

## PUBLIC SAFETY SIGNAL TO MDUs

National Fire Protection Association (NFPA) and International Fire Code standards apply to public safety DAS, which states that any new building or major renovation with more than three stories or any underground facilities has to pass a public safety communications Test. If the building and Fire Department test the building and it fails to provide clear radio communications throughout, the building owners have to fix the problem before they can get an occupancy permit.



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# RADIO SIGNAL INSIDE, WHAT DOES THIS ALL MEAN?

## Fact of Life...

- No Matter how many towers the carriers or Jurisdiction's erect, or
- How many emergency repeater sites the counties/cities install...
- There will always be some outdoor areas and indoor areas that are without adequate signal because:
  - Construction material used today for energy efficient buildings
  - Proximity of serving radio sites



**IT IS UP TO THE BUILDING OWNER TO ENSURE COVERAGE IS MET WITH A SYSTEM**



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## WHAT'S THE PROBLEM?



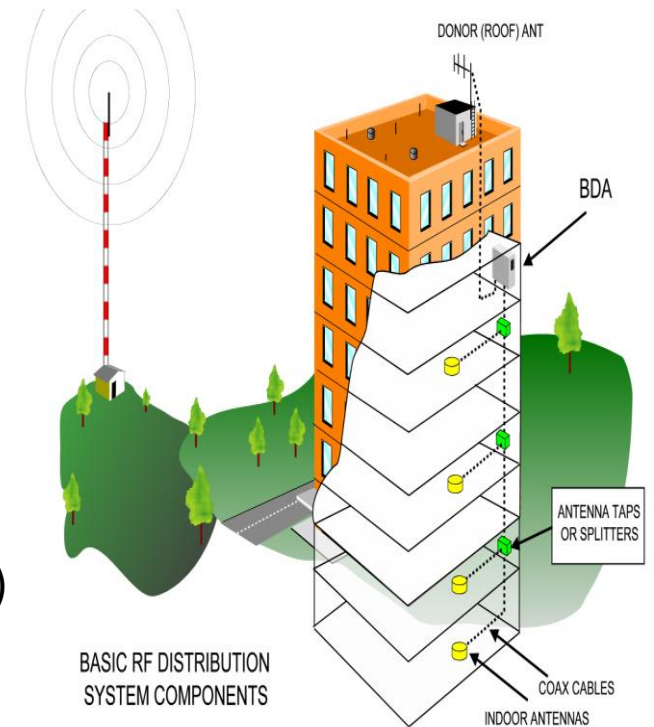
No Matter how good the Emergency Comm System (ECS) is for the local County/City...

Some areas in buildings will not have a signal...

## WHAT'S THE ANSWER?

An In-Building Distributed Antenna System (DAS)

With Bi-Directional Amplification in the frequency range used by the AHJ (Authority have Jurisdiction)



# WHAT STRUCTURES REQUIRE ERRC (Emergency Responder Radio Communication)

## In General:

- Sub-Grade floors on all new construction or where the signal fails the minimum baseline measurements in all public areas and emergency egress areas
- All floors of buildings greater than 3 stories, type I & II construction



## DAS DEPLOYMENTS: <1% of Project Cost

Dependent on multitude of issues:

