



Contract Number: CT-IT-14*145
Effective Date: 10.15.13
Term Date: 10.14.18
Cost: ✓
Revenue: ✓
Total: NTE:
Action: 7.1.18
Renewal By:
Term: 10 14.18
Reviewed by: pk

BOARD OF SUPERVISORS AGENDA ITEM SUMMARY

Requested Board Meeting Date: October 15, 2013

ITEM SUMMARY, JUSTIFICATION &/or SPECIAL CONSIDERATIONS:

This Intergovernmental Agreement between Pima County Arizona, the US Department of Interior (DOI) and the U.S. Department of Homeland Security (DHS), grants permission for Pima County to utilize the Ajo Mountain Repeater Site for its radio communications facility.

Pima County Wireless Integrated Network (PCWIN) Wireless Services Division has an ongoing need for use of the Ajo Mountain Repeater Site to provide coverage for the entire Ajo area as a critical part of PCWIN Voice Radio System and will not function properly without it. The IGA is for Inter-Agency use of the facility for a period of 5 years, with four (4) 5-year renewals by mutual agreement of the parties.

CONTRACT NUMBER (If applicable): CT-IT- 140000000000000000145

STAFF RECOMMENDATION(S):

The Information Technology Department recommends that the Pima County Board of Supervisors adopt and the Chairman sign the Intergovernmental Agreement with the US Department of Interior (DOI) and the U.S. Department of Homeland Security (DHS) for Inter-Agency Use of the Ajo Mountain Repeater Site.

CORPORATE HEADQUARTERS: Washington, DC

Page 1 of 2

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To: CoB - 10.2.13
Agenda 10.15.13
(3)

CLERK OF BOARD USE ONLY: BOS MTG. _____

ITEM NO. _____

PIMA COUNTY COST: N/A and/or REVENUE TO PIMA COUNTY:\$ N/A

FUNDING SOURCE(S): N/A

(i.e. General Fund, State Grant Fund, Federal Fund, Stadium D. Fund, etc.)

Advertised Public Hearing:

		YES	X	NO
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Board of Supervisors District:

1		2		3	X	4		5		All	
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IMPACT:

IF APPROVED:

Pima County will continue to use the Ajo Mountain Repeater Site to provide coverage for the Ajo Area as part of PCWIN Wireless Services network.

IF DENIED:

Pima County will not have an agreement for use of the Ajo Mountain Repeater Site, and the PCWIN Wireless Services Division will have to consider other options to provide coverage for the Ajo Area.

DEPARTMENT NAME: Information Technology

CONTACT PERSON: Julie K McWilliams TELEPHONE NO.: 724-8066

Intergovernmental Agreement

between

**Pima County, the United States Department of Interior (DOI),
and the United States Department of Homeland Security (DHS)**

for

Inter-Agency Use of the Ajo Mountain Repeater Site

This Intergovernmental Agreement (IGA) is entered into by and between Pima County, a body politic and corporate of the State of Arizona ("County"), the United States Department of Interior (DOI), and the United States Department of Homeland Security (DHS) pursuant to A.R.S. § 11-952.

Recitals

- A. County, DOI and DHS may contract for services and enter into agreements with one another for joint or cooperative action pursuant to A.R.S. § 11-951, et seq.
- B. County is authorized by A.R.S. § 11-952 et seq.
- C. DOI is authorized by The Superintendent of Organ Pipe Cactus National Monument, by virtue of his/her position has the authority to enter into agreements which are restricted in scope to the internal management of the Monument.
- D. DHS is authorized by The Homeland Security Act of 2002, as amended, Pub. L. 107-296 (November 25, 2002), codified in Title 6, U.S. Code; The Immigration and Nationality Act, as amended, Publ. L. 82-414 (June 27, 1952), codified in Title 8, U.S. Code; 8 U.S.C. § 1103(c); Delegation of Authority to the Commissioner of U.S. Customs and Border Protection, Delegation No. 7010.3.
- E. County, DOI and DHS desire to enter into an inter-agency agreement regarding the use, maintenance, and repair of the Ajo Mountain repeater site.

NOW, THEREFORE, County, DOI and DHS, pursuant to the above, and in consideration of the matters and things hereinafter set forth, do mutually agree as follows:

Agreement

- 1. **Purpose.** The purpose of this IGA is to enter into an inter-agency agreement regarding the use, maintenance, and repair of the Ajo Mountain repeater site.
- 2. **Scope.**
 - A. Definitions
Ajo Mountain Repeater Site: Refers to the repeater site located on top of Ajo Mountain consisting of a radio shack, radio tower, solar panels, grounding equipment, and radio equipment.

