

SANTA ROSA FIRE DEPARTMENT

FIRE PREVENTION BUREAU

INSPECTION CHECKLIST

July 1, 2010



EMERGENCY RESPONDER RADIO COVERAGE SYSTEM

Address:		Permit #:
Inspector:	Date:	Status:
Inspector:	Date:	Status:
A-Approved, R-Re-inspection Required		

This Checklist outlines general requirements. Information contained herein applies to typical instances and may not address all circumstances.

REQUIREMENTS BEFORE ACCEPTANCE TEST

Y N

- Approved plans and permit on site.
- Plans match equipment layout, component manufacturer model and size.

SYSTEM INSTALLED

- Location of the building or development and signal in the area (non or weak).
- Active or Passive system (amplified or non-amplified)
- System security. Due to location, system monitored 24/7 by central system or ties into supervisory circuit of alarm or routine inspections to be performed.

SIGNAL REQUIREMENTS

- Review documentation that system will achieve an average in-building field strength of -95dBm throughout 90% of the area of each floor of the building. If outside strength is lesser than inside shall be equal to outside strength (elevator coverage exempt).
- Verify Simplex or Duplex channels and coverage.
- Review documentation that average signal strength of -100 dBm is measured at the nearest police/fire receiver site. For REDCOM it would be (Mt Jackson) and Santa Rosa (Control 3) is at Bethlehem Tower. Voting is used.

SYSTEM DESIGN

ACTIVE SYSTEM

- Installation performed by FCC certified technician and all components are FCC Certified.

Inspection Checklist
Emergency Responder Radio Coverage System

Y N

- 10. System is designed to operate on VHF (151-159), UHF public safety (450-490 bands), 700 (future), 800 MHz bands, and Cellular/GSM/PCS frequencies.
- 11. Filters to reject frequencies outside those used for emergency communications.
- 12. Method of transmission throughout building ("leaking coax" or fiber optics). Penetrations through rated walls will need to be sealed.
- 13. Emergency power. Active radio systems must have 12 hrs of emergency power supply via generator or battery backup. Generators must be approved and have a permit. Battery shall charge when in the presence of external power. Equipment room to be labeled as "Radio Equipment Room".
- 14. No interconnection to Fire Alarm system unless using Fire Alarm to monitor Radio Communication status through a "Supervisory" Circuit.
- 15. Where booster equipment is stored in an area prone to water or chemicals it needs to be in a watertight case conforming to NEMA-4 standards.
- 16. Power supply. Circuit breakers locked to prevent accidental shut-off.

PASSIVE SYSTEM

- 17. Penetrations through rated walls will need to be sealed.
- 18. System is designed to operate on VHF (151-159)

ACCEPTANCE TESTING

- 19. Two-way coverage on each floor of the building is a minimum of 90 percent.
- 20. Each floor of the building divided into 20 equal areas. Maximum of 2 areas can fail. If more than two areas fail then divide the building into 40 equal areas and a maximum of 4 can fail. If more than 4 areas fail system must be altered to meet requirements.
- 21. Voice test conducted using a portable radio with specifications equal to SRFD and SRPD radios and talking through REDCOM.
- 22. Data test performed using laptop and communicating with CAD. A single spot in grid to be selected with no searching for alternative spots if test fails.
- 23. Gain values of amplifiers measured with results kept on site for annual verification. Copies to be sent to 911 Supervisor.
- 24. Person conducting acceptance testing is qualified with current FCC license or a technical certification issued by APSCO or PCIA.