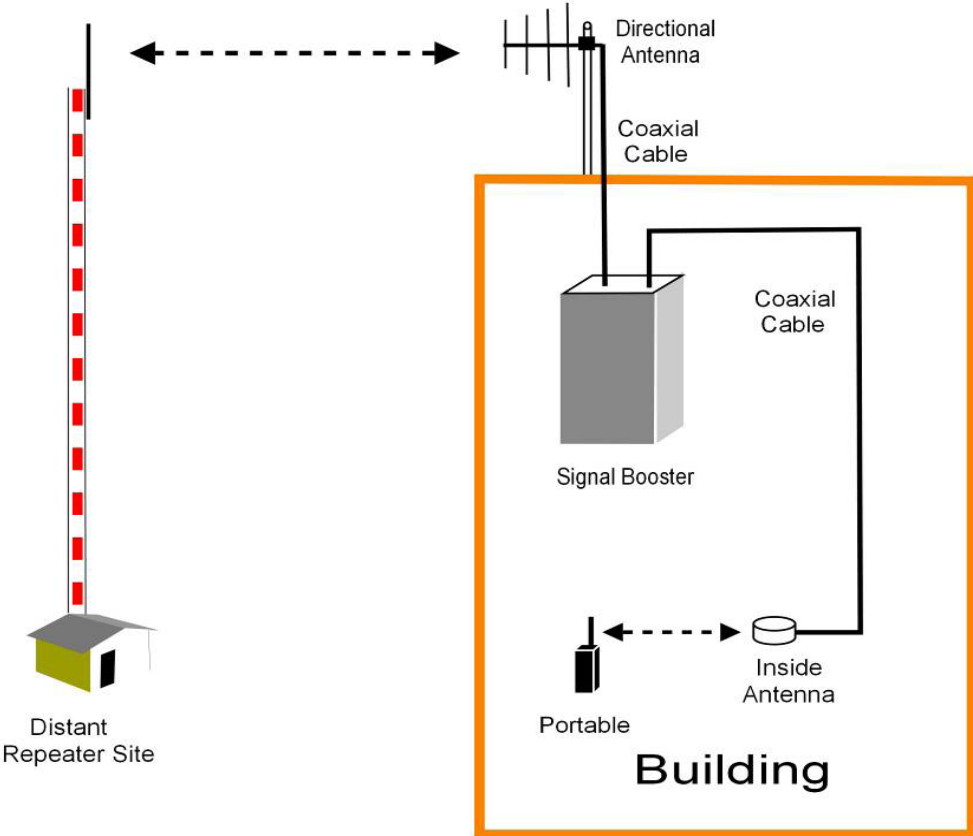
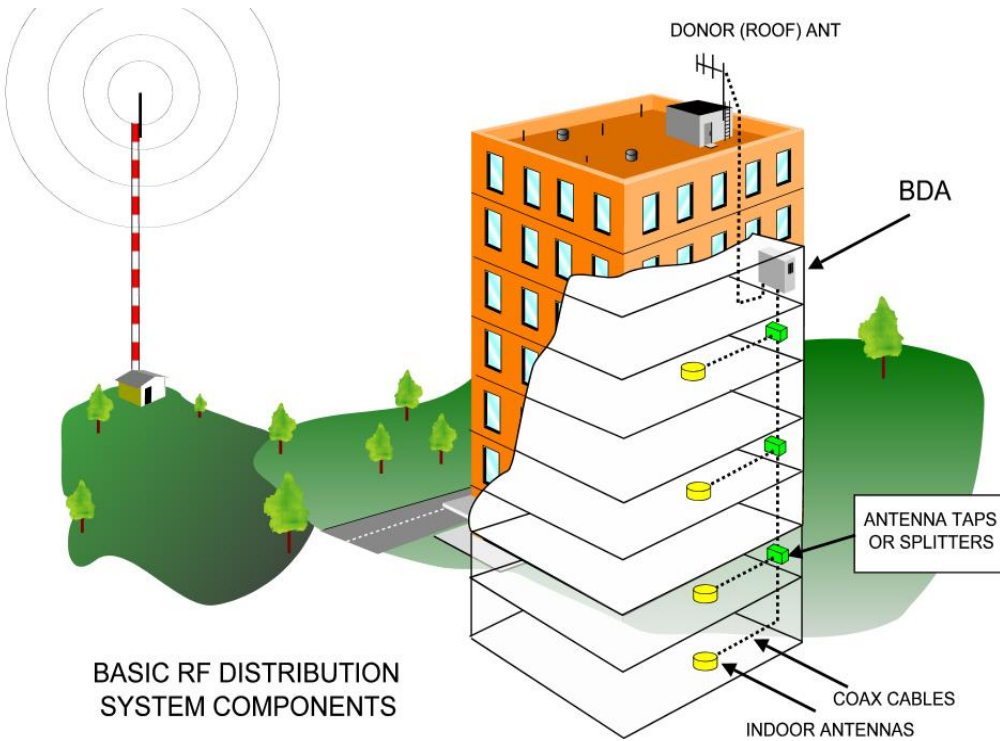
1. Local rules of -95dBm or DAQ 3.4
2. Number of sub-grade floors
3. Proximity to Donor serving site
4. Location/Position
5. Topography including other buildings
6. Type of Construction and materials used



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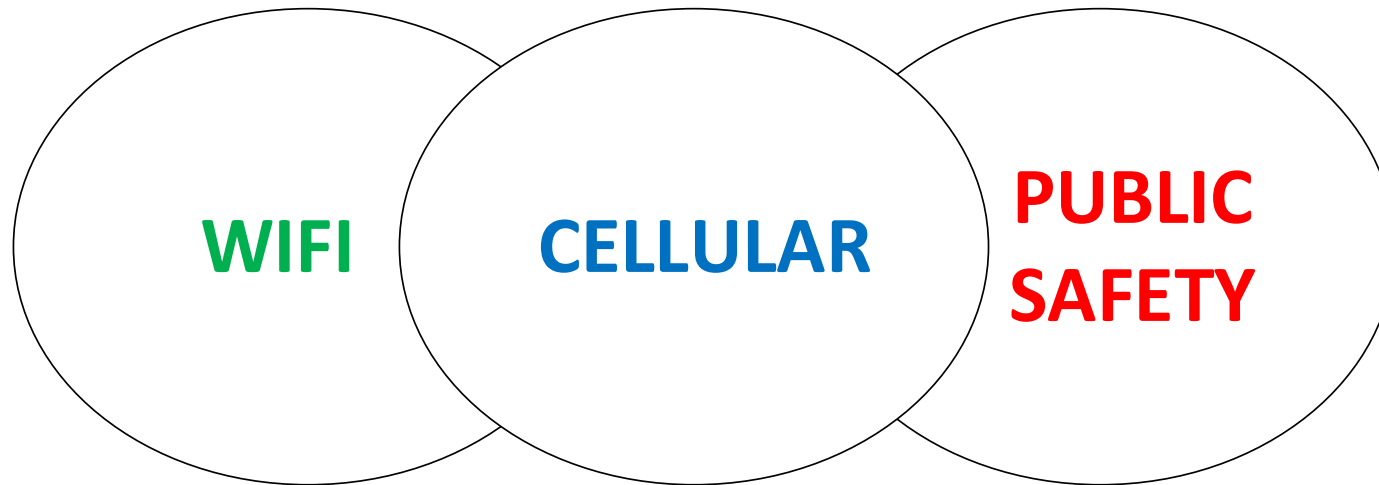
# TYPICAL APPLICATIONS



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## CONVERGED SOLUTIONS (DAS – Cellular and Public Safety)



- Public Safety is required and must be across a traditional coax based DAS, why? Can I leverage this for Cellular?
  - NEMA 4 Enclosures
  - BBU – 24 Hours
  - 5 Point Alarming – Fire Panel
  - Survivability (Horizontal/Vertical)
  - FCC Class B – Channelized
  - Parallel System Infrastructure
  - Survivability (Horizontal/Vertical)
  - FCC Class B – Channelized
  - Can utilize towards Cellular System



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