

## Service Requirements

### General

Contact Idaho Power before beginning work on any new service.

**Exception:** If the service meets the requirements described in the *Reduced Charge Option for Underground Electrical Service* (DFE-071) pamphlet and the customer will be installing the trench and conduit, Idaho Power does not need to be notified until the service is ready for the cable and meter to be installed.

All meter installations must meet current electrical code requirements and display the proper electrical permit.

To help prevent damage, always call **Dig-Line** for locations at least **2 business days** before digging, excavating, or driving a ground rod.

Dial **811** (Nationwide)

**Be sure to connect to the proper equipment.** Refer to the *Definitions* section or contact Idaho Power for clarification.

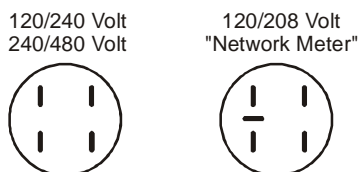
### Burial Depth

Cable for electrical service cable must be buried at least 30". Contact Idaho Power if this depth cannot be achieved.

### Service Voltages

**Single Phase (1-Ø)** 120/240 volts  
240/480 volts  
120/208 volts ("network")

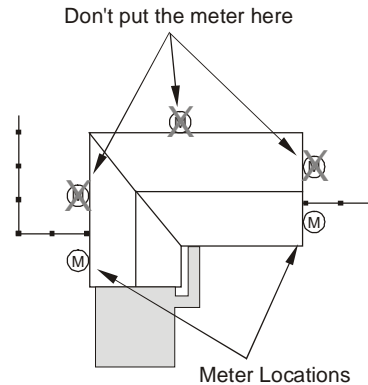
**NOTE.** Use the correct meter base for 1-Ø, 120/208 volt "Network" applications.



1-Ø Self-contained Meter Lug Arrangements

### Meter Location

The meter and any associated equipment must be located so that the installation and any future maintenance can be performed without undue inconvenience to the customer or Idaho Power. Locate residential as shown below.



The meter must be located in a reasonably protected area so that the risk of inadvertent damage is minimized.

Placing the meter in front of the fence keeps Idaho Power out of the back yard.

The meter base, conduit, and any CT enclosure must be adequately supported on the outside of an exterior structure wall so that it will be readily accessible to Idaho Power. **Do not cover or enclose the meter.**

A **recessed meter bases** is permitted but advance approval is required. See page 4.

### Meter Height

**Permanent meters** must be 5'-6" (+/- 6") above the finished grade or other accessible surface such as a deck or stairs, except as noted below.

- ◆ Multiple meter bases must be installed so that the lowest meter is at least 4'-0" above the finished grade.
- ◆ Meters installed on pedestals must be 3'-0" to 6'-0" above the finished grade.

### Special Meter Base Requirements

**480 volt meter bases.** EUSERC-approved safety socket meter bases with factory installed test bypass facilities are required for 480 volt self-contained meters to provide a means to de-energize and isolate the meter. These meter bases must have an interlocking device, a screw-type meter ring, and be capable of being sealed by Idaho Power.

**1-Ø, 400 amp meter bases.** These meter bases must not have a link bypass or a lever bypass. Locking jaws are acceptable.

### Meter Base Guidelines

Refer to the *Meter Base Identification Guidelines* located on [www.idahopower.com](http://www.idahopower.com).

### Multiple Meters

Each meter base or service disconnect that is part of an installation with more than one meter is required to be plainly and permanently marked with numbers or letters that corresponds to the address, suite, office, or room it serves.

### Meter Rooms for Multiple Meters

Multiple meter installations may be located in a meter room provided that all of the following criteria are met:

1. A plan for the meter room must be submitted to Idaho Power for approval before any wiring is done.
2. The meter room must be accessible to Idaho Power through an exterior metal door with a lock box. The door must be permanently labeled with the words "Electrical Room".
3. The meter room may only be used for electrical equipment and communication equipment that does not interfere with the electrical equipment. No storage of any kind will be allowed.
4. Lighting, drainage and health issues are the responsibility of the customer.