Ajo Mountain Repeater Working Group: Comprised of representatives from all stakeholders utilizing the Ajo Mountain Repeater Site. At the time of this agreement, the group is comprised of representatives from the Ajo Border Patrol Station, Organ Pipe Cactus National Monument, Pima County Sheriff's Department (Ajo District), Pima County Information and Technology (PCIT), and Customs and Border Protection Office of Information and Technology.

B. Background

The Ajo Mountain repeater site (the site) is utilized by components of the DOI, DHS, and PC; specifically, the National Park Service (NPS) from the Organ Pipe Cactus National Monument (OPCNM) and Bureau of Land Management (BLM) from DOI, the U.S. Border Patrol Ajo Station from DHS, and the Ajo District of the PCSD. Each component has installed radio equipment at the Ajo Mountain site.

The site is powered via solar panels installed at the site that generate power stored in external batteries. These batteries are intended to extend the communication capabilities of the repeater for up to eight days should the solar panels fail. The site is remotely monitored by Customs and Border Protection (CBP) Office of Information and Technology (OIT) officers. Due to the remote location of the site, it can only be accessed by helicopter. Due to the nature of the site, technology disruptions occur frequently causing the repeater site to fail. This a significant officer safety concern for all parties.

A Pepro LLC equipment shelter was selected for the site and purchased by OPCNM. This shelter was selected because it had the least impact on the terrain due to its four-corner mounting and attached, self-supporting antenna mast. The solar system and battery bank were designed and purchased by CBP. In May of 2010, OPCNM did the site development construction at the site. In April of 2010, CBP installed the shelter and solar system. Both agencies shared the costs of construction and installation. All but two solar panels were purchased by the Border Patrol. The other two were purchased by Pima County.

In response to a prolonged period of technology failure, representatives from the OPCNM, Ajo Border Patrol Station, CBP OIT, and PCSD met on February 12, 2013, to determine the extent of the failure and develop a strategy to repair the site. During the meeting, it was determined that an Intergovernmental Agreement (IGA) needed to be developed in order to maintain the site and identify the roles and responsibilities of all stakeholders. Extensive research was done to determine if there was any existing IGA. While a draft did exist, it was incomplete. This document serves to fulfill the goal of a site IGA set forth in the February 12 meeting.

C. Responsibilities

1) Ajo Mountain Repeater Site Work Group

The site will be managed by a working group consisting of representatives from the OPCNM, BLM, U.S. Border Patrol Ajo Station, PCSD, PCIT, and CBP OIT. All parties will submit a primary point of contact for the working group who will be responsible for attending meetings regarding management of the site and representing their respective agency. That list will become an attachment to this document. Each respective agency is responsible for providing updates to the point of contact list when a change in the primary point of contact occurs. This list will be maintained by the Ajo Border Patrol Station. Any other agency seeking to install equipment at the site must submit their request to the group in writing and provide a detailed description of what equipment will be brought in.

Any agency having any equipment at the site must provide a list of all equipment (including a description of the equipment, serial number, the name of the agency it belongs to, and a point of contact) in use and stored at the site. This list will be updated when there are any changes and will be maintained by the Ajo Border Patrol Station. Each agency will be responsible for and resolve any interference caused by their equipment. Any technician performing work at the site must leave the as if it were undisturbed, with nothing left behind other than the site equipment. Any and all items deemed trash must be removed from the site and appropriately discarded. All items not deemed trash left behind for later use must be clearly marked as to whom they belong and a contact number. Any item left behind and not marked shall be deemed trash and removed from the site.

A description of any planned changes, modifications, new installations, upgrades, and repairs will be provided in writing to the working group as soon as practicable, but before the modifications are made. Specifically, the description will include a list of all equipment to be removed, all equipment to be installed, and how much power the equipment will draw. Modification plans will be subject to a thirty (30) day comment period by the working group to ensure that the modification will not interfere with the current operation of the site. All changes must then be agreed to by all parties in the working group. The working group will then provide written authorization for the proposed change/modification. Any significant change falling outside of the scope of the current environmental clearance for the site must be brought before the work group for discussion and approved by the work group before any additional environmental assessment takes place.

OPCNM is responsible for the structure and antennae mast. CBP is responsible for the solar system and battery bank. Border Patrol and Pima County are responsible for the repair of their respective solar panels. However, because failure of any of these individual components has the potential to negatively impact all members of the group, when any party cannot maintain their portion of the site for any reason, that agency will notify the group in writing. Every effort will be made to pool resources

to ensure the site operates at full capacity.

