## SINGLE-PHASE UNDERGROUND LINE EXTENSIONS

### REQUIREMENTS

The overhead/underground differential payment for single-phase underground line extensions to individuals as well as within subdivisions is usually satisfied if the customer provides all trenching, backfilling (including any imported backfill required), compaction, repaving, and all earthwork required for equipment pad sites. TEP reserves the right to design any single phase underground distribution system in a duct. For such installations, the following basic rules are applied.

1) All trenches shall comply with TEP's trenching and backfill requirements (joint and non-joint trenches).
2) Property corner pins must be identified and left in place and/or re-established in place for TEP inspectors' use in placing stakes for transformers, pullboxes, J1's, pedestals and backfill inspections.
3) The customer is responsible for the trench and/or excavation being properly located within specified easements and/or rights-of-way. All relocation costs resulting from improperly located trenches shall be borne by the customer.

## THREE-PHASE UNDERGROUND LINE EXTENSIONS

### REQUIREMENTS

The overhead/Underground differential payment for the three-phase underground line extensions is usually satisfied by the customer providing all earthwork and installing all necessary ducts, concrete pads, pole risers and other appurtenances as specified on the applicable TEP Standards for these items. Each installation will require advanced layout and approval by TEP as to satisfying the differential cost in this manner. The customer is responsible for the trench and/or excavation being properly within specified easements and/or right-of-way. All relocation costs resulting from improperly located trenches shall be borne by the customer.

1) Layout of the electrical system completed.

2) Obtain easements and agreements as possible.

3) Customer installs duct system and calls for inspection before backfilling the trench. Any concrete encased duct must be inspected prior to and after the pouring of concrete, but prior to backfilling the trench. After duct has been inspected and passed, customer to shade duct and install other utilities. A minimum of one foot seperation is required between TEP and other utilities.

4) Customer completes backfill and compaction as required.

5) Customer installs TEP approved precast pad or frames the concrete pad and calls for inspection.

6) Customer pours concrete pad, removes frame work and calls for a final inspection.

7) Customer installs pull rope and calls for mandrel inspection. Note: All contingencies must be satisfied prior to mandrel inspection including any billable costs, deposits and/or easements.

8) TEP installs the primary cable and pad-mounted transformer(s). Service point of delivery is typically at the secondary terminals in the transformer. Customer to furnish and install service conductors from the TEP transformer to the customers switchgear. **The service conductor size will be no greater than 500 kcmil**.