



TCOMM911 ERCES VENDOR PROCESS OVERVIEW

1 Introduction

TCOMM911 holds the licenses from the FCC for the frequencies used to operate the public safety radio system in Thurston County.

Note the following process steps for in-building ERCES design and approval:

- TCOMM911 has a design review process for ERCES installations to ensure compliance with the currently published *TCOMM911 In-Building ERCES Technical Criteria* available on the TCOMM911 website. Approval of a submitted design by TCOMM911 does not guarantee compliance with any local building codes.
- TCOMM911 has an Uplink Validation Checklist that must be completed by the ERCES vendor and submitted to TCOMM911 when making a request for a final uplink validation test. Note that at no time will an ERCES be connected to the TCOMM911 network prior to the successful completion of the uplink validation test.
- TCOMM911 will issue a re-broadcast agreement to the property owner, copied to the ERCES vendor, and the AHJ fire marshal on the successful completion of an Uplink Validation test by TCOMM911 radio technicians.

2 Vendor Process Overview

2.1 Authority for ERCES Requirement

The Washington State Fire Code and Thurston County building codes outline the requirements for in-building emergency responder communication enhancement systems (ERCES). Per NFPA 1221, AHJ fire marshals are the final authority for ERCES requirements for any property.

If the AHJ fire marshal determines that an ERCES is required, the fire marshal will advise TCOMM911 by email at RadioHelpDesk@TCOMM911.org with:

- 1) Property owner name, phone number and email
- 2) Civic address for the property
- 3) ERCES vendor name and contact details (if known)

2.2 Request to TCOMM911 for a New ERCES and Donor Site

When a vendor is engaged with a property owner/developer to install a new ERCES in Thurston County the Vendor must submit a request to TCOMM911 to have a donor site identified for the new installation. All requests are made via email to RadioHelpDesk@tcomm911.org. The following information must be provided in the request:

- Civic Address for the property
- Property Owner Contact information



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- Name
 - Address
 - Phone Number
 - Email
- Installer/Vendor Contact Information
 - Name
 - Address
 - Phone Number
 - Email
- Lat/Long of the donor antenna location
- Height above ground for the donor antenna

When the request is received, TCOMM will provide the following information:

- Donor site name
- Azimuth to the donor site
- Distance to the donor site
- Donor site ERP

Any changes to the donor antenna location must be highlighted in the design submission document. If during the installation process a clear path to the donor site is unavailable, vendors must immediately contact TCOMM911 to request an alternate donor site.

2.3 In-Building ERCES Design Approval Process

ERCES vendors are required to submit the ERCES design for review and approval by TCOMM911 prior to installation. The design review process is available on the TCOMM911 website @ <https://tcomm911.org/in-building-erces-resources/>. Note that all ERCES designs must align with the currently published *TCOMM911 In-Building ERCES Technical Criteria*.

2.4 Uplink Validation Checklist Requirements

Vendors must submit a completed uplink validation checklist and submit it to TCOMM911 when requesting an uplink validation test. All submissions are by email to RadioHelpDesk@TCOMM911.org. The checklist is available on the TCOMM911 website @ <https://tcomm911.org/in-building-erces-resources/>.

2.5 Uplink Validation Testing by TCOMM911 Radio Technicians

The first part of the uplink validation test performed by TCOMM911 radio technicians is to verify coverage conditions in the worst areas of the building with the ERCES turned off. These areas are identified in advance by the ERCES vendor. Coverage in these areas needs to meet a minimum standard



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of DAQ 3.0 (Speech understandable with slight effort. Requires occasional repetition due to noise or distortion)

- If this test shows areas of poor coverage, TCOMM911 will perform uplink validation testing on the property.
- In the rare case that the test shows good radio coverage (meets DAQ3.0) with the ERCES turned off, TCOMM will not issue a re-broadcast agreement and the ERCES will not be connected to the TCOMM911 radio network.
 - If deemed necessary by the fire marshal, the property owner will need to engage with an ERCES vendor to document coverage according to Section 5.10.5.4 of the Washington State Fire Code.

2.6 Issuing of Re-Broadcast Agreements

On successful completion of uplink validation testing by TCOMM911, a re-broadcast agreement will be issued to the property owner, copied to the ERCES vendor, and the AHJ fire marshal. This agreement signifies that the installed ERCES meets the technical requirements to re-broadcast TCOMM911 frequencies. This re-broadcast agreement does not replace or ensure compliance to the Washington State Fire Code or building codes in Thurston County.

3 ERCES Requirements in Thurston County

3.1 Existing Building

If the AHJ fire marshal determines that an existing building should be retrofitted with an ERCES, the property owner should contract with a reputable ERCES vendor to perform a coverage test of their building to validate existing coverage. Section 5.10.5.4 of the Washington State Fire Code details the testing requirements.

3.2 New Building

- New buildings that are designed to LEED certified standards with low-E glass typically will not have good public safety radio coverage. These buildings are good candidates for ERCES.
- ERCES requirements for other types of construction should be evaluated by a qualified RF Engineer.

3.3 Ongoing Monitoring

The requirement for annual testing of all in-service ERCES is defined in Washington State Fire Code section 510.6.1 Testing and proof of compliance.



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4 Complete ERCES Design Review and Approval Process Flow