2) Equipment Violations

Any unauthorized equipment found in use at the site will be immediately disconnected and removed from the site without advance notice to the owner of the unauthorized equipment. The individual who removes the unauthorized equipment will notify their working group representative who will in turn notify the entire group. The notification should include what was removed, when it was removed, and current location of the equipment.

If any agency is found to be in violation of this agreement, the working group will convene to discuss the violation and determine a resolution. Any resolution will include a detailed description of the violation, provide a remedy, and set a reasonable deadline for that remedy to take place. If the agency in violation fails to remedy the violation without proper cause or explanation, the group will notify the agency in writing that their equipment will be removed. The violator will then have thirty (30) calendar days to remove their equipment from the site. After the provided date, the working group will designate a technician to remove the violator's equipment.

3) Site Visits

All site visits will be announced to the working group with as much advance notice as possible. Should an agency need to conduct a site visit but not have the means to access the site, every effort should be made by the other members of the working group to provide assistance in accessing the site, if possible. All agencies are responsible for the maintenance of the site. At a minimum, general maintenance should be conducted twice a year based on a schedule to be decided by the working group and technicians from each agency. A report of general findings will be written upon completion of the maintenance inspection and shared with the working group. Where possible, all trips to the site will be shared with the working group in advance and coordination between all parties to ensure parts sharing and use of a helicopter. If any parts are needed for site repair or maintenance, the information will be reported to the working group. Every agency will make every effort to share parts when possible.

All members of the group will provide contact information for a technician that can service the site. When the site goes down, the matter will be reported to the Ajo Border Patrol Station shift Watch Commander. The Watch Commander will report the problem to the working group via email. The Watch Commander will be responsible for calling the technicians to coordinate a rapid response to diagnose the problem. Once the problem is diagnosed, the technician will report it to the working group and fix the problem if possible. If not, recommendations will be sent to the working group who will meet to coordinate the repair.

4) Technical Standards

The Pepro equipment shelter and attached antenna mast at the Ajo site was designed to accommodate a limited amount of equipment and antennas, shown on attachments 1 and 2.

Each user has a designated equipment rack for its radios, is using pre-approved operating frequencies that were included in an inter-modulation study, and has a pre-approved antenna of a specific model that is located at a designated location on the antenna mast.

Because the shelter, PV solar system, and antenna mast were designed to exact radio and antenna specifications it is critical that any change or modification at the site be kept within the approved technical limits of the Pepro shelter. This is especially important for the antenna mast, which was engineered for a total of 8 antennas, each a specific model. When all of these antennas are mounted, the antenna mast wind load is only ninety (90) miles per hour. This is the minimum allowable safety margin. Therefore, no additional antennas will be allowed on the mast unless installation can be accomplished without increasing the mast's wind load.

All equipment must be licensed for the Ajo Mountain site by the National Telecommunications and Information Administration (NTIA) or the Federal Communications Commission (FCC).

Copies of all frequency authorizations will be provided to the group, maintained by the Ajo Border Patrol Station, and added as an attachment to this document.

All equipment shall be labeled with the owner's name, address, contact information, and frequencies (i.e. transmit, receive, and any tone control frequencies).

All equipment shall be enclosed in manufacturers "factory-housing" with appropriate covers in place, or properly mounted in industry-standard equipment racks and that are properly grounded. Each user's equipment will be limited to the rack space allotted when the shelter was designed.

Transmitters

All transmitter installations shall minimize spurious radiation and intermodulation products with isolators and cavities. At a very minimum, a single stage isolator (typical isolation 25 dB) will be used. A dual stage isolator (typical isolation 50 dB) is recommended, and will be mandatory in cases where harmful interference results from transmitter mixing.

All isolators will be followed by bandpass cavities in order to prevent interference from harmonics or noise produced by isolators.

The direct radiation of out-of-band emissions shall be reduced to a minimal level

such that the emissions may not be identified as a source of interference as defined in FCC rules and regulations.

All transmitters not in immediate use shall be removed from the radio site.

Receivers

All receivers will have sufficient “front end” pre-selection or installed cavities to prevent receiver-produced crosstalk or intermodulation.

A bandpass device (cavity, crystal filter, etc.) is recommended at the input of all receiving devices. A cavity, or other protective device, should be placed between the antenna and the receiver to prevent an antenna from seeing a non-linear device such as the first RF amplifier in a receiver.

