



Nampa Fire District - Prevention Bureau  
 Prevention Phone: 208-468-5751  
 Email: prevention@nampafire.org  
 Admin Office: 9 12th Ave South - Nampa ID 83651

**Emergency Responder  
 Radio Coverage Permit  
 Application**

**BUSINESS / PROJECT INFORMATION**

Business Name &/or Project Name:

Business Address &/or Project Site:

Business Contact Name (if applicable):

Phone #:

Building Permit #:

Occupancy ID:

Date:

**Designer Information**

Company Name:

Address:

Contact Name:

Email:

Phone #:

**Applicant / Installer Information**

Company Name:

Address:

Contact Name:

Email:

Phone #:

**PROJECT DETAILS**

**Check One Box:**

New system (Existing Building)	New system (New Building)	Re-submittal
Modification of existing system	Replacement of existing system (include reason in comments below)	

**Scope of Work/Explanatory Comments:**

Describe the work to be performed in detail including the reasons for the purposed work. Please explain any unusual conditions and/or special design considerations necessary to understand the proposed scope of work and system design.

**APPLICANT INSTRUCTIONS**

#1 Fill out NFD Permits Account Request Form on-line (find form on website) #2 You will receive an email after filling out and submitting a NFD Permits Account Request. Be sure to save that email to reference during the application/inspection process. In the email there is a upload link called "application intake folder". Please submit/upload this application along with all additional documents to that folder link. #3 Fill out the Canyon County Public Safety Rebroadcast Authorization Agreement form and submit it to Christine Wendelsdorf at [christine.wendelsdorf@canyoncounty.id.gov](mailto:christine.wendelsdorf@canyoncounty.id.gov). You may reach her at (208)454-7271 for any questions on the Canyon County Public Safety Rebroadcast Authorization Agreement form. #4 Fees will be invoiced after review and will need to be paid before the permit will be issued.

**Applicant Signature:**

**Date:**

**Internal Information Filled out by Nampa Fire Prevention Bureau**

Application:    Approved    Denied

Reason for Denial:

Reviewed By:

Date:

## **RESPONSIBILITIES & REQUIRED INFORMATION**

**The following conditions shall be always adhered to for the permit to be valid.**

**Emergency responder radio coverage.** All new building shall have approved radio coverage for emergency responders within the building installed in accordance with Section 510 of the International Fire Code and with the applicable provisions of NFPA 72, National Fire Alarm Signaling Code. This section shall not require improvements of the existing public safety communication system.

**Exceptions.** Where the Fire Code Official determines that the radio coverage is not needed.

**Emergency responder radio coverage in existing building.** Existing buildings shall be provided with approved radio coverage for emergency responders as required in IFC Chapter 11.

**Construction permit required.** A construction permit for the installation of or modification to emergency responder radio coverage systems and related equipment is required as specified in IFC Section 105.7.6. Maintenance performed in accordance with the International Fire Code is not considered a modification and does not require a permit.

**Radio signal strength.** The building shall be considered to have acceptable emergency responder radio coverage when signal strength measurements in 95% of all areas of the building and 99% in elevators (measured at the primary recall floor), stair shafts and Fire Command Centers meet the signal strength requirements in IFC Sections 510.4.1.1 and 510.4.1.2.

**Minimum signal strength into the building.** A minimum signal strength of -95 dBm shall be receivable within the building.

**Minimum signal strength out of the building.** A minimum strength of -95 dBm shall be received by the agency's radio system when transmitted from within the building.

**System Design.** The emergency responder radio coverage system shall be designed in accordance with IFC Section 510.4.2.1 through 510.4.2.5.

**Frequency range.** The frequency ranges can be obtained from Nampa Fire Protection District and Canyon County Emergency Management.

**Power supply.** Power supplies shall conform with NFPA 72, Section 10.5 (Power Supplies).

**Secondary power.** If any part of the installed system or systems contains an electrically powered component, the installed system or systems shall be provided with an independent battery system or an emergency generator capable of operating for a period of at least 12 hours without external power input. The battery system shall automatically charge in the presence of external power input.

