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APPEAL SUMMARY

Status: Decision Rendered

Appeal ID: 32302	Project Address: 825 NE Multnomah St
Hearing Date: 5/22/24	Appellant Name: Peter Kim
Case No.: B-010	Appellant Phone: 971.242.8176
Appeal Type: Building	Plans Examiner/Inspector: Brian Quattlebaum
Project Type: Commercial	Stories: 20 Occupancy: A-3, B, & S-1 Construction Type: 1-A
Building/Business Name: 825 Lloyd Tower	Fire Sprinklers: Yes - Throughout
Appeal Involves: Alteration of an existing structure, other: Occupant load calcs for seismic trigger	LUR or Permit Application No.:
Plan Submitted Option: pdf [File 1]	Proposed use: Commercial office

APPEAL INFORMATION SHEET

Appeal item 1

Code Section	City of Portland Title 24.85.040 Change of Occupancy or Use
Requires	Multiple occupancy changes to a single building may be made under this section without triggering a seismic upgrade provided the cumulative changes do not result in the addition of more than 149 occupants with respect to the legal building occupancy as of October 1, 2004.
Code Modification or Alternate Requested	This appeal proposes that this building be permitted to add up to 10 percent more occupants with respect to the legal building occupancy as of October 1, 2004, before the seismic upgrade requirements mandated by section 24.85.040 are applicable.
Proposed Design	The 825 Lloyd Tower at 825 NE Multnomah St – Unit 1 is an existing high-rise building in Portland, Oregon that consists of a 20-story office tower (primarily B Occupancy) over 1-story of below-grade general storage and mechanical (S-1 Occupancy) service floor. This is an existing permitted building constructed in 1981 under the 1979 Uniform Building Code (UBC). The entire structure is protected with an automatic fire sprinkler system and a voice annunciated fire alarm system throughout. The building's fire alarm system was fully upgraded in 2016 under the permit 16-193179-FA.

This appeal proposes that this building be permitted to add up to 10 percent more occupants with respect to the legal building occupancy as of October 1, 2004, before the seismic upgrade requirements mandated by section 24.85.040 are applicable.

Reason for alternative

There is an ongoing concern expressed by building owners, architects, code experts, and even some city officials about the 149-occupant load trigger as it is currently applied to existing buildings in Portland. This approach is unfairly burdensome on large buildings. The state Building Codes Division (BCD) has approved a state-wide alternate materials method SAM 08-05 which permits occupant load increase to be up to 10% of the building area per table 1007.3, footnote b.

" b) Where the area of the new occupancy with a higher hazard category is less than or equal to 33 percent of the total building floor area, and the total occupant load for the building is not increased by more than 150 occupants (or 10 percent of the existing occupant load, whichever is greater) the building does not require structural improvement unless required by other provisions of this code."

We urge you to approve the proposed modifications to occupant load threshold that triggers a seismic upgrade to The 825 Lloyd Tower based on the state-wide SAM (attached).

APPEAL DECISION

**"Allow building to add up to 10 percent more occupants with respect to the legal building occupancy as of October 1, 2004, before the seismic upgrade requirements mandated by section 24.85.040 are applicable:
Granted as proposed.**

Note: Baseline occupancy and cumulative increase to be verified during plan review."

"The Administrative Appeal Board finds that the information submitted by the appellant demonstrates that the approved modifications or alternate methods are consistent with the intent of the code; do not lessen health, safety, accessibility, life, fire safety or structural requirements; and that special conditions unique to this project make strict application of those code sections impractical.

Pursuant to City Code Chapter 24.10, you may appeal this decision to the Building Code Board of Appeal within 90 calendar days of the date this decision is published. For information on the appeals process, go to www.portlandoregon.gov/bds/appealsinfo, call (503) 823-6251 or come to the Development Services Center."



No. 08-05
2012 International Existing Building Code and
2014 Oregon Structural Specialty Code, Chapter 34
(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: 2012 International Existing Building Code (IEBC)
2014 Oregon Structural Specialty Code (OSSC)

Code Section: OSSC Chapter 34

Date: October 1, 2008 (Issued)
May 5, 2010 (Updated)
July 1, 2014 (Updated)

Initiated by: Building Codes Division (BCD)

Subject: Use of the 2012 International Existing Building Code (IEBC) Chapter 34

Background:

Chapter 34 of the OSSC (based on the 2012 International Building Code) regulates the repair, alteration, change of occupancy, and addition of existing buildings. It principally provides two paths for compliance; a “*prescriptive compliance method*” and a “*performance compliance method*.”

