Public Safety ERCES (BDA) and DAS System Test Report

☑ Annual Inspection ☐ 3 or 5 Years Re-Certification ☐ Deficiency ☐ Repair and Test

Date Prepared:	Oct 24, 2026
Project:	Harbor Point Offices
Date of Test:	2026-10-22

SECTION 1 BUILDING CONTACT AND ERCES INFORMATION

Section 1.1 Building Address and Contact Information

Building Name:	Harbor Point Offices
Building Address:	400 Harbor Point Drive, Portsville, NC
Building Contact Name:	M. Okafor, Property Manager
Building Contact Phone:	(555) 010-4400
Contact Address:	400 Harbor Point Drive, Suite 100, Portsville, NC
Contact Email:	pm@example.com
Central Station Monitoring:	☑ Yes ☐ No
Monitoring Required:	☑ Yes ☐ No
Monitoring Company Name:	Example Central Station
Monitoring Company Phone:	(555) 010-9000

Section 1.2 In-Building Emergency Radio Communication Enhancement System Information

System Make:	ExampleCom
System Model:	PS-800 Class A, 2 W
Location of System in Building:	Level 1 electrical room (BDA, BBU); fiber remotes L3 and L5
Applicable Code Year/Building Permit Issue:	2021 IFC 510 / Permit FP-2023-0412

SECTION 2 TESTING COMPANY, TECHNICIAN AND EQUIPMENT

Section 2.1 Testing Company Information for Current Test

Company Name:	Demo Radio Services LLC
Contact Name:	A. Rivera
Mailing Address:	PO Box 100, Portsville, NC
Phone:	(555) 010-2000
Emergency Phone:	(555) 010-2001
Email:	service@example.com

Section 2.2 Technician Information for Current Test

Technician Name:	A. Rivera
Phone:	(555) 010-2002

SAMPLE

Technician FCC Certification/GROL#:	PG-00-012345
NICET In-Building Public Safety Certification#:	NICET 211-0042
Manufacturer training or other equivalent received:	☑ Yes ☐ No
Training received and date:	ExampleCom PS-series commissioning & service, 2024

Section 2.3 Testing Equipment for Current Test

Spectrum analyzer make/model:	Fast Radio Survey Field Kit, receiver DEMO-SN-0001
Calibration performed date:	2026-09-14
Calibration expired date:	2027-09-14
Calibration performed by firm:	Fast Radio Survey production calibration bench

** Use of a calibrated spectrum analyzer, with a current calibration, is required for this testing.

SECTION 3 CURRENT TEST – REQUIRED ELEMENTS AND TEST CHECKLIST

Date of Test:	2026-10-22

The items on the checklists below shall be inspected and tested. This list does not constitute all of the required inspecting and testing of the fire and life safety system. Refer to the CURRENT FIRE CODE AND REFERENCED NFPA STANDARD and the MANUFACTURER'S INSTRUCTIONS for weekly, monthly, and/or quarterly inspecting and testing requirements.

Section 3.1 Pre-Test Check

Note: Take precautions necessary to avoid preventable alarms.

1. If a monitored fire alarm system is present in the building, the Central Station Monitoring Service was notified that ERCES testing is occurring and will be generating supervisory signals.	☑ Yes ☐ No ☐ N/A

Section 3.2 General – Record keeping

1a. Grid diagram for each floor, showing tested strengths in each grid square.	☑ Yes ☐ No
1b. Copies of manufacturer specification sheets for all BDA/DAS systems components, including amplifiers, signal boosters, antennas, coax, couplers, splitters, combiners, and other passive components.	☑ Yes ☐ No
1c. Data sheets for Battery Backup Unit (BBU) and charging system.	☑ Yes ☐ No
1d. Certification letter stating that the BDA/DAS system has been installed per code and was complete/fully functional at time of install.	☑ Yes ☐ No

