

# Chapter 34 – Existing Buildings

- **CHANGE:** Repairs are addressed by Section 3404 and IEBC Chapter 4

## SECTION 3404 MODIFICATIONS TO IEBC CHAPTER 4 ➡ REPAIRS

3404.1 General, IEBC Section 401. The following provisions replace the indicated sections in the IEBC.

IEBC 401.2 Compliance. The work shall not make the building less complying than it was before the repair was undertaken.

Devices or safeguards that are required by this code shall be repaired in conformance with the code edition under which installed. To determine compliance with this subsection, the building official shall have the authority to require a building or structure to be reinspected.

*\*NEW language from local Building Official via public proposal:*

Work on nondamaged components that is necessary for the required repair of damaged components shall be considered a part of the repair and shall not be subject to the requirements for alterations. Routine maintenance, ordinary repairs exempt from permit in accordance with Section 105.2 of the Building Code, and abatement of wear due to normal service conditions shall not be subject to the requirements for repairs.

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- **CHANGE:** Repairs are addressed by Section 3404 and IEBC Chapter 4

## IEBC 401.2 Compliance. Repairs continued...

Where it becomes necessary to repair all or a portion of a legally existing building that has been damaged by, including but not limited to; fire, wind, flood, earthquake and other similar damage where, prior to the damage the legally existing building did not contain dangerous conditions, the building may be reconstructed exactly as it existed prior to the damage provided that the building meets the applicable requirements of IEBC Section 405. Such repairs are not required to meet code requirements for new construction.

Where dangerous conditions existed prior to the damage occurring, the building may be constructed as it existed prior to the damage provided that the dangerous conditions are corrected, as determined by the building official. The absence of fire-resistance-rated construction, related building components, automatic sprinkler systems and other life safety features shall not be deemed to be an unsafe or dangerous condition where such systems and construction methods were not required at the time the building was originally constructed or modified through permit.



# Chapter 34 – Existing Buildings

- **CHANGE:** Options for alterations, additions and changes in occupancy

## SECTION 3403

### MODIFICATIONS TO IEBEC CHAPTER 3

#### **PROVISIONS FOR ALL COMPLIANCE METHODS**

3403.1 Administration, IEBEC Section 301. The following provisions replace the indicated sections in the IEBEC.

- ➡ **IEBC 301.3.1 Prescriptive compliance method.** *Alterations, additions and changes of occupancy complying with Chapter 5 of this code shall be considered in compliance with the provisions of this code.*
- ➡ **301.3.2 Work area compliance method.** *Alterations, additions and changes of occupancy complying with the applicable requirements of Chapters 6 through 12 of this code shall be considered in compliance with the provisions of this code.*
- ➡ **301.3.3 Performance compliance method.** *Alterations, additions and changes of occupancy complying with Chapter 13 of this code shall be considered in compliance with the provisions of this code.*

# Chapter 34 – Existing Buildings

- **CHANGE:** Compliance options for alteration, addition and changes of occupancy.

## **THREE COMPLIANCE METHODS – SUMMARY** *(Customer's Choice / Designer's choice)*

- ✓ **Prescriptive compliance method:** The familiar Chapter 34 compliance path, Step by step detailed application.
- ✓ **Work area compliance method (definition):** That portion or portions of a building consisting of all reconfigured spaces as indicated on the construction documents. Work area **excludes other portions of the building where incidental work entailed by the intended work must be performed and portions of the building where work not initially intended by the owner is specifically required by this code.**
- ✓ **Performance compliance method:** The familiar Chapter 34 Section 3412 path. “Scorecard” evaluation process covering: fire safety, MOE and general safety. **Does not cover structural** – requires independent structural analysis of existing building.

