

SECTION 3
BROADBAND WIRELESS ANTENNA SYSTEM
SONOMA COUNTY AIRPORT
GENERAL
FOR REFERENCE ONLY

3-1.1 DESCRIPTION

- A. Furnish and install a broadband wireless antenna system as shown on the drawings and specified herein.

3-1.2 SUBMITTALS

- A. Provide standard manufacturer's cut sheets for all equipment supplied showing dimensions, construction, wiring diagrams, frequency ranges, mounting details, transmission ranges, beam width, bandwidth, and any rating data.

3-1.3 WARRANTY

- A. Contractor shall warranty all equipment and the labor required to install equipment for a period of one year.
- B. During the warranty period, if the chosen operating frequency becomes unreliable or the equipment fails to function properly, or any of the local municipal bodies complains of interference from contractor-installed equipment, the contractor shall respond within seven (7) days to determine the source of interference or the system malfunction and either repair the system or coordinate a new frequency.
- C. Contractor shall provide, as an additive bid item, a two year extended warranty. This warranty shall be identical to the initial one year warranty.

PRODUCTS

3-2.1 MANUFACTURERS

- A. Part numbers for designated manufacturers are used to establish a level of quality. Approved equal equipment from another manufacturer is also acceptable. Each unit shall be certified to meet the requirements of FCC rules and regulations.

3-2.2 WIRELESS ACCESS POINT

- A. Access Point units shall be Cisco Aironet 1250, part number AIR-AP 1252AG-A-K9.
 - 1. Software Cisco IOS Software Release 12.(10b)JA, or later.
 - 2. Status, Ethernet, and Radio LED indicators.
 - 3. Provide 802.3af PoE.

4. Operating temperature -4 deg. F to 131 deg. F.
5. Provide lightning surge protector arrestor, and surge protection.

3-2.3 ANTENNA

- A.** Provide HyperLink Technologies Broadband Solid Parabolic Dish Antenna, Model HG5158DP-29D.
 1. 5.1 GHz to 5.8 GHz frequency range.
 2. 28.5 dBi gain.
 3. Dual polarization.
 4. Tilt and swivel mast mount.
- B.** Provide HyperLink Technologies Sector Panel Antenna, Model HG2458-14P-090.
 1. Dual-Band 2.4 GHz / 4.9-5.8 GHz frequency range.
 2. Dual-Feed via two (2) integral N-female connectors.
 3. 14 dBi gain.
 4. 90 deg. Horizontal beam width.
 5. 21 dB front to back ratio.

3-2.4 ANTENNA MAST

- A.** Provide Navigance Technologies Group antenna mast, Number NTG-AS003.
 1. Sub-assemblies consist of NTG-SA005, NTG-SA006, NTG-SA007, NTG-SA008, AND NTG-SA004.
 2. Provide all necessary hardware for complete installation.
 3. Provide concrete base sized for proper installation.

3-2.5 ETHERNET SWITCH

- A.** Ethernet switch for head-end shall be Linksys SRW-2024P.
 1. Twenty-four (24) ports 10/100Mbps PoE (802af) ports.
 2. Managed switch, Layer 2, 5.6Gbps switching capacity.
 3. 802.3af compliant PoE.
 4. 24 RJ-45 connectors for 10BASE-T, 100BASE0TW and 1000BASE-T with 2 shared SFP ports.
 5. Provide redundant power supply.
- A** Ethernet switch for remote locations shall be Linksys SRW-2008MP.
 1. Eight (8) ports 10/100Mbps PoE (802af) ports.
 2. Managed switch, Layer 2, 5.6Gbps switching capacity.
 3. 802.3af compliant PoE.
 4. 2 Gigabit combo ports shared between miniBBIC ports and ports 7 and 8.
 5. Provide redundant power supply.

3-2.6 UNINTERRUPTIBLE POWER SUPPLY (UPS)

- A.** Provide American Power Conversion Corporation UPS, Model Smart-UPS SC.
 - 1. 120VAC input power.
 - 2. Output power shall be sized to meet the component loads as indicated on drawings.
 - 3. Maintenance-free sealed lead-acid battery with suspended electrolyte: leakproof.
 - 4. DB-9 RS-232 Interface port.
 - 5. Operating temperature 0 deg F to 104 deg F at 5% to 95% relative humidity non-condensing.

3-2.7 ENCLOSURES

- A.** See Security System Specification 2-2.19.

EXECUTION

3-3.1 CONSTRUCTION

- A.** System shall be set up in an access point – subscriber configuration, or in a point-to-point configuration. Either configuration that meets the owner’s objectives with a minimum of cost and maintenance shall be acceptable.
- B.** System shall be able to communicate with 99% accuracy over a 2-mile range.
- C.** Systems shall be unaffected by weather, temperature, or any atmospheric conditions. Contractor shall install any heaters, heat-tracing, or weather protection needed for reliable operation.

3-3.2 INSPECTION, INSTALLATION, AND TESTING

- A.** Contractor shall perform a field survey test for available frequencies in the specified range and shall coordinate with local FAA, Police, and Fire departments to agree on a frequency which is to remain available and without significant interference.
- B.** Manufacturer’s or contractor’s representative shall appear on site for training for at least (4) hours to train airport personnel in maintenance, troubleshooting, operation, and programming of the telephone entry system. Manufacturer’s or contractor’s representative shall be required to obtain a signature from the maintenance personnel involved, and from the airport or assistant airport manager, indicating that the training is complete and satisfactory.

MEASUREMENT

- 3-4.1** The Broadband Wireless Antenna System supplied and installed as incidental to the Security System.

PAYMENT

3-5.1 No separate payment shall be made for the Broadband Wireless Antenna System. Broadband Wireless Antenna System costs shall be considered incidental to the Security System lump sum bid item.

END OF SECTION