

EMERGENCY RESPONDER COMMUNICATION COVERAGE (ERCC)

This information package shall be used in conjunction with the California Fire Code, Section 510, NFPA 1225, and other applicable design standards as adopted by the City of Mountain View (*Refer to Mountain View City Code Chapter 14 for adopted Editions of NFPA*). This information package is not intended for use as a stand-alone document.

ADMINISTRATIVE:

- Submittals are only accepted online via ePermitsMV. To submit, please visit the following for instructions on submitting:

<https://www.mountainview.gov/depts/comdev/building/epermitsmv.asp>

- Provide associated main building permit number on permit application.
- Plan check turnaround time for each submittal is a minimum of three (3) weeks.
- Incorporate onto the drawings: the contractor's name, address, phone number, California Contractor's license number and license type (i.e., valid FCC general radio operators license, certification of in-building system training by an approved organization/school or certificate issued by the manufacturer of the equipment being installed, etc.)
- The contractor will be notified by phone or email when the plans and permit are approved. All plan check and permit fees will be collected when the plans are approved.
- Equipment shall be listed for the purpose for which it is used. Submit complete manufacturer's specification sheets (i.e., Catalog cut sheets) for each system component. On cut sheets that include more than a single device, clearly indicate the specific item(s) to be installed by use of an arrow or similarly effect marking.
- Field inspections are conducted Monday, Wednesday, and Friday only. For inspection scheduling or for general information, please call (650) 903-6313. Inspections will not be scheduled until a permit has been issued. Allow 2-3 working days' advanced notice when requesting inspections. The permit card and an approved set of (hard copy) plans must be kept at the project site until the permit is finalized. Failure to maintain the permit card and approved plans on site will result in the cancellation of the inspection. Coordination with the fire alarm contractor is required.

Note: Third party testing via TEA is required for all ERCC systems. Contact FPE at anish.murthy@mountainview.gov to arrange 3rd party frequency testing. Receipt of a passing test report from TEA is required prior to final inspection with FPE. Coordinate with FPE for final inspection. ERCC permits require building inspector sign off after final FPE sign off.

TECHNICAL CRITERIA

The City of Mountain View uses a regional digital/trunked (Motorola P25 Phase II) simulcast radio system. The radio system is known as the "Silicon Valley Regional Communications System" (SVRCS). SVRCS operates in the 700/800 MHz public safety frequency band. There are multiple simulcast "cells" that comprise the SVRCS: City of Mountain View is located in the "West Cell" of the SVRCS. There are multiple transmit/receive sites arranged around the West Cell, including one at the City of Mountain View Police/Fire Administration building at 1000 Villa Street, Mountain View, CA 94041.

All BDA/DAS installations that will be used in conjunction with the SVRCS must be registered in advance with the Silicon Valley Regional Interoperability Authority (SVRIA). A copy of the SVRCS DAS/BDA registration form is available (as is online registration) at the SVRIA website - <http://svria.org/registration-form/>

SVRCS frequency ranges are:

Input/uplink/mobile Tx: 799 - 805 MHz

Output/downlink/mobile Rx: 769 - 775 Mhz

GENERAL REQUIREMENTS

- The Emergency Responder Communication Coverage (ERCC) system shall be installed in accordance with the City of Mountain View Requirements, California Fire Code Section 510, NFPA 1225, and other applicable design standards as adopted by the City of Mountain View. **Incorporate this as a verbatim note onto the drawings.**
- The ERCC shall be registered with SVRIA. Proof of registration shall be submitted with the plan submittal (include application with the actual plan set). After the BDA installation is complete, the SVRIA registration document must be completed with the applicable post installation data and submitted to the fire code official prior to final acceptance. **Incorporate this as a verbatim note onto the drawings.**
- An electronic (PDF) contractors commissioning report is required prior to the scheduled FPE final inspection. The contractors commissioning report shall include, at a minimum, the following information:
 - Table of Contents
 - Purpose or Background
 - Contact Information (name, address and phone number of the firm that installed the ERCC, including the project manager and/or designer)
 - Site information - Address and aerial/satellite photograph
 - Equipment Information
 - Provide specific information and specifications of each of the different types of BDAs used for the project
 - Model Number
 - Frequencies
 - Electrical specifications of the BDA
 - Closeout BDA Report
 - One page summary of the system such as site location, job name, contact person, frequencies, BDA location(s), input and output power, number of transmit and receive antennas, etc
 - Provide screen shots (from spectrum analyzer) for uplink and downlink for each frequency

- Catalog cut sheets of all equipment used/installed
- Photographs
 - Rooftop penetrations
 - Installed BDA equipment
 - Connections to splitters
 - Other photos that show typical installation conditions, as needed
- Completed SVRIA application
- As-built copy of plans as the final attachment

Incorporate this as a verbatim note onto the drawings.

