State of Oregon
Building Codes Division
Better Buildings for Oregon

Notice of Temporary Rule
October 1, 2018

OSSC: Emergency Responder Radio Coverage

Purpose of the rules:

This rule provides predictable uniform standards regarding the installation of construction components for emergency responder radio coverage.

Citation:

Amend: OAR 918-460-0110
This rule becomes effective October 1, 2018.

History:

The division received complaints from industry regarding the predictability and application of the emergency responder radio coverage provisions in the state building code. After examining the issues, the division determined that the best course of action was to remove the sections of the code that were creating the unpredictable environment and causing confusion. Accordingly, the division repealed sections 403.4.5 and 915.1 from the Oregon Structural Specialty Code (OSSC). This information was presented to the Building Code Structures Board (board) on February 24, 2016. At the board meeting it was determined the Office of State Fire Marshal would create a workgroup to develop a checklist to resolve industry complaints. During the board meeting, the division was informed that the workgroup would be able to develop the checklist in a relatively short period of time. The workgroup presented their checklist to the division in May 2016, but the division was unable to confirm the proposal had stakeholder support. The proposal was therefore presented again to the board on August 3, 2016, where the board approved the proposal with division recommended amendments.

During the August 3, 2016, meeting, questions regarding the legal authority to print the required code provisions were raised. The division then sought and received legal advice that all construction provisions would need to be printed in the OSSC. The division then proceeded to reformat the August 3 rule and moved all proposed construction provisions related to emergency responder radio coverage into the OSSC. The new format was presented to the board on November 2, 2016, for additional stakeholder feedback. The division informed the board that adopting this rule was critically important to emergency personnel, and to prevent a further delay, the checklist and rules were going to be adopted as a temporary rule on November 3, 2016. The division also requested board approval for the rules to be sent to public hearing. The board suggested additional technical changes and recommended that the proposal be adopted as a temporary rule and approved the proposal for a public hearing, with the understanding that the board would have an additional opportunity for review before the rules became effective as permanent rules. The division adopted temporary rules on November 3, 2016.

The division had planned on adopting a permanent rule to replace the November 3, 2016, temporary rule. The division did not adopt a permanent rule at that time because the authority of the division to adopt rules in this area was challenged by the Office of State Fire Marshal and the Department of Administrative Services through the Strategic Interoperability Extension Council. This development was communicated to the board at its February 1, 2017, meeting. Subsequent to the February 1, 2017, meeting, the division received confirmation and clarification from the Oregon Department of Justice (DOJ) regarding the division's ability to adopt rules for construction requirements for emergency responder radio coverage. The division filed temporary rules which contained the changes in accordance with the guidance provided by DOJ which became effective on May 2, 2017.

The May 2, 2017, temporary rules were intended to maintain the requirements for construction components for emergency responder radio coverage while allowing time for remaining jurisdictional issues to be resolved and for the division to go forward with permanent rulemaking. During that temporary rule period the division filed a notice for permanent rulemaking and held a public hearing on September 19, 2017. The public comment period for the rulemaking closed on September 22, 2017.

The division continued to work with the fire service and other industry stakeholders to refine the requirements and applicability of the relevant OSSC sections and the associated form for ERRC construction components. Previously, at the November 2, 2016, meeting, the board also requested an additional review before the division adopted a permanent rule. Resolution of the outstanding issues and the additional requested board review were not able to be completed before the May 2, 2017, temporary rule expired, and the division adopted a temporary rule on October 29, 2017.

To maintain consistent and predictable requirements for ERRC, the division adopted the ERRC construction component requirements as a temporary rule, effective April 27, 2018. This ensured that the previous requirements did not lapse and would provide additional time for the board to review the final permanent rule. As a result of the ongoing discussions on this issue, the code changes adopted by the April 27, 2018, temporary rule differed from the previous temporary rule in several ways. These code and form changes included:

- General clarification of terms and removal of redundant language.
- Added language to address battery systems.
- Added requirement for protection of pathways within a single floor level.
- Removed FCC license holder verification.

The specific code section changes are as follows:

- Reinstate OSSC Sections 403.4.5 and amended 915.1.
- Adopt OSSC Sections 915.1.1, 915.2, and 915.3.
- Amend OSSC Section 907.2.13.2.
- Adopt form OSSC 915.

The division presented and received final approval from the board for the April 27, 2018, temporary rules to be adopted as permanent rules at the board's August 1, 2018, meeting. Following the August 1 board meeting the division held an additional public information meeting on September 25, 2018, to collect additional public testimony, and ensure that the proposed permanent rules met the fire and life safety needs of the fire service. Without the approval of the fire service the division will not adopt the rules as permanent rules. Additionally, due to an administrative issue the division needs to adopt an additional temporary rule which renumbers the ERRC amendments from 918-460-0015 to 918-460-0100.

Effect of the rules:

This rule updates the Oregon Structural Specialty Code for emergency responder radio coverage construction provisions.