Discussion:

The IEBC, as promulgated by the International Codes Council, expands the provisions of OSSC Chapter 34 and adds a third approach known as the “work area compliance method” which is based on the level of work performed. The intent of the IEBC is to provide increased flexibility in the use of alternative approaches to achieve compliance with minimum requirements to safeguard the public health, safety and welfare. Designers may not mix and match compliance paths.

Seismic Rehabilitation: The IEBC provides 2 options for the seismic retrofit of existing buildings; 1) Appendix A and 2) ASCE 31 (Seismic Evaluation of Existing Buildings) in conjunction with ASCE 41 (Seismic Rehabilitation of Existing Structures). These standards are adopted insofar as they relate to the repair, alteration, change of occupancy, and addition to existing buildings.



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Local adoption of a Seismic Rehabilitation Plan (ORS 455.020 {4}): This statute states in part: “Pursuant to the regulation of dangerous buildings, a municipality may adopt seismic rehabilitation plans that provide for phased completion of repairs that are designed to provide improved life safety but that may be less than the standards for new buildings.” (Emphasis added). When a local municipality adopts a seismic rehabilitation plan as noted in statute, it is a separate requirement from those seismic rehabilitation upgrades that are required as part of an alteration, repair, change of occupancy or addition. In brief, municipalities may adopt additional triggers requiring compliance with the local seismic rehabilitation plan. Examples would include:

1. re-roofing,
2. cost threshold of remodel,
3. change of occupancy to a different relative hazard classification, essential facilities

In addition, the locally adopted seismic rehabilitation plan may specify a specific seismic rehabilitation standard (i.e., ASCE 41, Appendix A of the IEBC, etc.).

The IEBC also contains “Resource A” entitled; “**Guidelines on Fire Ratings of Archaic Materials and Assemblies.**” Resource A is only a guideline and is not intended to be a document for adoption. Accordingly, it is not part of this alternate method.

The technical and scientific facts of this alternate method have been reviewed by the Building Codes Structures Board.

Conclusion:

This alternate method is applicable to the occupancy categories covered in the Oregon Structural Specialty Code and administered through chapter 1 of the same.

Alterations, repairs, additions and changes of occupancy to existing structures shall be permitted to comply with the 2012 International Existing Building Code as amended herein. All 2012 International Existing Building Code references to other codes are as defined in Chapter 2, of the Oregon Structural Specialty Code.

The following portions of the International Existing Building Code **are not adopted** by the State of Oregon. Subject matter contained therein shall comply with applicable sections of the Oregon Structural Specialty Code, the Oregon Mechanical Specialty Code, the Oregon Electrical Specialty Code, the Oregon Boiler and Pressure Vessel Safety Code and the Oregon Plumbing Specialty Code:

1. All portions of Chapter 1, Administration, except Sections 101.2, 101.4, and 101.6
2. Section 115 - Unsafe structures and equipment. (May be adopted by local ordinance)
3. Section 116 - Emergency Measures (May be adopted by local ordinance)
4. Section 117 - Demolition (May be adopted by local ordinance)
5. All references to R-3 Occupancies
6. All references to The International Property Maintenance Code (May be adopted by local ordinance)
7. All references to accessibility. See 2014 OSSC Section 341.1
8. All References to Type A and B dwellings
9. All references to historic buildings. See 2014 OSSC Section 340.9
10. All references to relocated buildings. See 2014 OSSC Section 3410.1
11. All references to Flood Hazard Areas. Section 2014 OSSC Section 3404.2
12. Sections 607, 808, 1008 - Electrical Provisions
13. Section 608, 809, 1009 – Mechanical
14. Section 609, 810, 1010 – Plumbing

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15. Sections 707, 811, 908 - Energy. See 2014 Oregon Energy Efficiency Specialty Code
16. Section 902.2.1 - Boiler controls
17. Section 804.4 - Fire alarm and detection. See 2014 Oregon Fire Code Section 907.3
18. Chapter 15 - Construction Safeguards
19. Chapter 16 - Reference Standards. See 2014 OSSC Chapter 35
20. Elevator standards for existing buildings
21. Platform lifts for existing buildings
22. Appendix B
23. Resource A

