager of commercial office building
Marshall McGrady, building trade representative
Chase Browning, representative of a fire protection agency
- Members Absent:** Andrew Dykeman, vice-chair, three-plus stories general contractor
Randy Samuelson, Oregon disabilities commission representative
Vacancy, architect
Vacancy, heavy industry construction contractor
- Staff Present:** Alana Cox, administrator, building codes division
Todd Smith, manager, policy technical services manager
Richard Rogers, chief building official
Tony Rocco, structural program chief
Mark Heizer, mechanical and energy code engineer
Eric McMullen, senior building code specialist
Jeremy Williams, structural program engineer
Pierre Sabagh, policy analyst
Debi Woods, boards coordinator
Nathan Kramer, executive support analyst
Kaydi Milton, policy development coordinator
- Guests Present:** Natalie Janney, Multi Tech Engineering Services, Inc
Adele Schaffeld, Malheur County
Eric Lacey, Self
Tom Young, Self
Stephen Forster, Self

I. Board business

- A. **Call to order:** Chair Eric Schmidt called the Building Codes Structures Board meeting to order at 9:31 a.m.
- B. **Roll call:** Five members were present with board member Chase Browning in person and four members connected by Zoom. Members vice chair Dykeman and Samuelson were excused.

- C. **Approval of agenda and order of business:** The chair ruled the agenda and order of business approved.
- D. **Approval of the draft board meeting minutes:** The chair ruled final the Aug. 9, 2023, minutes.
- E. **Date of the next scheduled meeting:** May 1, 2024.

F. Formal farewell to member Stephen Forster

Chair Schmidt welcomed former board member Stephen Forster and made the following statement. Stephen Forster was first confirmed to the Building Codes Structures Board (BCSB) for a four-year term that began Feb. 17, 2016, through June 30, 2019, in representing the position of fire protection agency. When Stephen was first nominated as a board member, he brought more than 20 years of extensive fire and building code experience in diverse applications ranging from rural construction to state of the art semiconductor manufacturing facilities. At the time of nomination, Stephen had the support of both the Oregon Fire Chief's Association and Oregon Fire Marshal's Association as their recommended candidate representing the fire protection agency on the Building Codes Structures Board. Then in July of 2019 Stephen was confirmed for a second four-year term to the BCSB. In addition to his years of service on the board, Stephen had an active role in the adoption processes, and was instrumental in bringing several clarifying amendments to our codes. Stephen made himself available to staff to discuss a variety of solutions as he played an active role in the adoption process for both the 2019 and the 2022 iterations of the Oregon Structural Specialty Code. On behalf of staff and the board members who served the same as Stephen, our genuine appreciation, and thanks for his significant contributions goes out to him for his many years of service on the Building Codes Structures Board.

Board member Heikkinen added that he enjoyed working on the board with Stephen and that he represents the fire protection professionals extremely well, has always been respectful of everyone that comes to these meetings, spoken at these meetings and is always well prepared. The board is going to miss his expertise and professionalism.

Board member McGrady also wanted to thank Stephen and his expertise has been very valuable to the board and appreciates his professionalism and wisdom.

Mr. Chair Schmidt stated that he has known Stephen for a long time and is one of the reasons why he is here today on the board. He has appreciated his guidance, advice, wisdom, and friendship. Appreciates everything has done for the state and know his work will continue even beyond today.

Stephen Forster wanted to thank all board members, BCD staff, and everyone that is part of the board. He stated there is a great relationship between staff and the board and believes that benefits the public greatly. This has been a significant part of his career and is one of the most memorable things that he has engaged in. He looks

forward to working with the board in a different capacity and wishes everyone the best of luck.

G. Welcome new member Chase Browning

Chase was confirmed September 29, 2023, to the Building Codes Structures Board in the position representing the fire protection agency. His term began October 5, 2023, and is serving a partial four-year term ending June 30, 2027.

New member Chase Browning introduced himself stating that it is an honor to be here and is humbled by the support from Oregon Building Officials Association, Oregon Fire Chief's Association, and Oregon Fire Marshals Association in supporting his candidacy for this position. Thank you, Stephen, for all his work over the years and helping continue a good connection between building and fire. He said he was excited to have this opportunity to work with the board and see how he can help. Chase has been with Medford Fire Department for ten years and has been the fire marshal for three years. He also has twenty-five years as a fire protection contractor before moving into a government role.

II. Public comment- None

III. Reports and updates

A. Structural Program Update

Chief Rocco, structural program chief, informed the board that the [2023 Oregon Residential Specialty Code \(ORSC\)](#) training videos have been posted on our division website. The training videos have been split into three separate modules; [Structural, Fire & Life Safety](#); [Energy Efficiency](#); and [Mechanical and Fuel Gas](#). The training will be required for certified individuals including plans examiners, inspectors, and building officials. It is also a great tool and resource for others to understand code updates and they are free and available for anyone to access. In addition to these trainings, our team has produced a new training regarding ORSC Section R327 and the Wildfire Hazard mitigation construction standards. This training was prepared by CCB at their request, but it also is good training for contractors, local government partners, and other customers to review. BCD is also currently working on a residential energy mechanical compliance video which focuses on plan specification and identifying compliance. Residential code update becomes mandatory statewide on April 1. BCD now turns to the upcoming OSSC process, the 2022 OSSC has been effective since October 1, 2022, which means the division must start looking at the process for the 2025 iteration. OSSC now includes three large model codes, it includes all the IBC provisions, it includes the majority of the IEBC provisions and includes all of the new construction provisions of the IFC. The division will cover the proposed process in more detail under the new business plan item.