Section 3.3 ERCES Specifications/Performance at Commissioning and Current

	At Commissioning	Current Test
1. Antenna Type	Yagi, 7-element	Yagi, 7-element
2. Antenna Gain (dBd)	11 dBd	11 dBd
3. Antenna Coordinates (NAD83)	35.10412 N, 77.03518 W	35.10412 N, 77.03518 W
4. Antenna Azimuth (degrees true)	212°	213°
5. Uplink Gain Setting (db)	62 dB	61 dB
6. Downlink Gain Setting (db)	68 dB	68 dB
7. Signal Level Received from Donor Site (-dBm)	-61 dBm	-62 dBm
8. Channelized Donor Site Name	County Simulcast — Site 4	County Simulcast — Site 4

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	At Commissioning	Current Test
9. Channelized or Broadband	Channelized (6 ch)	Channelized (6 ch)
10. BDA Temperature check (°F):	78	

Section 3.4 Active Components

1. Signal booster is within a NEMA 4 Enclosure (or IP66 if approved by Fire Marshal).	☑ Yes ☐ No
2. Battery is within a NEMA 4 Enclosure (or IP66 if approved by Fire Marshal).	☑ Yes ☐ No
3. Battery is supervised by Fire Alarm System.	☑ Yes ☐ No
4. Signal booster is supervised by Fire Alarm System.	☑ Yes ☐ No
5. Equipment is FCC certified.	☑ Yes ☐ No
6a. Equipment alarm log checked for recurring or substantial alarms and addressed as per manufacturer's recommendations.	☑ Yes ☐ No
6b. Isolation testing performed and measured system isolation is at least 20 db above the total downlink and the total uplink gain (whichever is greater) between least isolated DAS antenna and the donor antenna.	☑ Yes ☐ No
7. DAS is communicating with same donor site as identified at time of commissioning or communicating with approved donor site as documented in writing by Radio System Operator or Authority Having Jurisdiction.	☑ Yes ☐ No
8. DAS signal strength received from donor site at the input to the BDA meets original installation values plus or minus 2 db.	☑ Yes ☐ No
9. Uplink amplifier gain matches gain at commissioning plus or minus 2 db.	☑ Yes ☐ No
10. Uplink amplifier gain matches gain values recorded at commissioning plus or minus 2 db.	☑ Yes ☐ No
11. Antenna azimuth matches commissioning azimuth plus or minus 5 degrees.	☑ Yes ☐ No

Section 3.5 Distribution System Re-Certification (3 or 5 Years)

15a. Every three or five years from date of installation: Perform full grid test: Signal strength remains stronger than (less negative than) -95 dBm for 95% of grids on each floor in non-critical areas.	☐ Yes ☑ No

If no, location(s) of failed grids: Level 1 — County Simulcast CC — 853.9125 MHz: Grid 1 area 17 (16/17 tested, 94%)

Not tested: 3 of 20 area locations (not measured 1, NT 2)

15b. Create/verify list of critical areas in this building (once list is correct, select Yes).	☑ Yes ☐ No

Critical areas: Fire Command Center; Stair A; Stair B; Elevator lobby

15c. Critical areas are provided with 99% floor area radio coverage with coverage stronger than -95 dBm.	☑ Yes ☐ No

15d. Every three or five years from date of installation: Perform SINR / BER testing at each critical area. (If AHJ Radio Systems is capable)	☐ Yes ☐ No

If no, location(s) of non-acceptable communications: Not required by AHJ for this annual visit

Section 3.6 Batteries/Secondary Power

16a. Backup batteries and secondary power supply tested under load for 1 hour and meet requirements.	☑ Yes ☐ No

SAMPLE

	Bat. 1	Bat. 2	Bat. 3	Bat. 4
16b. Battery Temperature (°F)	77	77	78	78
16c. Battery Voltage (V)	12.71	12.69	12.72	12.70

Remote amplifier 1: Fiber remote L3 (IDF 3A)

16a. This unit's backup batteries and secondary power supply tested under load for 1 hour and meet requirements.	☑ Yes ☐ No

	Bat. 1	Bat. 2	Bat. 3	Bat. 4
16b. Battery Temperature (°F)	75	75		
16c. Battery Voltage (V)	12.66	12.64		

Remote amplifier 2: Fiber remote L5 (IDF 5A)

16a. This unit's backup batteries and secondary power supply tested under load for 1 hour and meet requirements.	☑ Yes ☐ No

	Bat. 1	Bat. 2	Bat. 3	Bat. 4
16b. Battery Temperature (°F)	76	76		
16c. Battery Voltage (V)	12.58	12.61		

Section 3.7 Alarm Panel Monitoring

17. If a fire alarm system is present in the building, the fire alarm system is supervising the ERCES.	☑ Yes ☐ No ☐ N/A
18. If a fire alarm system is present in the building, a supervisory signal was received at Central Station Monitoring company.	☑ Yes ☐ No ☐ N/A
18a. For buildings without a fire alarm system, a dedicated monitoring panel annunciates supervisory and trouble signals for the signal booster system and power supply(ies).	☑ Yes ☐ No ☐ N/A

Section 3.8 Final Checks

19. If building includes a fire alarm system, inform alarm-monitoring company that testing is complete.	☑ Yes ☐ No

SECTION 4 SIGNATURES AND REPORTING

20. A copy of this test report will be given to the owner in either electronic or paper form.	☑ Yes ☐ No
21. A copy of this test report will be provided to the Fire Department as required.	☑ Yes ☐ No
By accepting this statement, I, the certified technician shown on this form, certify that this fire protection system(s) has been properly inspected for functional operation in accordance with the current Fire Code (FC) used by the department that has jurisdiction and NFPA Standards adopted by the FC for this system. Any deficiencies found are noted in the report and have been reported to the building Owner/Manager for corrective action.	☑ Yes ☐ No
I am authorized to submit this report for the certified technician who has accepted this statement.	☑ Yes ☐ No

SIGNATURES (OPTIONAL)

SAMPLE

Signature of Technician

A. Rivera 2026-10-22

Signature of Building Representative

M. Okafor 2026-10-22

REMARKS / DEFICIENCY / AND RECOMMENDATION:

Deficiency: Grid 1 area 17 measured -97.4 dBm on the control channel; a 42U IT cabinet installed since the 2025 visit now sits in front of the passive antenna serving that bay. Recommend relocating the antenna 8 ft east and re-testing. Areas 3 and 8 are inside the elevator core (no floor area); area 14 is a locked tenant suite — to be tested on return visit. All other items normal.

SAMPLE

Threshold Settings

Measurement	DL Area Point	DL Critical Point	DL Use for grading
P25 Power (RSSI)	-95.0 dBm	-95.0 dBm	Yes
P25 S/N (SINR)	20.0 dB	22.0 dB	Yes
P25 FBER	2.0 %	1.5 %	Yes
DAQ	3.0	3.4	Yes
LTE Band 14 RSRP / PCI / S/N	—	—	No (diagnostic)

S/N is the carrier-to-noise ratio of the channel over the receiver's own noise floor in the 12.5 kHz channel bandwidth, measured in the spectrum beside the channel. A decoder-based SINR from another instrument reads higher at low signal levels; the two are not interchangeable. Rows tagged "floor-ltd" were captured while a stronger nearby signal held the receiver's gain down, raising its noise floor over the channel: their S/N is a lower bound and their RSSI may read low. The tag does not change the grade.

Sample collection method

Measurement	Sample Collection Method
P25 Channels Power	Average
P25 Channels SINR	Average

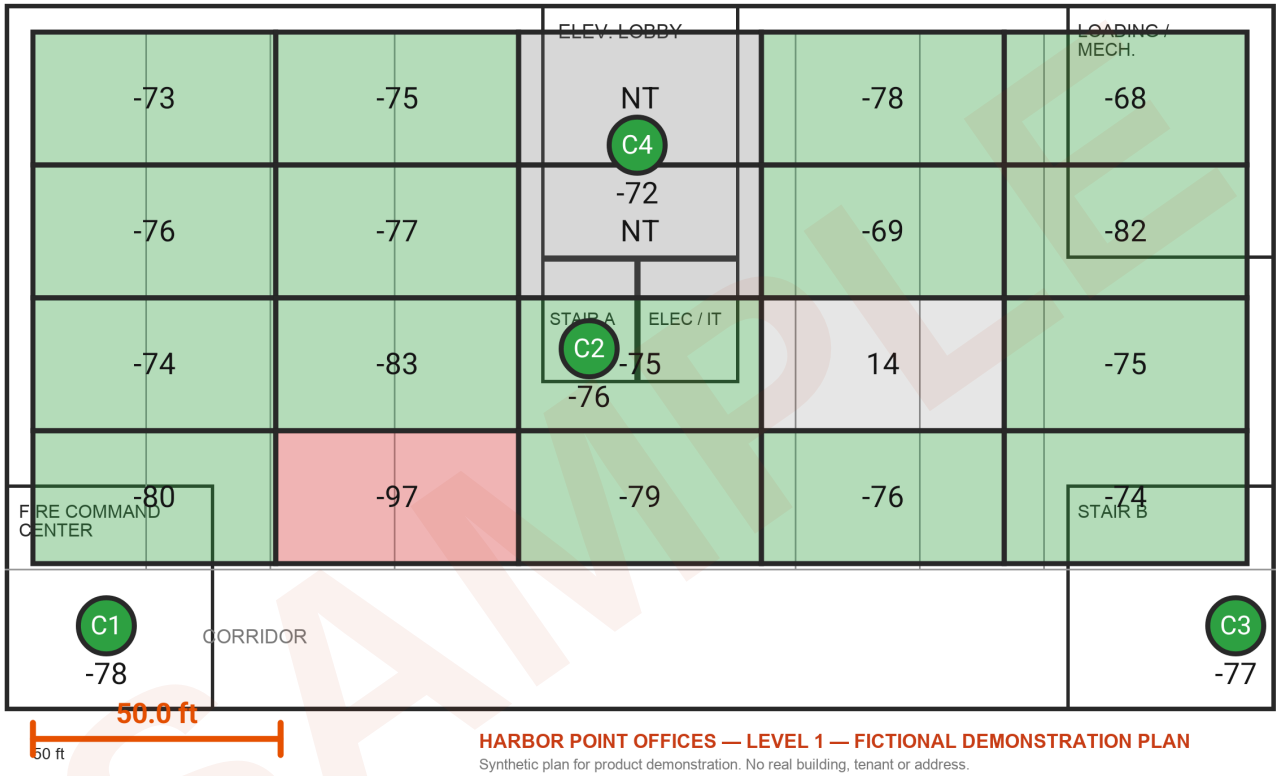
Floors Result

Floor Plan	County Simulcast CC 853.91250
Level 1	Fail

SAMPLE

Floor: Level 1
Channel: County Simulcast CC
Result: Fail

Freq (MHz)	Tech	Band	Ant Gain	Cable Loss	Type	Mod	NAC	Ph.	Area Points passed	Critical Points passed
853.91250	P25		0.00	0.00	CC	–	2A7	–	16/18 (89%)	4/4 (100%)



SAMPLE

Scale: 1 px = 0.1140 ft (calibrated against a 50.0 ft reference)

Grid	# of Areas	Area Size (sq ft)	Area Width (ft)	Area Height (ft)	Guideline	Comments
1	20	1313.25	49.02	26.79	! >125% aspect	

Guideline: grid cells should be square within 125% and at most 80 × 80 ft (standard 20 × 20 or 40 × 40 ft).

Floor: Level 1 — Channel: County Simulcast CC

Critical Points

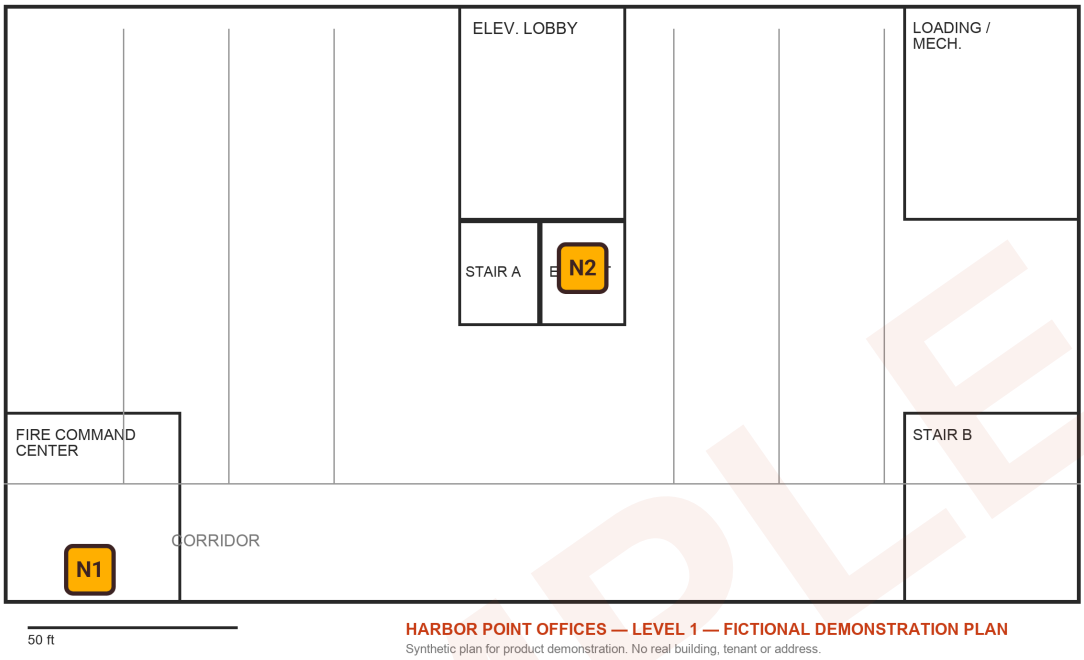
Point	DL Power (dBm)	DL S/N (dB)	DL FBER (%)	DL DAQ	Result	Comment
1	-77.60	29.80	0.17	4.5	Pass	Average lock
2	-75.50	31.40	0.31	4.3	Pass	Average lock
3	-77.40	31.60	0.54	4.5	Pass	Average lock
4	-72.30	32.60	0.36	4.4	Pass	Average lock

Area Points

Grid	Area	DL Power (dBm)	DL S/N (dB)	DL FBER (%)	DL DAQ	Result	Comment
1	1	-73.40	31.30	0.35	3.8	Pass	Average lock
1	2	-74.50	31.70	0.69	4.2	Pass	Average lock
1	3	NT	NT	NT	NT	NT	Elevator core — no floor area
1	4	-77.90	29.10	0.84	4.2	Pass	Average lock
1	5	-67.60	28.00	0.23	3.9	Pass	Average lock
1	6	-76.20	28.90	0.85	4.0	Pass	Average lock
1	7	-77.40	26.90	0.77	4.5	Pass	Average lock
1	8	NT	NT	NT	NT	NT	Elevator core — no floor area
1	9	-68.60	25.40	0.35	4.2	Pass	Average lock
1	10	-81.60	33.30	0.17	4.0	Pass	Average lock
1	11	-73.60	32.30	0.35	4.1	Pass	Average lock
1	12	-83.00	32.90	0.42	3.9	Pass	Average lock
1	13	-75.20	31.70	0.19	3.8	Pass	Average lock
1	14	NT	NT	NT	NT	—	
1	15	-75.10	25.90	0.66	4.6	Pass	Average lock
1	16	-79.60	24.10	0.52	4.1	Pass	Average lock
1	17	-97.40	18.20	1.90	3.1	Fail	Average lock
1	18	-78.80	32.70	0.52	3.9	Pass	Average lock
1	19	-75.60	29.20	0.60	4.4	Pass	Average lock
1	20	-73.90	30.40	0.34	3.9	Pass	Average lock

SAMPLE REPORT — fictional building, people and data, generated by the Fast Radio Survey app

Survey Notes



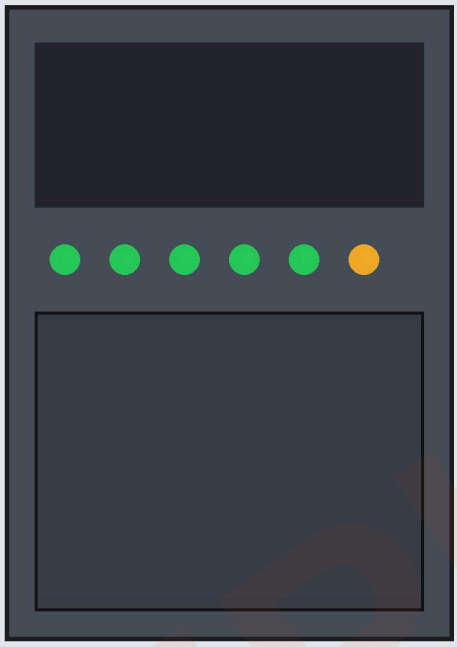
Note locations — Level 1

Note 1

FCC remote annunciator: normal, no troubles displayed at start of test.

SAMPLE

Remote annunciator



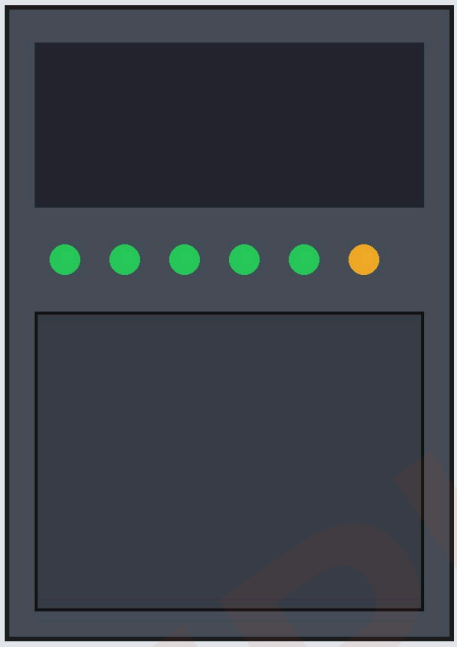
Dedicated ERCES panel, lobby of Fire Command Center
All indicators normal
DEMO PHOTO — rendered placeholder, fictional site

Note 2

Area 17 reads -97.4 dBm; passive antenna behind new IT rack. Recommend antenna relocation.

SAMPLE

Area 17 — DAS antenna obstructed

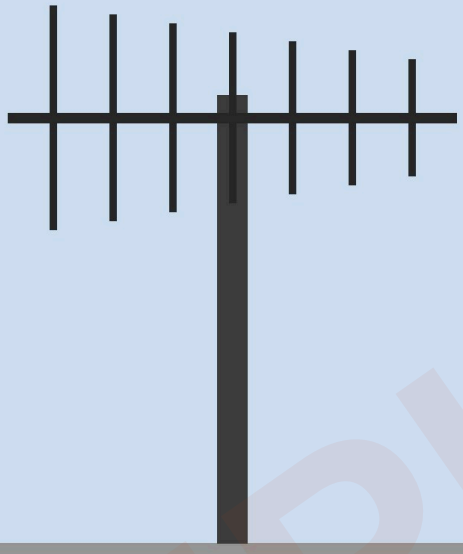


Omni antenna now behind a 42U IT cabinet
Added after 2025 visit
DEMO PHOTO — rendered placeholder, fictional site

SAMPLE

Photos & Attachments

Donor antenna (roof)

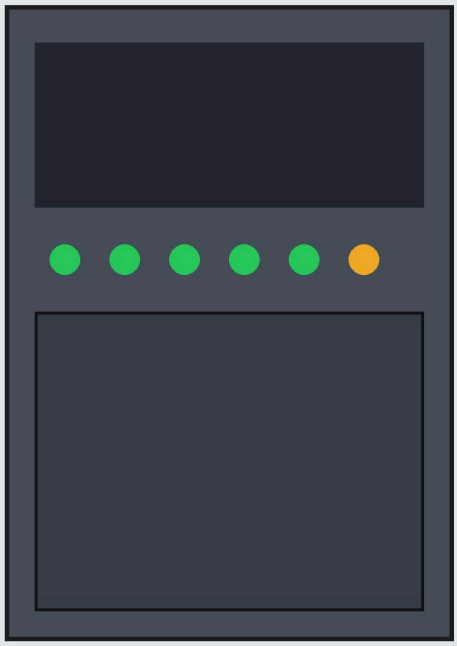


Yagi, 11 dBd, azimuth 212°
Hardware tight, boots intact

DEMO PHOTO — rendered placeholder, fictional site

Donor antenna, roof — mount and weatherproofing inspected

BDA and battery cabinet



NEMA 4 enclosures, supervised
Four 12 V 100 Ah batteries
DEMO PHOTO — rendered placeholder, fictional site

SAMPLE

SAMPLE REPORT — Demo building, people and data, generated by the Fast Radio Survey app