The following sections of the IEBC are amended as indicated:

1. Section 1401.2 **Applicability**. Structures existing prior to **July 1, 2014**, in which there is work involving additions, alterations or changes of occupancy shall be made to conform to the requirements of this chapter or the provisions of Chapters 5 through 13. The provisions of Sections 1401.2.1 through 1401.2.5 shall apply to existing occupancies that will continue to be, or are proposed to be, in Groups A, B, E, F, M, R, S **and U**. These provisions shall not apply to buildings with occupancies in Group H or I.
2. Chapter 3, Section 301.1, 301.1.4.1 and 301.1.4.2: See Structural/Seismic revisions below
3. Chapter 4, Section 402.1, 403.1, 404.1, and 407.1: See Structural/Seismic revisions below
4. Chapter 6, Section 602.2, 606.1, 606.2.1, 606.2.2.2, and 606.2.2.3: See Structural/Seismic revisions below
5. Chapter 7, Section 706.2, and 706.3.1: See Structural/Seismic revisions below
6. Chapter 8, Section 807.5: See Structural/Seismic revisions below
7. Chapter 9, Section 907.4: See Structural/Seismic revisions below
8. Chapter 10, Section 1001.3.1 and 1007.3.1: See Structural/Seismic revisions below.

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

(Signature on File)

Mark Long, Administrator
Building Codes Division

May 5, 2010

Date

ATTACHMENT TO CODE APPEAL

Chapter 3

Section 301.1

SUMMARY OF REVISIONS:

1. Clarify that all new structural members must meet the current IBC.
2. Remove loophole that allows structural design to previous editions of code.

OREGON REVISIONS:

301.1 General. The repair, alteration, change of occupancy, addition or relocation of all existing buildings shall comply with one of the methods listed in Sections 301.1.1 through 301.1.3 as selected by the applicant. Application of a method shall be the sole basis for assessing the compliance of work performed under a single permit unless otherwise approved by the code official. Sections 301.1.1 through 301.1.3 shall not be applied in combination with each other. Where this code requires consideration of the seismic-force-resisting system of an existing building subject to repair, alteration, change of occupancy, addition or relocation of existing buildings, the seismic evaluation and design shall be based on Section 301.1.4 regardless of which compliance method is used. **New structural members added as part of the repair, alteration, change of occupancy or addition shall comply with the International Building Code.**

~~Exception: Subject to the approval of the code official, alterations complying with the laws in existence at the time the building or the affected portion of the building was built shall be considered in compliance with the provisions of this code unless the building is undergoing more than a limited structural alteration as defined in Section 907.4.3. New structural members added as part of the alteration shall comply with the International Building Code. Alterations of existing buildings in flood hazard areas shall comply with Section 701.3.~~

Section 301.1.4.1

SUMMARY OF REVISIONS:

1. Clarifies that all of the system seismic design parameters must be obtained from ASCE 7 and incorporates ICC issued errata.
2. Carries forward the intent of the existing amendment to the 2006 IEBC.
3. Under the 2012 IBC the IEBC provisions are only an alternate compliance method, IBC Chapter 34 may still be used.

OREGON REVISIONS:

301.1.4.1 Compliance with IBC level seismic forces. Where compliance with the seismic design provisions of the International Building Code is required, the procedures shall be in accordance with one of the following:

1. One-hundred percent of the values in the International Building Code. Where the existing seismic force-resisting system is a type that can be designated as “Ordinary”, values of R , Ω_0 and C_d used for analysis in accordance with Chapter 16 of the International Building Code shall be those specified for structural systems classified as “Ordinary” in accordance with Table 12.2-1 of ASCE 7, unless it ~~can be~~ **is** demonstrated that the structural system satisfies the proportioning and detailing requirements for systems classified as “Intermediate” or “Special.” **will provide performance equivalent to that of a “Detailed”, “Intermediate” or “Special” system.**

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2. Compliance with ASCE 41 using both the BSE-1 and BSE-2 earthquake hazard levels and the corresponding performance levels shown in Table 301.1.4.1.

