



# TWO-WAY COMMUNICATION ENHANCEMENT SYSTEM INSPECTION



C10 (1 of 1)

REQUIRE A MINIMUM 24-HOUR NOTICE  
CONSTRUCTION SCHEDULING:

**941-861-5127**

## INSPECTION PROCEDURES

**AT TIME OF INSPECTION YOU WILL BE REQUIRED TO PROVIDE THE  
FOLLOWING TO CONDUCT THE INSPECTION AND FOR FINAL APPROVAL**

**PLEASE CHECK OFF EACH ITEM PRIOR TO CALLING FOR YOUR INSPECTION:**

- NO INSPECTION WILL BE DONE UNLESS A MINIMUM OF 2 SETS OF INSPECTION & MAINTENANCE FORMS AND APPROVED SET OF JOB SITE PLANS ARE ON SITE!
- VERIFY RADIO REGISTRATION: THIS RADIO SHALL BE REGISTERED AT THE FCC WEBSITE BY THE INSTALLING CONTRACTOR.
- ANNUAL (12 MONTH) MAINTENANCE & INSPECTION CONTRACT SHALL BE PROVIDED AT TIME OF INSPECTION
- A FINAL COMPLETE TEST REPORT SHALL BE PROVIDED WITH ALL AREAS MEETING MINIMUM RADIO STRENGTH
- THE LICENSE (FCC G.R.O.L.) TECHNICIAN SHALL BE ON SITE FOR ALL RADIO TESTING**
- ANY BDA / DAS EQUIPMENT THAT REQUIRES A KEY FOR ACCESS SHALL BE PROVIDED AND LOCATED IN THE KNOX BOX
- DAS/BDA SYSTEM SHALL BE MONITORED BY THE FIRE ALARM SYSTEM AND COMPLY WITH THE FOLLOWING SIGNALS PER NFPA 72 & 1221
  1. SYSTEM AND SIGNAL BOOSTER SUPERVISORY SIGNALS SHALL INCLUDE THE FOLLOWING:
    - (B) ANTENNA MALFUNCTION.
    - (C) SIGNAL BOOSTER FAILURE.
    - (D) LOW-BATTERY CAPACITY INDICATION WHEN 70 PERCENT OF THE 12-HOUR OPERATING CAPACITY HAS BEEN DEPLETED.
  2. POWER SUPPLY SIGNALS SHALL INCLUDE THE FOLLOWING FOR EACH SIGNAL BOOSTER:
    - (A) LOSS OF NORMAL AC POWER.
    - (B) FAILURE OF BATTERY CHARGER.
- DEDICATED PANEL MONITORING:** A DEDICATED MONITORING PANEL SHALL BE PROVIDED WITHIN THE FIRE COMMAND CENTER. THE MONITORING PANEL SHALL PROVIDE VISUAL AND LABELED INDICATION OF THE FOLLOWING FOR EACH SIGNAL BOOSTER:
  - (A) NORMAL AC POWER
  - (B) SIGNAL BOOSTER TROUBLE
  - (C) LOSS OF NORMAL AC POWER
  - (D) FAILURE OF BATTERY CHARGER
  - (E) LOW-BATTERY CAPACITY
- BATTERY BACKUP OR AUTOMATIC STARTING GENERATOR FUNCTIONAL TEST (12 HOURS MINIMUM BACKUP)
- PLACARD: THE **C.R.C.C SIGN** SHALL BE POSTED NEXT THE FACP / BDA INDICATING THE DATE OF THE FINAL SYSTEM TEST

**NOTE:** PERMIT FEE COVERS ONE TEST AND ONE FINAL INSPECTION. ANY ADDITIONAL PARTIAL OR RE-INSPECTIONS WILL HAVE A \$75 FEE PER INSPECTION PAYABLE IN ADVANCE.