*Note: Mixing methods is not permitted.*



# Chapter 34 – Existing Buildings

***Prescriptive compliance method:*** The familiar Chapter 34 compliance path. Step by step detailed application – Occupancy Change:

3405.5 Change of occupancy, IEBC Section 506. The following provisions replace the indicated sections in the IEBC.

**IEBC 506.1 Compliance.** *A change of occupancy shall not be made in any building unless that building is made to comply with the requirements of the Building Code for the use or occupancy. Changes of occupancy in a building or portion thereof shall be such that the existing building is not less complying with the provisions of this code than the existing building or structure was prior to the change. Subject to the approval of the building official, changes of occupancy shall be permitted without complying with all of the requirements of this code for the new occupancy, provided that the new occupancy is ~~less~~ not more hazardous, based on life and fire risk, than the existing occupancy.*

**\*\*NEW** clarification added by local Building Official via public proposal.

# Chapter 34 – Existing Buildings

- **Prescriptive compliance method:** The familiar Chapter 34 compliance path. Step by step detailed application – Alterations:

3405.3 Alterations, IEBC Section 503. The following provisions replace the indicated sections in the IEBC.

**IEBC 503.1 General.** Except as provided by IEBC Section 302.4, 302.5 or this section, *alterations* to any building or structure shall comply with the requirements of the *Building Code* for new construction. *Alterations shall be such that the existing building or structure is not less complying with the provisions of the Building Code than the existing building or structure was prior to the alteration.*

## **Exceptions:**

1. An existing stairway shall not be required to comply with the requirements of Section 1011 of the *Building Code* where the existing space and construction does not allow a reduction in pitch or slope.
2. Handrails otherwise required to comply with Section 1011.11 of the *Building Code* shall not be required to comply with the requirements of Section 1014.6 of the *Building Code* regarding full extension of the handrails where such extensions would be hazardous because of plan configuration.



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- *Prescriptive compliance method: The familiar Chapter 34 compliance path. Step by step detailed application – Additions:*

3405.2 Additions, IEBC Section 502. The following provisions replace the indicated sections in the IEBC.

**502.1 General.** *Additions to any building or structure shall comply with the requirements of the **Building Code** for new construction. Alterations to the existing building or structure shall be made to ensure that the existing building or structure together with the addition are not less complying with the provisions of the **Building Code** than the existing building or structure was prior to the addition. An existing building together with its additions shall comply with the height and area provisions of Chapter 5 of the **Building Code**. (Not modified – use IEBC)*

IEBC 502.2 Disproportionate earthquake damage. Not adopted by the State of Oregon, Building Codes Division, as part of the *state building code*.

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■ **CHANGE:** Work area method compliance path.

**Work area compliance method (definition):** That portion or portions of a building consisting of all reconfigured spaces as indicated on the construction documents. Work area excludes other portions of the building where incidental work entailed by the intended work must be performed and portions of the building where work not initially intended by the owner is specifically required by this code.

Chapter 6 provides the **general scoping** of the method and identifies requirements for classifying the work. We will cover these on the next few slides.

- ✓ LEVEL 1 Alterations = Chapter 7
- ✓ LEVEL 2 Alterations = Chapter 8 and Chapter 7
- ✓ LEVEL 3 Alterations = Chapter 9 and Chapters 7 & 8
- ✓ Change of Occupancy = Chapter 10 (for “work area” method)
- ✓ Additions = Chapter 11 (for “work area” method)