TABLE 301.1.4.1
PERFORMANCE CRITERIA FOR IBC LEVEL SEISMIC FORCES

Risk CATEGORY (Based on IBC Table 1604.5)	PERFORMANCE LEVEL FOR USE WITH ASCE 41 BSE-1 EARTHQUAKE HAZARD LEVEL	PERFORMANCE LEVEL FOR USE WITH ASCE 41 BSE-2 EARTHQUAKE HAZARD LEVEL
I	Life safety (LS)	Collapse prevention (CP)
II	Life safety (LS)	Collapse prevention (CP)
III	Note a, Note b	Note a
IV	Immediate occupancy (IO)	Life safety (LS)

- a. **Acceptance** criteria for RiskCategory III shall be taken as 80 percent of the acceptance criteria specified for Risk Category II performance levels, but need not be less than the acceptance criteria specified for Occupancy Category IV performance levels.

Section 301.1.4.2

SUMMARY OF REVISIONS:

1. Removes the reference to methods contained in older documents and replaces them with more modern consensus-based upgrade and evaluation procedures.
2. It further removes the reference to ASCE 31 as an “upgrade” document because ASCE 31 is actually an “evaluation” document.

OREGON REVISIONS:

301.1.4.2 Compliance with reduced IBC level seismic forces. Where seismic evaluation and design is permitted to meet reduced *International Building Code* seismic force levels, the procedures used shall be in accordance with one of the following:

1. The *International Building Code* using 75 percent of the prescribed forces. Values of R , Ω_0 and C_d used for analysis shall be as specified in Section 301.1.4.1 of this code.
- ~~2. Structures or portions of structures that comply with the requirements of the applicable chapter in Appendix A as specified in Items 2.1 through 2.5 shall be deemed to comply with this section.~~
 - ~~2.1 The seismic evaluation and design of unreinforced masonry bearing wall buildings in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A1.~~
 - ~~2.2 Seismic evaluation and design of the wall anchorage system in reinforced concrete and reinforced masonry wall buildings with flexible diaphragms in Occupancy Category I or II are permitted to be based on the procedures specified in Chapter A2.~~
 - ~~2.3 Seismic evaluation and design of cripple walls and sill plate anchorage in residential buildings of light frame wood construction in Occupancy Category I or II are permitted to be based on the procedures specified in Chapter A3.~~
 - ~~2.4 Seismic evaluation and design of soft, weak, or open front wall conditions in multiunit residential buildings of wood construction in Occupancy Category I or II are permitted to be based on the procedures specified in Chapter A4.~~
 - ~~2.5 Seismic evaluation and design of concrete buildings and concrete with masonry infill buildings in all occupancy categories are permitted to be based on the procedures specified in Chapter A5.~~

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3. ~~Compliance with ASCE 31 based on the applicable performance level as shown in Table 301.1.4.2. It shall be permitted to use the BSE-1 earthquake hazard level as defined in ASCE 41 and subject to the limitations in Item 4 below.~~
2. 4. Compliance with ASCE 41 using the BSE-1 Earthquake Hazard Level and the performance level shown in Table 301.1.4.2. The design spectral response acceleration parameters S_{XS} and S_{X1} specified in ASCE 41 shall not be taken less than 75 percent of the respective design spectral response acceleration parameters S_{DS} and SD_1 defined by the International Building Code.

A building that is evaluated and determined to meet ASCE 31 based on the applicable performance levels as shown in Table 301.1.4.2 is considered to be compliant with reduced IBC level forces.

**TABLE 301.1.4.2
PERFORMANCE CRITERIA FOR REDUCED IBC – LEVEL SEISMIC FORCES RISK CATEGORY**

RISK CATEGORY (Based on IBC Table 1604.5)	PERFORMANCE LEVEL FOR USE WITH ASCE 31	PERFORMANCE LEVEL FOR USE WITH ASCE 41 BSE-1 EARTHQUAKE HAZARD LEVEL
I	Life safety (LS)	Life safety (LS)
II	Life safety (LS)	Life safety (LS)
III	Notes a, b	Note a
IV	Immediate occupancy (IO)	Immediate occupancy (IO)

- a. Acceptance criteria for RiskCategory III shall be taken as 80 percent of the acceptance criteria specified for Risk Category II performance levels, but need not be less than the acceptance criteria specified for Risk Category IV performance levels.
- b. For RiskCategory III, the ASCE 31 screening phase checklists shall be based on the life safety performance level.

