

**Attachment A – 2 Buck Mountain MW**

**STATEMENT OF WORK**

**SECTION 1 – GENERAL SITE INFORMATION**

**1.1 Site Name, Number, and Statement of work Date**

Site: Buck Mountain

Site Number: F72002

Statement of work date: March 6, 2014

**1.2 General Statement of Work**

This State Radio Project (SRP) statement of work (SOW) is for civil infrastructure improvements at an existing radio communications facility at Buck Mountain located in Lane County, Oregon. Site # F72002 . Project work identified within the final construction drawings (FCD's) and written in sections 2 – 14 of this SOW includes but is not limited to:

1. Construction of new foundation under existing generator shelter.
2. Provide and install new ice-bridge from existing tower to shelter.
3. Provide and install new ice-shield over the existing LPG tank.
4. Trench and install conduit with telemetry conductor for LPG monitoring.
5. Provide and Install of new waveguide ladder.
6. Provide and install new cable entry port for existing shelter.
7. Remove and replace existing HVAC unit with new Bard 3 ton (or equivalent) HVAC unit.
8. Remove and replace existing generator with new Owner provided 35kW generator.
9. Upgrade electrical service with new 150 amp panel.
10. Prep, seal and paint the exterior of the shelter.
11. Install new and upgrade existing exterior and interior electrical grounding.

Refer to sections 2-14 for specific scope of work.

Attachments A of this Contract identify the site specific Work directives. Attachment C supports these site specific work directives.

**1.3 RESERVED**

**1.4 Site Directions and Coordinates**

Site Directions:

**BUCK MOUNTAIN F72002**

**DIRECTIONS VERIFIED BY ROY SPAULDING 11/28/2012:**

From Salem, Merge onto I-5 South via the ramp to Eugene. Take exit 194A to merge onto OR-126 E. Turn left on 42nd Street toward Marcola (NORTH). Drive 0.5 miles Turn right onto Marcola Road. Drive 6.3 miles Turn left onto Hill Road. Take 1st right onto Donna Road. Take the 1st left onto McGowen Creek Road. (ZERO ODOMETER)

Drive 0.4 (0.4) miles stay left onto road 16-2-27.  
Drive 1.0 (1.4) miles stay right.  
Drive 0.8 (2.2) miles stay right.  
Drive 0.8 (3.0) miles stay left around gravel pit.  
Drive 0.5 (3.5) miles stay right.  
Drive 0.9 (4.4) miles stay left up hill and to locked gate.  
Drive 0.7 (5.1) miles to site on left

Site Coordinates:  
Latitude: 44.19761 North / Longitude: -122.98694 West

## **1.5 Key SRP Staff**

The following personnel will be the primary contacts during construction. Their contact information will be provided at the time of award. Any questions or comments prior to the bid award should be directed to the Agency Contract Representative listed on the first page of the bid package.

- a) SRP Principal Project Manager (PPM) – Mike Mullen
- b) SRP Site Project Manager (SPM) – Manny Polanco
- c) SRP Construction Quality Manager (CQ or CQM) – Bryce Foster
- d) Sr. Contracts Manager – Tim Dodson
- e) ODOT / SRP Document Control (email all deliverables to) - [ODOTMPBDocCntrl@odot.state.or.us](mailto:ODOTMPBDocCntrl@odot.state.or.us)

## **SECTION 2 –MOBILIZATION, SITE USE, PERMITS, OWNER FURNISHED MATERIALS AND INSPECTIONS.**

### **2.1 *Permits***

The Building Permit application is the responsibility of the Owner. Owner will ensure building permits are available at the time of the issuance of Notice to Proceed. In some case the contractor will be responsible for picking up the permit at the jurisdiction. If there are any fees to be paid at the time of pickup those fees will be reimbursed by the Owner and are not part of the contract price. No mark up is allowed on these fees.

Building and Trade Permit Jurisdiction is:

Lane County

#### **2.1.1 Trade Permits**

Contractor and their sub-contractors are responsible for obtaining all required trade permits.

