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1. PROPOSAL DESCRIPTION

1.1. Document

This document represents a fast track response to the needs of the Town of Prescott Valley, based on documents provided representing the need to procure and construct a communications facility for public safety users.

1.2. Site Requirements

The Communications Facility provides up to 12 rack spaces in a standard communications site layout, divided into two user rooms, separately locked and keyed, with a separate power services room, in a single shelter. The shelter will use passive ventilation to maintain an acceptable equipment temperature, without the use of air conditioning or heating, contain the batteries in a separate room away from the site electronics, and provide three DC voltages (12 / 24 / 48), two AC voltage (120/240) power, to users at the site.

The site is entirely Solar Powered, with supplemental generator power to recharge batteries in the event of a Solar power budget shortfall, or equipment failure.

The tower is a 100' four leg communications structure, designed to support 400% expansion of the current antenna load perceived, supporting all future uses, as well as fully utilizing the available lease boundaries, should other users require tower space, without having to construct additional tower facilities.

It is intended that the site require fueling only on an annual basis, under normal operating conditions and loads, the single propane tank may be expanded with a manifold, adding an additional 500 gallon tank at the site. The generator allows for a 100% load increase, when accounting for de-rating at the installed site elevation.

The TOPV provided site layout diagram has been modified to preclude any shading of the solar array by any portion of the tower or installed antennas, and to provide for enhanced lightning protection, isolating the solar and power systems, from the tower facilities. The layout allows for the installation of additional shelters or structures, that may share the tower, and preserves space for the installation of additional solar facilities. Placement of the tower away from the solar panels removes any falling ice and snow, from the tower, from landing on the solar array, not so much for a damage protection aspect as the site does not appear to suffer heavy rime icing, but to prevent the buildup of ice on the panels shed from the tower in winter months, maintaining solar efficiency.

2. NILES RADIO SCOPE OF SERVICES

Niles Radio Communications proposal, using the site requirements document provided, proposes to provide site engineering, design, and construction services, including a normalized use profile for the proposed equipment for this facility, resulting in a 'turn-key' facility.

The proposal is broken into two costs groups, those describing the required components and services intended to meet the Homeland Security Grant requirements and intentions, and those required to complete the facility, placing it into service.

Niles Radio has completed, and provided a preliminary site plan for the site, and has completed the preliminary solar power budget, which is the basis of the sizing for the power system for this site.

3. COMPLETENESS OF PROPOSAL – FAST TRACK PROCESSING

While this document represents the completed facility, issues regarding final configuration and contractual issue are not covered by this document. Niles Radio respects and understands that this site is an



evolving process, and that such changes required or desired by the Town of Prescott valley, that do not affect the material cost of the project, will not result in charges for 'change orders' processed. Niles Radio expects that materials and systems ordered, after acceptance of any design criteria, will be purchased even if changes are made to the configuration at a later time, which may relegate certain materials unusable for this installation.

Niles Radio will provide drawings depicting the installation and locations of all systems, however, such drawings will not be stamped by an Arizona PE, until the process is completed. Additional reviews and 'stamps' of drawings, other than the tower structural drawings, are at an additional fee. Any items that do not meet typical construction standards for communications facilities will be corrected prior to site acceptance. This process will accelerate the construction process to a serviceable level of completion, within the shortest time possible.

4. ARIZONA REGISTERED CONTRACTOR

JC Cullen, Inc., DBA Niles Radio Communications is an Arizona Licensed Contractor, registration number 200028.

5. WARRANTY

In addition to the manufacturers warrantees provided, Niles Radio Communications warrants that materials and workmanship provided by Niles Radio Communications will be free from defects for a period of two years, exclusive of any provided manufacturer's warranty.

Niles Radio Communications specifically warrants that the equipment it manufactures and constructs to be free from defects in materials and workmanship. Completed systems that have been operated within ratings and have not been subjected to mechanical or other abuse or modification and have failed because of such defects, will, at the option of Niles Radio Communications, be repaired or replaced within two years from the date of installation. Equipment that fails under conditions other than described herein will be repaired at the price of parts and labor in effect at the time of repair.

This warranty is in lieu of all other warranties, express or implied, including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose. Niles Radio Communications is not liable for any consequential damages.

6. PROPOSAL – HOMELAND SECURITY GRANT FUNDS

The items provided under this section, include all items, in their proper and adjusted quantities, with the additional components, labor and materials as necessary, to complete the Table 1 items from the Homeland Security Grant.

Niles Radio will provide for site grading as required, all installation and excavation as required to provide for a complete ready to use facility, when accompanied by the shelter and systems installation. Niles Radio will include 550' 'MAG 160' specification, 6' chain link fence, with a 14' double opening drive gate, a single personnel gate, and approximately 60 tons ¾" AB material for driveway and access grading.