Chapter 4

Section 402.1 ~ Additions

SUMMARY OF REVISIONS:

IBC Section 3403 and the prescriptive compliance method of the IEBC Section 402 are identical with the exception of Oregon amendments to Chapter 34 of the IBC. Removing this section of the IEBC and referencing IBC Section 3403 will include these amendments in the prescriptive path of the IEBC without having to duplicate all the amendments.

OREGON REVISIONS:

402.1 General. Additions to any building or structure shall comply with the requirements of the International Building Code, Section 3403.

Delete remainder of IEBC Section 402.

Section 403.1 ~ Alterations

SUMMARY OF REVISIONS:

IBC Section 3404 and the prescriptive compliance method of the IEBC Section 403 are identical with the exception of Oregon amendments to Chapter 34 of the IBC. Removing this section of the IEBC and referencing IBC Section 3404 will include these amendments in the prescriptive path of the IEBC without having to duplicate all the amendments.

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OREGON REVISIONS:

403.1 General. Alterations to any building or structure shall comply with the requirements of the International Building Code, Section 3404.

Delete remainder of IEBC Section 403.

Section 404.1 ~ Repairs

SUMMARY OF REVISIONS:

IBC Section 3405 and the prescriptive compliance method of the IEBC Section 404 are identical with the exception of Oregon amendments to Chapter 34 of the IBC. Removing this section of the IEBC and referencing IBC Section 3405 will include these amendments in the prescriptive path of the IEBC without having to duplicate all the amendments.

OREGON REVISIONS:

404.1 General. Repairs to any building or structure shall comply with the requirements of the International Building Code, Section 3405.

Delete remainder of IEBC Section 404.

Section 407.1 ~ Change of Occupancy

SUMMARY OF REVISIONS:

IBC Section 3408 and the prescriptive compliance method of the IEBC Section 407 are identical with the exception of Oregon amendments to Chapter 34 of the IBC. Removing this section of the IEBC and referencing IBC Section 3408 will include these amendments in the prescriptive path of the IEBC without having to duplicate all the amendments.

OREGON REVISIONS:

407.1 General. Changes of occupancy or use to any building, structure or portion thereof shall comply with the requirements of the International Building Code, Section 3408.

Delete remainder of IEBC Section 407.

Chapter 6

Section 602.2 ~ New and Replacement Materials

SUMMARY OF REVISIONS:

Modified to be consistent with 2014 OSSC Section 3401.4.2.

OREGON REVISIONS:

602.2 New and replacement materials. Except as otherwise required or permitted by this code, materials permitted by the applicable code for new construction shall be used. **Except for structural repairs and alterations,** ~~E~~-like materials shall be permitted for repairs and alterations, provided no *dangerous* or *unsafe* condition, as defined in Chapter 2, is created. Hazardous materials, such as asbestos and lead-based paint, shall not be used where the code for new construction would not permit their use in buildings of similar occupancy, purpose and location.

ATTACHMENT TO CODE APPEAL

Section 606.1 ~ Structural Repairs

SUMMARY OF REVISIONS:

Clarify that structural repairs must comply with all of the provisions of the OSSC, not just the detailing provisions.

OREGON REVISIONS:

606.1 General. Structural repairs shall be in compliance with this section and Section 601.2. Regardless of the extent of structural or nonstructural damage, dangerous conditions shall be eliminated. Regardless of the scope of repair, new structural members and connections used for repair or rehabilitation shall comply with the ~~detailing~~ provisions of the International Building Code for new buildings of similar structure, purpose and location.

Section 606.2.1 ~ Repairs

SUMMARY OF REVISIONS:

Modified to be consistent with 2014 OSSC section 3405.4.

OREGON REVISIONS:

606.2.1 Repairs for less than substantial structural daage. For damage less than *substantial structural damage*, the damaged elements shall ~~be permitted to be restored to their predamage condition~~ comply with the International Building Code.

Section 606.2.2.2 ~ Repairs “Compliant”

SUMMARY OF REVISIONS:

Modified to be consistent with 2014 OSSC Section 3405.2.2.

