



RWC Technical Requirements for ERRCS

For new BDA's either due to new construction or retrofits/repairs:

- Class A amplifiers (see FCC 47 CFR 90.219 (a)) must be used for any ERRCS installed to operate on the RWC 700 MHz P25 network
- Existing Class B amplifiers must continue to be maintained on an annual basis. If an existing Class B amplifier fails, it must be replaced with a Class A amplifier
- The BDA shall support uplink squelch
- The BDA must have AGC – Automatic Gain Control

BDA Configuration

- BDA maximum uplink and downlink gain settings shall be 20dB less than isolation measured between donor antenna and the DAS.
- All appropriate RWC frequencies shall be programmed into the BDA
- Typical filter configuration shall be 12.5 kHz unless approved by the RWC
- Uplink Squelch should be enabled

Donor Antenna

- The donor antenna shall be a directional antenna.
- The donor antenna frequency range shall support 700 MHz public safety band, 769-775 MHz (downlink) and 799-805MHz (uplink)
- For DAS projects requesting design approval after August 1, 2024, the donor antenna shall support:
 - A horizontal beamwidth of 30 degrees or less
 - A vertical beamwidth of 30 degrees or less
 - A front-to-back ratio of 27db or greater

Antennas that meet this requirement listed below. If other antennas are discovered that meet these requirements, please feel free to update us.

- 1) ADRF: AD-PA-700-900-DIN-X
 - 2) Gamma Nu: F16V28DHFB
 - 3) Ventev: VHG-VL3015-ODNF
- The donor antenna must be placed and oriented with unobstructed view of the donor site. This criterion is concerned principally with near field obstructions such as parapets, HVAC units, ducting, screen walls, etc. Antennas need to be secured clearly above any near field obstacles. Wind loading should be considered when installing and securing antennas. Line of sight buildings or other obstructions will be considered by the RWC during uplink testing.



- The donor antenna must be oriented at the pre-approved donor site mentioned in the plan's acceptance document given with plans approval

RWC DAS Technical Requirements

- Filtration to remove nearby saturating cellular noise or other signals may be required.

Fiber DAS

- For new DAS projects and DAS projects added to campuses or developments with the following characteristics must incorporate the new building's DAS into the fiber DAS, rather than adding a new BDA with a new donor antenna.
 - Building campuses with one address or parcel identified by the county assessor's office.
 - Buildings are connected or within 1000' and are of the same ownership.
- If a building requires more than a single BDA, per the manufacture installation recommendations, then an ERRCS fiber DAS system installation would be required.