# SARASOTA COUNTY FIRE DEPARTMENT



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## CERTIFICATE OF RADIO COVERAGE COMPLIANCE SIGN

(POST THIS DOCUMENT IN COMMAND ROOM)

PROJECT NAME: \_\_\_\_\_

PROJECT ADDRESS: \_\_\_\_\_

INSTALLATION CONTRACTOR: \_\_\_\_\_

TEST DATE: \_\_\_\_\_ TEST TIME: \_\_\_\_\_

(TESTING FOR COMPLIANCE AND CERTIFICATION SHALL BE PERFORMED AFTER CONSTRUCTION AND INTERIOR FINISHING WORK IS COMPLETE)

I AM THE RESPONSIBLE PERSON IN CHARGE AND I CERTIFY THE OCCUPANCY IDENTIFIED ABOVE WAS TESTED FOR SARASOTA COUNTY P25 TRUNKED SYSTEM FREQUENCIES FOR PUBLIC SAFETY RADIO RF COVERAGE LEVELS AND MEETS THE MINIMUM REQUIREMENTS SET FORTH BY NFPA 72 & NFPA 1221 AS PER ADOPTED EDITION AT TIME OF INSTALLATION.

I FURTHER CERTIFY THAT THE BUILDING WAS TESTED IN ACCORDANCE WITH THE PROVISIONS SET FORTH IN NFPA 72, 1221 AND TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THE RADIO RF COVERAGE LEVELS FOR THIS OCCUPANCY MEET OR EXCEED THOSE REQUIRED BY NFPA 72 & NFPA 1221 AS PER ADOPTED EDITION AT TIME OF INSTALLATION AND PERMITTING.

THIS SITE WAS TESTED IN ACCORDANCE WITH NFPA 1, NFPA 72, NFPA 1221 AND FOUND TO BE IN COMPLIANCE ON \_\_\_\_\_ DATE

### DESIGN PROFESSIONAL CERTIFICATION:

I HEREBY CERTIFY THAT THESE ENGINEERING DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF FLORIDA.

NAME: \_\_\_\_\_ COMPANY: \_\_\_\_\_

ENGINEER LICENSE NUMBER: \_\_\_\_\_ EXPIRATION DATE: \_\_\_\_\_

### FCC GROL LICENSE PROFESSIONAL:

I HEREBY CERTIFY THAT ALL INITIAL AND FINAL TESTING DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND I AM DULY LICENSED BY THE FEDERAL COMMUNICATIONS COMMISSION IN THE UNITED STATES AND MEET ALL RULES AND REGULATIONS OF THE STATE OF FLORIDA,

NAME: \_\_\_\_\_ COMPANY: \_\_\_\_\_

FCC GROL LICENSE NUMBER: \_\_\_\_\_ EXPIRATION DATE: \_\_\_\_\_

\_\_\_\_\_  
SIGNATURE FCC LICENSE HOLDER DATE

### OWNER OR AGENT OF SITE:

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_



# SARASOTA COUNTY FIRE DEPARTMENT

## TWO-WAY COMMUNICATION ENHANCEMENT SYSTEM

### PLAN REVIEW



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THE FOLLOWING CHECKLIST IS INTENDED TO ASSIST YOU IN THE PREPARATION OF YOUR FIRE SYSTEM DRAWINGS. THIS CHECK SHEET IDENTIFIES THE MINIMUM REQUIREMENT FOR THE INITIAL FIRE PLAN REVIEW. THIS CHECK LIST IN NO WAY DETAILS ALL OF THE REQUIREMENTS THAT MAY BE NECESSARY FOR A COMPLETE CODE COMPLIANT SYSTEM. A SEPARATE APPLICATION SHALL BE SUBMITTED FOR THE INSTALLATION OF ANY FIRE PROTECTION AND/ OR DETECTION SYSTEM BY THE INSTALLING CONTRACTOR FOR A CODE COMPLIANCE REVIEW

**AS PER THE FLORIDA FIRE PREVENTION CODE NFPA 1- 11.10.1** TWO-WAY RADIO COMMUNICATION ENHANCEMENT SYSTEMS. IN ALL NEW AND EXISTING BUILDINGS, MINIMUM RADIO SIGNAL STRENGTH FOR FIRE DEPARTMENT COMMUNICATIONS SHALL BE MAINTAINED AT A LEVEL DETERMINED BY THE AHJ.

**ENGINEER & CONTRACTOR QUALIFICATIONS:**

- 1  **ENGINEER:** THE SYSTEM DESIGNER SHALL BE COMPLETED BY A FLORIDA LICENSED PROFESSIONAL ENGINEER. ALL DESIGN DOCUMENTS SHALL BE SIGNED AND SEALED.
- CONTRACTOR:** THE LEAD INSTALLATION PERSONNEL AND PERSONNEL CONDUCTING RADIO SYSTEM TEST SHALL BE QUALIFIED TO PERFORM SUCH WORK AND HOLD A CURRENT (FCC GENERAL LICENSE) AND LOW VOLTAGE LICENSE AS REQUIRED BY THE SCOPE OF WORK BEING PERFORMED.

