



Aledo ISD Public Safety BDA

Overview

Aledo ISD has engaged BearCom to design and implement a Distributed Antenna System (DAS) that will satisfy the Authority Having Jurisdiction, to the location of each campus hereafter to be referenced as AHJ, International Fire Code section 510 requirements for Emergency Responder Radio Coverage adopted by the AHJ. BearCom is proposing a Public Safety DAS Solution that will utilize Bi-Directional Amplifiers and Indoor Antennas to distribute signal.

Purpose

This Statement of Work (SOW) defines the scope of the services and the deliverables that BearCom will provide to Aledo ISD. The SOW further identifies the tasks and services related to the supply, installation, and testing of new equipment.

General SOW Tasks

The following is a general description of the tasks and responsibilities associated with the total project and tasks performed at all facilities:

Inventory Control

- BearCom has an inventory control system in place to track order date, order status, delivery date, destination facility, staging status, and testing status.
- BearCom will be able to supply inventory control reports to Aledo ISD upon request.
- If needed, BearCom can provide warehouse space for the delivery and storage of all equipment.

Bill of Materials (BOM)

- BearCom will develop the BOM necessary to supply and install the required equipment for each facility covered under this SOW.
- BearCom will be responsible for verifying that the BOM is complete and accurate.
- BearCom will submit spec sheets, iBwave design, iBwave heat maps to AHJ Fire Marshal for ERRC Permit to install.

Infrastructure

The main components of the Public Safety DAS include:

- Public Safety Class A Passive Bi-Directional Amplifier
- Battery Backup
- Ultra-Low Profile Indoor Antennae
- Yagi Outdoor Antennas
- ½" Plenum Air Coaxial Cable
- Miscellaneous Parts

Stage Equipment

- All staging activities will occur at facilities provided by BearCom.
- BearCom will develop and document layouts and cabling plans.
- BearCom will power up equipment observing for signs of failure or improper operation.
- BearCom will label equipment and cabling as necessary to ensure efficient installation at the AISD specific campus.
- BearCom will repack equipment for delivery to the AISD specific campus.

Shipping of Equipment

BearCom will transport equipment from the staging location to the AISD specific campus.

Contractor Deliverables

- Aledo ISD will assist in providing BearCom with reasonable access to all facilities as necessary to perform installation and testing.
- Aledo ISD will assist in providing a temporary storage location on-site to house equipment during the installation and testing process.
- Aledo ISD will assist in providing BearCom with any IT assistance needed during installation and testing.
- All penetrations and sleeves required through walls will be provided by the contractor. All roof and floor penetrations will be provided by the contractor.
- All electrical outlets shall have dedicated circuits and will be provided by the contractor.
- Rack(s) and rack space will be provided by the contractor, if desired.
- Any training other than OSHA, First Aid, and CPR will be provided at no cost to BearCom.

Install Equipment

- BearCom will physically place all equipment in the areas specified with Aledo ISD.
- BearCom will provide all tools needed to install equipment.
- BearCom will install all equipment per standards and consistent with industry practices. All installations will also comply with NEC 2017 National Electrical Code, Uniform Fire Code, and NFPA 78 Lightning Protection Code.
- BearCom will mount equipment in specified equipment racks, walls, or cabinets as mutually agreed upon by BearCom and Aledo ISD. Modifications to the equipment mounting and installation plans may occur under the direction of Aledo ISD.
- BearCom will mark all transmission lines, jumpers, internal cabling, and control cabling and develop documentation to reflect the actual installation.
- Contractor shall coordinate when Fire Alarm wiring is needed and is responsible for wiring into Customer owned alarm system.
- Polyphaser to be installed by BearCom to ground bar.
- Donor Antenna Cabling / Routing
 - Antenna cabling to be run from BDA unit to outdoor donor antenna.
 - Aledo ISD will assist to validate and identify for BearCom viable cable access and specified path from BDA to polyphaser to outdoor donor antenna location.
 - BearCom is not responsible for conduit if needed/requested, unless noted elsewhere.
 - BearCom is not responsible for roof penetration weather head.
- DAS Antenna Cabling/Routing
 - Aledo ISD/ BearCom to mutually agree on cable routing based on project design.