OREGON REVISIONS:

606.2.2.2 Extent of repair for compliant buildings. If the evaluation establishes that the building in its predamage condition complies with the provisions of Section 606.2.2.1, then the damaged elements shall be ~~permitted to be restored to their predamage condition~~ repaired such that they comply with the International Building Code.

Section 606.2.2.3 ~ Repairs “Noncompliant”

SUMMARY OF REVISIONS:

Modified to be consistent with 2014 OSSC Section 3405.2.3.

OREGON REVISIONS:

606.2.2.3 Extent of repair for noncompliant buildings. If the evaluation does not establish that the building in its pre-damage condition complies with the provisions of Section 606.2.2.1, then the building shall be rehabilitated to comply with the International Building Code, ~~provisions of this section. The wind load for the repair and rehabilitation shall be those required by the building code in effect at the time of original construction, unless the damage was caused by wind, in which case the wind loads shall be in accordance with the International Building Code. The seismic loads for this rehabilitation design shall be those required by the building code in effect at the time of original construction, but not less than the reduced IBC (strikethrough)-level seismic forces.~~

ATTACHMENT TO CODE APPEAL

Chapter 7

Sections 706.2 & 706.2.1 ~ Alterations – Level 1

SUMMARY OF REVISIONS:

Modified to be consistent with 2014 OSSC Chapter 16 and ASCE 7

OREGON REVISIONS:

706.2 Addition or replacement of roofing or replacement of equipment. Where addition or replacement of roofing or replacement of equipment results in additional dead loads, structural components supporting such reroofing or equipment shall comply with the gravity load requirements of the International Building Code.

Exceptions:

1. Structural elements where the additional dead load from the roofing or equipment is not increased by more than 5 percent.
2. Buildings constructed in accordance with the International Residential Code or the conventional light frame construction methods of the International Building Code and where the dead load from the roofing or equipment is not increased by more than 5 percent.
3. Addition of a second layer of roof covering weighing 3 pounds per square foot (0.1437 kN/m²) or less over an existing, single layer of roof covering.

Replacement equipment shall be anchored and braced in accordance with the requirements of the International Building Code.

Sections 706.3 & 706.3.1 ~ Reroof Permits

SUMMARY OF REVISIONS:

Captures all parapets and precludes compliance with reduced forces.

OREGON REVISIONS:

706.3 Additional requirements for reroof permits. The requirements of this section shall apply to *alteration* work requiring reroof permits.

706.3.1 Bracing for unreinforced masonry ~~bearing wall~~ parapets. Where a permit is issued for reroofing for more than 25 percent of the roof area of building assigned to Seismic Design Category D, E or F that has parapets constructed of unreinforced masonry, the work shall include installation of parapet bracing to resist the ~~reduced~~ *International Building Code* level seismic forces as specified in Section 301.1.4.2~~1~~ of this code, unless an evaluation demonstrates compliance of such items **using the reduced International Building Code seismic forces as specified in Section 301.1.4.2.**

Chapter 8

Section 807.5 ~ Existing Structural Elements Resisting Lateral Loads

SUMMARY OF REVISIONS:

Precludes compliance with reduced forces.

ATTACHMENT TO CODE APPEAL

OREGON REVISIONS:

807.5 Existing structural elements resisting lateral loads. Alterations affecting the demands or capacities of existing elements of the lateral load-resisting system shall be evaluated using the wind provisions of the International Building Code and the ~~reduced~~ IBC-level seismic forces. Any existing lateral load-resisting structural elements whose demand-capacity ratio with the alteration considered is more than 10 percent greater than its demand-capacity ratio with the alteration ignored shall be brought into compliance with those wind and seismic provisions. In addition, the alteration shall not create a structural irregularity prohibited by ASCE 7 unless the entire structure complies with Section 301.1.4.2. For the purposes of this section, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacity shall account for the cumulative effects of additions and alterations since the original construction.

Chapter 9

Section 907.4.2 ~ Substantial Structural Alterations

SUMMARY OF REVISIONS:

Precludes compliance with reduced forces.

OREGON REVISIONS:

907.4.2 Substantial structural alteration. Where more than 30 percent of the total floor and roof areas of the building or structure have been or are proposed to be involved in structural *alteration* within a five-year period, the evaluation and analysis shall demonstrate that the altered building or structure complies with the *International Building Code* for wind loading and with ~~reduced~~ IBC-level seismic forces. The areas to be counted toward the 30 percent shall be those areas tributary to the vertical load-carrying components, such as joists, beams, columns, walls and other structural components that have been or will be removed, added or altered, as well as areas such as mezzanines, penthouses, roof structures and in-filled courts and shafts.