Where duplexing is used, a bandpass device must be used with the transmitter. A notch type device works well at protecting the system receiver but does little to reject broadband transmitter noise that can affect other systems.

Antennas

All broken, defective, or unnecessary antennas and associated hardware will be removed from the radio site.

Transmission Lines

All transmission lines are to be supported in accordance with the manufacturers specifications. Plastic ties and/or galvanized/stainless steel hangers are to be used when securing transmission lines. No hardware of any kind that will rust may be used. Non-metallic attachments are encouraged.

Jacketed or double-shielded transmission line is required is required to all antennas. Double-shielded braid or solid outer conductor coaxial cable must be used for all connections between the radio, duplexers, filters, etc. RG-8, or equivalent braided shield type cable, is not permitted. No transmission line shall be left un-terminated.

Type “N” connectors are preferred over other types. No adapters may be used.

D. Technical Conflict Resolution

The best method of avoiding interference problems is through site planning, strict adherence to the terms and conditions of this Agreement, and cooperation between users. However, where evidence from analysis supports a probable interference problem:

- Involved systems will be identified and checked for compliance with technical standards. Specific equipment, notch filters, crystal filters, dual

isolators, and/or bandpass devices may be required. The need for this equipment will be determined on a case-by-case basis.

- Users not in compliance with these standards will be given thirty (30) days to comply. After thirty (30) days they will be in violation of the Agreement.

Interference problems should be resolved by verifying adherence with the required protection measures included in this Agreement. Where violations create irreconcilable problems, the user will terminate the incompatible use.

3. **Financing.** Any funding expended in furtherance of this Intergovernmental Agreement shall not violate the Anti-Deficiency Act, 31 U.S.C. § 1341 nor the Adequacy of Appropriations Act, 41 U.S.C. § 11.

Each party will be responsible for its own incurred costs at the Ajo Mountain repeater site. Maintenance/upkeep of the facility will be provided by the National Park Service. Any change to this financial agreement will be by written Amendment.

4. **Term.** This IGA shall be effective on the date it is fully executed by all parties and shall continue for a period of five (5) years and may be renewed for up to four (4) additional five-year periods unless it is, prior to the expiration of such period, extended or terminated by agreement of the parties.

This IGA will terminate upon written agreement of the parties. Any party can individually terminate its participation in this agreement at any time via written notification to the other parties.

5. **Disposal of Property.** Upon the termination of this IGA, all property involved shall revert back to the owner. Termination shall not relieve any party from liabilities or costs already incurred under this IGA, nor affect any ownership of property pursuant to this IGA.
6. **Indemnification.** Each party (as Indemnitor) agrees to indemnify, defend and hold harmless the other party (as Indemnitee) from and against any and all claims, losses, liability, costs or expenses (including reasonable attorney's fees) (hereinafter collectively referred to as "claims") arising out of bodily injury of any person (including death) or property damage, but only to the extent that such claims which result in vicarious/derivative liability to the Indemnitee, are caused by the act, omission, negligence, misconduct, or other fault of the Indemnitor, its officers, officials, agents, employees, or volunteers.
7. **Insurance.** Each party shall obtain and maintain at its own expense, during the entire term of this Contract the following type(s) and amounts of insurance:

- a) Commercial General Liability in the amount of \$1,000,000.00 combined single limit Bodily Injury and Property Damage.

- b) Commercial or Business automobile liability coverage for owned, non-owned and hired vehicles used in the performance of this Contract with limits in the amount of \$1,000,000.00 combined single limit or \$1,000,000.00 Bodily Injury, \$1,000,000.00 Property Damage.
- c) If this Contract involves professional services, professional liability insurance in the amount of \$1,000,000.00.
- d) If required by law, workers' compensation coverage including employees' liability coverage.

Parties to this agreement shall provide thirty (30) days written notice to all parties to this IGA of cancellation, non-renewal or material change of coverage.

The above requirement may be alternatively met through self insurance pursuant to A.R.S. §§ 11-261 and 11-981 or participation in an insurance risk pool under A.R.S. § 11.952.01 at no less than the minimal coverage levels set forth in this article. Parties to this agreement shall provide thirty (30) days written notice to all other parties of cancellation, non-renewal or material change of coverage.