B. Energy Program Update

Mr. Heizer, mechanical and energy chief, wanted to give an update on the status of the 2024 Oregon Energy Efficiency Specialty Code (OESC) also known as Chapter thirteen of the building code. Currently we're having a delay on the roll out of the code and the

adoption and application dates, the federal government is working on a new online version of COMcheck and that includes the first roll out of the use of 90.1 2022, until that tool is available, we have some internal statewide forms and documents that would accompany that based on the final version and it is pushing out the applicable date for the use of the 2024 OESC.

IV. Communications- Housing Production Advisory Council (HPAC)

Chair Schimdt welcomed Natalie Janney from Multi-Tech Engineering and asked her to introduce herself. Natalie said she was one of the members of the governor Kotek housing production advisory council and was the work group chair for the codes and design work group. The HPAC was split into five work groups: availability of land, land development, permitting, codes and designs, and workforce shortages and finance. There were fifty-nine recommendations that the HPAC put forth and adopted. The final report is not out but there is a draft report in your [packets](#). Out of the fifty-nine recommendations, there are only five recommendations that would impact BCD directly.

The first recommendation would be to expand state and local capacity for plan review and site inspections for housing. If a local jurisdiction didn't have the capacity to review building plans in a timely manner, it would expand the state's capacity to provide that plan review.

The second recommendation is visitability and access to accessible living units. The part of this that would impact BCD is it would require backing for grab bars in all first-floor bathrooms. This stemmed from accessibility advocates stating even though all bathrooms may not be fully accessible from an ADA standpoint but there is benefit to having some accessibility features even when they can't be fully accessible. There will need to be some work with BCD because not all small bathrooms have logical places for grab bars, there will need to be a little flexibility. Another part of this recommendation is that there would be some more planning type offsets that would encourage builders to build accessible or visitable homes, however this part would not affect BCD.

The third recommendation would be to adjust condominium regulations and requirements for increased production. This recommendation came about to reduce liability for condo developers so that more condos could be developed in the state of Oregon. The main thing is to reduce the statute of ultimate repose from ten years to six years and as a part of that BCD is to develop an envelope inspection standard that could be used to help offset that protection to the condo association.

The fourth recommendation would be to expand BCD's ready build program. This would allow more types of housing that would be permitted under the ready build program. She believed it was to have a couple of building plans for a two-bedroom, single family dwelling detached; a three-bedroom detached single family dwelling; a duplex; and a four-plex apartment. There would need to be provisions in there for different types of engineering requirements for different parts of the state, but this would provide an option especially in areas with recent wildfire loss. Having the ability to have some cheaper

ready plans for people to build homes faster in those areas would be helpful. BCD would need to allow the use of single stairs for buildings up to five floors. This is currently in line with some legislation that was passed last year, and we just added to that. This would only be allowed for sprinkled buildings with no more than four units per floor. The distance requirements couldn't be more than 125 feet from the door to the stairs, operational windows are required. There is the option that the sprinklers could be upgraded from NFPR 13R to NFPR 13, but they don't know if that is necessary and would defer to the fire department experts on this. However, in local capacity for fire response in a more rural area where there are longer response times, this may not be an appropriate standard.

The fifth and last recommendation is updating the middle housing statues and rules. This is where you could streamline the middle housing process a little faster. Remove the state code provision requiring a single service for each lot. You don't want to build a subdivision that has a single sewer service for each lot and then must immediately tear up the road and add additional sewer services and the other side to this is allowing multiple water meters to be served off of a single water tap.

Chair Schmidt stated that he is happy to see some work around the condominiums. It has been a long time coming for many years since we've talked about some needs for some change to be able to help allow that type of construction and to hopefully move forward with some positive changes. Also wanted to thank Natalie Janney for her leadership and wanted to show appreciation for overseeing the meetings and how challenging it can be. Chair Schmidt also asked BCD if there is a timeline or work already underway for the condominiums.

Mr. Rocco, structural program chief, stated there hasn't been any direction on any of these recommendations yet and believes the next step is getting the ratified final report. Seeing if any of them have legislation associated with them or if there's any direction from the governor's office. As far as the single stair recommendation that came out of last session and that's one that we already have on the docket for the upcoming code adoption process.

V. Appeals - None

VI. Unfinished business - None

VII. New business

Board review and determination on the division's proposed process and timeline for developing and adopting the 2025 Oregon Structural Specialty Code (OSSC)

Pierre Sabagh, policy analyst, said ORS 455.020 requires that the division, with the approval of the Building Codes Structures Board, adopt minimum standards for the construction, reconstruction, alteration and repair of buildings and other structures, as well as the installation of mechanical devices and equipment. These standards are adopted as the Oregon Structural Specialty Code. The division works with building officials, technical committees, advisory boards, and the public to adopt, amend, and

interpret the provisions of the OSSC. The division's goal is to have the 2025 Oregon Structural Specialty Code (OSSC) in place by Oct. 1, 2025, with a six-month phase-in period. Our fully anticipated timeline is in the packet today in the memo and then there's a separate sheet that shows the full timeline itself. The agenda does require a motion.

Mr. Rocco, structural program chief, added that the team has already been conducting some outreach like with SEAO (Structural Engineers Association of Oregon), fire service members, and others. The division started a bit early with the timeline and anticipation of approval of the process. The last couple of code iterations the ICC publishing process has changed so we are trying to adapt and become more efficient and try to get these code books out early.