#### **2.1.2 Oregon Department of Forestry (ODF) Permits**

All ODF property requires a work permit issued from ODF. Contractor shall obtain this permit prior to start of work. The Owner can provide the contact information and forms if needed.

### 2.1.3 Property and Access Road Owner Permits

The following additional permit and insurance requirements are required by the property and access road owners.

1. Reserved

## **2.2 Materials**

### **2.2.1 Owner Provided Materials**

Contractor shall pick up and take possession of Owner-provided materials, shall transport them to the project site, shall secure them until installed, and shall install this equipment in accordance with the project Plans and Specifications.

The following Owner-provided materials will be available for transfer to the Contractor from ODOT (MPB – 3210 Del Webb Avenue NE, Salem Oregon. (Unless otherwise noted)

1. One (1) 35kW electric power generator (configured for propane vapor) with ATS

Contractor must notify the Owners Site Project Manager one week in advance of the scheduled pickup time for the material listed above.

### **2.2.2 Contractor Provided Materials**

Contractor shall provide all other materials, labor, and equipment necessary to complete the Work according to the contract Plans and Specifications which may include some or all of the following:

- 1) All equipment and labor to construct the site
- 2) Crushed rock aggregate, and structural and non-structural Fill materials
- 3) Erosion control materials/equipment
- 4) Fasteners and hardware
- 5) Cable Management Apparatus (i.e. Ice Bridge, Trapeze, Cable Ladder, and Waveguide Ladder as applicable)
- 6) All paint , weather proofing and galvanizing materials
- 7) Concrete, including reinforcing steel and forms
- 8) All interior and exterior electrical equipment
- 9) All interior and exterior grounding materials
- 10) Safety bollards
- 11) Signage
- 12) Snow entry vestibules, hatches and ladders
- 13) Propane lines, regulators and valves
- 14) Fencing and Gates
- 15) Utility vaults and conduit for underground electrical and telemetry
- 16) All support structures (H-Frames, Ice-Shields, etc. as applicable)
- 17) Fire extinguishers
- 18) One (1) new 6' fiberglass 1AA ladder extra heavy duty rated for 375lb

- 19) One (1) new three drawer desk (unless specified otherwise)
- 20) One (1) new metal folding chair
- 21) One (1) new college ruled log book
- 22) One (1) new First aid kit
- 23) Any additional material needed to complete the site

Contractor-provided materials require a submittal for review and approval in accordance with the submittal requirements found in Attachment C.

### **2.2.3 Material Salvage**

Contractor shall deliver the following salvaged materials and assets to ODOT (MPB – 3210 Del Webb Avenue NE, Salem Oregon. (Unless otherwise noted)

- 1. One (1) Existing generator

### **2.3 Seasonal Restrictions and Site Access**

Contractor shall work with the local Oregon Department of Forestry and Property Owner – Weyerhaeuser to determine and establish additional Work requirements and controls that are a result of the fire restrictions in place at the time of construction. Contractor shall comply with all fire restrictions. The Property Owner for this project is:

Weyerhaeuser

Contact information will be provided at time of contract award.

During fire season (typically late April through October) in forest areas the following minimum fire protection conditions must be followed.

- i) Each truck must have
  - i. 1 round pointed shovel at least 8 inches wide, with a handle at least 26 inches long
  - ii. 1 axe or Pulaski with 26 inch handle or longer
  - iii. 1 fire extinguisher rated not less than 2 ½ pound ABC (OR-OSHA requires a 5 lb extinguisher for all commercial work)
  - iv. Adequate muffler and exhaust system to prevent sparks
- ii) No Smoking is allowed while working or traveling in the operation area
- iii) Full commercial Fire Equipment Requirements can be obtained on the ODF website.

Contractor shall comply with all local, state, federal, and property owner fire regulations.

#### **2.3.1 Site Access, Work Conditions and Special Usage**

The following conditions apply to site access, work, and usage.