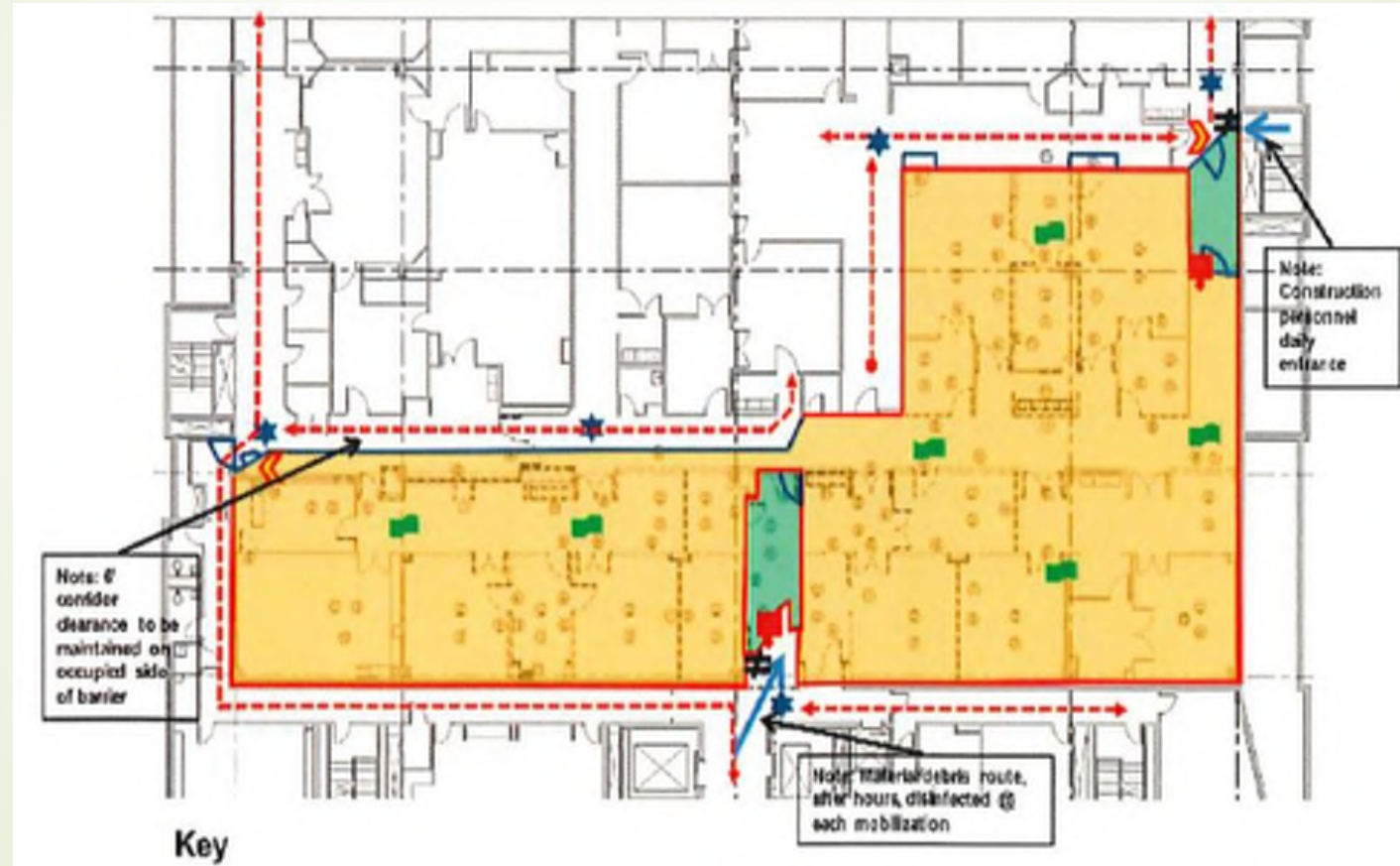
*\***Note:** Level 1, 2 & 3 Alterations are specifically defined/scoped*



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➤ **CHANGE:** Work area method compliance path.

The area of work must be clearly identified on the *construction documents*.



# Chapter 34 – Existing Buildings

➤ **CHANGE:** Work area method compliance path.

Work area compliance method

- ✓ LEVEL 1 Alterations = Chapter 7
- ✓ LEVEL 2 Alterations = Chapter 8 and Chapter 7
- ✓ LEVEL 3 Alterations = Chapter 9 and Chapters 7 & 8

**602.1 Scope.** Level 1 *alterations* include the removal and replacement or the covering of existing materials, elements, equipment, or fixtures using new materials, elements, equipment, or fixtures that serve the same purpose.