Chair Schmidt stated that he sees in the memo it shows March 4th through March 21st is the committee member solicitation, but the timeline page shows March 4th through March 17th.

Pierre Sabagh, policy analyst, responded that is likely a typo in the memo as Mr. Rocco already stated that we are reaching out, going to solicit members and that it is in that two-week period. Then the board will review and improve members and get a clear solicitation period.

Chair Schmidt stated he trusts that we do the work that needs to be done but it does seem like a short timeline but if the division is already soliciting members it should be an easy turnaround time.

Mr. Rocco, structural program chief, added that we haven't solicited members on the committee yet, the division giving them a heads up that the process is coming. The division can extend that period if needed and align it with the public proposal period. There is a lot of flexibility there so feel free to make a recommendation if you would like to see it extended.

Chair Schmidt stated in terms of the actual solicitation period or application period for somebody to apply and put interest. He suggests at least three-week timeline as long as that works bringing that back to the board on May 1st for approval.

MOTION by member Gary Heikkinen to amend and approve the division's proposed code adoption process steps and timeline for adopting the 2025 Oregon Structural Specialty Code which will include amending the timeline for solicitation to be March 4th through March 25th

Roll call vote:

Yea: Chase Browning, Gary Heikkinen, Marshall McGrady, Brenda Hartzog, Chair Eric Schmidt.

Nay: none

Motion carried unanimously.

VIII. Announcements - None

IX. Adjournment

Chair Schmidt adjourned the meeting at 10:10 a.m.

Respectfully submitted by Kaydi Milton, policy development coordinator.

2024 Legislative Update

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The following is a brief summary of recently passed legislation which may be of interest to the board. These summaries are not a complete outline of the new law and the summary should not be relied upon for decision making. Please refer to the bill text for a complete description of the law change.

Bills Passed in the 2024 Session that may impact BCD Operations

HB 4016 Wildfire

Bill

Summary: In 2021, the Legislature enacted Senate Bill 762, a wide-ranging wildfire law that invested in programs and with three specific strategies: creating fire-adapted communities, increasing the resiliency of Oregon's landscapes, and developing safer and more effective wildfire response. Senate Bill 80 (2023) was the 2023 successor to SB 762. It modified various wildfire provisions from SB 762 and allocated more than \$220 million in total funds to nine agencies for the purposes of implementing a statewide comprehensive strategy to promote wildfire risk reduction, response, and recovery.

HB 4016 makes discreet updates to the statutes and programs created by SB 762 (2021) and SB 80 (2023). Notably, HB 4016 directs DCBS to allow a person to apply for a grant under the Fire Hardening Grant Program on or before Dec. 31, 2025. The bill also directs the Department of Consumer and Business Services and the Department of the State Fire Marshal to report, on or before Sept. 15, 2024, to committees or interim committees of the Legislative Assembly related to natural resources on a proposal for a proactive home hardening program.

Plan: The division will continue to operate the Fire Hardening Grant Program. The division will work with the Department of the State Fire Marshal to develop a proposal for a proactive home hardening program.

SB 1521 Human services omnibus update

Bill

Summary: SB 1521 is a human services omnibus measure that makes changes to statutory provisions related to care for vulnerable individuals. Under various Oregon laws, care for vulnerable individuals includes fire safety requirements for facilities housing those individuals, including facility sprinkler requirements. Among the changes in the bill, SB 1521 extends an existing sunset. Section 3, chapter 91, Oregon Laws 2022, exempts single family residences being used as licensed residential training homes or licensed adult foster homes from certain automatic sprinkler requirements.

This exemption was set to expire on July 1, 2024. SB 1521 will extend the sunset deadline to July 1, 2026.

Plan: The division expects to work with stakeholders, including the Department of Human Services, in order to develop potential sprinkler requirement next steps before July 1, 2026.

SB 1537 Housing Production

Bill

Summary: HB 1537 enacts multiple policy changes and investments to make it easier to build housing in Oregon. The bill's primary directives that impact the division are those that create a new office, the Housing Accountability and Production Office (HAPO), administered by DCBS and the Department of Land Conservation and Development (DLCD) under an interagency agreement. The HAPO is responsible for providing technical assistance to local governments and applicants for land-use and building permits in areas such as housing law compliance, reducing permitting and land-use barriers to housing production, and supporting reliable and effective implementation of local procedures and standards relating to the approval of residential development projects. The bill also directs both agencies to coordinate in rulemaking activities and state agency activities related to housing development processes to enable support of local government and land-use applicants.

Plan: The measure requires BCD to establish an interagency agreement with DLCD to operate and execute the work of the HAPO. BCD received authority for additional staff support, and the division will be implementing an internal reorganization to accomplish the directives of the bill. No current existing work or responsibilities of division staff will be disrupted or altered, nor will there be any changes to existing board authority.

**Agenda
Item
VII.A**

State of Oregon

Board memo

Building Codes Division

May 1, 2024

To: Building Codes Structures Board

From: Pierre Sabagh, policy analyst, Policy and Technical Services

Subject: 2025 Oregon Structural Specialty Code Review Committee Member Selection

Action requested:

Building Codes Structures Board review the selection of a code review committee for the 2025 Oregon Structural Specialty Code (OSSC).

Background:

At the Building Codes Structures Board meeting on February 7, 2024, the board discussed appointing a code review committee for the 2025 OSSC. The division issued a solicitation for individuals interested in participating in the code review committee on March 4, 2024. The solicitation closed on March 24, 2024. Following this memo is the list of individuals that submitted interest in serving on the code review committee.