1. Four wheel drive vehicles may be required to access the site.

**2.4 Culturally Sensitive Sites**

If the Contractor finds a previously undiscovered sensitive cultural find, immediately cease all activities at that site and notify the Site Project Manager. If the Contractor inadvertently disturbs unknown sensitive cultural finds, but immediately ceases all activities and follows the procedures listed in 00290.50 (of the 2008 ODOT Standard Specifications for Construction), the Agency (as provided in 00290.51(b) of the 2008 ODOT Standard Specification for Construction), to the extent permitted by Article XI, Section 7 of the Oregon Constitution and the Oregon Tort Claims Act, will indemnify, within the limits of the Tort Claims Act, the Contractor for costs associated with monitoring, recovery, site restoration or other required archaeological work, provided neither the Agency nor the State shall be required to indemnify the Contractor for such costs resulting from, arising out of or relating to the willful misconduct, negligence or other wrongful acts attributable to the Contractor or other persons on the Project site. Delays to work due to discovery of new cultural sensitive finds will be considered for exclusion from Contract time.

The 2008 ODOT Standard Specifications for Construction can be viewed at:  
[http://www.oregon.gov/ODOT/HWY/SPECS/pages/standard\\_specifications.aspx](http://www.oregon.gov/ODOT/HWY/SPECS/pages/standard_specifications.aspx)

**2.5 Vandalism**

The contractor shall provide protection of the Work from vandalism until the contracted Work is completed. If reasonable protection has been provided the Contractor’s responsibility for damage resulting from vandalism will be limited to \$2,000 per occurrence. Requests for reimbursement of amounts in excess of \$2,000 shall be in writing and directed to the PPM. Upon receipt, the PPM will investigate, evaluate the amount of damages and their cause, and determine whether, and how much, the Contractor will be recompensed.

**2.6 Document Definitions**

Plans	FCD (Rev Rev #11 ) dated 01/09/2014The project plans provide the detail of what work is needed at the site contract.
Statement of Work (SOW)	The Statement of Work (SOW) is written specifically for this project and identifies the scope of work to be completed.
Specification Manual	The Specification Manual is to be used as a reference document to aid in clarification of the Statement of Work and Plans and is intended to be used in combination of the plans The Specification Manual includes sections and details that may not be applicable to this project.
Wireless Requirements	Microwave and antenna install standards are included in the Wireless requirements documents and take precedence over the Plans and the SOW. Please follow these guidelines very closely.
Shelter Plans	When applicable shelter plans are included; these are for reference. When the contract includes installation of a building the Owner (State of Oregon) will provide the building. Refer to the Statement of Work to determine the location of the

	building for transfer to the contractor. <u>The building plans are generated at the manufacture, by the manufacture. These plans are specific to the building however, not specific to the site and the site conditions. Refer to the SOW, the CDs and the Specification Manual for site specific conditions.</u>
Tower Plans	When applicable tower plans are included; these are for reference. When the contract includes installation of a tower the Owner (State of Oregon) will provide the tower and the tower assembly drawings. Refer to the Statement of Work to determine the location of the tower for transfer to the contractor.
Climbing Certification	All work to be performed 6-ft or more above the tower foundation will require a valid Climbing Certification. The certificates are a requirement of the State and must be submitted as a submittal with proper approvals by the State. Even if the tower work is access by means other than climbing are the, the Climbing Certification is still required.
Order of precedent	In the event that there is conflicting information among the SOW, Plans, or Specifications, the contractor shall notify the Owner. The order of precedent for these documents is Statement of work, Plans, and then specifications.

