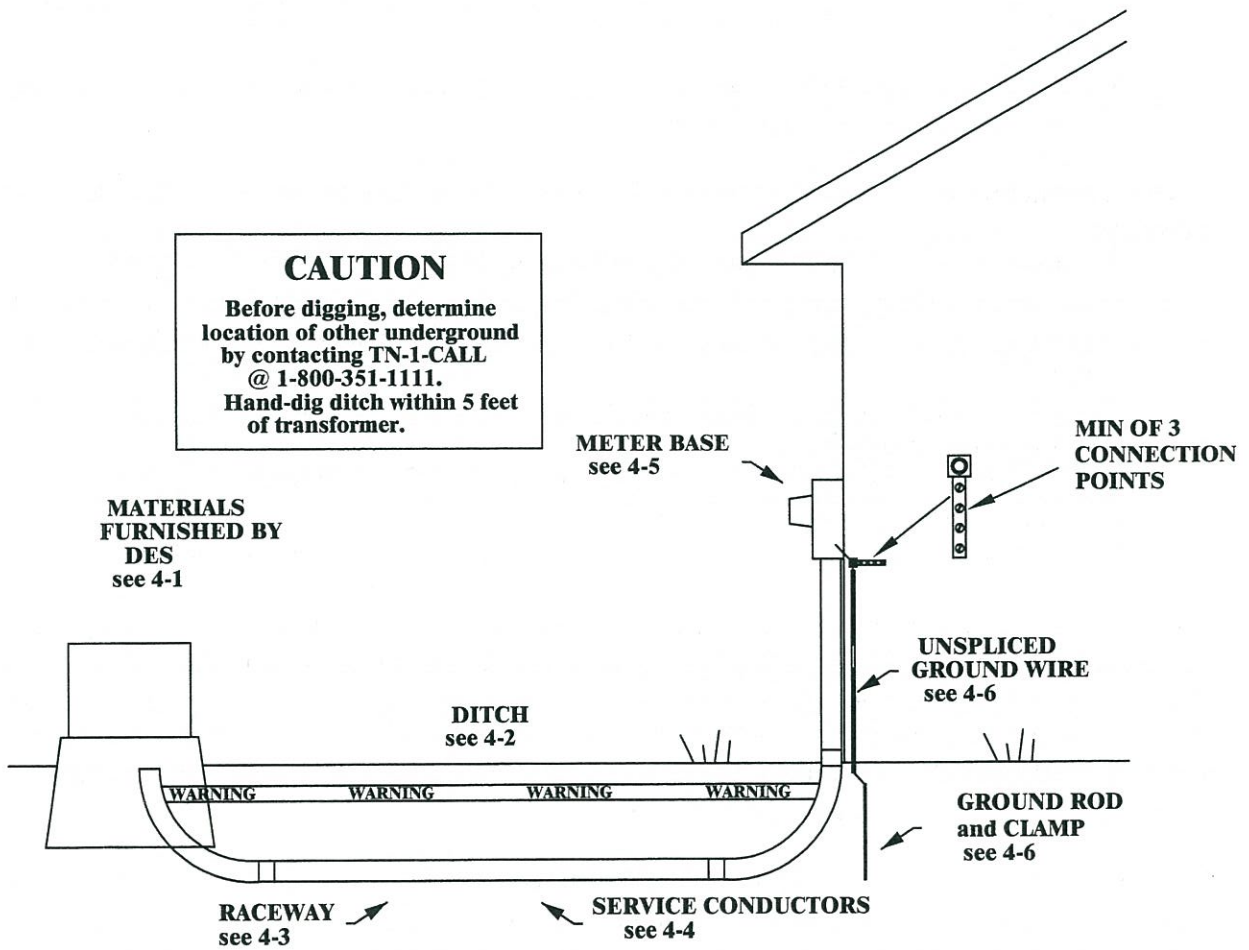


Fig.4 UNDERGROUND RESIDENTIAL SERVICE FROM A PAD MOUNTED TRANSFORMER



- 4-1. Where underground service will originate from a pad mount transformer, DES will furnish and install service conductor from transformer to meter base for a cost of \$1 per foot of conductor. Where there is not an existing transformer DES will furnish and install the pad-mounted transformer. DES will furnish and the customer shall install the preformed fiberglass box pad. See DES engineer for additional cost associated with this type of installation.
- 4-2. Customer is responsible for opening ditch from transformer to meter location as follows:
- a. Where ditch length will exceed 225 ft. see DES engineer.
 - b. Hand-dig ditch when within 5 ft. of transformer.
 - c. Depth sufficient to bed service conductors 24 in. below final grade, including ditches.
 - d. Where impractical to obtain 24 in. depth, see DES engineer.
 - e. Customer will backfill ditch after inspection by DES - 24 hr. notice required.
- 4-3. Continuous raceway from transformer base to meter base will be furnished and installed by customer to the following specifications:
- a. 3 in. schedule 40 or schedule 80 electrical PVC, with correct type fittings and/or bushings as required.
 - b. Minimum 24 in. long radius schedule 80, continuing with schedule 80 conduit into bottom of meter base.
 - c. Rope with a minimum breaking strength of 300 pounds or 1/4" pull rope inside raceway. Strings will not be accepted.
- 4-4. Service conductors to be installed near other utility lines, structures, or obstructions require the following:
- a. Conductors run parallel to water or gas lines must have a minimum 3 ft. separation.
 - b. Conductors crossing water or gas lines, phone or TV cable, shall have a minimum vertical clearance of not less than 12 inches run in schedule 80 electrical conduit. Concrete encasement maybe required.
 - c. Conduit under paving such as roads, driveways, patios, etc. Must be run in schedule 80 electrical PVC.
 - d. Telephone and TV cable may be run in same ditch with a minimum 12 in. horizontal separation between service conductor and cable.
 - e. Disconnect means will be on right side of meter base. Use type W conductors.
- 4-5. A meter base of proper size and type will be furnished and installed by the customer. Meter will be located between 5 and 6 ft. above final grade, on end of house closest to service pole at a point marked by DES engineer. Meter base will not be located on or under porches, decks, or carports. If distribution panel is not located in immediate vicinity of meter, a weatherproof disconnect may be required; refer to National Electric Code. Conduit for DES conductor to enter on left side of meter base. Customer conduit to exit below or to right of meter base.
- 4-6. A ground wire of No. 4 bare copper or larger shall be run from the meter base to a driven ground rod. An 8 ft. driven ground rod bonded to ground wire with clamp suitable for direct soil burial will be installed below final grade. If rebar is used in a concrete foundation the rebar shall be stubbed out of the concrete at the service entrance. The ground wire will be attached to the rebar using a suitable tear drop clamp then run to the ground rod and then to the meter base unspliced.