Discussion:

The division recommends a committee of seven to nine members. Through the committee member solicitation period, 21 applications were received from interested parties with a variety of backgrounds and experience. The board may also select committee members from current board members or may select individuals not represented on the list or the board. The division listed the current representation as guidance for the board to determine appropriate representation on the committee. Applicants were asked to explain their experience working with the code and identify themselves based on the following categories:

- Building official
- Representative of a fire protection agency
- Owner/manager of a commercial office building
- Architect or engineer
- Disabilities Commission representative
- Contractor of building more than three stories above grade

- Contractor specializing in construction for heavy industry
- Representative of the building trade
- Representative of a utility or energy supplier
- Other

Options:

- Board to identify the technical code review committee members

2025 Oregon Structural Specialty Code (OSSC)

Code Review Committee

Member solicitation submissions

1. Derren Crop | Technical Manager / Cuhaci Peterson Architect
2. Janice Sanada | Architect, Managing Principal / LRS Architects
3. Josiah Ball | Senior Project Architect / Jacobs Engineering Group
4. Sam Stuckey | Architect / Holst Architecture
5. Tom Jaleski | Architect / Jensen Hughes
6. Edward Busby | The Galli Group-Principal Engineering Geologist (Retired)
7. Edward Butts | Registered Structural Engineer / 4B Engineering Consulting LLC
8. Kyle Smith | Group Leader / GeoEngineers
9. Ryan Guay | KPFF / SEAO
10. Adele Schaffeld | Building Official / Malheur County
11. Jason Phelps | Commercial Building Inspector / City of Hillsboro
12. Jody Orrison | Building Codes Analyst / City of Portland
13. Matthew Amos | Strategic Planning DSFM / Oregon State Fire Marshal
14. Steve Forster | Fire Marshal / Tualatin Valley Fire & Rescue
15. Rebai Tamerhoulet | Building Codes Director / Instructor
16. Robert Castile | Assistant Building Official / City of Springfield
17. Katie Martin | Construction Manager / Elemental Energy
18. Nathan Morris | Estimator - FLS, & Specialty Systems Project Manager / Dynalectric
19. Joseph Cervantes | Space Age Electronics
20. Crystal Knowles | Crystal's Cleaning Service
21. Lauren Geddes | Intel Corporation

Derren Crop | Technical Manager / Cuhaci Peterson Architect

- I've prepared Fire/Life Safety code summaries for architectural projects since 2007.
- The projects were small to medium commercial construction jobs, some all new, but most were tenant improvements and remodels of wildly different characteristics.
- Changing a small business occupancy into a small daycare occupancy can be far more involved (code wise) than remodeling 20,000 sf of high tech F-1 manufacturing space.

Janice Sanada | Architect, Managing Principal / LRS Architects

- Licensed Architect in Oregon for over 20 years and have seen the role that building codes play in ensuring the life safety of our community.
- I appreciate Oregon's efforts to tailor the International Building Code to support the state's specific needs.
- I am involved in my architecture firm's Code Knowledge Group, acting as a resource, educating, and sharing code information on a broad range of projects.
- In 2022, I helped Oregon's Technical Code Review Committee and was impressed with the balanced approach in recommending code clarifications to the board.
- In 2023 and 2024, I've been involved with the International Code Council's Committee for Healthcare, creating and reviewing proposals to the International Building Code, related to Healthcare occupancies.
- I'm enthusiastic about collaborating with fellow industry professionals and would be honored to assist the technical code review committee in providing recommendations to the board.

Josiah Ball | Senior Project Architect, Jacobs Engineering Group

- I have been working under the OSSC authority for 13 years and 8 years as a licensed architect.
- Currently I work primarily in semiconductor design and focus heavily on the hazardous occupancies code.
- I also have experience with NFPA, OSHA, ANSI 117.1, and limited experience with OMSC, and OSPC.

Sam Stuckey | Holst Architecture

- I've been a licensed architect in Oregon since 2019 and have worked in the architecture, design, and construction industry in Texas and Oregon since 2010.
- The last 8 years of my career have been spent designing and overseeing the construction of affordable and market-rate multifamily housing in Multnomah County, from 3-story Type V-B wood walk-ups to 12-story Type I-A concrete buildings and nearly everything in-between.
- I've been involved in successfully permitting nine (almost ten!) different projects in Portland and Gresham.

Tom Jaleski | Jensen Hughes

- I am an Architect with 40 years of experience, back to the UBC, and a building code consultant with Code Unlimited, acquired by Jensen Hughes, since 2012.
- I have provided life safety code reviews for commercial, health care, manufacturing, high-rise, public, and most other forms of buildings across the state.
- I have also submitted many alternate means requests across the state.
- I am also involved in the 2027 IBC/IFC code changes, on behalf of clients.

Edward Butts | 4B Engineering Consulting LLC

- Although I am not a registered structural engineer, as a civil engineer I have designed numerous structures over the past 40 years and have considerable experience with the IBC, Oregon amendments, and the preceding UBC.
- I have design experience with seismic codes, CMU, wood, and steel and am also a registered electrical engineer, which often overlaps with the structural code.