**MINIMUM REQUIREMENTS**

**“DRAWING SHALL SHOW YOUR SCOPE OF WORK ONLY - ALL UNRELATED WORK SHALL BE REMOVED FROM THE DRAWINGS”**

- 2  ALL DRAWINGS, SPECIFICATIONS, REPORTS OR DOCUMENTS PREPARED SHALL BE SIGNED AND SEALED BY A FLORIDA REGISTERED DESIGN PROFESSIONAL.
- 3  THE BUILDING IS (NEW) \_\_\_\_\_ OR (EXISTING) \_\_\_\_\_ PLEASE IDENTIFY ON THE DRAWINGS.

4  **NEW BUILDINGS**

**CONSTRUCTION PLAN REVIEW**

THE INITIAL CONSTRUCTION DRAWINGS SHALL INCLUDE A STATEMENT ON THE DRAWINGS THAT INDICATES THE FOLLOWING: AS PER NFPA 1-11.10.1: IN ALL NEW AND EXISTING BUILDINGS, MINIMUM RADIO SIGNAL STRENGTH FOR FIRE DEPARTMENT COMMUNICATIONS SHALL BE MAINTAINED AT A LEVEL DETERMINED BY THE AHJ AND COMPLETED PRIOR TO BUILDING FIRE FINAL.

**INITIAL SURVEY TEST - APPLYING FOR A FIRE PERMIT**

A PRELIMINARY SITE SURVEY THAT INCLUDES SIGNAL STRENGTH, SIGNAL TO NOISE RATIO AND BIT ERROR RATE SHALL BE COMPLETED AND SUBMITTED FOR REVIEW. THE PRELIMINARY SURVEY TESTING SHALL BE IN ACCORDANCE WITH NFPA 1221, WITH A 20 GRID OVERLAY ONTO A FLOOR AREA WITH A MINIMUM GRID CELL DIMENSION OF 20 FT AND A MAXIMUM GRID DIMENSION OF 80 FT that WILL SUFFICE TO ENCOMPASS THE ENTIRE FLOOR AREA. A SEPARATE FIRE PERMIT SHALL BE REQUIRED.

IF A TWO-WAY RADIO COMMUNICATION ENHANCEMENT SYSTEM IS REQUIRED BASED UPON THE INITIAL SURVEY TEST, THE INSTALLING CONTRACTOR SHALL INCLUDE A COMPLETE SET OF DRAWINGS THAT IDENTIFIES ALL (A) CRITICAL AND (B) NON-CRITICAL AREAS WITH ALL ROOMS IDENTIFIED BY NAME ALONG WITH A SIGNAL TEST GRID OVERLAY, EQUIPMENT SUBMITTALS, AND ITEMS NOTED IN THIS CHECK SHEET.

**FINAL SURVEY TEST**

A FINAL RADIO SIGNAL TEST SHALL BE PROVIDED PRIOR TO FINAL FIRE INSPECTION AND ALL DRAWINGS UPDATED.

5  **EXISTING BUILDINGS**

A PRELIMINARY SITE SURVEY THAT INCLUDES SIGNAL STRENGTH, SIGNAL TO NOISE RATIO AND BIT ERROR RATE SHALL BE COMPLETED AND SUBMITTED FOR REVIEW. THE PRELIMINARY SURVEY TESTING SHALL BE IN ACCORDANCE WITH NFPA 1221, WITH A 20 GRID OVERLAY ONTO A FLOOR AREA WITH A MINIMUM GRID CELL DIMENSION OF 20 FT AND A MAXIMUM GRID DIMENSION OF 80 FT that WILL SUFFICE TO ENCOMPASS THE ENTIRE FLOOR AREA. A SEPARATE FIRE PERMIT SHALL BE REQUIRED.

IF A TWO-WAY RADIO COMMUNICATION ENHANCEMENT SYSTEM IS REQUIRED BASED UPON THE INITIAL SURVEY TEST, THE INSTALLING CONTRACTOR SHALL INCLUDE A COMPLETE SET OF DRAWINGS THAT IDENTIFIES ALL (A) CRITICAL AND (B) NON-CRITICAL AREAS WITH ALL ROOMS IDENTIFIED BY NAME ALONG WITH A SIGNAL TEST GRID OVERLAY, EQUIPMENT SUBMITTALS, AND ITEMS NOTED IN THIS CHECK SHEET.