**2.7 Construction Inspections**

The contractor shall coordinate all required inspections at least 48 hours in advance with the inspector and CQ. Notifications are “work week” hours and exclude weekends and State holidays. In the event that an inspection must be canceled this notice shall be sent no less than 24 hours in advice to the inspector and CQ. **If cancelations are not made 24 hours in advance or the inspection results are found to be failing the contractor may be subject to the cost incurred by the Owner for the canceled service or the re-inspection of work that failed inspection.**

Contractor shall coordinate all inspections required by the Owner and the Jurisdiction. The following inspection services are provided by the Owner as needed (these are in addition to Jurisdiction inspections):

1. Special Inspection (SI) for Soils Density foundation (Over 2500 PSI design strength) sub grade, vehicle and crane area fills materials, and compound sub-grade.
2. Special Inspection (SI) for Concrete reinforcement (Over 2500 PSI design strength). Special Inspection and Owner
3. Special Inspection (SI) for Concrete placement (Over 2500 PSI design strength) Special Inspection and Owner. Note the Special Inspector will collect up to eight (8) compression cylinders, five (5) of which the Owner defines break schedule and the remaining are for the contractor to choose dates if needed.
4. Grounding Inspection, the Owner will inspect all grounding. No grounding hidden or below grade grounding is to be covered until it has been inspected.
5. Gas line pressure test, the Owner will inspect the gas line pressure test, the contractor shall provide the materials and labor for the test.
6. HVAC and Generator Commissioning, the Owner will witness commissioning provided by the contractor.

7. Tower inspections, the Owner's tower crew will inspect the tower work performed by the contractor. Note requires one calendar week notice for scheduling. This inspection also requires that the Contractor have a tower crew on site to resolve any issues found.

### **SECTION 3 – CIVIL LAND IMPROVEMENTS**

#### **3.1. GENERAL REQUIREMENTS**

- 3.1.1. Contractor shall provide, install and maintain all necessary sedimentation control and erosion prevention per the Plans.
- 3.1.2. Contractor shall install, for future use, pull strings in all conduits installed.
- 3.1.3. Contractor shall install appropriate termination at each end of all conduits.
- 3.1.4. High water levels may be encountered. Based on his pre-Bid observation of the site, Contractor shall include sufficient time in his proposed construction schedule to accommodate dewatering that may be required. Should high water levels be encountered during construction, Contractor shall consult with Owner and Engineer to agree on a construction plan for dewatering the site. The dewatering plan and compensation, if applicable, will be implemented by a CCO.
- 3.1.5. Based upon compaction test results, if native soils are deemed unsuitable for structural compaction requirements, Contractor shall provide all required structural fill in order to meet the project requirements.
- 3.1.6. In the event that Contractor does not find the excavated materials suitable for grading of the project. Contractor may seek written approval from Owner to use imported fill.
- 3.1.7. Contractor shall use all efforts to make the best use of the native earth materials to accomplish excavation, backfilling and grading of the site. Contractor shall take care to schedule and execute the excavation, backfill and grading Work in a manner that manages the moisture content of otherwise-suitable native earth material to be optimum for compaction, including protecting and preserving excavated soil for future use. Contractor shall not use imported fill unless Contractor clearly demonstrates that native fill material is not suitable for use and Contractor has gained written authorization from the Owner to use imported fill.
- 3.1.8. Failure by the Contractor to appropriately schedule and execute the Work and to protect, preserve, and properly handle earth materials suitable for fill shall not constitute sufficient grounds for the Owner to add imported fill into the Work through the Owner's Change Order Process.
- 3.1.9. Contractor shall remove all tree stumps in the affected construction area and dispose of them at an authorized dump site.
- 3.1.10. Contractor shall not burn debris and slashes on site. Contractor shall not leave on site any debris and slash material removed during construction. Contractor shall dispose of removed material at an approved and suitable location.
- 3.1.11. Contractor shall ensure site compound is free of vegetation upon site completion.
- 3.1.12. During construction, Contractor shall maintain all access roads to the site and upon completion of construction must leave roads in the pre-construction condition or

better. Contractor shall create and include in the site closeout package video record of the pre-construction and post construction condition of the entire length of the site access road. Contractor shall provide all necessary materials, equipment, and labor required to repair any damage to the road that occurs as a result of construction activities, snow removal for site access, equipment transport, or materials delivery for the Project Site.