Edward Busby | The Galli Group- Principal Engineering Geologist (Retired)

- Have worked with OSSC and other building codes over the last 35 years- primarily Chap 16/18.
- Worked on multiple geotechnical projects in So. Oregon/N.Ca.
- My "hobby" is now tracking changes in seismic design per OSSC, ASCE-7 and IBC; and USGS Nat.
- Seismic Hazard Maps and their influence on new editions of OSSC and other building codes (BCs).
- Enjoy history/evolution of BCs including Oregon's with SB 73 in 1973.
- Take annual ASCE courses on ASCE-7 updates/methods and general seismic design.
- BS-Geology; MS-Geological Engineering.
- CEG in OR/CA since 1985.

Ryan Guay | KPFF / SEAO

- I have been working in the structural engineering field for over 8 years, almost exclusively in Oregon.
- I have been nominated by the SEAO code committee to be the representative from SEAO.

Kyle Smith | Group Leader / GeoEngineers

- The OSSC refers to the IBC and ASCE 7 for new buildings.
- As a professional geotechnical engineer, I have been applying the IBC and ASCE 7 to new hundreds of new buildings including the Seattle Convention Center, First Light Tower, Swedish First Hill Medical Campus, and many liquefiable sites in the Pacific Northwest.
- I am interested in guiding updated code language to leverage evidence-based improvements in engineering and promote development that cities and counties seek to improve their communities.
- I work with Hamilton Puangnak, who is a voting member on the Earthquake Engineering Committee with SEAW and associate member of the Seismic Subcommittee with ASCE/SEI 7.
- This provides me with key insights that can inform how OSSC will want to align or deviate from the latest updates to these codes based on local Oregon geology and policy.

Adele Schaffeld | Malheur County Building Official

- I attended my first building code administration class in 1999 and have been active in code development.
- I participated and chaired two committees for OFMA on the last Fire Code adoption as well as participated on the ORSC review committee last year.
- I am on several boards for OBOA including the Codes Committee.
- This is where we follow all of the code change proposals at the national level through state code adoption.
- I am also the President of the Eastern Oregon Building Officials Association providing a link between Salem and Eastern Oregon.
- I have attended numerous code hearings and wish to participate in the code adoption process.
- If you need a copy of my certifications please let me know.

Jason Phelps | City of Hillsboro

- I have 19 years combined experience in building codes.
- 6 years as a commercial building inspector at the City of Newberg and 13 years as a commercial plans examiner at the City of Hillsboro.
- Prior to building codes, I was a commercial carpenter for 15 years.
- I also work as an adjunct faculty instructor in the BIT program at Chemeketa, where I teach the 2021 IBC, 2021 IMC, 2021 IFC, among other codes and standards.
- I have been teaching building codes at Chemeketa for 8 years.
- I have served on Group A code change committee for the ICC 3 times.
 - 2018 ICC and 2021 ICC - Mechanical Code Change Committee Member.
 - 2024 ICC - IBC General - Code Change Committee Member.
- I have an AAS in Building Inspection Technology from PCC, I graduated in 2005.
- I enjoy being part of the process and helping to make a difference in our industry.
- I work well with others, and I hope you will consider my application to be part of the committee.

Jody Orrison | Building Codes Analyst / City of Portland

- I worked with the OSSC first as an architect for 9 years, but have been with the City of Portland as a life safety reviewer, senior, and now building code analyst for 11 years.
- I've attended ICC code change hearings at the national level for 3 code cycles and followed the state code change committee meetings for the 2019 OSSC and 2023 ORSC.

Matthew Amos | Strategic Planning DSFM / Oregon State Fire Marshal

- I have used the OSSC as part of my job as a Fire Inspector, and as a Deputy State Fire Marshal since 2013.
- I currently attend Building Code Consistency meetings with several Building Official Groups throughout the state discussing and making code related decisions.
- I will also be assisting with the development of the 2025 Oregon Fire Code, and I attend ICC's Fire Code Action Committee meetings currently working on the 2027 IFC.

Steve Forster | Fire Marshal / Tualatin Valley Fire & Rescue

- 8+ year member of the State of Oregon Building Code Structures Board
- 15+ years code development with ICC Fire Code Action Committee (scope included FLS sections of IBC)
- Former Chair of ICC Fire Code Action Committee - Western Region Working Group (scope included Fire & Life Safety sections of IBC)

Rebai Tamerhoulet | Building Codes Director/Instructor

- 3/87 to 12/89 Assistant Professor at the University of Chlef, Algeria: Taught engineering and managed the program for Civil Engineering Department (classes in Strength of materials, Concrete and Pres-stressed concrete structures, steel structures ...)
- 1/1990 to 5/1994: KPFF Consulting Engineers, Portland: Provided design and analysis for a broad range of projects, from a simple structure to multi-million dollar commercial, industrial, residential and institutional facilities covering tens of thousands of square feet and implemented in multiple phases. This diverse scope of work gives me experience with myriad design techniques for all types of construction and materials, including wood and light-gauge steel framing; reinforced, pre-cast, pre-stressed, and post-tensioned concrete; and structural steel.
- 6/1994 to 3/2007: Building Codes Division: Facilities Engineer and Building Official for several counties, I led the plan review section in the main office in Salem. I provided assistance to BCD field offices in several cities. I reviewed the plans and structural calculations, assigned tasks to plan examiners, assisted field inspectors and served as the day-to-day contact with architects, engineers and permit applicants. I assisted OR-OSHA inspectors in investigating structural failures and determined the causes of the collapses.
- 4/2007 to 8/2008 City of Salem: Division engineer: supervise plan review and inspection sections: I reviewed the plans and structural calculations, assigned tasks to plan examiners, assisted field inspectors and served as the day-to-day contact with architects, engineers and permit applicants.
- -9/2008 to 12/2009: KPFF Global Abu Dhabi UAE: I worked closely with the assigned Principal-in-Charge of structural design during the schematic design phase to select the best structural system for each project. At the completion of the design development phase, I assumed primary responsibility for the preparation of construction documents, provides technical and managerial guidance to design engineers, and oversees the construction services portion of work.
- 1/2010 to 4/2023 City of Salem (Building official): I manage the Building and Safety Division. I am responsible for the development and the implementation of new and revised policies. I establish the service goals and standards. I prepare the division annual budget and annual work plan. I ensure that the division's operations comply with federal, state and the city regulations. I provide day to day assistance to the staff and the public to resolve code administration issues through code interpretation or the alternate methods and materials of construction or specific modifications to adopted codes.
- COMMITTEES AND BOARDS
 - Residential and Manufactured Structures Board
 - Advisory committee for Chemeketa Inspection Program
 - IAS Technical Advisory Committee

