A secondary electrical service connects an existing Douglas County PUD transformer or handhole to a meter base using secondary wire. Secondary services are typically a maximum of 150'.

Customer Responsibilities
- The basic steps below must be completed prior to the installation of your service.
- The requirements listed on this page do not to cover everything, nor every situation; the list is intended to highlight the main items that apply to most standard services.
- Additional information and details are provided on the following pages. If you still have questions, contact the engineer for your area or call (509)881-2227. When calling, please provide your work order number.

Conduit Installation
- Install 3" gray schedule 40 PVC secondary conduit, 36" below final grade on even ground.
- Install 2" gray schedule 40 PVC communications conduit 18" deep (minimum); it can run with secondary conduit.
- Conduits shall be swept up 6" (minimum) above final grade.
- 36" radius sweeps are required and no more than three sweeps are allowed without prior approval. There must be a minimum of 10-feet between sweeps. Back-to-back sweeps are not allowed.
- Sweep conduits 6"-8" from a power pole under the existing standoff brackets, or as directed.
- Conduit must be inspected by PUD personnel prior to backfilling.
- At the same time, PUD crews will install the customer provided sweep into an existing padmount transformer or handhole DO NOT PLUMB SWEEP INTO TRANSFORMER OR HAND HOLE (the trench must be accessible).
- The trench for conduit shall be to the edge of a padmount transformer or handhole.
- Communications conduit shall be swept up 1-ft to the right/backside of the padmount transformer or handhole when facing the front (labeled side), unless otherwise approved.
- Conduit must be backfilled to final grade prior to PUD crews installing wire.
- For single phase 600 and 800 amp services, install two (2) 3" gray schedule 40 conduits.

Meterbase Installation
- The meter height shall be 5'-6" above final grade, have unrestricted access, and shall be installed on the front 1/3 of the home or property.
- Recessed or flush mounted meterbases are not allowed.
- For overhead services; the customer must provide an attachment point on the mast, where crews will deadend/attach the service wire.
- For underground services; the meterbases shall have appropriate sized lugs for the installation of the PUD wires. If unsure, verify with your engineer. Wire sizes are typically:
  - 2/0 wire for 100amp services.
  - 4/0 wire for 200amp services.
  - 350MCM for 400amp services.
  - Other installations are as required.
- Conduit may be reduced down to 2-1/2" at the meterbase entrance only, if necessary, and must enter the bottom left hand knock out. Do not use the center knockout.
- The meterbase must be approved by Labor and Industries (LnI) prior to energizing the service.
- A meterbase for single-phase self-contained meters may include a link type by-pass device which will allow current to pass through the meter base in order to break load for safety in installing and removing meters. Lever type by-pass and jaw release meter bases are not allowed.

Electric Service Guides are available online at https://douglaspud.org/services/electric-service-guides.
SECONDARY SERVICE CONNECTION

A secondary service connection connects an existing Douglas County PUD transformer or handhole to a meter base using secondary (three stranded) cable or wire. Secondary services are typically a maximum of 150'.

Customer Responsibilities

- Provide, install and maintain all required service entrance equipment per standard drawings and applicable codes.
- Provide and install the secondary service conduit per standard drawing.
- Install communication conduit per standard drawing.
- Furnish trenching and backfill of the conduits per standard drawing.
- Trench inspection by Douglas County PUD field representative.
- Electrical Inspection application and inspection through Washington State Department of Labor and Industries.

Applicable Standard Drawings

Please review the following standard drawings attached before starting construction. Drawings contain important information required for your project.

- Trenching and Conduit Requirements (underground service)
- Underground Service to Building OR Overhead Service to Building
- Overhead Service Wire Misc Requirements (overhead service)
- Preferred Meter Base Location
- Single Phase Meter Base Requirements

Fees

Fees for secondary services are based on the ampacity fee and miscellaneous fees as described in the Customer Service Policies.