- 3.1.13. Road improvements may be necessary for construction activities. Any road improvements for or as a result of construction activities are the responsibility of the Contractor and the Contractor shall, at no cost to Owner, provide all materials, equipment, and labor to perform the improvements. Contractor shall obtain pre-approval from the SPM and the property owner for any and all proposed road improvements.
- 3.1.14. Inspections required for this section are soils density. Soils density is performed by Owner's Special Inspector and CQ. The Contractor shall notify the inspector and CQ 48 hours in advance. All fill material is required to be compacted in accordance with the plans. Only structural fill (foundation sub grade, vehicle and crane areas) required special inspection.
- 3.1.15. Contractor shall coordinate with the Owner's special inspector for all concrete, soils density, proctor, and steel inspections. Proctor samples shall be collected for all proposed fill material (native and imported).
- 3.1.16. Contractor shall coordinate with the CQ and SPM 48 hours in advance for all inspections. The minimum required inspections include concrete, steel, soils density, grounding, erosion control, and periodic inspections. All required inspections are defined in the Plans and SOW.
- 3.1.17. Contractor shall inspect, and document with photos, all installed equipment and structures for damages and quality immediately upon final construction/installation or assembly and include all such photos in the Contractors daily construction progress report.
- 3.1.18. Trench backfill and fill areas below foundations and structural areas require the fill to be tested in 6" lifts. Contractor shall coordinate with the Owner's inspector for these tests. If test are not performed the Contractor shall excavate and refill the area with the tester on site at the Contractor's expense.

### **3.2. SITE-SPECIFIC WORK**

- 3.2.1. Contractor shall install underground conduit with conductor for LPG telemetry from existing LPG tank to the existing generator shelter per the Plans.

## **SECTION 4 – FOUNDATIONS AND EQUIPMENT SUPPORT**

### **4.1 GENERAL REQUIREMENTS**

- 4.1.1 Contractor shall install foundations as depicted on Construction Drawings and per ODOT SRP Specification Manual, Division 2, Section 02465 and Division 3, Section 03300
- 4.1.2 Contractor shall cure foundations to the following strengths before use or equipment or structure installation.
  - 4.1.2.1 Shelter Foundations – 100% of design strength.
  - 4.1.2.2 Tower Foundations – 80% of design strength



- 4.1.2.3 Propane Tank Foundations – 100% of design strength or a full 7 day cure
- 4.1.2.4 All other concrete under 2500 psi– 100% of design strength or a full 7 day cure
- 4.1.2.5 All other concrete over 2500 psi – 100% of design strength.

- 4.1.3 The Owner will provide the Special Inspector. The Contractor shall coordinate all inspections with the Special Inspector, CQ, and SPM 48 hours prior to need. Special Inspection (provided by Owner) and Owner inspections a required for all reinforced concrete requiring strength greater than 2500 psi. Concrete inspection required includes both reinforcing steel and concrete.
- 4.1.4 The Owner’s inspector will provide up to eight (8) compression cylinders, five (5) of which will be tested (broken) on the following schedule 7, 14, two at 28 days, and hold/56 days. The remaining three (3) cylinders are at the contractor’s discretion for the test (break) days.

#### **4.2 SITE-SPECIFIC WORK**

- 4.2.1 Contractor shall construct a new concrete foundation support under existing shelter/generator room per the Plans which includes lifting the existing building if necessary to complete the work.
- 4.2.2 Contractor shall install concrete floor reinforcement per the plans. If when the floor is opened the existing condition is different than shown in the plans, the contractor shall request direction based on the “as found” condition from the Site Project Manager (SPM) with an RFI.