- 2019 Oregon Structural Specialty Code Adoption Committee (2017-2017, review IBC 2018 for adoption)
- OBOA Special Inspection and Code Committee
- NFPA 5000 Committee

Robert Castile | City of Springfield Assistant Building Official

- I have worked on the O.B.O.A code change committee for the review of Oregon Residential Structural Specialty Code, and Oregon Structural Specialty Code from 2017-2020

Katie Martin | Elemental Energy

- I have been in the construction industry for 19 years.
- I am currently the Construction Manager for Elemental Energy.
- My focus is commercial solar PV installations on new and existing commercial buildings.
- I also serve as a Board Member of the Oregon Solar + Storage Industries Association.
- I am the Chair of the Technical Committee for the organization; this Committee focuses on Code related topics.

Nathan Morris | Estimator - Fire, Life Safety, & Specialty Systems Project Manager / Dynalectric

- I estimate and manage life safety projects for Dynalectric Oregon.
- I spend large amounts of time in the OSSC for estimating and designing fire alarm systems as well as the other Oregon Specialty Codes.
- I also assist my coworkers with their code questions.

Joseph Cervantes | Space Age Electronics

- I wrote proposals for the 2024 IBC and IFC.
- I was on multiple working groups and also serve on numerous Code Advisory Committees in numerous states.
- I am a Principal for multiple NFPA standards as well.

Crystal Knowles | Crystal's cleaning service

- I have no previous experience with this code, I do however have 20+ years voluntary conflict resolution and having an objective party without a monetary interest would be good for the state.
- I do work full time but can make the time to attend the meetings as long as I have two weeks notice.

Lauren Geddes | Intel Corporation

- I am an IH and process safety engineer for Intel and I frequently perform code analyses for new tools and facilities systems.

**Agenda
Item
VII.B**

State of Oregon

Board memo

Building Codes Division

May 1, 2024

To: Building Codes Structures Board

From: Pierre Sabagh, policy analyst, Policy and Technical Services

Subject: Statewide Alternate Method 24-03 regarding Multi-Period Response Spectrum

Action requested:

Board review and recommendation of the technical and scientific facts of Statewide Alternate Method (SAM) No. 24-03.

Background:

Statewide alternate methods are approved by the Building Codes Division administrator in consultation with the appropriate advisory board. In making these rulings, the director must obtain the approval of the appropriate advisory board as to technical and scientific facts of the proposed alternate method.

If a statewide alternate method is adopted, building officials shall approve the use of any material, design or method of construction addressed in the statewide alternate method. In addition, the decision to use a statewide alternate method is at the discretion of the designer. The statewide alternate method does not limit the authority of the building official to consider other proposed alternate methods encompassing the same subject matter.

SAM 24-03 was introduced in 2024. For the development of seismic design ground motion values, the multi-period response spectrum paired with additional site classes is available in ASCE 7-22. This method better characterizes seismic hazard and design forces as compared to ASCE 7-16, which is the version of the standard referenced in the 2022 Oregon Structural Specialty Code (OSSC). This improved estimate of seismic hazard and design forces is especially pronounced for moderate- and long-period buildings. This statewide alternate method allows for the use of multi-period response spectra and additional site classes in accordance with ASCE 7-16 as modified with provisions from ASCE 7-22. This SAM is intended to provide a codified path for the outlined design procedures until the 2025 OSSC is implemented, at which time it will be rescinded. The full SAM is provided in your board packet.

Options:

- Approve the technical and scientific facts of the proposed statewide alternate method.
- Amend and approve the technical and scientific facts of the proposed statewide alternate method.
- Disapprove the technical and scientific facts of the proposed statewide alternate method and state reasons for disapproval, for the record.

Multi-Period Response Spectrum

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 applicant; 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 reference: 2022 Oregon Structural Specialty Code (OSSC)—Section 1613

Date: TBD

Subject: Multi-Period Response Spectrum

Overview:

For the development of seismic design ground motion values, the multi-period response spectrum paired with additional site classes is available in ASCE 7-22. This method better characterizes seismic hazard and design forces as compared to ASCE 7-16, which is the version of the standard referenced in the 2022 Oregon Structural Specialty Code (OSSC). This improved estimate of seismic hazard and design forces is especially pronounced for moderate- and long-period buildings. This statewide alternate method allows for the use of multi-period response spectra and additional site classes in accordance with ASCE 7-16 as modified with provisions from ASCE 7-22 as shown below.