**Signal booster requirements.** If used, signal boosters shall meet the following requirements in accordance with IFC Section 510.4.2.4:

1. All signal booster components shall be contained in a NEMA 4-type waterproof cabinet.
2. The battery system shall be contained in a NEMA 3R or higher rated cabinet.
3. Equipment shall have FCC certification prior to installation.

**Installation requirements.** The installation of the public safety radio coverage system shall be in accordance with IFC Sections 510.5.1 through 510.5.5.

**Approval prior to installation.** The installation of the public safety radio coverage system shall be in accordance with IFC Sections 510.5.1 through 510.5.5.

**Approval prior to installation.** No amplification system capable of operating on frequencies licensed to any public safety agency by the FCC or other radio licensing authority shall not be installed without prior coordination and approval of the Fire Code Official.

**Acceptance Test procedure.** Acceptance testing for Emergency responder radio amplification system is required, upon completion of installation. It is the building owner's responsibility to have the radio system tested by qualified personnel to ensure a minimum of 95% two-way coverage on each floor of the building.

A report shall be submitted to the Nampa Fire Protection District and Canyon County Emergency Management at the conclusion of the acceptance testing containing a floor plan and the signal strengths at each location tested and other relevant information. A representative of the Nampa Fire Protection District may oversee the acceptance test. Acceptance testing is also required whenever changes occur to the building that would materially change the original field performance test. The test procedure shall be conducted as follows:

1. Each floor of the building shall be divided into a grid of approximately twenty (20) equal areas.
2. Testing shall use a two (2) watt, portable transceiver with speaker/microphone and flexible antenna (or any calibrated device which will produce signal levels useable by the prescribed portable radio). Field strength testing instruments must have been calibrated within one (1) year of the date of the acceptance test. Field strength testing instruments must be of the frequency selective type incorporating a flexible antenna similar to the ones used on the handheld transceivers. Nampa fire Protection District may designate alternate methods of measuring the signal level, which satisfy appropriate levels of public safety coverage.
3. If two (2) adjacent areas fail the test, the floor may be divided into forty (40) equal areas to be more statistically accurate. If system fails the forty (40) area test, the system shall be altered to meet 95-% coverage requirement.
4. A spot located approximately in the center of a grid area will be selected for the test, then the radio will be keyed to verify two-way communication to and from the outside of the building. Once the spot has been selected, prospecting for a better spot within the grid area is not permitted. The gain values of all the amplifiers shall be measured and the results kept on file with the building owner so that the measurements can be verified each year during the annual test. In the event that the measurement results become lost, the building owner will be required to rerun the acceptance test to reestablish the gain values.
5. As part of the installation a spectrum analyzer or other suitable test equipment shall be utilized to ensure spurious oscillations are not being generated by the subject signal booster. This test shall be conducted at time of installation and subsequent annual inspections.

**FCC compliance.** The emergency responder radio coverage system installation and components shall also comply with all applicable federal regulations including, but not limited to, FCC 47 DFR Part 90.219.

**Maintenance.** The emergency responder radio coverage system shall be maintained operational at all times in accordance with IFC Sections 510.6.1 through 510.6.3.

**Testing and proof of compliance.** The emergency responder radio coverage system shall be inspected and tested annually, or whenever structural changes occur to the building that would materially change the original field performance tests by a consultant approved by the Fire Code Official. The performance test shall include at minimum a floor plan and the signal strength in various locations of the building. Testing shall consist of the following:

1. In-building coverage test as described in IFC Section 510.5.3.
2. Signal booster shall be tested to ensure that the gain is the same as it was upon initial installation and acceptance.
3. Backup batteries and power supplies shall be tested under load of a period of one hour to verify that they will properly operate during an actual power outage. If within the 1-hour test period the battery exhibits symptoms of failure, the test shall be extended for additional 1-hour periods until the integrity of the battery can be determined.
4. All other active components shall be checked to verify operation within the manufacturer's specifications.
5. At the conclusion of the testing, a report, which shall verify compliance with IFC Section 510.5.3, Shall be submitted to the Fire Code Official through livsafe.com each year.