- ERCC signage is required to be provided immediately adjacent to each exterior building mounted Knox Box or Knox Key Switch which controls a vehicle gate. ERCC signage shall also be required on the door(s) leading into the ERCC's head end. **Incorporate this as a verbatim note onto the drawings.**

Note: Incorporate the following signage detail into the plan set. Indicate that the sign shall be: of all weather construction, a minimum size of 6" x 8", 1/2" minimum white lettering and white image on red background



Radio System Installed

DRAWING REQUIREMENTS

The following is the minimum information to be included within the submittal drawing package:

- A copy of any RF site survey done to determine RF coverage within the projects structure.
- Predicted RF coverage plots or calculated signal levels within the structure.
- A listing of any excluded areas of the project and why the were excluded.
- Site plan with equipment and antenna(s) locations noted.
- Manufacturer's data sheets or detailed specifications on all hardware items proposed.
- System block diagram indicating connectivity and location of all system components.
- Fire alarm interface for CFC required supervisory signals.

- Manufacturers recommended procedures for testing all required supervisory signals.
- Information regarding annual preventative maintenance and any service plan for the system.
- Floor plans that show antenna runs, equipment locations, and installation details.
- Roof plan with antenna location and mounting details (permanently affixed, sleds not allowed).
- Elevation floor plan that shows location of new equipment, installation details, new electrical circuit(s) with panel board locations.
- Floor plan that shows location and type of vertical risers to roof.
- Where conduits or sleeves penetrate fire rated walls or floor/ceiling assemblies, provide data sheets and through penetration fire rated details of the proposed fire stopping system(s).
- Copy of the SVRIA permit application (incorporate into the actual plan set)

Note: The applicant may submit the site survey and equipment proposal for concept approval prior to submitting the full detailed plan set.

ADDITIONAL REQUIREMENTS

- All applicable ERCC equipment shall be UL 2524 listed.
- The ERCC head end shall be located within a minimum 2-hour fire rated room when located within the building envelope. The head end shall, when approved by the FPE, be allowed to be installed a maximum of 1 below the level of exit discharge where co-located with the fire alarm control panel and within Type I construction (i.e., podium style project). The head end shall be allowed to be installed on the roof where either of the following two conditions is met:
 - 1) The head end is located within a 2-hr fire rated enclosure/room. The enclosure/room shall be a conditioned space.
 - 2) The head end is located within a non-combustible, conditioned, enclosure with a minimum separation of 15 ft from surrounding equipment or similar items. The entire roof shall be constructed with a minimum 2-hr fire rating.

For all head end installations on the roof, the Emergency Power Off switch shall always be located on the level of exit discharge in an approved location. Signage shall be provided at the EPO and on the roof.

- Horizontal and vertical runs shall be protected per the following (show on riser and associated details):
 - Horizontal runs: Pathway Survivability Level 1 (EMT conduit or other metallic conduit that is rigid)
 - Vertical runs: Pathway Survivability Level 2*

*Note: Vertical runs shall also be provided within a minimum 2-inch rigid metallic conduit.

- Provide a signage detail to be provided at the rooftop donor antenna stating the following: "MOVEMENT OR REPOSITIONING OF THIS ANTENNA IS PROHIBITED WITHOUT APPROVAL"

FROM THE FIRE CODE OFFICIAL." Detail shall indicate the sign is to be of all-weather construction, have a minimum letter height of 1", and have white lettering on red background.

- Per NFPA 1225, the following designated critical areas shall be designed with 99 percent floor area signal strength radio coverage:
 - Fire Command Centers
 - Fire Pump Rooms
 - Exit Stairs
 - Exit Passageways
 - Elevators
 - Elevator Lobbies
 - Standpipe Cabinets and Sprinkler Sectional Valve locations
- Passive RF components shall be monitored for integrity (floor antennas, horizontal coax runs, splitters, etc.). An open condition shall be recognized by the system and monitored by the fire alarm panel.
- For high rise buildings, a dedicated annunciator shall be provided within the fire command center to announce the status of all RF-emitting devices and active system components. ERCC BDA and UPS shall not be located within the Fire Control Center. ERCC signage is required on the outside of FCC door(s).