Discussion:

ASCE 7-22 Section 11.4.5.1 introduces a multi-period spectrum available at 22 discrete periods compared to the two-point spectrum (i.e., calculated at 0.2 seconds and 1 second) of ASCE 7-16. Furthermore, ASCE 7-22 Chapter 20 establishes nine site classes (i.e., Site Class A, B, BC, C, CD, D, DE, E and F) compared to the six (i.e., Site Class A, B, C, D, E and F) in ASCE 7-16. These changes provide an improvement in the characterization of the seismic hazard and resulting design forces which can be advantageous for certain buildings, particularly those with moderate and longer fundamental periods.

The multi-period spectrum for the corresponding site class is provided in the USGS Seismic Design Geodatabase and can be accessed directly through the ASCE Hazard Tool at [https://ascehazardtool.org/selecting-ASCE/SEI 7-22 as the Standard Version](https://ascehazardtool.org/selecting-ASCE/SEI-7-22-as-the-Standard-Version). This multi-period spectrum can then be used within the equivalent lateral force, response spectrum, or linear response history procedure of ASCE 7-16 Chapter 12 with some modifications. Where ASCE 7-16 requires the use of seismic response parameters (e.g., S_I , S_s , S_{DI} , S_{DS} , etc.) rather than the full multi-period response spectrum (e.g., force demands on nonstructural components in Chapter 13), the seismic response parameters are also taken from the USGS Seismic Design Geodatabase consistent with the multi-period spectrum.

Other western U.S. states have also adopted the multi-period response spectrum and updated site classes. The Washington State Building Code permits the use of the multi-period spectrum of ASCE 7-22 by modifying ASCE 7-16 through an emergency rule (WSR 22-11-010). The California Building Code Section 1617A also permits the use of the multi-period spectra of ASCE 7-22 for certain healthcare occupancies.

Note that this statewide alternate method is not written for use with ASCE 7-16 Chapters 15, 16, 17 or 18. This is not to say that the multi-period spectrum is not applicable to designs in accordance with these chapters. Rather, it was judged that an alternate means and methods approach was more appropriate in those cases. Since ASCE 7-16 Chapters 16, 17 and 18 already require peer review for essentially all projects pursuing these chapters, the use of the multi-period spectrum can be addressed directly within the performance-based design framework for such projects.

Conclusion:

Under application of the 2022 OSSC, ASCE 7-16 Section 11.4 may be replaced in its entirety by ASCE 7-22 Section 11.4 for design in accordance with ASCE 7-16 Chapters 12 and 13.

Where ASCE 7-22 Section 11.4 is used as permitted above, all of the following additional modifications to ASCE 7-16 shall be required:

1. ASCE 7-16 Section 11.2 shall be modified to include the definition of the USGS Seismic Design Geodatabase as “A U.S. Geological Survey (USGS) database of geocoded values of seismic design parameters and geocoded values of multi-period 5%-damped MCE_R response spectra.” The USGS Seismic Design Geodatabase may be accessed through the ASCE Hazard Tool at [https://ascehazardtool.org/selecting ASCE/SEI 7-22 as the Standard Version](https://ascehazardtool.org/selecting-ASCE/SEI-7-22-as-the-standard-version).
2. The seismic response parameters S_S , S_I , S_{MS} , S_{MI} , S_{DS} and S_{DI} as defined in ASCE 7-22 Section 11.3 and calculated in accordance with ASCE 7-22 Section 11.4 shall be used throughout ASCE 7-16 Chapters 11, 12, 13, and 14 where they occur.
3. ASCE 7-16 Eqs. (12.8-2), (12.8-3) and (12.8-4) shall all be replaced with the following equation. Where the period T is less than the period at which S_a is maximum, the maximum value of S_a shall be used.

$$C_s = \frac{S_a}{\left(\frac{R}{I_e}\right)}$$

4. When the modal response spectrum analysis procedure is selected, the multi-period design response spectrum shall be used in ASCE 7-16 Section 12.9.1.2.
5. When the linear response history analysis procedure is selected, the multi-period design response spectrum shall be used as the target response spectrum in ASCE 7-16 Section 12.9.2.3.
6. ASCE 7-16 Chapter 20 shall be replaced in its entirety by ASCE 7-22 Chapter 20.
7. Where a site-specific ground motion analysis is performed, ASCE 7-16 Chapter 21 shall be replaced in its entirety by ASCE 7-22 Chapter 21.

The technical and scientific facts for the statewide alternate method are approved.

Alana Cox, Administrator
Building Codes Division

Date

Contact: Visit the division website to [contact a building code specialist](#).

**Agenda
Item
VII.C**

State of Oregon

Board memo

Building Codes Division

May 1, 2024

To: Building Codes Structures Board

From: Pierre Sabagh, policy analyst, Policy and Technical Services

Subject: Statewide Alternate Method 24-04 regarding Reinforced Concrete Ductile Coupled Walls

Action requested:

Board review and recommendation of the technical and scientific facts of Statewide Alternate Method (SAM) No. 24-04.

Background:

Statewide alternate methods are approved by the Building Codes Division administrator in consultation with the appropriate advisory board. In making these rulings, the director must obtain the approval of the appropriate advisory board as to technical and scientific facts of the proposed alternate method.

If a statewide alternate method is adopted, building officials shall approve the use of any material, design or method of construction addressed in the statewide alternate method. In addition, the decision to use a statewide alternate method is at the discretion of the designer. The statewide alternate method does not limit the authority of the building official to consider other proposed alternate methods encompassing the same subject matter.