### **SECTION 5 – TOWER, STEEL PLATFORMS, AND STEEL INSTALLATION**

#### **5.1. GENERAL REQUIREMENTS**

- 5.1.1. All exterior hardware must be galvanized or stainless steel per Spec. Manual requirements
- 5.1.2. All Contractor supplied steel parts must be hot dipped galvanized.
- 5.1.3. All required field modifications to steel must be properly treated with cold galvanizing compound.
- 5.1.4. All exterior zip ties must be stainless steel. Protruding ends of all interior nylon zip ties must be flush cut. All interior zip ties must be black UV resistant nylon.
- 5.1.5. Contractor shall provide a new lock on the anti-climb devise; the lock must be a master lock 175LH or equivalent. The lock combination to be used will be provided by the CQ during construction.
- 5.1.6. All exposed unistrut and all-thread ends must be covered with appropriately sized rubber caps.
- 5.1.7. Contractor shall notify the CQ 48 hours in advance of beginning construction of the tower and 24 hours in advance of completing construction of the tower to full height.
- 5.1.8. All installations on the tower require an inspection by the Owner. Contractor shall request this inspection through the SPM and CQ at least one week in advance of desired inspection date.

5.1.9. Contractor shall have tower climbers on site during the Owner's tower inspection. The tower climbers shall be equipped with the necessary equipment to address deficiencies found during inspection.

**5.2. SITE-SPECIFICWORK**

5.2.1. Contractor shall provide and install a new ice bridge and trapeze between the existing tower and shelter per the Plans.

5.2.2. Contractor shall install a new waveguide ladder for cable management per the Plans.

5.2.3. Contractor shall provide and install a new ice-shield over the LPG tank in accordance with the Plans and Specifications.

**SECTION 6 – SHELTER AND SHELTER IMPROVEMENTS**

**6.1. GENERAL REQUIREMENTS**

6.1.1. In all newly installed shelters Contractor shall supply the following

6.1.1.1. One (1) new 6' ladder Type 1AA extra heavy duty 375lb rating

6.1.1.2. In shelters with a communication room over 11'x12' in size: One (1) new assembled three drawer desk (approx. desk surface dimensions 46 x 20). In a shelter with a communication room under 11' x 12' in size: a 24"x36" folding table

6.1.1.3. One (1) new metal folding chair

6.1.1.4. One (1) new bound log book with pen

6.1.1.5. One (1) broom

6.1.1.6. One (1) dust pan

6.1.2. Contractor shall field-assemble and install components of the shelter, such as, but not limited to, fire extinguishers, first aid kit, eye wash station, exterior hoods, generator exhausts, electrical connections.

**6.2. SITE-SPECIFICWORK**

6.2.1. Contractor shall provide and install a new entry port on the west end of the shelter per the Plans.

6.2.2. Contractor shall provide and install new foundation support to the existing shelter under the generator and equipment rooms per the Plans.

6.2.3. Contractor shall prep, seal and paint the exterior of the shelter per the Plans and Specifications.

6.2.4. Contractor shall install a new HVAC unit per the plans and section 12 below.

6.2.5.

**SECTION 7 – FENCES, GATES, AND SIGNAGE**

**7.1 GENERAL REQUIREMENTS**

- 7.1.1 On all new fence gates installed, the Contractor shall provide a combination padlock - Master Lock 175LH (2 ¼" resettable brass combination lock with a hardened steel shackle) or equivalent.
- 7.1.2 Combination for the gate lock will be provided by the SPM or CQ.
- 7.1.3 All installed gates must swing freely with latch and locks working as intended.

**7.2 SITE-SPECIFIC WORK**

- 7.2.1 Reserved

**SECTION 8 – ELECTRICAL SYSTEMS**

**8.1. GENERAL REQUIREMENTS**

- 8.1.1 Contractor shall perform all electrical Work in compliance with the National Electric Code and the local jurisdiction requirements.
- 8.1.2 Contractor shall obtain any electrical permits required by the local jurisdiction.
- 8.1.3 Contractor shall install electrical Work per the Plans.
- 8.1.4 Contractor shall notify the SPM and CQ 24 hours prior to Installation of a new power meter.
- 8.1.5 All electrical work will be reviewed by the Owner in addition to jurisdiction inspections. The contractor shall provide access to all closed electrical boxes in which he has performed work.
- 8.1.6 For all new installed generator (including generators provided with a new building) the Contractor shall provide generator commissioning using a licensed generator technician. Commissioning shall include a 1 hour load bank test. Contractor shall notify the SPM and CQ 48 hours in advance of the commissioning, shall provide a copy of the commissioning results to the CQ within 24 of commissioning and shall include commissioning results in the closeout documents.