**FINAL SURVEY TEST**

A FINAL RADIO SIGNAL TEST SHALL BE PROVIDED PRIOR TO FINAL FIRE INSPECTION AND ALL DRAWINGS UPDATED.

**NOTE:** WE HAVE PROVIDED A PRELIMINARY LIST OF AREAS DEEMED CRITICAL (ITEM 21A) IN THIS CHECK SHEET. CRITICAL & NON-CRITICAL AREAS ARE SUBJECT TO CHANGE BASED UPON BUILDING LAYOUT AND FIRE DEPARTMENT REQUIREMENTS.



# TWO-WAY COMMUNICATION ENHANCEMENT SYSTEM

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## DRAWINGS:

- 6  DRAWINGS ALONG WITH THE REQUIRED SPECIFICATIONS AND CALCULATIONS SHALL BE SUBMITTED IN ACCORDANCE WITH APPROPRIATE PLANS CHECKLIST AS LISTED HERE PLEASE INCLUDE APPROPRIATE PLANS CHECKLIST WITH A MAXIMUM SHEET SIZE 30" X 42".
- 7  PROJECT NAME, ADDRESS, CITY AND STATE SHALL BE SHOWN ON EACH DRAWING.
- 8  CONTRACTOR NAME, ADDRESS, CITY, STATE AND LICENSE NUMBER SHALL BE SHOWN ON EACH DRAWING.
- 9  SCOPE OF WORK, NOTES.
- 10  SCALE – A GRAPHIC REPRESENTATION OF THE SCALE USED ON ALL PLANS.
- 11  NORTH ARROW - MUST APPEAR ON EVERY SHEET SHOWING A PORTION OF THE SITE.
- 12  A KEY PLAN SHALL BE REQUIRED AS NEEDED.
- 13  DATE - THE DATE OF THE PLANS ALONG WITH ANY SUBSEQUENT REVISIONS MUST BE NOTED.
- 14  SHEET NUMBER - EACH SHEET MUST SHOW THE SHEET NUMBER AND THE TOTAL NUMBER OF SHEETS INCLUDED, AS WELL AS CLEARLY LABELED MATCH LINES TO SHOW WHERE OTHER SHEETS MATCH OR ADJOIN TO EACH OTHER.
- 15  COMPLETE, CURRENT MANUFACTURER'S SPECIFICATION AND INSTALLATION SHEETS ARE ATTACHED FOR ALL CONTROL UNITS, COMPONENTS, APPLIANCES, DEVICES, MODULES AND RELAYS LISTED ON LEGEND.
- 16  IS THE SYSTEM CAPABLE OF UPGRADE, TO ALLOW FOR INSTANCES WHERE THE JURISDICTION CHANGES OR ADDS SYSTEM FREQUENCIES, IN ORDER TO MAINTAIN RADIO SYSTEM COVERAGE AS ORIGINALLY DESIGNED