SAM 24-04 was introduced in 2024. Reinforced concrete ductile coupled walls are a seismic force-resisting system (SFRS) which complies with all of the requirements for special reinforced concrete shear walls and a few additional requirements for wall and coupling beam aspect ratio and coupling beam reinforcement development. Reinforced concrete ductile coupled walls are a permitted SFRS in American Society of Civil Engineers (ASCE) 7-22, but not addressed in the ASCE 7-16, which is the version of the standard referenced in the 2022 Oregon Structural Specialty Code (OSSC). This statewide alternate method allows for the use of reinforced concrete ductile coupled walls as a SFRS in accordance with ASCE 7-16 as modified with provisions from ASCE 7-22. This SAM is intended to provide a codified path for the outlined design procedures until the 2025 OSSC is implemented, at which time it will be rescinded. The full SAM is provided in your board packet.

Options:

- Approve the technical and scientific facts of the proposed statewide alternate method.
- Amend and approve the technical and scientific facts of the proposed statewide alternate method.
- Disapprove the technical and scientific facts of the proposed statewide alternate method and state reasons for disapproval, for the record.

Reinforced Concrete Ductile Coupled Walls

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 applicant; 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 reference: 2022 Oregon Structural Specialty Code (OSSC) – Section 1613

Date: TBD

Subject: Reinforced Concrete Ductile Coupled Walls — Seismic Force-Resisting System

Overview:

Reinforced concrete ductile coupled walls are a seismic force-resisting system (SFRS) which complies with all of the requirements for special reinforced concrete shear walls and a few additional requirements for wall and coupling beam aspect ratio and coupling beam reinforcement development. Reinforced concrete ductile coupled walls are a permitted SFRS in American Society of Civil Engineers (ASCE) 7-22, but not addressed in the ASCE 7-16, which is the version of the standard referenced in the 2022 Oregon Structural Specialty Code (OSSC). This statewide alternate method allows for the use of reinforced concrete ductile coupled walls as a SFRS in accordance with ASCE 7-16 as modified with provisions from ASCE 7-22 as shown below.

Discussion:

Seismic design parameters and design procedures for reinforced concrete ductile coupled walls were introduced in the ASCE 7-22 and the American Concrete Institute (ACI) 318-19, respectively. ACI 318-19 is already a referenced standard of the 2022 OSSC. As a result, the design procedures for reinforced concrete ductile coupled walls are already available within the 2022 OSSC. They occur in ACI 318-19 Section 18.10.9 including requirements for wall aspect ratio, coupling beam aspect ratio, and coupling beam reinforcement development. These requirements are “intended to induce an energy dissipation mechanism associated with inelastic deformation reversal of coupling beams” (ACI 318-19 Section R18.10.9).

While ACI 318-19 is already a reference standard of the 2022 OSSC, ASCE 7-22 is not. Rather, ASCE 7-16 is the referenced version. As a result, the seismic design parameters (i.e., Response Modification Coefficient, R ; Overstrength Factor, Ω_o ; Deflection Amplification Factor, C_d ; and height limits) for reinforced concrete ductile coupled walls are not available in the 2022 OSSC. This statewide alternate method amends ASCE 7-16 to introduce the seismic design parameters for reinforced concrete ductile coupled walls. Seismic design parameters for reinforced concrete ductile coupled walls in ASCE 7-22 were developed through extensive physical testing and analysis (i.e., FEMA P-695) at the University of California Los Angeles. The seismic design parameters, particularly the Response Modification Coefficient, R , for reinforced concrete ductile coupled walls are favorable to those of special reinforced concrete shear walls (i.e., $R = 8$ versus $R = 6$, respectively). Adoption of this Statewide Alternate Method therefore provides the option to use lower design forces for buildings where the design requirements for reinforced concrete ductile coupled walls in ACI 318-19 can be met.

Conclusion:

Under application of the 2022 OSSC, reinforced concrete ductile coupled walls as defined in ACI 318-19 Section 2.3 and complying with ACI 318-19 Section 18.10.9 may be used as a seismic force-resisting system (SFRS). ASCE 7-16, Table 12.2-1 *Design Coefficients and Factors for Seismic Force-Resisting Systems* shall be modified to include the following:

TABLE 12.2-1 DESIGN COEFFICIENTS AND FACTORS FOR SEISMIC FORCE-RESISTING SYSTEMS

Seismic Force-Resisting System	ASCE 7 Section Where Detailing Requirements Are Specified	Response Modification Coefficient, R^a	Overstrength Factor, Ω_0^b	Deflection Amplification Factor, C_d^c	Structural System Limitations Including Structural Height, h_n (ft) Limits ^d					
					Seismic Design Category					
					B	C	D ^e	E ^e	F ^f	
A. BEARING WALL SYSTEMS										
20. Reinforced concrete ductile coupled walls^g	14.2	8	2½	8	NL	NL	160	160	100	
B. BUILDING FRAME SYSTEMS										
27. Reinforced concrete ductile coupled walls^g	14.2	8	2½	8	NL	NL	160	160	100	
D. DUAL SYSTEMS WITH SPECIAL MOMENT FRAMES CAPABLE OF RESISTING AT LEAST 25% OF PRESCRIBED SEISMIC FORCES										
14. Reinforced concrete ductile coupled walls^g	14.2	8	2½	8	NL	NL	NL	NL	NL	

^g Structural height, h_n , shall not be less than 60 ft (18.3m).

The technical and scientific facts for the statewide alternate method are approved.

Alana Cox, Administrator
Building Codes Division

Date

Contact: Visit the division website to [contact a building code specialist](#).