**8.2. SITE-SPECIFIC WORK**

- 8.2.1. Contractor shall install new 35KW generator (configured for propane vapor) with automatic transfer switch (ATS) in accordance to Plans and specifications.
- 8.2.2. Contractor shall upgrade electrical service with new 150 amp panel.
- 8.2.3. Contractor shall upgrade the electrical supply per the Plans.
- 8.2.4. Contractor shall install a new electrical circuit for the new HVAC unit.

**SECTION 9 – GROUNDING**

**9.1 GENERAL REQUIREMENTS**

- 9.1.1 Contractor shall install all new grounding and grounding upgrades required by the Project Plans and Statement of Work.
- 9.1.2 Contractor shall perform all grounding work in accordance with the Plans, the Statement of Work, and in accordance with current revision of the Harris Corporation Installation

Manual AE/LZT 123 4618/1 "Site Grounding and Lightning Protection Guidelines" (Harris Grounding) in addition to all applicable local, state, and national codes.

- 9.1.3 Contractor shall provide three point fall of potential test of the installed ground ring upon site completion. The testing procedure must be in conformance with Harris guidelines. This test requires an Owner's witness; therefore the contractor must schedule the test one (1) week in advance with the CQ and SPM. Contractor is not responsible for the resulting measured resistance (ohms) of the site ground system that has been installed according to the Plans and Harris Grounding Guidelines.
- 9.1.4 All below-grade grounding constructed as part of this contract requires inspection before back fill. Contractor shall schedule the grounding inspection, coordinating that schedule with the CQ at least 48 hours in advance.
- 9.1.5 In the event that there is a conflict between the Plans or Statement of Work and the Harris Grounding Guidelines, the Contractor shall request clarification through the SPM and CQ.
- 9.1.6 New buildings, tower, and ice bridge installs and grounding upgrades require new ground bar installations as shown in the Plans. Ground bar locations are at the tower (TGB) and interior (MGB) and exterior (EGB) of the entry port.
- 9.1.7 The Plans may not give a full representation of all required grounding bonds. Contractor shall bond all exterior metal components and structures per Harris Grounding Guidelines.

## **9.2 SITE-SPECIFIC WORK**

- 9.2.1 Contractor shall upgrade electrical grounding at the site to meet specifications in Attachment B, Section 9 – Grounding. to include but not limited to:
- 9.2.2 Install new or upgrade existing Shelter and tower exterior ground ring.
- 9.2.3 Install new Shelter / facilities Interior ground halo.
- 9.2.4 Grounding for fence, propane tank and generator
- 9.2.5 Grounding for existing and new coax cable at tower and for shelter entry port.
- 9.2.6 New master and secondary ground bus bars and tower bars.

## **SECTION 10 – LOW VOLTAGE/ALARMS/TELCO**

### **10.1. GENERAL REQUIREMENTS**

- 10.1.1. Reserved.

### **10.2. SITE-SPECIFIC WORK**

- 10.2.1. Reserved

## **SECTION 11 – EQUIPMENT SET AND TRANSPORTATION**

### **11.1. GENERAL REQUIREMENTS**

- 11.1.1. Contractor shall provide all permits, labor and equipment, including crane and trailers, needed for transporting equipment and materials to site location. This includes all highway permits, overweight permits, flagging, pilot cars, road work or any other additional cost items related to moving the shelter.

