**Emergency Responder Communications Enhancement System (ERCES)**

**Radio Signal Strength Testing Requirements**

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| **Revision History** |
| **Revision Date** | **Section/Nature of Revision** |
| **10/29/24** | Document Issued |

The purpose of this document is to serve as a guide for qualified contractors and/or subcontractors who will be performing occupancy radio signal strength testing within Pinellas County Schools. This document is not intended to supersede the authority of the Fire Marshal to apply the requirements of the Florida Fire Prevention Code (FFPC) fairly and equitably as occupancy conditions dictate. Rather, it is intended to provide minimum submission and approval requirements to those entities performing the scope of work described in this document. It is assumed that the requirement to complete a radio signal strength test and provide evidence of compliant radio signal strength for an occupancy has already been determined by statute, rule, code/standard or through consultation with the Authority having Jurisdiction (AHJ).

**Pretesting Requirements**

1. Submit the proposed test plan (grids) to the AHJ via a paper or digital submission (minimum 11x17 inches), which includes:
2. Note indicating tests will be conducted in accordance with the FFPC and NFPA, most current versions.
3. Title block including:
4. Name and location of building being tested.
5. Name and location of company performing test.
6. Name of GROL holder conducting/supervising test and FCC license number.
7. Legible floor plan of the building:
8. All building levels identified and included.
9. All rooms/spaces identified by purpose.
10. Drawn to a graphic scale and scale noted on each sheet.
11. Separate sheet for each building level.
12. Point of compass indicating north.
13. Note detailing the make and model of spectrum analyzer used for the test and the most recent calibration date within the last 12 months.
14. Each sheet shall be numbered consecutively.
15. Grid overlay shall cover only the building footprint:
16. Critical areas, such as fire command center(s), the fire pump room(s), exit stairs, exit passageways, elevator lobbies, standpipe cabinets, sprinkler sectional valve locations and other areas deemed critical by the AHJ, shall be gridded separately.
17. Grids shall cover the entire footprint of the building.
18. Building levels in excess of 8,000 square feet shall have a minimum of twenty grids for each level. Those less than 8,000 square feet shall have a minimum 20 x 20 grid size.
19. Each grid shall be labeled with a unique identifier.
20. Once the test plan is approved, the submission will be returned and testing may be completed.
21. For new buildings or spaces under construction, the area being tested shall be a minimum of 80 percent complete prior to the final test being conducted. This does not preclude predictive analysis testing; however, the final test will not be accepted if conducted prior to this point.
22. The testing contractor shall contact Donna Beim, Pinellas County Radio and Technology, at (727) 582-2510 or via email at dbeim@pinellascounty.org prior to conducting the test to ensure the proper tower location and control frequency are used during testing.
23. Evidence of contact with the FCC license holder shall be provided with the completed test results.

**Post Testing Requirements**

1. Upon completion of the radio signal strength test, the entire pretest submission will be returned for review of results and determination of compliance. Radio signal strength compliance with the FFPC shall be determined by the Pinellas County Schools AHJ.
2. Each identified grid shall clearly detail the radio signal strength value (s), in dB, for that grid.
3. Heat maps may be included; however, the provision of a heat map shall not replace the grid overlay and radio signal strength value(s).
4. Radio coverage shall be provided throughout the building as a percentage of floor area for each level.
5. Critical areas shall be provided with 99 percent floor area radio coverage.
6. General building areas shall be provided with 90 percent floor area radio coverage.
7. A minimum inbound signal strength of -102 dBm shall be provided throughout the coverage area.
8. Not more than two (2) nonadjacent grid cells shall be allowed to fail the test.
9. No adjacent grids shall be allowed to fail.
10. No critical grids shall be allowed to fail.
11. Should the radio signal strength test results for the building be deemed complianct, a Certificate of Radio Coverage Compliance (CORCC), signed and sealed by the Florida licensed engineer (P.E.) of record, stating that the public safety radio system coverage reliability within the occupancy meets the requirements set forth in NFPA 1225 and was tested as well as documented in accordance with the provisions set forth by Pinellas County Schools.
12. The certified CORCC shall be returned to the Pinellas County Schools AHJ for approval and shall be posted conspicuously at the main fire alarm control panel.
13. Should the radio signal strength test results be deemed and non-compliant, a two-way radio communications system (ERCES) shall be required.

**\*\*\*END OF SECTION\*\*\***