

Inventory of Equipment Schedule – Attachment #1
RFP L262301

QTY	SYSTEM COMPONENTS	VOLTAGE/AMPERAGE	LOCATION	NOTES
1	Vacuum Breaker/Relay Metering Controller SEL 351	25 kV / 200 amp	Bonita Switch	Preventative Maintenance: Oil Filled Transformer, 14,900 to 4160 Frequency of oil samples to be every three years, or as requested by MGIO. Bonita Switch – 266 – Step down transformer, ground level, inside reactor cabinet. Reactor Control. SW-4 – Step down transformer x 3, ground level, inside breaker cabinet. Trip controls. Notes: Graham County leaves their source available. MGIO will open the vacuum breaker switches to take the load off the mountain and de-energize the commercial line. 1. Vendor is responsible for all lockout/tagout procedures. Vendor must budget 5-6 hours just for LO/TO procedure. 2. Vendor is responsible for putting on all the grounding operations and equipment. 3. MGIO does not have drawings for the (F-1) switch and the Vacuum Fault Interrupter at the Bonita Site.
3	Shunt Reactors (PT)	25 kV/ 450 kVAR	In route to site	Preventative Maintenance Required Oil Filled Transformers 14, 400-120 Frequency of oil samples to be every three years, or as requested by MGIO. SR-1 Shunt Reactor - Base Access Road, Step down transformer, ground level, inside reactor cabinet. Reactor control. SR-2 Shunt Reactor – Shannon – Step Down Transformer, ground level, inside reactor cabinet. Reactor control. SR-3 Shunt Reactor – 266 - USFS Boundary – Step down transformer, ground level, inside reactor cabinet, reactor control.
3	Transfer Switches	25 kV	PMH-9, PMH-5, PMH-12 Series	Preventative Maintenance Required PMH-9 SW-1 Automatic Transfer Switch PMH-5 SW-2 Switch – Base Access Road PMH-12 SW-3 Interrupter - LBT
1	Disconnect Switch	25 kV	Utility Building Entry Pad	Preventative Maintenance Required SW-4

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23	23 Miles Medium Voltage Cable (underground)	35 kV / 200 amp	From Bonita Relay to MGIO Site and Columbine Work Center	Preventative Maintenance Not Required. However, this equipment may fall into <i>Additional Services</i> (reference Section 5.9) as needed. NOTE: New T-body isolate cable was installed in 2010. The 35KV cable is bundled and each run reconnected with a splice ring. (The OKONITE Company, 1/ 3/0 MCM 35 KV 3/C/3/ MCM 35KV.) To date there have not been able cable failures or hot spots. 1. Cable testing, (Hipod AC VLF insulation resistance) will be at the discretion of MGIO and is not part of this scope of work. 2. MGIO is responsible for the annual insulation incidence. 3. MGIO has the ability to locate all splices and balls. Four day are allowed for cable maintenance, if needed.
7	Sectionalizing Cabinets	25 kV	Various locations along cable (~ every 3 miles)	Preventative Maintenance Required SC-1 – Columbine. Clean and check for hot spots and perform general house- keeping. MGIO requires LO/TO from the Forest Service Generator to meter box to prevent back feed. SC-2 – Base of Access Road SC-3 – Cunningham Trail SC-4 – Shannon Campground SC-5 – 132, Route 366 SC-6 – Mile post 117 Route 266. Open cabinet, clean and check for hot spots, perform general housekeeping and wipe clean. No PM service required on the Forest Service Generator. SC-7 – State Forest Route
6	Transformers (oil filled)	25 kV / 480 V or 208 V	Various Buildings on site	Preventative Maintenance required Oil filled transformers, 24,900~480, 480Y/277, 208Y/120 or 480 to 24,900. Frequency of oil samples to be every three years, or as requested by MGIO. TR0-1- Step up transformer 2nd level deck outside Utility Building. Sit when on generator. TR0-2 – Step down transformer, ground level, outside Utility Building. Utility Building TR-3 – Step down transformer, ground level, inside Utility building

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				Note: Low voltage transformer 480-208Y/120. TR0-4 – (VATT) Step down transformer, ground level, outside the Vatican, Vatican Building. TR0-5 (SMT) Step down transformer, ground level, outside the SMT. SMT Building. TR0-6 Step down transformer, ground level, outside the LBT. LBT fire pump.
1	Transformer (dry)	480 V/120 V-150 kVA	Utility Building on site	Preventative Maintenance Required T-1 (LBT) Step down transformer, ground level inside the LBT Equipment 5-15kV 501-5-00 Dry Type Transformer 24,900 to 4160 NOTE: Reference requirements for entering LBT Building.
4	Switchgear Panels/Breakers	480 V	Utility Building on site	Preventative Maintenance Required CB1 – Generator CB2 – Generator Backup CB3 – Commercial Power CB10 – Transformer
2	Distribution Panels	480 V	Utility Building on site	Preventative Maintenance Required
1	Electrical Distribution Vault Main Vault Cherry Stem	14 V 425 Amperage	Top of the Access Road adjacent to the SMT 6	Preventative Maintenance Required. Frequency to be every three years, or, as needed by MGIO. Confined space vault with load breaker switches 3-3-3 Feeds the three telescopes. 1. MGIO does not have any drawings for this vault 2. No ultrasounds have been performed on this vault. 3. Confined Space Permit Required. Reference https://risk.arizona.edu/occupational-safety/confined-space-entry, and their written program is here: University of Arizona's Confined Space Entry Program