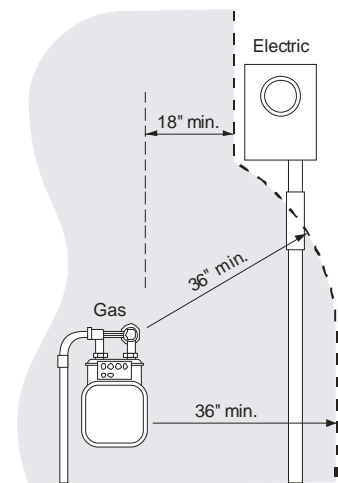
### Sealing for Moisture and Gas on Underground Services

Each meter base that is connected to an underground service where the service cables are installed in conduit must have all opening(s) between the meter base and the interior of a building permanently sealed to prevent any liquids or vapors from passing into the building. See NEC 230.8, *Raceway Seal*.

### Clearances

**Separation between Electric and Gas.** A gas meter must have a minimum horizontal separation of 36" from any electric meter, enclosure or equipment. Electrical conduit is not considered electrical equipment.

For **residential applications**, this clearance can be reduced to 36" measured in any direction, except that the horizontal separation must not be less than 18". Keep all electric equipment out of the shaded area as shown.



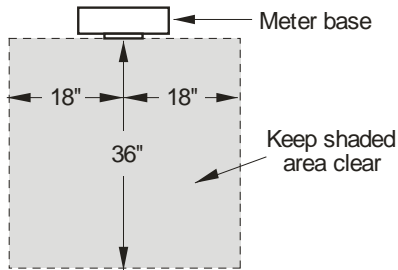
**Clearance for Residential**

**Propane Tanks.** Any regulator, pressure relief valve, or fill connection associated with a propane tank or its delivery system must be at least 10' away from any source of ignition, which includes the electric meter, air conditioning unit, etc. Keep the service cable and conduit at least 3' away from the tank.

**NOTE.** Propane tanks used for dispensing must be at least 20' from any source of ignition.

## Requirements for Single-Phase (1-Ø) Underground Electric Service

**Working Space.** Keep the 36" x 36" area directly in front of the meter base clear of any equipment, landscaping or other obstacles that could interfere with access to the meter.



### Caution: Portable Generators

Do not connect a portable generator to a building's electrical wiring unless a transfer switch has been installed per NEC 702. The transfer switch prevents the generator from feeding back into the Idaho Power electrical system, exposing workers to unforeseeable hazards. The generator can also be damaged if the electrical system becomes energized while the generator is operating.

### Who Provides the Connectors?

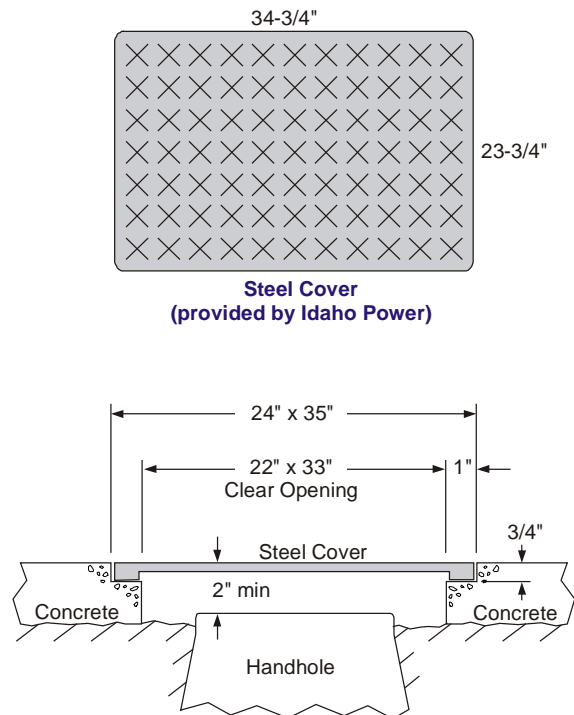
Generally, the owner of the enclosure or equipment will provide the electrical connectors (lugs or terminals) within that piece of equipment necessary to connect the electrical cables, regardless of who owns the cables. The number, size, and type of cables must be known so that the proper lugs or terminals can be provided.

For example, Idaho Power will connect its service cable to the customer's equipment, such as a meter base or CT enclosure, using the customer-provided connectors.