- BearCom is not responsible for conduit if needed/requested, unless noted elsewhere.
- Aledo ISD is responsible for riser penetrations if needed/requested, unless noted elsewhere.
- BearCom to validate all cable runs completed by Aledo ISD to ensure integrity of fiber and coaxial cable.

Equipment Programming & Alignment

BearCom will program, tune, and align the Bi-Directional Amplifier as specified by the manufacturer's installation procedures, and SOW documents.

Post-Installation Inspection

- BearCom will accompany and support Aledo ISD or appointed representative with a post-installation inspection. All installations will be physically inspected for completeness, professional appearance, compliance with standards, and consistency with industry practices.
- BearCom will coordinate with AHJ Fire Marshall for physical inspection and Emergency Responder Radio Communication Acceptance Test.
- Aledo ISD will prepare a punch-list to document any discrepancies and necessary corrections identified during the Post-Installation Inspection.
- BearCom will correct all punch-list items to the reasonable satisfaction of Aledo ISD.

ERCES Acceptance Testing Criteria

- BDA Commissioning
 - Performance measurements
 - Reflective Power to donor antenna
 - Uplink and Downlink values
 - Oscillation Alarms
 - BearCom Testing Process
 - Operation of customer radio or Public Safety radio on BDA system
 - RSSI Values
 - Sample subscriber coverage test
 - BearCom Acceptance Testing Deliverables
 - Heat Maps of coverage with BDA System
 - iBwave System Design
 - Spectrum Analyzer readings from BDA system

Change Orders

- Any variations from this SOW may constitute a change in scope and must be mutually agreed upon in writing by both parties utilizing BearCom's Change Order Form

Projects Cost

Aledo ISD BDA Project is **\$576,348.05**

Campus specific pricing to be detailed on final page of Scope of Work document.

- *Tax Exempt Reseller Certification must be provided
- *Includes all Shipping Charges
- *Purchase Order to be made out to Bearcom
- *Bonds not included in proposals

*****Proposal is Valid for 30 days*****

Terms and Conditions

- *Coordination with current Fire Alarm Contractor required for system monitoring integration.
- *Each campus will be billed at Net 30 upon system commissioning.
- *Terms may be modified upon contract award

Warranty

- *Equipment installed is covered by the manufacturer, defined by the manufacturer in their warranty terms.
- *Warranty repair or replacement does include labor.
- *BearCom installation is covered by a 90-day installation warranty and does not cover damage from customer negligence or force majeure.
- *Annual Preventative Maintenance and Testing in not covered by these warranties.
- *After 1 year, system support can be on a time and material basis, or a service contract can be agreed to.

A full Bill of Materials and Cut Sheets will be provided upon award of the contract.

Statement of Work Created by:

BearCom
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Account Executive
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Aledo ISD Campus Pricing

Aledo High School -	\$136,129.03
Aledo Middle School -	\$55,295.68
Annetta Elementary School -	\$46,874.83
Coder Elementary School -	\$48,352.28
Daniel Ninth Grade Campus -	\$44,766.48
Early Childhood Academy -	\$34,414.15
McCall Elementary School -	\$37,807.23
Vandagriff Elementary School -	\$44,019.41
Walsh Elementary School -	\$46,188.96

Subtotal: \$493,848.05

5yr BDA System Maintenance Contract

Year 1 -	\$16,500.00
Year 2 -	\$16,500.00
Year 3 -	\$16,500.00
Year 4 -	\$16,500.00
Year 5 -	<u>\$16,500.00</u>

Subtotal: \$82,500.00

Pricing to reflect \$1,500 per campus per year

*Maintenance contract includes both Lynn McKinney Systems

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