**Additional frequencies and change of frequencies.** The building owner shall modify or expand the frequency range at his or her expense in the event frequency changes are required by the FCC or additional frequencies are made available by the FCC. Prior approval of a public safety radio coverage system on previous frequencies does not exempt this requirement.

**Identification.** Radio coverage system shall be identified by a sign located on or near the Fire Alarm Control Panel stating, **"This building is equipped with an Emergency Responder Radio Coverage System."**

**Field testing.** Police and Fire Personnel shall at any time have the right to enter onto the property to conduct its own field-testing to be certain that the required level of radio coverage is present.



# Canyon County Public Safety Rebroadcast Authorization Agreement

This Agreement between Canyon County and \_\_\_\_\_, referred to as “In-Building System Owner” is for the installation of a Bi-Directional Amplifier/Distributed Antenna Radio System (“BDA/DAS”) by Canyon County at the request of the In-Building System Owner at the site identified below which is owned by In-Building System Owner. The purpose of the BDA/DAS is to provide enhanced in building Public Safety Radio System Coverage. In order to have the BDA/DAS installed and maintained by Canyon County, the parties agree to the following terms and conditions:

**A. In-Building System Owner will provide the following information to Canyon County:**

- 1) Company and/or building name: \_\_\_\_\_
- 2) Address: \_\_\_\_\_
- 3) Contact name: \_\_\_\_\_
- 4) Email address: \_\_\_\_\_
- 5) Phone Number: \_\_\_\_\_
- 6) Emergency contact name/phone (24 hours/7 days): \_\_\_\_\_  
\_\_\_\_\_
- 7) Location of equipment in building: \_\_\_\_\_  
\_\_\_\_\_
- 8) Designed by (Company name/employee name): \_\_\_\_\_  
\_\_\_\_\_
- 9) Installed by: \_\_\_\_\_
- 10) Tested by (Company name/employee name/GROL #): \_\_\_\_\_  
\_\_\_\_\_



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- 11) Provide system drawings (soft copy)
- 12) Provide all system equipment documentation (soft copy)
- 13) Make/model: \_\_\_\_\_
- 14) Antenna type (panel, yagi, etc.) \_\_\_\_\_
- 15) Antenna gain (dBd): \_\_\_\_\_
- 16) ERP to donor site (dBm): \_\_\_\_\_
- 17) Antenna coordinates (NAD83): \_\_\_\_\_
- 18) Antenna height above ground (feet): \_\_\_\_\_
- 19) Downlink signal or Organic signal (-dbm): \_\_\_\_\_
- 20) Date of plan commission (first turned on): \_\_\_\_\_

## **B. The County will provide the following information:**

- 1) Projected Signal Level at donor site (-dBm): \_\_\_\_\_
- 2) Donor site name: \_\_\_\_\_
- 3) Projected signal level from donor site (-dBm): \_\_\_\_\_
- 4) Antenna azimuth (degrees true): \_\_\_\_\_

## **C. Terms & Conditions**

- 1) In-Building System Owner must conduct a site measurement at the donor site and BDA/DAN site at the time of commissioning. The BDA/DAN system cannot be in operating state until this has been done.
- 2) Canyon County will have unfettered and continual access to the in-building system equipment and components at all times and whenever deemed necessary by Canyon County.
- 3) The In-Building System Owner is responsible for ensuring the system equipment and components are maintained per manufacturer and FCC specifications. BDA's must be



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FCC Class “A” type Channelized units that only repeat the 24 channels of the Canyon County Simulcast.

- 4) Canyon County reserves the right to turn the system off in the event it is found to cause harmful interference to the Canyon County 700 MHz Emergency Radio Communications System.
- 5) Canyon County reserves the right to change frequencies and donor site locations as its needs dictate. The applicant is responsible for all costs to modify the BDA/DAS system to conform.

### D. Authorizations

By signing this document, the representatives affirm that each has authority to bind their respective organization to this Agreement.

**For Canyon County:**

**For In-Building System (BDA) Owner:**

\_\_\_\_\_

\_\_\_\_\_

Title: Radio Communications Services Manager

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_