Contact:

If you have questions or need further information, contact Richard Rogers, Chief Building Official, at 503.378.4472, or richard.rogers@oregon.gov.

918-460-0110
Emergency Responder Radio Coverage

(1) In addition to the amendments in OAR 918-460-0015 the Oregon Structural Specialty Code is amended pursuant to OAR chapter 918, division 8 showing the section reference, a descriptive caption, and a short description of the amendment.

(2) Effective May 2, 2017, for new construction standards related to emergency responder radio coverage, Oregon Structural Specialty Code Sections 403.4.5, 907.2.13.2, 915.1, 915.1.1, 915.2, and 915.3 are adopted and amended. Form OSSC 915, which contains the minimum necessary required information for building departments to consider new construction standards related to emergency responder radio coverage, is adopted. No building official may authorize construction standards that would exclude emergency responder radio coverage unless proper authorization is provided in a complete Form OSSC 915.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 455.030, 455.110
Stats. Implemented: ORS 455.110
Hist.: BCD 24-2018(Temp), f. 9-28-18, cert. ef. 10-1-18 thru 3-29-19

Emergency Responder Radio Coverage
Oregon Structural Specialty Code

Proposed Code Changes

Text denotation:

Underline denotes new text,
~~strikethrough~~ denotes deletion

SECTION 915
CONSTRUCTION FOR EMERGENCY RESPONDER RADIO COVERAGE

915.1 General. When required by ~~**the fire code official**~~ **this section**, **construction components for** emergency responder radio coverage shall be provided in **all** new buildings **which meet one of the following criteria:** ~~**in accordance with Section 510 of the Fire Code.**~~

1. **Any building with one or more *basements* or below-grade building levels.**
2. **Any underground building.**
3. **Any building more than five stories in height.**
4. **Any building 50,000 square feet in size or larger.**

For information about coverage requirements regulated and enforced by the fire official, see Section 510 of the Fire Code.

915.1.1 Exceptions. **A building meeting the criteria listed in Section 915.1 may be excepted from emergency responder radio coverage construction requirements for the following reasons:**

1. Where approved by the building official, in consultation with the fire official, a wired communication system in accordance with Section 907.2.13.2 shall be permitted to be installed or maintained in lieu of emergency responder radio coverage construction requirements.

2. Where recommended by the fire official and approved by the building official, construction requirements for an emergency responder radio coverage system is not necessary for the specific building based on the fire official's recommendation.

3. Any building listed in Section 915.1 that, through performance testing, meets the radio coverage requirements of Oregon Fire Code Section 510.

915.2 Form OSSC 915. **A completed Form OSSC 915 shall be submitted to the building official at the time of initial permit application.**

Exception: **Where portions of the construction documents demonstrating compliance with Section 915 are being deferred in accordance with Section 107.3.4.2, only Parts I and II of**

Form OSSC 915 are required to be completed and submitted to the building official at the time of initial permit application.

OSSC Form 915 is available at the following link: www.oregon.gov/bcd/Pages/forms.aspx

915.3 Survivability. The following construction components shall be required as specified for the installation of emergency responder radio coverage systems:

1. **All signal booster components shall be contained in a National Electrical Manufacturer's Association (NEMA) 4-type waterproof cabinet.**
2. **Battery systems used for the emergency power source shall be contained in a NEMA 3R or higher-rated cabinet.**
3. **All system backbone pathways between signal boosters, donor antennae and secondary power supplies and between head end and remote units for fiber based systems shall be protected by a shaft enclosure in accordance with Section 713.**
4. **Primary cable riser pathways between floors shall be protected in shaft enclosures constructed in accordance with Section 713.4 or an approved equivalent. Connections between riser and feeder cables shall occur within the shaft enclosure.**

SECTION 403
HIGH-RISE BUILDINGS

403.4.5 Construction for emergency responder radio coverage. Construction components for emergency responder radio coverage shall be provided in accordance with Section ~~**510 of the *Fire Code***~~ **915 unless otherwise exempted by this code.**

SECTION 907
FIRE ALARM AND DETECTION SYSTEMS

907.2.13.2 Fire department communication system. Where a wired communication system is **permitted by the fire official and approved by the building official** ~~**approved**~~ in lieu of an emergency responder radio coverage system in accordance with Section ~~**510 of the Fire Code**~~ **915**, the wired fire department communication system shall be designed and installed in accordance with NFPA 72 and shall operate between a fire command center complying with Section 911, elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, areas of refuge and inside enclosed exit stairways. The fire department communication ~~**device**~~ **equipment** shall be provided at each floor level within the enclosed exit stairway**. Approval of a wired communication system must be documented on Form OSSC 915 in accordance with Section 915.**

State of Oregon
Form OSSC 915
Emergency Responder Radio Coverage (ERRC) Checklist

For use to determine compliance with 2014 OSSC 403.4.5 and 915.