### Placing a Handhole in a Driveway

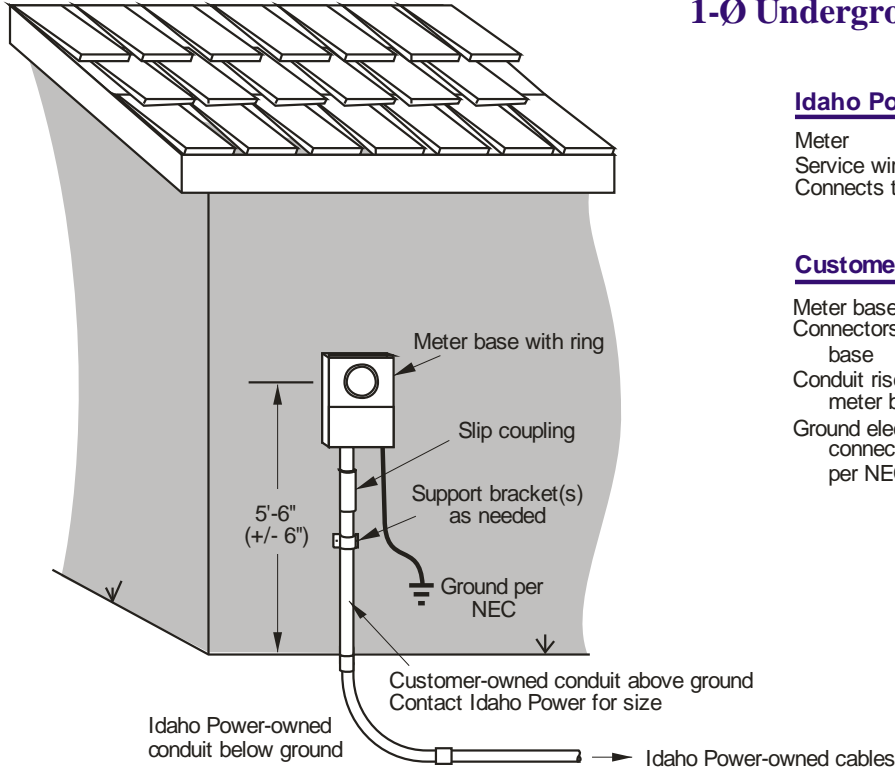
A customer has three options when a concrete driveway or other concrete surface that could be driven on conflicts with the location of a handhole.

1. The customer can shape or move the driveway so that the handhole will not be located within the paved area, thus avoiding the conflict.
2. The customer can pay Idaho Power to install a heavy duty handhole that is rated for a driveway surface.
3. The customer can frame a 24" x 35" opening in the driveway around the handhole and pay Idaho Power for a steel cover that fits in the opening.
  - ◆ The opening must have a 3/4" x 1" recess on all four sides to accept the lid and allow it to be flush with the surface of the driveway.
  - ◆ The top surface of the driveway must be at least 2" above the top of the handhole.



# Requirements for Single-Phase (1-Ø) Underground Electric Service

## 1-Ø Underground Service to a Building



### Idaho Power Provides

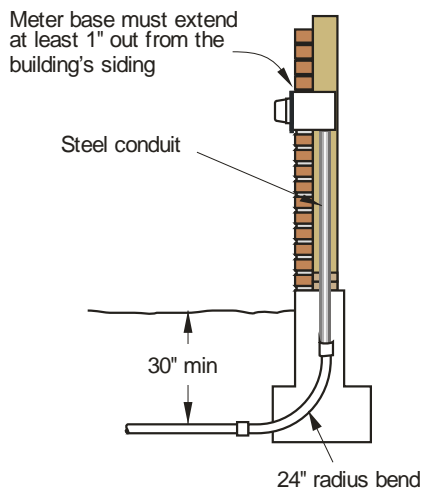
Meter  
Service wires and conduit  
Connects the service wires at the meter base