## DESIGN

- 17  ALL SYSTEMS SHALL BE DESIGNED IN ACCORDANCE WITH THE CURRENTLY ADOPTED FLORIDA FIRE PREVENTION CODE, NFPA 1221 NEC 70, AND ALL REFERENCED CODES AND STANDARDS CURRENTLY ADOPTED.
- 18  A PRELIMINARY SITE SURVEY TEST SHALL BE COMPLETED TO MAKE A DETERMINE THE AVAILABLE SIGNAL STRENGTH, SIGNAL TO NOISE RATIO AND BIT ERROR RATE.
- 19  THE DRAWINGS SHALL IDENTIFY ALL ROOMS & SPACES BY NAME AND THEIR USE.
- 20  IF THERE IS A FIRE COMMAND ROOM, IS THERE A DEDICATED MONITORING PANEL PROVIDED IN THE FIRE COMMAND CENTER TO ANNUNCIATE THE STATUS OF ALL SIGNAL BOOSTER LOCATIONS? THE MONITORING PANEL SHALL PROVIDE VISUAL AND LABELED INDICATION OF THE FOLLOWING FOR EACH SIGNAL BOOSTER: (1) NORMAL AC POWER (2) SIGNAL BOOSTER TROUBLE (3) LOSS OF NORMAL AC POWER (4) FAILURE OF BATTERY CHARGER (5) LOW-BATTERY CAPACITY.
- 21  **RADIO COVERAGE THROUGHOUT THE BUILDING** - THE BUILDING SHALL HAVE A MINIMUM OF:
  - (A) **CRITICAL AREAS RADIO COVERAGE 99%:**  
ALL CRITICAL AREAS SUCH AS THE FIRE COMMAND CENTER(S), THE FIRE PUMP ROOM(S), EXIT STAIRS, EXIT PASSAGEWAYS, ELEVATOR, ELEVATOR LOBBIES, STANDPIPE CABINETS, SPRINKLER SECTIONAL VALVE LOCATIONS, AND OTHER AREAS DEEMED CRITICAL BY THE AUTHORITY HAVING JURISDICTION SHALL HAVE A MINIMUM OF 99% FLOOR AREA RADIO COVERAGE
  - (B) **NON-CRITICAL AREAS RADIO COVERAGE 90%:**  
SHALL HAVE A MINIMUM OF 90% FLOOR AREA RADIO COVERAGE STATED ON PLANS.
- 22  IS THE RADIO ENHANCEMENT SYSTEM EQUIPPED WITH AN FCC COMPLIANT CLASS "B" OR CLASS "A" SIGNAL BOOSTER (BI-DIRECTIONAL AMPLIFIER / DISTRIBUTED ANTENNA SYSTEM) OR SYSTEMS OTHERWISE APPROVED.
- 23  ARE ALL COMPONENTS PROPERLY ENCLOSED, SUCH AS REPEATERS, TRANSMITTERS, RECEIVERS, SIGNAL BOOSTER COMPONENTS, AND BATTERY SYSTEM COMPONENTS IN A NEMA 4- OR 4X-TYPE ENCLOSURE(S)
- 24  ARE THE RADIO ENHANCEMENT SYSTEM AND ALL ACTIVE CONTROLS LOCATED IN A PLACE THAT MEETS ALL ENVIRONMENTAL REQUIREMENTS WITH REGARDS TO HEATING, VENTILATION, COOLING, AND HUMIDITY REQUIREMENTS OF THE MANUFACTURER SPECIFICATIONS.
- 25  ARE THE RADIO ENHANCEMENT SYSTEM AND ALL ACTIVE CONTROLS LOCATED IN AN AREA FREE FROM HAZARDS.
- 26  IF A SIGNAL BOOSTER HAS BEEN INSTALLED, IS IT FCC CERTIFICATED AND COMPATIBLE WITH BOTH ANALOG AND DIGITAL
- 27  ALL WIRING SHALL BE INSTALLED AT A MINIMUM THE SAME OR GREATER LEVEL OF SURVIVABILITY, PATHWAY AND CLASS AS THE FIRE ALARM SYSTEM
- 28  ALL EQUIPMENT SHALL BE UL LISTED IN ACCORDANCE WITH ITS INTENDED USE.
- 29  **DBPR DIVISION OF ELEVATOR SAFETY:** THE INSTALLING CONTRACTOR SHALL SUBMIT A LETTER TO DBPR FOR APPROVAL ALLOWING FOR PENETRATIONS INTO THE ELEVATOR SHAFT. ONLY IF INSTALLING SYSTEM IN THE ELEVATOR SHAFT.