- 8. **Compliance with Laws.** The parties shall comply with all federal, state and local laws, rules, regulations, standards and Executive Orders, without limitation to those designated within this IGA. The laws and regulations of the State of Arizona shall govern the rights of the parties, the performance of this IGA and any disputes hereunder. Any action relating to this IGA shall be brought in an Arizona court in Pima County.
- 9. **Non-Discrimination.** The parties shall not discriminate against any County employee, client or any other individual in any way because of that person's age, race, creed, color, religion, sex, disability or national origin in the course of carrying out their duties pursuant to this IGA. The parties shall comply with the provisions of Executive Order 75-5, as amended by Executive Order 2009-09, which is incorporated into this IGA by reference, as if set forth in full herein.
- 10. **ADA.** The parties shall comply with all applicable provisions of the Americans with Disabilities Act (Public Law 101-336, 42 U.S.C. 12101-12213) and all applicable federal regulations under the Act, including 28 CFR Parts 35 and 36.
- 11. **Severability.** If any provision of this IGA, or any application thereof to the parties or any person or circumstances, is held invalid, such invalidity shall not affect other provisions or applications of this IGA which can be given effect, without the invalid provision or application and to this end the provisions of this IGA are declared to be severable.
- 12. **Conflict of Interest.** This contract is subject to cancellation for conflict of interest pursuant to A.R.S. § 38-511, the pertinent provisions of which are incorporated herein by reference.

13. **Non-Appropriation.** Notwithstanding any other provision in this IGA, this IGA may be terminated if for any reason the Pima County Board of Supervisors does not appropriate sufficient monies for the purpose of maintaining this IGA. In the event of such cancellation, Pima County shall have no further obligation to the United States Department of Interior (DOI) and the United States Department of Homeland Security (DHS) other than for payment for services rendered prior to cancellation.
14. **Legal Authority.** Neither party warrants to the other its legal authority to enter into this IGA. If a court, at the request of a third person, should declare that either party lacks authority to enter into this IGA, or any part of it, then the IGA, or parts of it affected by such order, shall be null and void, and no recovery may be had by either party against the other for lack of performance or otherwise.
15. **Worker's Compensation.** Each party shall comply with the notice of A.R.S. § 23-1022 (E). For purposes of A.R.S. § 23-1022, irrespective of the operations protocol in place, each party is solely responsible for the payment of Worker's Compensation benefits for its employees.
16. **No Joint Venture.** It is not intended by this IGA to, and nothing contained in this IGA shall be construed to, create any partnership, joint venture or employment relationship between the parties or create any employer-employee relationship between County and any other party's employees, or between any other party or parties and any County employees. Neither party shall be liable for any debts, accounts, obligations or other liabilities whatsoever of the other, including (without limitation) the other party's obligation to withhold Social Security and income taxes for itself or any of its employees.
17. **No Third Party Beneficiaries.** Nothing in the provisions of this IGA is intended to create duties or obligations to or rights in third parties not parties to this IGA or affect the legal liability of either party to the IGA by imposing any standard of care with respect to the maintenance of public facilities different from the standard of care imposed by law.
18. **Notice.** Any notice required or permitted to be given under this IGA shall be in writing and shall be served by delivery or by certified mail upon the other party as follows (or at such other address as may be identified by a party in writing to the other party) :

County:

Lionel H. Bittner, CIO
Pima County IT Department
33 North Stone Avenue, 17th Floor
Tucson, Arizona 85701
Tel: 520-724-8113
Fax: 520-838-7420

DOI:

Matthew D Vandzura
Acting Superintendent
Organ Pipe Cactus National Monument
10 Organ Pipe Drive
Ajo, Az 85321
Tel: 520-387-7661 x 7500
Fax: 520-387-7663
Cell: 520-235-6765

DHS:

Devin Reno
Supervisory Border Patrol Agent
Ajo Border Patrol Station
850 N. Highway 85
Why, AZ 85321
O: (520) 387-7002 Ext. 2715
C: (618) 201-2335

With copies to:

County Administrator
130 West Congress Street, 10th Floor
Tucson, Arizona 85701

Clerk of the Board
130 West Congress, 5th Floor
Tucson, Arizona 85701

- 19. Entire Agreement.** This document constitutes the entire Agreement between the parties pertaining to the subject matter hereof, and all prior or contemporaneous agreements and understandings, oral or written, are hereby superseded and merged herein. This IGA shall not be modified, amended, altered or extended except through a written amendment signed by the parties and recorded with the Pima County Recorder, or Arizona Secretary of State, whichever is appropriate.

This document constitutes an inter-governmental arrangement between the Parties and does not create or confer any rights, privileges, or benefits upon any person, party, or entity. This IGA is not and shall not be construed as a rule or regulation.