**603.1 Scope.** Level 2 *alterations* include the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment.

**604.1 Scope.** Level 3 *alteration* apply where the work area exceeds 50 percent of the *building area*.



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## ➤ **CHANGE:** Work area method compliance path – LEVEL 1 ALTERATIONS

### **Work area compliance method**

- ✓ Level 1 alterations = Chapter 7

### **Keys to level 1 alterations**

- ✓ Does not include the reconfiguration of rooms or spaces – different from L2 and L3 alterations.
- ✓ Work areas will involve removal and replacement of existing elements, equipment, or fixtures with new materials/equipment/elements that serve the same purpose.
- ✓ Generally, all new work must comply as new. This includes applicable standards, installation details, penetrations, joints and continuity provisions.
- ✓ The work cannot make the building less compliant than it was prior to the alteration.

# Chapter 34 – Existing Buildings

➤ **CHANGE:** Work area method compliance path – LEVEL 2 Alterations

## Work area compliance method

✓ Level 2 alterations = Chapter 8 (plus applicable Chapter 7 provisions)

## Keys to level 2 alterations

- ✓ Does include the reconfiguration of rooms or spaces.
- ✓ Areas of alteration (combined) must be less than 50% of the overall building area.
- ✓ Work areas on stories that exceed 50% of the story “trigger” additional compliance for the story. Specifically MOE components and sprinkler protection.
- ✓ Generally, all new work must comply as new, with exceptions for certain structural considerations.
- ✓ The work cannot make the building less compliant than it was prior to the alteration.



# Chapter 34 – Existing Buildings

➤ **CHANGE:** Work area method compliance path – LEVEL 3 Alterations

## Work area compliance method

- ✓ Level 3 alterations = Chapter 9 (plus applicable Chapter 7 and Chapter 8 provisions)

## Keys to level 3 alterations

- ✓ Work areas are greater than 50% of the total building area.
- ✓ Additional design features and building upgrades are “triggered” outside the actual work areas. Specifically MOE components and sprinkler protection.
- ✓ Generally, all new work must comply as new, with exceptions for certain structural considerations. Legally existing elements may remain unaltered, where not affected by the increase in design features.

**EXAMPLE:** MOE lighting and exit signage must be provided from the highest story containing a work area, to the LED.

# Chapter 34 – Existing Buildings

■ **CHANGE:** Performance compliance method

## **Keys to the performance compliance method**

- ✓ Chapter 13 – nearly identical to Section 3412 of the 2014 OSSC.
- ✓ Originated with the BOCA National Building Code.
- ✓ Point based system that allows an evaluation to identify how alterations improve existing building compliance.
- ✓ The evaluation uses a scoring system covering 21 safety parameters, and will document the degree of compliance for each.
- ✓ More significant parameters use relative hazards of use and occupancy classification.
- ✓ Does not cover structural, and requires an independent structural analysis of the building to determine adequacy of structural systems.
- ✓ Generally offers multiple options and means towards compliance, depending on the site specific conditions.



# Appendix O – Tsunami Load Effects

➤ **CHANGE:** Chapter 6 of ASCE 7-16 is captured by Appendix O

## Keys of Appendix O:

New chapter of ASCE 7 specifically addressing tsunami loads and designs for RC III and IV structures (potential for RC II).

Establishes the Tsunami Design Zone – areas vulnerable to being flooded or inundated by the Maximum Considered Tsunami (MCT)

The MCT is taken as having a 2% probability of being exceeded in a 50 year period.

**Table C6.1-1 Exposure of the Five Western States to Tsunami Hazard**

State	Population at Direct Risk <sup>a,b</sup>
Oregon	25,000 residents plus another 55,000 tourists; 300 miles of coastline Total resident population of area at immediate risk of post-tsunami impacts <sup>c</sup> : 100,000

# Appendix O – Tsunami Load Effects

■ **CHANGE:** Chapter 6 of ASCE 7-16 is captured by Appendix O

## Keys of Appendix O

- \*Local amendment (ORS 455.040), prospectively approved and provided in code for local municipalities to consider adopting.
- \*Permits modification, as determined necessary by local governing authority.
- \*Includes optional tools to address vertical evacuation refuge structures.
- \*Aligns with the passage of HB3309, clearly establishing the consideration of tsunami design as a local community-specific decision.
- \*Adds layer of required design analysis for affected structures.