### Customer Provides

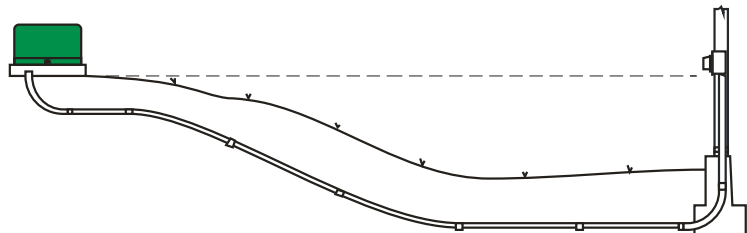
Meter base  
Connectors for the service wires at the meter base  
Conduit riser from just below ground to the meter base  
Ground electrode(s), ground wires, and connections to ground the meter base per NEC

## Requirements for a Recessed Meter Base

**Each recessed meter base requires advance approval from Idaho Power!** All installations are not the same. If yours is not done correctly, Idaho Power will not hook it up! Don't risk it. Contact Idaho Power .



**CAUTION.** The meter base must be higher than the conduit between the meter and Idaho Power's equipment to prevent water from flowing into the meter base.



**Make sure. Contact Idaho Power first!**

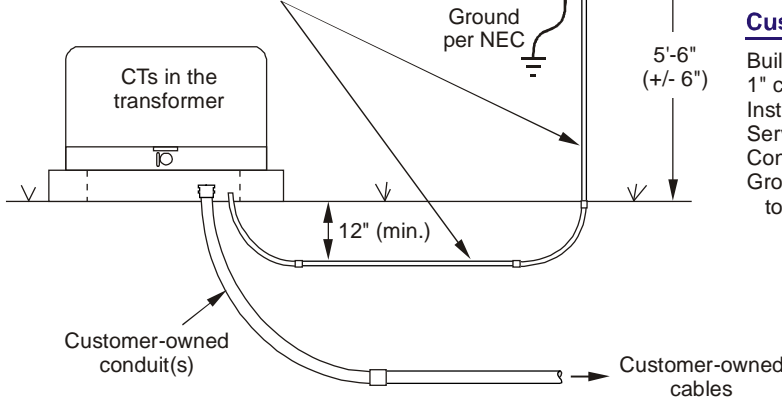
# Requirements for Single-Phase (1-Ø) Underground Electric Service

## Customer-owned 1-Ø Underground CT Service

Idaho Power-owned meter base is installed by the customer and must be adequately supported on a building wall, or on a 3" galvanized pipe or unistrut channel(s) set 2' deep in concrete.

Idaho Power-owned 1" conduit (30' max. length) provided and installed by the customer

- Above ground use EMT
- Below ground use EMT or Sch 40 PVC



### Idaho Power Provides

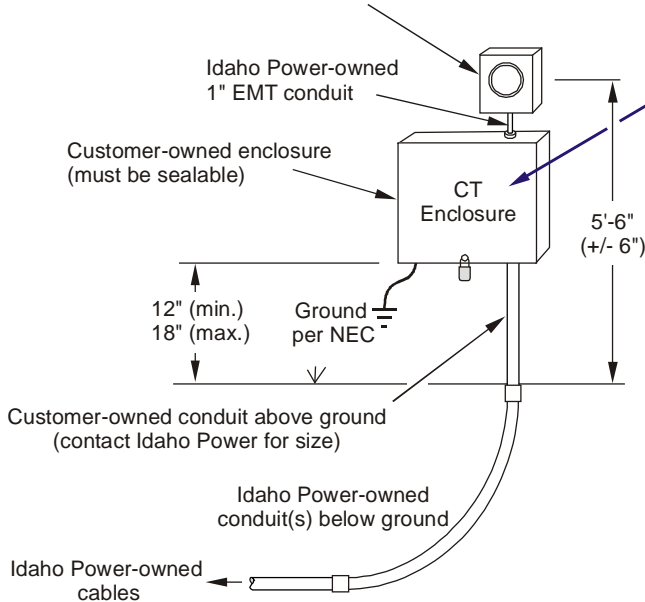
CT meter base, CTs and meter  
CT metering wires and connections  
Connectors for service cables at the transformer

### Customer Provides

Building or structure to attach the CT meter base  
1" conduit for CT wires  
Installs the CT meter base and 1" conduit  
Service cables and conduit(s)  
Connects the service cables at the transformer  
Ground electrode(s), ground wire and connections to ground the CT meter base per NEC

## Idaho Power-owned 1-Ø Underground CT Service

Idaho Power-owned meter base must be adequately supported on a building wall or suitable structure  
Can be located to the side of the CT enclosure