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In Witness Whereof, County has caused this Intergovernmental Agreement to be executed by the Chairman of its Board of Supervisors, upon resolution of the Board and attested to by the Clerk of the Board; DOI and DHS have caused this Intergovernmental Agreement to be executed by the parties upon resolution of the Intergovernmental Agreement and attested to by:

PIMA COUNTY:

DEPARTMENT OF INTERIOR

Chairman
Board of Supervisors



Signature


ATTEST:

ATTEST:

Clerk of the Board

Signature

DEPARTMENT OF HOMELAND SECURITY:



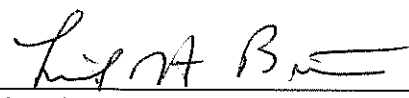
Signature

ATTEST:

Signature

Approval

The foregoing Intergovernmental Agreement between Pima County, the Department of Interior, and the Department of Homeland Security has been reviewed by the undersigned, and is hereby approved as to content.

 4-26-13

Lionel H. Bittner
Pima County Chief Information Officer

Intergovernmental Agreement Determination

The foregoing Intergovernmental Agreement between Pima County, the United States Department of Interior, and the United States Department of Homeland Security has been reviewed pursuant to A.R.S. § 11-952 by the undersigned, who have determined that it is in proper form and is within the powers and authority granted under the laws of the State of Arizona to those parties to the Intergovernmental Agreement represented by the undersigned.

DEPARTMENT OF INTERIOR:




Signature

9/3/13

Date

DEPARTMENT OF HOMELAND SECURITY:

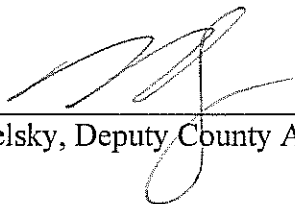


Signature

9/16/13

Date

PIMA COUNTY:



Marc Natelsky, Deputy County Attorney

8/30/13

Date

Exhibit A: Statement of Work

Ajo Mountain – Statement of Work

Project Location

Ajo Mountains, Organ Pipe Cactus National Monument – Site Code "AJOMTN"
Western Pima County, AZ
(32° 01' 39"; -112° 41' 27")

The following Exhibits are referenced in this section:

Exhibit A: AJO MT Equipment Layout
Exhibit B: AJO MT Block Diagram

System Description

The Ajo Mountain site is an existing remote site in the western part of Pima County. This site is helicopter access only, and therefore requires radio equipment with low power requirements to facilitate the use of solar energy supply at the site. As part of the system design, this site is being equipped with Fixed Mount Digital (Vehicle) Repeaters and serves as a coverage extension to the Jewek Mountain trunked repeater site.

The site consists of the following major devices:

- Two Digital Repeater Systems (DRS)

Conventional Site Antenna System

The following information describes the antenna systems:

1. **Transmit and Receive Antennas** – the following antennas are used at this site:
 - a. TX/RX: (Qty 2) Antel BCD-8007, 6.5 dB Omni directional mounted at the 20' elevation.
 - b. TX/RX: (Qty 2) DB499A, 10 dB Yagi directional mounted at the 15' elevation.
2. **Transmission Line** - The Transmit lines use ½ inch LDF, and ½ inch SuperFlex. The attenuation for 1/2 inch Heliax is 1.13 dB per 100 feet.
3. **Surge Suppression** - Surge suppression devices are provided for all antenna transmission lines.

The DRS equipment for this location is provided in an indoor enclosure that is configured for a rack mount application. There are no microwave connectivity requirements for this site location. Line of site with the Jewek Mountain trunked repeater site is required.

Equipment Enclosure

The Motorola DRS indoor cabinets (two each) will be mounted in the center rack in the OPCNM building on the summit of Ajo Mountain (Refer to Exhibit A: AJO MT Equipment Layout)

Cabinet Dimensions: Height / Width / Depth	520mm (20.5") x 520mm (20.5") x 230mm (9")
Enclosure type	Wall mount, steel box

Solar Panel Power and Battery System Specifications

Provided by CBP and OPCNM.

Communication Tower

The contractor shall install Two Antel BCD-8007 omni-directional antennas and two DB499-A directional yagi antennas (aimed toward Jewek Mountain) to masts; which would then be installed onto the DHS owned battery enclosure.

Block Diagram

Exhibit B: AJO MT Block Diagram

Ajo Mtn.

Exhibit B: AJO MT Block Diagram

Solar Panels will be mounted on the building on the south facing wall

* Equipment layout final, DC distribution subject to change.

