



# Orange City Fire Department

## Emergency Responder Radio Communications System



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### **Guidelines for 800 MHz BDA Plan Submittal:**

1. Contractor shall submit two sets of BDA design documentation and drawings to the Orange City Fire Department for review and approval, prior to commencing with any work.
2. Drawings must be a minimum size architectural D sheets or similar, with supporting manufacturer documentation on 8.5" x 11" pages. Site plan, floor plan(s) and wiring diagrams must be included.
3. The Orange City Fire Department (OCFD) will forward both sets of plans to the Orange County Sheriff's Department/Communications & Technology Division (OCSD/COMM) for review. Approval must be obtained from both agencies prior to commencing any work.
4. Once plans are approved by both the OCSD/COMM and the OCFD, OCFD will issue a permit for work to commence.
5. Note that city BDA ordinances are slightly different from one jurisdiction to another; therefore, it is up to the contractor to confirm the OCFD requirements prior to submittal.

### **BDA Design Documentation Requirement:**

1. The contractor is fully responsible for the 800MHz BDA design and compliance to the California Fire Code Section 510.
2. The final As-built BDA design documentation submitted shall be 8.5" x 11".
3. The BDA system shall be fully rebandable.
4. The manufacturer shall support the BDA system, for seven (7) years after it is installed.
5. The BDA system shall be equipped with a UPS system.
6. The BDA system shall be equipped with an Auto-dialer system.
7. Indoor antennas, at a minimum, shall be 700/800MHz compliant.
8. Indoor tri-band antennas for BDA/DAS and cell phone coverage is optional based on the building owner requirement.
9. The BDA design shall utilize inductive couplers rather than splitters.
10. Drawings shall document the following:
  - a) Model numbers for all proposed equipment (i.e. BDA, Indoor antennas, Donor antenna, UPS, Etc.).
  - b) Rack layout diagram.
  - c) Fiber optics layout and interconnect (if possible).
  - d) 20x20 equal grid signal measurements per floor, before and after the BDA install.
  - e) A single diagram showing the signal levels of the BDA and indoor antennas.
  - f) The drawing shall show indoor antenna layouts and signal levels, splitter/hybrid layouts and donor antenna.
11. The contractor is responsible to work with the OCFD to get a BDA sign-off form (contact OCFD new construction inspector for PDF copy).

### **BDA Auto-dialer Assignment:**

1. 2-3 weeks prior to completion of job, contractor shall send an email to OCSD/COMM and the OCFD to schedule for the BDA system sign-off.
2. The contractor shall specify the building address, building owner contact and contractor contact.



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3. OCSD/COMM will assign a BDA ID number and give instructions to the contractor for programming the auto-dialer to dial into the county paging system.

### **Final Job-card Sign-off:**

1. The contractor shall have all the BDA design documentation and forms contained in a soft binder on site.
2. The contractor shall have a copy of the BDA Ordinance sign-off form (containing the OCFD logo) for the OCSD/COMM representative to sign.
3. OCFD and OCSD/COMM representatives will review the BDA design submittal documentation for completeness.
4. Per the design plan, a spot grid test is performed throughout the entire building.
5. OCSD/COMM personnel will verify the BDA auto-dialer is working in conjunction with the countywide paging system.
6. OCSD/COMM personnel will perform BDA isolation test to ensure the BDA does not interfere with the county cell sites and repeater system.
7. Upon completion of the testing, the Certification-Public Radio System Coverage form will be signed.