Grant Funds	\$298,211.54
Solar System Parts	\$35,329.96
Solar System Labor	\$6,610.78
Tax	<u>\$2,983.97</u>
Total	\$44,924.70
Battery System Parts	\$67,899.91
Battery System Labor	\$3,966.47
Tax	<u>\$5,734.83</u>



Total	\$77,601.20
Generator System	
Parts	\$16,921.61
Generator System La-	
bor	\$3,702.04
Tax	<u>\$1,429.20</u>
Total	\$22,052.84
Tower Parts	\$71,126.15
Tower Labor and	
Freight	\$52,282.89
Tax	<u>\$6,007.31</u>
Total	\$129,416.35
Fencing and Aggre-	
gate	\$22,330.41
Labor	
Tax	<u>\$1,886.03</u>
Total	\$24,216.43

Items included in this section, and their quantities, include:

SOLAR ARRAY / POWER SYSTEM

- 2 Outback Power FM80 MPPT 80 amp solar charge controllers
- 32 Kyocera 205W KD205GX-LPU – OR EQ. PENDING AVAILABILITY
- 1 Solar Panel Mounting Frame Assembly
- 24 3 Foot MC4 extender cable male/female cables
- 16 30 Foot MC4 (SolarLine 2) Extender Cable
- 1 FWPV-8 Solar Power Combiner Panel
- 8 15 Amp PV Array Breakers
- 1 Outback Power Remote Temperature Sensor
- 2 Outback Power VFX3648 3600 Watt Sine Wave Inverter 3600W 48VDC
- 1 MATE2 - Systems Display and Controller
- 1 Outback Power HUB10 10 Port Communications Manager
- 1 Outback Power Flexnet-DC System Monitor
- 6 OBCATV-6 Communications Cable
- 3 Deltec 500 amp, 50 millivolt current shunts
- 3 Flexware Shunt Bus
- 1 OutBack Flexware 500AC
- 1 OutBack Flexware 500DC
- 1 FW-MP Mounting Plate
- 2 FW-ACA Conduit Adaptor for Outback FX Inverters
- 2 FW-DCA Conduit Adapter for Outback FX Inverters
- 2 OBB-175-125VDC-PNL 175 amp DC circuit breaker
- 8 Outback Power TBB-X Insulated Terminal Bus Bars
- 1 FW-IOB-D-120/240VAC AC Input-Output-Bypass Assembly
- 6 20 Amp AC Breaker Single Pole 115 VAC
- 8 OBDC-20 20 Amp DC Breaker
- 1 Outback Power FW-X240 Auto Transformer
- 2 FW-CCB2 FM-60 Mounting Bracket for 2 Controllers



- 4 DC Battery Cable Sets
- 1 Conduit / DC Solar systems
- 32 Surrrette 6CS-21PS Deep Cycle Battery
- 1 Battery Support Racks
- 1 48-24-15RM DC DC Converter for 24VDC Systems
- 6 48-12-30 RM DC DC Converters for 13.8VDC Systems
- 1 Cummins/Onan 20GGMA Generator Assembly
- 1 500 Gallon Propane Tank
- 1 Regulator
- 1 Install Generator and Concrete Rail Pad
- 1 Electrical Systems Installation and Configuration

TOWER SYSTEM

- 1 Valmont 108-M860-100, 100' four leg Self Supporting Tower
- 1 Freight
- 1 Engineering Drawings - Stamped
- 75 Foundation Concrete
- 1 Steel Reinforcement
- 1 Excavation
- 1 Crane Services
- 2 WB-GR1024-B Cable Tray, 24" X 20' 13'4" w/two row hangers
- 1 Tower Ground Materials - Bond to Shelter Halo
- 1 GeoTech Report and Analysis
- 1 Steel Placement / Concrete Place and Finish
- 1 Tower Erection Labor

7. PROPOSAL – ADDITIONAL FUNDING REQUIRED

The items included in this section include the Communications shelter and its installation, a short haul low cost (high performance) microwave link between the existing CYFD shelter and the new facility, and the costs for deployment of equipment to the site (excavation, tower and shelter deliveries). Also included is the installation labor for any radios / antennas made available at construction of the facilities. Not included are antennas, feedline or ancillary materials for additional installations.

The Shelter is an Enviro Buildings shelter, designed as a three room structure, with three entry points. The center wall is structural in this facility, and may be provided with a locked or unlocked door, separating the two user equipment rooms. The third room is dedicated for plant systems, isolation of batteries, and power production, control and monitoring equipment.

The shelter is to be Tan in color, factory applied, with a concrete foundation, installed as a complete structure. The shelter is warranted for 10 years.

General Funds	\$94,177.70
Shelter Parts	\$42,379.88
Shelter Labor	\$17,284.61
Tax	<u>\$3,579.40</u>
Total	\$63,243.90
Misc Expenses Parts	\$2,864.30
Misc Expenses Labor	\$18,220.30

Tax	<u>\$241.92</u>
Total	\$21,326.52
CYFD Link Parts	\$8,249.46
CYFD Labor	\$661.08
Tax	<u>\$696.75</u>
Total	\$9,607.29

SHELTER SYSTEM

- 1 24X16X8 three room shelter – Enviro Building Tan
- 1 Reinforcement
- 7 Concrete
- 1 Flooring Material
- 1 Surface Electrical
- 4 Equipment Racks
- 4 Overhead Cable Tray
- 4 Cable Rack Splice Kits
- 4 Runway End Supports
- 2 Runway Hangers
- 1 Ground Halo, Rods, Ground wire and materials
- 1 Foundation Excavation – Forming
- 1 Concrete Placing/Finishing
- 1 Shelter Construction

MISC EXPENSES

- 1 Equipment Deployment
- 1 Travel Expense
- 1 Per Diem Expense
- 1 Installation - two repeaters and antennas, including DB224 cable/antennas

TEMP LINK - RAD INTEGRATED 5.8GHZ LINK

- 2 A2L-58SRT1I T1 Link to CYFD Fire Department
- 2 A/CBLUTP50 ODU Cables
- 1 Link Installation

8. PROPOSAL – SUM OF COSTS

Total Parts	\$267,101.67
Total Labor	\$102,728.16
Total Sales Tax (8.446%)	<u>\$22,559.41</u>
Project Total	\$392,389.24