# TWO-WAY COMMUNICATION ENHANCEMENT SYSTEM

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## MONITORING SIGNALS

- 30  DOES THE INTEGRITY OF THE CIRCUIT MONITORING SIGNAL BOOSTER(S) AND POWER SUPPLY COMPLY WITH NFPA 1221
- 31  SIGNAL BOOSTER AND POWER SUPPLIES SHALL INCLUDE THE FOLLOWING MONITORING SIGNALS:
- FIRE ALARM SYSTEM MONITORING:** SHALL INCLUDE AUTOMATIC SUPERVISORY AND TROUBLE SIGNALS BOOSTER(S) AND POWER SUPPLY(IES) THAT ARE ANNUNCIATED BY THE FIRE ALARM SYSTEM AND COMPLY WITH THE FOLLOWING:
    - (1) THE INTEGRITY OF THE CIRCUIT MONITORING SIGNAL BOOSTER(S) AND POWER SUPPLY(IES) SHALL COMPLY WITH 1221
    - (2) SYSTEM AND SIGNAL BOOSTER SUPERVISORY SIGNALS SHALL INCLUDE THE FOLLOWING:
      - (A) ANTENNA MALFUNCTION. (B) SIGNAL BOOSTER FAILURE. (C) LOW-BATTERY CAPACITY INDICATION WHEN 70 PERCENT OF THE 12-HOUR OPERATING CAPACITY HAS BEEN DEPLETED.
    - (3) POWER SUPPLY SIGNALS SHALL INCLUDE THE FOLLOWING FOR EACH SIGNAL BOOSTER:
      - (A) LOSS OF NORMAL AC POWER. (B) FAILURE OF BATTERY CHARGER.
  - DEDICATED PANEL MONITORING:** A DEDICATED MONITORING PANEL SHALL BE PROVIDED WITHIN THE FIRE COMMAND CENTER. THE MONITORING PANEL SHALL PROVIDE VISUAL AND LABELED INDICATION OF THE FOLLOWING FOR EACH SIGNAL BOOSTER:
    - (A) NORMAL AC POWER (B) SIGNAL BOOSTER TROUBLE (C) LOSS OF NORMAL AC POWER (D) FAILURE OF BATTERY CHARGER
    - (E) LOW-BATTERY CAPACITY
- 32  IF A DONOR ANTENNA EXISTS, IS THERE ISOLATION BETWEEN THE DONOR ANTENNA AND ALL INSIDE ANTENNAS AT A MINIMUM OF 15 DB ABOVE THE SIGNAL BOOSTER GAIN UNDER ALL OPERATING CONDITIONS
- 33  ARE THERE NO PERMANENT EXTERNAL FILTERS AND ATTACHMENTS
- 34  ARE ALL EXTERIOR ANTENNAS DIRECTIONAL, HIGH GAIN, VERTICAL POLARIZED AND SPECIFIED FOR THE OPERATING FREQUENCIES? (YAGI OR CORNER REFLECTOR-TYPE ANTENNAS ARE RECOMMENDED.)
- 35  ARE ALL ANTENNAS PROTECTED FROM LIGHTNING STRIKES IN
- 36  IS THERE A GRID SYSTEM OVERLAYING ALL FLOORS IN ORDER TO IDENTIFY AREAS OF DEFICIENCIES WHILE TESTING?

## POWER SUPPLY & BOOSTER

- 37  ARE THE PRIMARY SOURCE SUPPLIED FROM A DEDICATED TWENTY (20) AMPERE BRANCH CIRCUIT.
- 38  IS THERE AT LEAST TWO INDEPENDENT AND RELIABLE POWER SUPPLIES PROVIDED FOR ALL REPEATER, TRANSMITTER, RECEIVER, AND SIGNAL BOOSTER COMPONENTS, ONE PRIMARY AND ONE SECONDARY
- 39  ALL CONTROL PANELS MUST BE CONNECTED TO A DEDICATED CIRCUIT BREAKER MARKED "RADIO ENHANCEMENT CONTROL CIRCUIT",
- 40  ARE THE BACKUP BATTERIES THE SAME SIZE AS THOSE REQUIRED ON THE APPROVED PLAN AND MARKED WITH THE DATE OF INSTALLATION,
- 41  THE SECONDARY POWER SOURCE SHALL CONSIST OF ONE OF THE FOLLOWING:
  - (A) A STORAGE BATTERY DEDICATED TO THE SYSTEM WITH AT LEAST 12 HOURS OF 100 PERCENT SYSTEM OPERATION CAPACITY
  - (B) AN AUTOMATIC-STARTING, ENGINE-DRIVEN GENERATOR SERVING THE DEDICATED BRANCH CIRCUIT OR THE SYSTEM WITH AT LEAST 12 HOURS OF 100 PERCENT SYSTEM OPERATION CAPACITY AND STORAGE BATTERIES DEDICATED TO THE SYSTEM WITH AT LEAST 2 HOURS OF 100 PERCENT SYSTEM OPERATION CAPACITY