Service Entrance Ampacity	Enclosure Dimensions (W x H x D)	Maximum Runs of Cable
Up to 400 amps	24" x 24" x 11"	1
Up to 800 amps	36" x 48" x 11"	2
Up to 1200 amps	36" x 48" x 14"	4
Over 1200 amps	Contact Idaho Power	

### Idaho Power Provides

CT meter base, CTs and meter  
CT metering wires and connections  
Service cables and conduits  
Connects the service cables at the CT enclosure

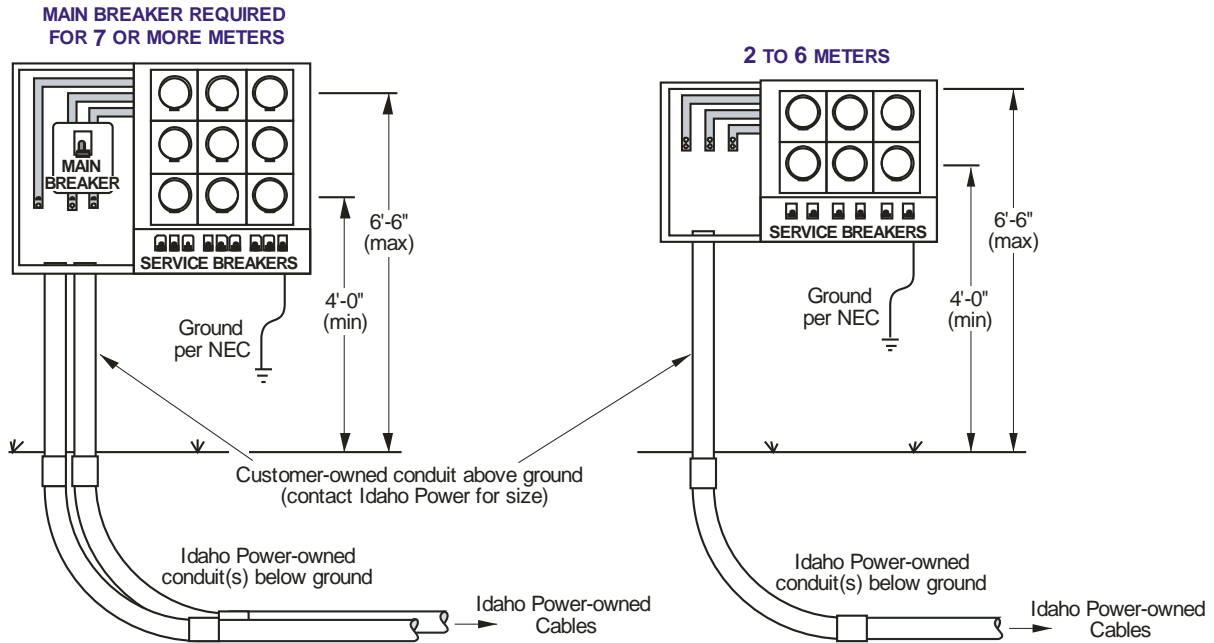
### Customer Provides

Building or structure to attach the CT enclosures and CT meter base  
CT enclosure (must meet IPCo specifications)  
1" EMT conduit between CT enclosure and meter base  
Installation of the CT meter base and 1" EMT conduit  
Connectors for service cables at the CT enclosure  
Conduit riser(s) from CT enclosure to ground line  
Ground electrode(s), ground wires and connections to ground the meter base per NEC

**NOTE.** There is an additional charge for CT metering when the customer's main breaker or panel size is 400 amps or less.

# Requirements for Single-Phase (1-Ø) Underground Electric Service

## Idaho Power-owned 1-Ø Underground Service to Multiple Meters



### Idaho Power Provides

- Meters
- Service cables and conduit(s) below ground line
- Connects the service cables at the bus or main breaker

### Customer Provides

- Meter base and main breaker (if needed)
- IMPORTANT NOTE:** The connection point for Idaho Power's service cables must be on terminals that extend away from the main breaker
- Connectors for the service wires at the bus or main breaker
- Conduit from the meter base to ground line
- Ground electrode(s), ground wires and connections to ground the meter base per NEC