Inspections

Electrical installations must be applied for and inspected by the Washington State Department of Labor and Industries Electrical Inspector AND a Douglas County PUD field representative prior to energizing the service. The customer (or customer’s electrician) is responsible for meeting all of the requirements for temporary and permanent service equipment in compliance with the NEC (National Electric Code), WAC (Washington Administrative Code) and any other federal, state and local codes and ordinances that apply to the project. The Washington State Department of Labor and Industries Electrical Inspections Department can be reached at 509-886-6500, the 24 hour inspection line is 509-886-6520.

Meter Base Location

The meter base must be located on the outside of the structure and in an area that will allow for unrestricted access by District personnel. Meter bases are not allowed in areas subject to being enclosed or fenced in (patios, decks, porches, breezeways). Typically, this is the front one-third of the home that faces the street or driveway. All meters must be located 5' - 6' above finish grade. Recessed or flush mounted meter bases are NOT allowed.
CONDUIT & INSTALLATION

- All material supplied by Customer unless otherwise noted.
- All power conduit shall be 3" schedule 40 gray electrical PVC.
- Sweeps shall be 36" minimum radius and kept to a minimum. Back to back sweeps are not allowed.
- Backbone communication conduit shall be 2" gray schedule 40 PVC. Install 2" gray schedule 40 PVC from Douglas County PUD transformer, handhole or pole location to home/business.
- Tape or cap ends of power conduit to prevent material from entering.
- Conduit fittings and joints shall be installed clean, square and thoroughly glued.
- Provide pull string in conduit. String shall pull freely and shall not be glued to conduit.
- Cap ends of communication conduits (no glue, please).

TRENCHING

- Customers are to provide trenching, backfilling and compaction in accordance with Douglas County PUD standards.
- Trench shall be as straight as possible.
- Backfill with a minimum 3 inch layer of clean backfill, rocks no larger than 1 inch and no sharp objects placed over conduits. (clean native backfill meeting the aforementioned standards is acceptable).
- Trench shall be free of trash and frozen or organic material and be thoroughly compacted throughout.
- Trenching in a public right-of-way or crossing under a public roadway requires a roadway use permit. This must be applied for and issued to the licensed and bonded excavation contractor who will perform all work in the public right-of-way.

SPECIAL NOTES

CALL BEFORE YOU DIG! 811
ALL CONDUIT MUST BE INSPECTED BEFORE COVERING - CALL DOUGLAS COUNTY PUD AT 881-2366 TO SCHEDULE INSPECTION. CALL 686-4501 FOR AN INSPECTION IN THE BRIDGEPORT AREA INCLUDING ALL AREAS NORTH AND EAST OF WITHROW.
DO NOT INSTALL CONDUITS INTO EXISTING TRANSFORMERS, HANDHOLES, VAULTS OR ANY ENERGIZED EQUIPMENT
If no bracket exists at pole, stub conduit up to within 8" (but no closer than 6") of pole at a preferred quadrant location.

Primary conduit will enter at left side of transformer

SECONDARY
48" PRIMARY

36" MIN RADIUS SWEEPS

3" POWER CONDUIT

DCPUD POWER POLE

DCPUD TO INSTALL RISER

6" to 8"

12"

CONDUIT RISER BRACKET
STUB UP POWER CONDUIT HERE AND CAP

45°

6" to 8"

CONDUIT STUB UP AT POLE

HAND DIG WHEN WITHIN 3 FEET OF AN ENERGIZED TRANSFORMER, TAKE CONDUIT TO THE BASE OF THE TRANSFORMER - DOUGLAS COUNTY PUD PERSONNEL WILL SWEEP INTO TRANSFORMER AT TIME OF INSPECTION.

SECONDARY/service conduits will enter at right side of transformer

CONDUIT STUB AT ENERGIZED TRANSFORMER

RESIDENTIAL CONSTRUCTION STANDARDS

TRENCHING AND CONDUIT REQUIREMENTS

DOUGLAS COUNTY PUD

APPROVED:

REV DATE 06/03/19

PAGE 2 OF 2

RCS–001
GENERAL NOTES

- All equipment furnished and installed by customer or customer's electrician unless otherwise noted.
- The meter base must be inspected by the Washington State Department of Labor & Industries Electrical Inspector and approved before service conductors can be installed. Permit and inspection sticker must be displayed.
- Meter base and conduit must be installed on an outside wall. Recessed (flush mount) meter bases are NOT allowed.
- Consult an electrician or Washington State Department of Labor & Industries Electrical Inspector for current NEC guidelines for service entrance, meter base and grounding codes.
GENERAL NOTES