Chapter 10

Section 1001.3.1 ~ Partial Change of Occupancy Classification

SUMMARY OF REVISIONS:

Requires compliance with structural provisions of 1007 in addition to the occupancy change requirements of 1012.

OREGON REVISIONS:

1001.3.1 Partial change of occupancy classification. Where a portion of an existing building is changed to a new occupancy classification, Sections 1007 and 1012 shall apply.

Section 1007.3.1 ~ Change of Occupancy (Work Area Method)

SUMMARY OF REVISIONS:

Establishes elevated seismic hazard improvement standards for change of occupancy.

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OREGON REVISIONS:

1007.3.1 Compliance with the *International Building Code* level seismic forces. Where a building or portion thereof is subject to a change of occupancy that results in the building being assigned to a higher occupancy category based on Table 1604.5 of the *International Building Code*; or where such change of occupancy results in a reclassification of a building to a higher hazard category as shown in Table 912.4; ~~or where a change of a Group M occupancy to a Group A, E, I-1, R-1, R-2 or R-4 occupancy with two-thirds or more of the floors involved in Level 3 alteration work, the building shall comply with the requirements for International Building Code level seismic forces as specified in Section 101.5.4.1 for the new occupancy category~~ **Table 1007.3 or when the total building occupancy load is increased by more than 150 occupants, the building shall comply with the seismic improvement standards of Table 1007.3 as defined in Section 301.1.4.1 for the new occupancy category.**

Exception:

~~Group M occupancies being changed to Group A, E, I-1, R-1, R-2 or R-4 occupancies for buildings less than six stories in height and in Seismic Design Category A, B or C.~~

Where approved by the code official, specific detailing provisions required for a new structure are not required to be met where it can be shown that an equivalent level of performance and seismic safety is obtained for the applicable occupancy category based on the provision for reduced International Building Code level seismic forces as specified in Section 301.1.4.2.

~~Where the area of the new occupancy with a higher hazard category is less than or equal to 10 percent of the total building floor area and the new occupancy is not classified as Occupancy Category IV. For the purposes of this exception, buildings occupied by two or more occupancies not included in the same occupancy category, shall be subject to the provisions of Section 1604.5.1 of the International Building Code. The cumulative effect of the area of occupancy changes shall be considered for the purposes of this exception.~~

~~Unreinforced masonry bearing wall buildings in Occupancy Category III when assigned to Seismic Design Category A or B shall be allowed to be strengthened to meet the requirements of Appendix Chapter A1 of this code [Guidelines for the Seismic Retrofit of Existing Buildings (GSREB)].~~

TABLE 1007.3
Seismic Hazard Categories and Structural Improvement Standard^d

<u>RELATIVE HAZARD^{b, c}</u>	<u>OSSC OCCUPANCY CLASSIFICATION</u>	<u>SEISMIC IMPROVEMENT STANDARD^a</u>
1 (Highest Standard)	A, E, I-2, I-3, H	301.1.4.1
2	R-1, R-2, R-4, SR, I-1, I-4	301.1.4.1
3	B, M	301.1.4.2
4	F-1, F-2, S-1, S-2	301.1.4.2
5 (Lowest Standard)	R-3, U	301.1.4.2

Notes:

- Required improvements shall be made such that the entire building conforms to the indicated standard.**
- Where the area of the new occupancy with a higher hazard category is less than or equal to 33 percent of the total building floor area, and the total occupant load for the building is not increased by more than 150 occupants (or 10 percent of the existing occupant load, whichever is greater) the building does not require structural improvement unless required by other provisions of this code.**
- Where a change in occupancy results in the addition of more than 150 occupants to the building (or 10 percent of the existing occupant load, whichever is greater), the building shall be structurally improved based the Seismic Improvement Standard for the occupancy classification of the majority of the added occupants.**
- For the purposes of this section, multiple changes in occupancy and occupant load are considered cumulative. The cumulative effects of the building area occupancy changes and occupant load changes shall be considered based upon the established legal occupancy on April 1, 2014.**