This checklist provides the minimum necessary required information and shall be provided to the local Building Code Official at time of building permit application where a proposed new building meets any one of the following criteria

1. Any building with one or more basement or below-grade building levels (*OSSC 915*).
2. Any underground building (*OSSC 915*).
3. Any building more than five stories in height (*OSSC 915*).
4. Any building 50,000 square feet in size or larger (*OSSC 915*

Part I Project Information *(to be completed by permit applicant or representative)*

Applicant or representative name: Jeancarlo Saenz **Phone number:** 972.726.9400

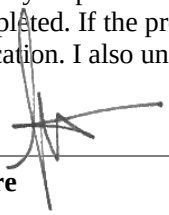
Project name: E2, Block 40

Address / location: 3838 SW Macadam Avenue

Building height: 84 ft **Construction type:** I-A & III-A

Number of floors below grade: 1.5 **Number of floors above grade:** 7.5 **Building square footage:** 234,904 s.f.

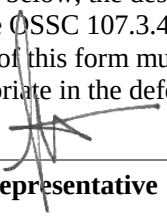
Acknowledgement: I understand, unless exempted by the building official, this project is required to comply with the construction requirements for emergency responder radio coverage systems, and that a building permit cannot be issued without this form being properly completed. If the project is an approved deferred submittal, only Parts I and II need to be completed at the time of permit application. I also understand that the fire official may waive the ERRC requirements. I have consulted with the local fire official.



Applicant / Representative signature 10.29.18 **Date**

Part II Deferred Submittal *(signed by local fire official, permit applicant and building official)*

By signature below, the designated parties acknowledge that ERRC compliance documentation for this project is being deferred (see OSSC 107.3.4.2). As provided by Section 915.2, only Parts I and II need to initially be completed. Parts III through VII of this form must be completed as necessary to demonstrate compliance and be submitted to the building official when appropriate in the deferred submittal process.



Applicant/Representative 10.29.18 **Date** **Building Official** **Date**

Local Fire Official / Title / Jurisdiction **Date**

Part III Local Fire Official Requirement *(to be completed by the Fire Code Official)*

Does the local fire official require an Emergency Responder Radio system?

- ❑ **Yes** If yes, complete Part IV Technical Criteria.
- ❑ **No** If no, indicate the reason below and return this form to the Building Official for approval.
  - ❑ Wired communication system is being installed.
  - ❑ Other (specify):

Local Fire Official / Title / Jurisdiction **Signature** **Date**

Part IV Technical Criteria *(to be completed by the local fire official)*

The following technical criteria are provided to aid in design where equipment is necessary to achieve compliance. This part may not be able to contain all necessary information and additional information may be required. This information is required as a condition of building permit issuance, but it is not adopted or made part of the state building code. If part of a deferred submittal, this section must be completed when appropriate in the process.

Technologies Used / Frequencies / Channels Required:

FCC License Holder for Emergency Radio frequency:

Contact Person / Phone Number:

Location and Technical Specifications of Agency Antennas Available at:

FCC Frequency Holder Special Requirements for Equipment:

Repeater type(s):

Minimum distance to closest repeater:

Effective radiated power of donor site:

Specific standards for maximum spurious oscillation levels:

Any other specific criteria:

Anticipated frequency changes:

Specific testing requirements:

Legal agreement required with FCC license holder? ❑ Yes ❑ No

Plan and specification submittal required? ❑ Yes ❑ No

❑ Additional local information is attached.

Part V System Design *(to be completed by the applicant and FCC license holder)*

Systems must comply with local fire service requirements, Section 510 of the fire code, FCC rules, and all conditions of FCC license holder use agreements. This information is required as a condition of building permit issuance, but it is not adopted or made part of the state building code.

System Type: ❑ DAS with signal booster ☒ Other: Refer to attached letter for proposed strategy for DAS system

Signal Booster Make / Model:

Donor Antenna Type:

Proposed Frequency Range or Number of Channels:

Part VI Building Official Approval

Where Emergency Responder Radio Coverage is required by the fire official, the building official regulates the ERRC construction components through the state building code. Only a building official may waive the construction requirements after a determination by the local fire official that ERRC is not necessary for the building.

Building Official Name	**Signature**	**Date**

PORTER Electric INC.

7320 NE St. Johns Road • Vancouver, WA 98665 • **360-574-1366** • Lic# PORTEE1554DK • **Fax 360-573-3723**

10/23/18

Attention: Plans Examiner

RE: Project: Block 40 “The Ella 2”

It is our intent to provide and install a DAS (Distributed Antenna System) as per Oregon Fire Code section 510.

Raceway and cabling will be installed during construction for a system the extent of which will be discovered during testing of the structure. Testing of the structure using a spectrum analyzer will be performed when the project has been substantially completed and ready for accurate testing of signal strength.

Test results, plans and submittals will be provided with a permit application to the AHJ for review at that time.

Bill Robinson
PORTER Electric Inc
7320 NE St Johns Rd
Vancouver WA 98665