3. Coordinate with the Engineer and the utility provider for metering and compliance with utility requirements. Primary line extensions, connection charges, meter charges, and other charges by the utility company to provide power to the location are paid for the entity that owns the signal. Get approval for the costs associated with these charges prior to engaging the utility company to do the work. Consult with the utility provider to determine costs and requirements, and coordinate the work as approved.
4. The enclosure manufacturer will provide Master Lock Type 2 with brass tumblers keyed #3540 for all custom electrical enclosures. Installing Contractor is to provide Master Lock #3540 Type 2 with brass tumblers for "off the shelf" enclosures. Master Lock #3540 keys and locks become property of the City. Unless otherwise approved, do not energize electrical service equipment until locks are installed.
5. When galvanized is specified for nuts, screws, bolts or miscellaneous hardware, stainless steel may be used.
6. Provide wiring and electrical components rated for 75°C. Provide red, black, and white colored XHHW service entrance conductors of minimum size 6 American Wire Gauge (AWG). Identify size 6 AWG conductors by continuous color jacket. Identify electrical conductors sized 4 AWG and larger by continuous color jacket or by colored tape. Mark at least 6 inches of the conductor's insulation with half laps of colored tape, when identifying conductors. Ensure each service entrance conductor exits through a separately bushed on-metallic opening in the weatherhead. The lengths of the conductors outside the weatherhead are to be 12 inches minimum, 18 inches maximum, or as required by utility.
7. All electrical service conduit and conductors attached to the electrical service including the riser or the elbow below ground are subsidiary to the electrical service. For an underground utility feed, all service conduit and conductors after the elbow, including service conduit and conductors for the utility pole riser when furnished by the Contractor, will be paid for separately.
8. Provide rigid metal conduit (RMC) for all conduits on service, except for the 1/2 in. PVC conduit containing the electrical service grounding electrode conductor. Size the service entrance conduit as shown in the plans. Extend all rigid metal conduits a minimum of 6 inches underground and then couple to the type and schedule of the conduit shown on the layout for that particular branch circuit. Install a grounding bushing on the RMC where it terminates in the service enclosure.
9. Ensure all mounting hardware and installation details of services conform to utility company specifications.
10. When providing an "Off The Shelf" service, provide laminated plan sheets detailing equipment and branch circuits supplied by that service. Reduce 11 in. x 17 in. plan sheets to 8 1/2 in. x 11 in before laminating. Deliver these drawings before completion of the work to the Engineer, instead of placing in enclosure that has no door pocket.
11. Do not install conduit in the back wall of a service enclosure where it would penetrate the equipment mounting panel inside the enclosure. Provide grounding bushings on all metal conduits, and terminate bonding jumpers to grounding bus. Grounding bushings are not required when the end of the metal conduit is fitted with a conduit sealing hub or threaded boss, such as a meter base hub.

VI. GROUND PULL BOXES

A. MATERIALS

1. Provide ground boxes compliant with the most recent City of Austin standard details 834S-1, 834S-2, 834S-3, 834S-4, 834S-5, 834S-6,834S-7, and 834S-8.
2. Provide Type A, B, C, and D ground boxes as shown in the plans.
3. Ensure each ground box cover is correctly labeled.
4. Provide larger ground boxes, approved by the Engineer, if called for in the plans.

B. CONSTRUCTION METHODS

1. Remove all gravel and dirt from conduit. Cap all conduits prior to placing aggregate and setting ground box. Ensure aggregate bed is in place and at east 9 inches deep, prior to setting the ground box. Install ground box on top of aggregate. Aggregate should not intrude into the ground box enclosure.
2. Install all conduits and ells in a neat and workmanlike manner. Uniformly space conduits so grounding bushings and bell end fittings can easily be installed.
3. Temporarily seal all conduits in the ground box until conductors are installed.
4. Permanently seal conduits immediately after the completion of conductor installation and pull tests. Permanently seal the ends of all conduits with duct seal, expandable foam, or other method as approved. Do not use duct tape as a permanent conduit sealant. Do not use silicone caulk as a sealant.
5. When a ground rod is present in a ground box, bond all equipment grounding conductors together and to the ground rod with listed connectors.
6. If an existing ground box in the contract has a metal cover, bond the cover to the equipment grounding conductor with a 3 ft. long stranded bonding jumper the same size as the grounding conductor. The bonding jumper is subsidiary to various bid items. Verify existing ground boxes with metal covers are shown on the plans, with notes fully describing the work required.
7. If other ground boxes with metal covers are within the project limits but are not part of the contract, the Engineer may direct the Contractor to bond the metal covers, identifying the specific boxes in writing. This work will be paid for separately.
8. Bond metal ground box covers to the grounding conductor with a tank ground type lug.
9. Uniformly space ends of conduits within the ground box. Position ends of conduits so that ground box walls do not interfere with the installation of grounding bushings or bell end fittings.
10. Maintain sufficient space between conduits to allow for proper installation of bushing.
11. Install a grounding bushing on the upper end of all RMC terminating in a ground box. Ground RMC elbows when any part of the elbow is less than 18 in. below the bottom of the ground box. Install a PVC bushing or bell end fitting on the upper end of all PVC conduits terminating in a ground box.