## FINAL TEST

- 42  A SECOND TEST SHALL BE COMPLETED AT FINAL THAT IDENTIFIES THE BUILDING HAS MET THE MINIMUM REQUIREMENTS OF THE BUILDING SIGNAL STRENGTH FOR BOTH (A) CRITICAL AREAS (B) NON CRITICAL AREAS.
- 43  A COMPLETED TEST REPORT SHALL BE SUBMITTED PRIOR TO FINAL INSPECTION TO THE AHJ.
- 44  PLACARD: THE C.R.C.C. SIGN SHALL BE POSTED NEXT TO THE BDA/DAS/FACP UPON FINAL SYSTEM TEST AS DIRECTED BY THE AHJ.
- 45  FINAL APPROVAL SUBJECT TO FIELD INSPECTION, CORRECTIONS MAY BE REQUIRED FOR CODE COMPLIANCE.
- 46  VERIFY RADIO REGISTRATION: THIS RADIO SHALL BE REGISTERED AT THE FCC WEBSITE BY THE INSTALLING CONTRACTOR.



# TWO-WAY COMMUNICATION ENHANCEMENT SYSTEM

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## RETRANSMISSION PROCEDURE

1. **OPTIMIZATION REQUIREMENT:** PRIOR TO COMMISSIONING THE TWO-WAY RADIO COMMUNICATIONS ENHANCEMENT SYSTEM, SARASOTA COUNTY PUBLIC SAFETY COMMUNICATIONS REQUIRES THAT THE BDA/DAS SYSTEM BE OPTIMIZED WITH OUR SYSTEM. THIS OPTIMIZATION IS ESSENTIAL FOR MITIGATING THE RISK OF INTERFERENCE AND MAINTAINING EFFECTIVE COMMUNICATION CAPABILITIES FOR PUBLIC SAFETY PERSONNEL.

2. **CONTACT INFORMATION:**

MOTOROLA SOLUTIONS, INC.  
8240 VICELA DRIVE, UNIT 2  
SARASOTA, FL 34240  
OFFICE: (941) 343-0020

**COMMISSIONING AUTHORIZATION:** FINAL RETRANSMISSION AUTHORIZATIONS WILL NOT BE ISSUED UNTIL THE SUCCESSFUL COMMISSIONING OF THE SYSTEM WITH OUR DESIGNATED VENDOR, MOTOROLA SOLUTIONS, INC.

**FINANCIAL RESPONSIBILITY:** ALL COSTS ASSOCIATED WITH THE SYSTEM COMMISSIONING, INCLUDING OPTIMIZATION, WILL BE THE RESPONSIBILITY OF THE BUILDING OWNERS, DEVELOPERS, OR CONTRACTORS INVOLVED IN THE PROJECT.



# SARASOTA COUNTY FIRE DEPARTMENT



DAS / BDA

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## TWO-WAY COMMUNICATION ENHANCEMENT SYSTEMS INSPECTION SCHEDULING INFORMATION

### RADIO FREQUENCY REQUIREMENTS

Sarasota County Public Safety Communications operates a Motorola 800 MHZ P25 phase 1 trunked radio system. We have 9 tower sites providing county wide coverage utilizing a simulcast configuration. The system has 17 trunked channels transmitting between 850.000 –860.000 MHZ and receiving between 805-815 MHZ.

The Motorola radio system uses a digital control channel that typically will be assigned to channel 1. The system may periodically rotate the control channel between channel 1, 2, 3 or 4.

When a radio signal coverage test is conducted, the active control channel will need to be the test frequency used to determine the signal levels. The control channel continuously transmits data 24/7

If a radio communications enhancement system is required to achieve the minimum signal levels, the design and equipment will need to cover the full range of 850.000 – 860.000 MHZ as we also operate on direct, simplex and national mutual aid channels.

**The P25 trunked radio system control channel frequencies are as follows.**

- **CH 1.** TX 851.3875 / RX 806.3875
- **CH 2.** TX 851.6875 / RX 806.6875
- **CH 3.** TX 851.7625 / RX 806.7625
- **CH 4.** TX 851.7875 / RX 806.7875

**SARASOTA COUNTY OPERATIONAL FREQUENCY:**..... 800 MHZ PUBLIC SAFETY & 45 MHZ OFFSET - LOCAL  
700 MHZ FOR FEDERAL MUTUAL AID.

**[HTTPS://WWW.RADIOREFERENCE.COM/](https://www.radioreference.com/)**

**NOTE:** WE HAVE 4 CHANNELS THAT ARE USED BUT ONLY THE STRONGEST CHANNEL IS ACTIVE THAT DAY.