- All equipment furnished and installed by customer or customer's electrician unless noted otherwise.
- The meter base must be inspected by the Washington State Department of Labor & Industries Electrical Inspector and approved before service conductors can be installed. Permit and inspection sticker must be displayed.
- Meter base and conduit must be installed on an outside wall. Recessed (flush mount) meter bases are NOT allowed.
- If the service mast is located within 4 feet of roof edge, service wire must maintain a minimum clearance of 18" from the roof top within a 6' radius. Beyond a 6' radius, consult Douglas County PUD for minimum clearance.
- If service mast is located more than 4 feet from the roof edge, service wire must maintain minimum clearance of 3 feet from the roof top.
- Service mast must be tall enough to provide required clearances from the ground to service conductors everywhere in the span (refer to spec RCS-007, Overhead Service Wire Misc Requirements).
- Consult an electrician or Washington State Department of Labor & Industries Electrical Inspector for current NEC guidelines for service entrance, meter base and grounding codes.
RESIDENTIAL CONSTRUCTION STANDARDS

OVERHEAD SERVICE WIRE MISCELLANEOUS REQUIREMENTS

APPROVED:  
REV DATE 06/18/15  
RCS-007

REQUIRED CLEARANCES FOR OVERHEAD SERVICE WIRE

CLEARANCES BETWEEN OVERHEAD UTILITIES - METER POLE

APPROVED DEADEND BRACKET TYPES  
(OVERHEAD WIRE ATTACHMENT)
**METER BASE LOCATION**

Your meter base must be located:

- Outside of the home.
- On the front \( \frac{1}{3} \) of your home closest to normal public access.
- In an area that is NOT subject to being fenced in or enclosed (patio, deck, carport, backyard, under stairway).
- In an area not subject to damage from vehicles.
- On a structure that is owned by you.
- All meters must be mounted between 5' to 6' above finish grade.
- In an area where Douglas County PUD personnel can safely obtain access for reading, testing and disconnecting in emergency situations.

**GENERAL NOTES**

- Recessed or flush mount meter bases are NOT acceptable.
- Clear working space of 3' deep in front of the meter is to be maintained and kept clear of obstructions including landscaping, decks, air conditioners etc.
- 20" minimum horizontal and vertical clearance must be maintained between the center of any meter and any obstruction.
- Enclosing residential meter bases is not acceptable.
- Consult an electrician or Washington State Department of Labor & Industries Electrical Inspector for current NEC guidelines for service entrance (meter base) and grounding codes.
## SOCKET CLIP ARRANGEMENTS

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### GENERAL NOTES

The meter base/socket you purchase and install shall meet the following general requirements:
- Be Underwriters Laboratories (UL) approved.
- Meet the standards of EUSERC.
- Be rated for exterior use and be rain-tight according to NEMA-3R.
- Have all unused openings tightly sealed from the inside of the socket.
- Be plumbed and securely fastened to the supporting structure.
- Have a cover that is securely attached to the meter base/socket case.
- Meter base shall NOT be enclosed or recessed.

**NOTE:** Meter base/socket shall not be used as a junction box.

Meter bases/sockets for 200A underground services shall:
- Be rated for 120/240 V and 200 A.
- Contain four meter jaws and one connection point for the neutral conductor.
- Be at least 4-1/4 inches deep, 11 inches wide, and 14 inches high.
- Accept 2-1/2-inch PVC conduit.
- Have lugs (electrical connectors) that are marked to accept 4/0 aluminum conductors.

Meter bases/sockets for 400A underground services shall:
- Be rated for 120/240 V and 320 A continuous current.
- Contain four meter jaws and one connection point for the neutral conductor.
- Contain a Class 320 link type manual bypass. Lever type bypasses are not allowed.
- Have lugs that will accept 350 MCM aluminum wire.

Single phase services over 400A require CT metering and additional different equipment, see spec RCS-015, Single Phase CT Metering, and spec C13-004, CT Metering Arrangement.