11.1.2. Contractor shall notify the SPM at least one (1) week prior to the desired shelter pickup date.

**11.2. SITE-SPECIFIC WORK**

11.2.1. Contractor shall provide all equipment and transportation to complete site work per the Plans.

**SECTION 12 – FIRE PROTECTION AND HVAC**

**12.1. GENERAL REQUIREMENTS**

12.1.1. For all new HVAC installs and refurbishments and new building installs the Contractor shall provide coordinate HVAC commissioning utilizing a licensed HVAC professional. Contractor shall notify the CQ and SPM 48 in advance of HVAC commissioning and provide copies of the commissioning report to the CQ within 24 hours of commissioning plus include copies in the closeout documents.

**12.2. SITE-SPECIFIC WORK**

12.2.1. Contractor shall provide and install a Bard 3 ton or equivalent HVAC unit in the existing shelter per the Plans.

12.2.2. Contractor shall provide commissioning of the new HVAC unit using a certified HVAC professional. Commissioning requires 48 hours' notice to the CQ and report delivered to the CQ within 24 hours of the commissioning plus included in the closeout packages.

**SECTION 13 – COMMUNICATION EQUIPMENT INSTALLATION AND TESTING**

**13.1. GENERAL REQUIREMENTS**

13.1.1. Reserved.

**13.2. STATEMENT OF WORK**

13.2.1. Reserved

**SECTION 14 – CUTOVERS, COORDINATION, DECOMMISSIONING, AND SITE DEMOLITION**

**14.1. GENERAL REQUIREMENTS**

14.1.1. Reserved.

**14.2. STATEMENT OF WORK**

14.2.1. Reserved

**SECTION 15 – EXISTING CONDITIONS AND DOCUMENTATION - THIS SECTION APPLIES TO THE PRE-BID STAGE OF THE PROCUREMENT ONLY**

If designated below as Applicable, the related documents are available for Bidders to review. Please contact Agency Contract Representative to arrange a date and time.

**A. Construction Pre-Construction Memo:**

Not Applicable

Applicable

Attached to bid package

To be provided before start of work

Comments:

**B. Environmental Reference Documents:**

1. Environmental Site Assessment

Not Applicable

Applicable

Attached to bid package

To be provided before start of work

Comments:

2. NEPA Report

Not Applicable

Applicable

Attached to bid package

To be provided before start of work

Comments:

3. FAA Approval

Not Applicable

Applicable

Attached to bid package

To be provided before start of work

Comments:

**C. Engineering Study Reference Documents:**

1. Tower Structural Analysis (including the Foundation Design)

Not Applicable

Applicable

Attached to bid package

To be provided before start of work

Comments:

2. Shelter Structural Analysis

Not Applicable

Applicable

Attached to bid package

To be provided before start of work

Comments:

3. Tower Mapping

Not Applicable

Applicable

Attached to bid package

To be provided before start of work

Comments:

4. Soil Resistivity Report

Not Applicable

Applicable

Attached to bid package

To be provided before start of work

Comments:

5. Geotechnical Evaluation

Not Applicable

Applicable

Attached to bid package

To be provided before start of work

Comments:

6. Survey

Not Applicable

Applicable

Attached to bid package

To be provided before start of work

Comments:

**D. Leasing Reference Documents:**

1. Fully Executed Lease

Not Applicable

Applicable   
Attached to bid package   
To be provided before start of work   
Comments:

**E. Utility Reference Documents:**

1. Easement Access

Not Applicable   
Applicable   
Attached to bid package   
To be provided before start of work   
Comments:

2. Utility Coordination Report

Not Applicable   
Applicable   
Attached to bid package   
To be provided before start of work   
Comments:

**F. Permitting Reference Documents**

1. Zoning Approval

Not Applicable   
Applicable   
Attached to bid package   
To be provided before start of work   
Comments:

2. Land Use Approval

Not Applicable   
Applicable   
Attached to bid package   
To be provided before start of work   
Comments:

3. Building Permit Application

Not Applicable



Applicable

Attached to bid package

To be provided before start of work

Comments: