New Service Handbook

PIERCE PEPIN
COOPERATIVE SERVICES
Live Better®

A Touchstone Energy® Cooperative

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New Electric Service

Pierce Pepin Cooperative Services *(PPCS)* is pleased to be your new electric service provider, and you have our pledge to provide the best service possible!

For us to begin construction of your new service, there are a few simple steps that need to be completed, which are detailed in this booklet.

PPCS is happy to assist you in any way we can. If you have any questions or concerns, don't hesitate to contact us.

The Paperwork and Fees

1) New Service Request. *PPCS* will complete a New Service Request upon notification of new construction. You will be required to provide a completed New Construction Worksheet with a site plot showing the meter location.

2) Application. An Application for Membership and Electric Service will be sent to you and must be completed and signed before your staking appointment will be scheduled. NOTE: A security deposit may be required as determined by your credit rating.

3) Right-of-Way Easement. This form must contain the complete legal description of the property (from deed or abstract), the easement granted, and the notarized signatures(s) of the appropriate landowner(s). (Note: You may be asked to assist in getting easements for properties that *PPCS* has to cross to serve your property. Initial right-of-way clearing (done to *PPCS* specifications) is your responsibility.)

4) New Service Fees.

- **Permanent service:** A new service fee must be paid prior to construction. Contact the *PPCS* office for the current fee. A per foot aid to construction fee must also be paid prior to construction for new electrical services requiring extensions. The line will be extended from the Cooperative's nearest available facility (determined by *PPCS*) to your meter. (Fees are subject to change. Contact *PPCS* for current information.)

- **Aid to construction—sharing fee:** In the event that additional connection to the extension is made within three (3) years of first construction, the original member shall notify the Cooperative and be reimbursed an amount proportionately based on the applicable extension charge, if any, of the new hook-up. Refund shall be no larger than the deposit or contribution paid toward the aid to construction cost. After three (3) years, no consideration will be given for any previous contributions paid.

continued...

Construction fees for new service, continued:

- **Temporary construction service:** In addition to the fees for permanent service noted above, a non-refundable service fee of $500 must be paid in advance of any construction, along with *PPCS* prior approval. Your electrician will provide temporary metering equipment. Any damage to the temporary wire will be the member's responsibility. *(Fees are subject to change. Contact PPCS for current information.)*

- **Dusk to dawn light pole*:** If an additional pole is needed for a dusk to dawn light, a fee for the pole and installation will be charged. If underground service to the security light is required, a per foot charge will be assessed.

**Note on meter and dusk to dawn light poles: For safety's sake, equipment not related to electric service -- such as antennas, member-furnished light fixtures, birdhouses, clotheslines, etc. -- are NOT allowed on PPCS poles and will be removed.*

5) Commercial/Industrial Service. The following is a statement of responsibilities for various aspects of the extension of three-phase electric service for commercial/industrial accounts. Please contact our office if you have any questions regarding this information.

- **Primary Service:** *PPCS* will provide conduits, trenching and backfill, and conductors. *PPCS* will provide and make terminations at transformer. Cable route must be at final grade.

- **Transformer:** *PPCS* will provide the transformer. The member will provide the transformer pad. when the service is underground. If the load is seasonal and requires a transformer larger than a 25 kVa, the member will pay the cost difference between a 25 kVa transformer and the size required. If the load is minimal, the member will pay the total cost of the transformer.

- **Secondary Service:** If underground, secondary wires shall be installed in conduit with a minimum four (4) inch inside diameter. When the meter is at the transformer, the member is responsible for conduits, conductors, terminations at main switchboard, and trenching and backfill. When the meter is at the building,

  The member will provide conductors and conduit, and *PPCS* will make termination at transformer. Cable route must be at final grade.

- **Metering:** The member is responsible for installing the meter socket and conduit. *PPCS* provides the meter socket, mounting specs, and the meter. *PPCS* will install the CT and PT, and all associated wiring.

continued...

Grounding Specifications

Ground rods. *NEC 250 Part III*

- Two grounds are required; a minimum of six (6) feet between the two grounds is required.
- Ground rods must be copper clad steel, and one-half (1/2) inch in diameter by eight (8) feet in length.

Ufer ground.

- In the situation where a "concrete encased electrode" (Ufer ground) has been installed per NEC 250.52(A)(3), then the need for supplemental electrodes per NEC 250 Part III are not required.

Grounding Electrode Conductor.

- Grounding electrode conductor must be #6 copper minimum or equivalent (see NEC Table 250.66 for proper size).
- Grounding electrode conductors shall be continuous without splice or joint. NEC 250.64(C).
- Main bonding jumper shall be installed to connect the neutral to system ground at service disconnect central service location.

Meter Socket Installation

The information in this section addresses questions most commonly asked by our members when applying for electric service. While this information covers *PPCS*' requirements for the electrical service entrance, it is NOT meant to replace state or national codes. For a copy of either code book, please contact:

National Electric Code
National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02619-7471
(800) 344-3555

Wisconsin State Electric Code
Department of Commerce
201 W. Washington Avenue
Madison, WI 53703
(608) 266-3151

NOTE: If you are NOT familiar with the proper wiring procedures, we recommend contacting an electrical contractor to perform your electrical work.

To help you prepare for electric service from our member-owned electric cooperative...

What You Need to Do

1) Perform initial clearing of trees and brush as requested by *PPCS*.

2) Locate the septic system, underground cables, any other underground facilities owned by you, and any stump or demolition burial areas on your property.

3) Supply and install the service entrance and meter loop on a *PPCS*-approved pole or building.

4) Install approved electrical system grounding.

5) Comply with code requirements when wiring.

6) Consult both the Wisconsin Electrical Code and the National Electrical Code (NEC) if in doubt about wiring requirements.

7) Contact *PPCS* before proceeding if proposed electrical wiring is not covered by the information contained herein.

8) Wireman provides *PPCS* with a signed affidavit, as to work completed.

9) Provide release signed by local inspector.

Single-Phase Dwelling Services

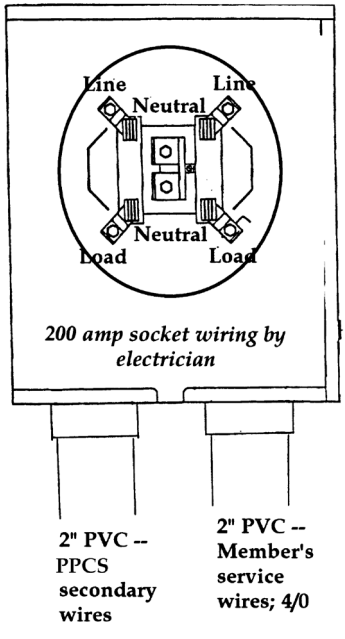
See NEC Table 310.15(B)(7) - For calculation Chart (Informative Annex D7)

	Copper	Aluminum
Service Size	*Min Size*	*Min. Size*
100 amp	#4	#2
150 amp	#1	2/0
200 amp	2/0	4/0
320 amp	*250 kcmil	*350 kcmil

** Or equivalent*

- Meter socket or base to be furnished and installed by member or electrician, and located so as it is accessible to cooperative personnel.
- Bypass lever meter socket required.
- Meter socket must be located not less than four (4) feet nor more than six (6) feet above ground level.
- For underground installations, the meter socket type must specifically be for underground applications, and the size must be 200 amp minimum regardless of the size of the load. Line side conduit supplied by member with expansion coupling (Diagram E).

Meter Socket Installation



Underground Service

Specifications for Underground Service

Diagrams D and E

1) Underground service must be grounded according to GROUNDING SPECIFICATIONS as detailed on page 3.

2) Two-inch diameter protective conduit with expansion coupling and bushings on each end must be provided by the member from the bottom of the meter socket to a depth of 18 inches below grade for service conductor. Approved PVC or rigid metal conduit may be used. Thin wall conduit (EMT) is unacceptable.

3) All ungrounded cables and conductors extending from the central service location shall have overcurrent protection located at the central service and sized in accordance with the ampacity of the ungrounded conductor. NEC 230.90(A).

4) Disconnecting means with overcurrent protection shall be provided to disconnect the utility wiring from the premises wiring at any point where utility wiring terminates and premises wiring continues underground. SPS 316.230(3)(A)

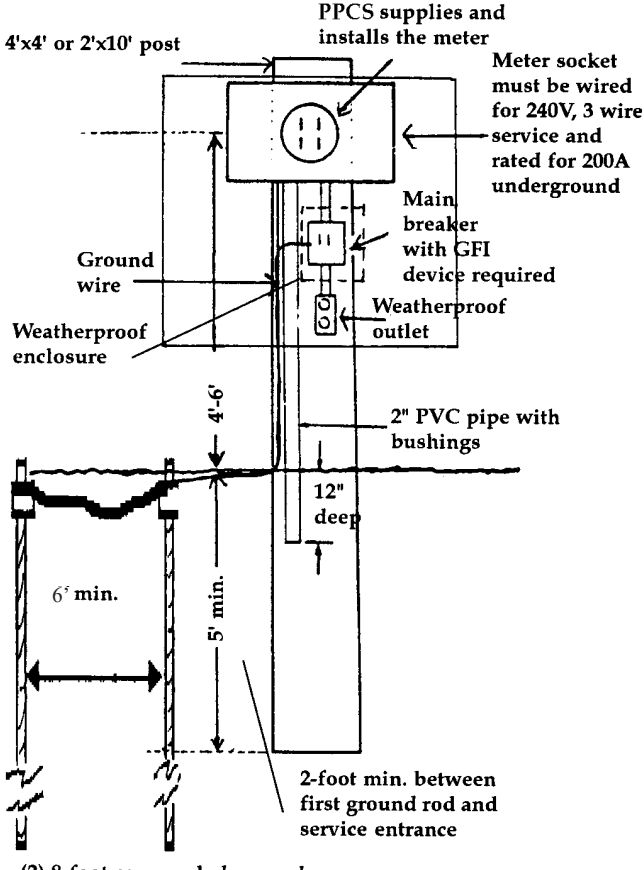
    (a) The service overcurrent device shall be an integral part of the service disconnecting means or shall be located immediately adjacent thereto. NEC 230.91.

Underground Service

Diagram D

Temporary Underground Installation

Members requesting temporary underground service must supply and set the temporary pole or post with the required equipment on it as shown below. The temporary pole or post must be set within five (5) feet of the permanent service location. PPCS does NOT set or wire the temporary pole/post. The service fees for temporary construction service apply. *(Contact PPCS for current information).*



Overhead Service

Specifications for Overhead Service: Meter on Pole

See Diagram A

1) Overhead service with meter on pole must be grounded according to GROUNDING SPECIFICATIONS as detailed on page 3.

2) Pole should be in close proximity to load being served.

3) Member's weatherhead for service entrance cables shall be located above the point of attachment of the service drop conductors to the building or other structure. Exception: Where it is impractical to locate the service head above the point of attachment, the service head location shall be permitted not farther than 24 inches from the point of attachment. NEC 230.54(C).

4) Leave 18 inches minimum drip loop for overhead service.

5) Disconnecting means with overcurrent protection shall be provided to disconnect the utility wiring from the premises wiring at any point where utility wiring terminates and premises wiring continues underground. SPS 316.230(3)(A)

   (a) The service overcurrent device shall be an integral part of the service disconnecting means or shall be located immediately adjacent thereto. NEC 230.91.

   (b) Overcurrent protection shall be provided in conjunction with all grade level switches, either as an integral part or located immediately adjacent thereto.

6) A separate conduit must be utilized for all load-side conductors. NEC 230.7.

Overhead Service

Specifications for Overhead Service: Meter on Building

See Diagrams B and C

1) Overhead service with meter on building must be grounded according to GROUNDING SPECIFICATIONS as detailed herein.

2) The point of attachment of the overhead service conductors to a building or other structure shall provide the minimum clearances as specified in 230.9 and 230.24. 2017 NEC 230.26

3) If a "through the roof" riser (service mast) is needed to obtain the required attachment height, it shall be supported to withstand strain of service drop conductors (2-inch minimum rigid metal conduit).

    (a) If service mast extends more than 36 inches above the roofline, it must be guyed.

4) Member's weatherhead for service entrance cables shall be located above the point of attachment of the service drop conductors to the building or other structure. *Exception: Where it is impractical to locate the service head above the point of attachment, the service head location shall be permitted not farther than 24 inches from the point of attachment. NEC 230.54(C).*

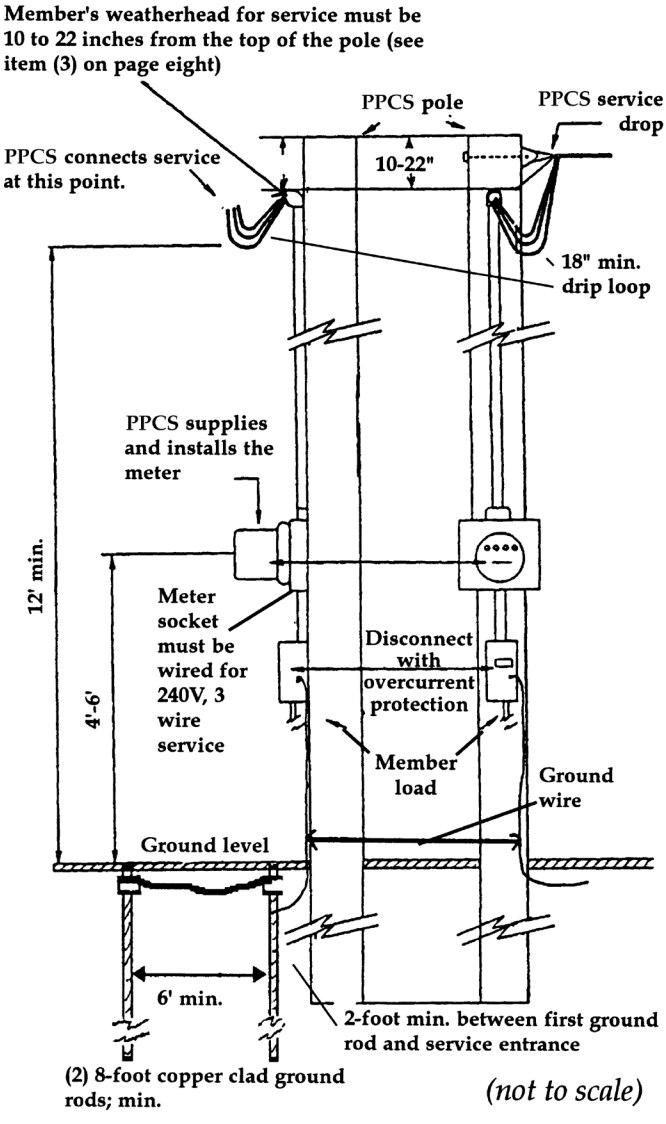
5) Leave a minimum 18 inches drip loop for service wires.

Overhead Service

Diagram A

Permanent Pole

PPCS will supply and set the permanent service pole. Member must wire the pole as shown below. Contact *PPCS* for current charges. *Note: If pole top CT metering is required, please contact PPCS.*

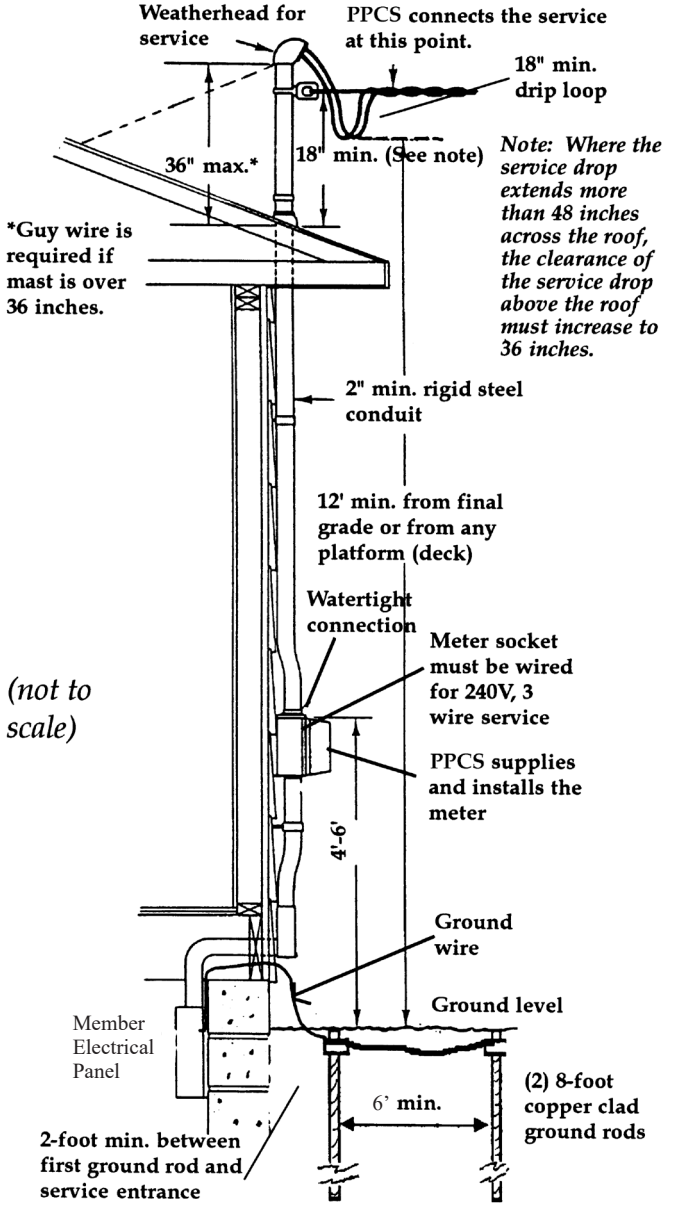


Overhead Service

Diagram B

Service Mast Installation

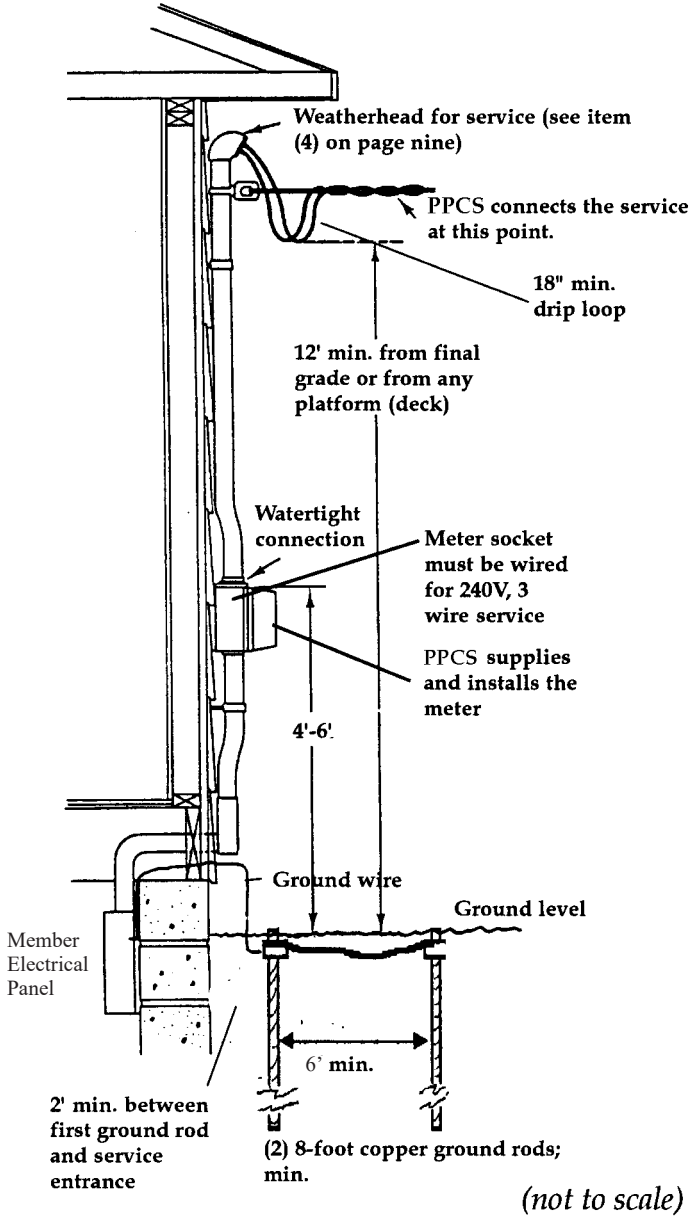
Note: A special kit is available commercially that offers support and weatherproofing at the roofline.



Overhead Service

Diagrams C

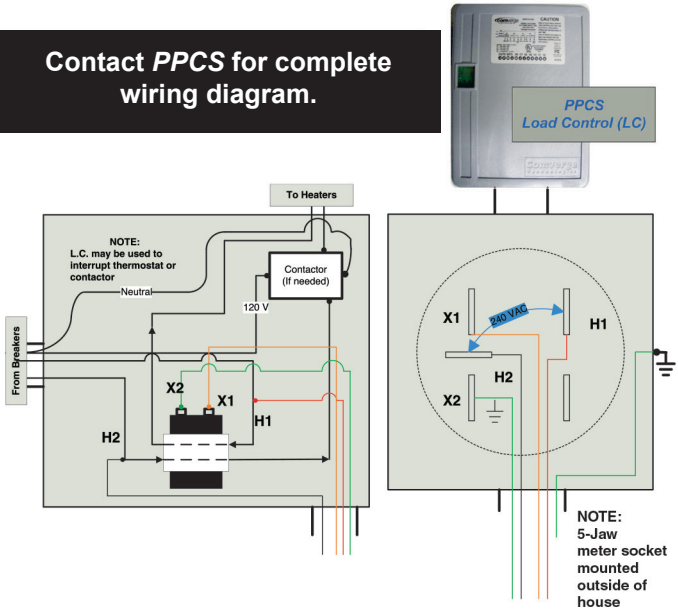
Service Mounted Socket Installation



(not to scale)

Off-Peak

Contact *PPCS* for complete wiring diagram.



R2 – Water Heater (240 VAC, 30A)
Blue wires **(N.C.)**

R1 – Dual Fuel (120 VAC, 5A)

• Electric Boiler :	Orange	**(N. O.)**
• Heat Pump	Yellow	**(N. C.)**
• Base board	White/green	
• A/C		

R3 – Storage (120 VAC, 5A)

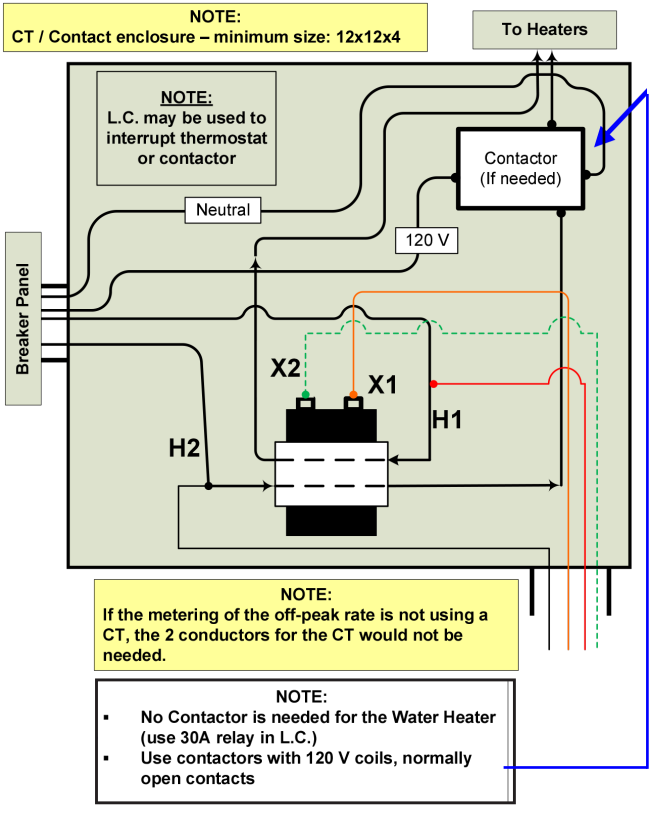
• In-floor heat	White / Blue	**(N.C.)**
• ETS heaters	Grey	
	Violet	

Load Control (L.C.) Power -

• Red (N)	**(120 V)**
• Black	**(240 V)**
• White/Red	

✓ **Current Transformer (CT) provided by Pierce Pepin**

NOTE:
All wires of the same leg in the breaker panel must pass through the CT in the same direction.
CT X2 must be grounded either in the meter socket or the CT enclosure but not at both ends.



Wire sizes & colors pulled/ran by Electrician from Members panel

2 – Blue #10 THHN (Water Heater)

2 – Yellow #12 THHN
(Dual Fuel: Electric heat / A/C)

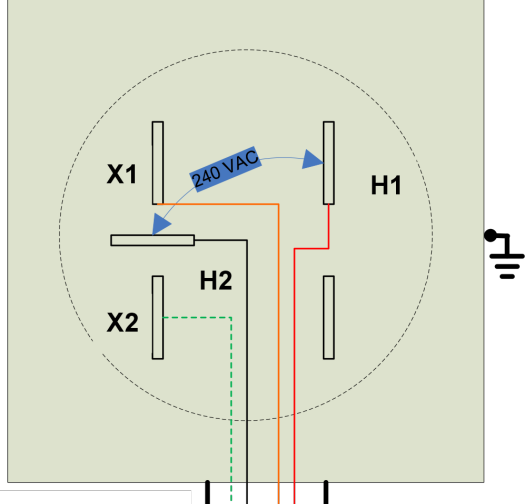
2 – Purple #12 THHN (Storage Heat)

2 – Brown #14 THHN (Alert) – [If needed]

1 – Black (H2)
1 – Red (H1) } (240 V) #12 THHN

1 – Orange (X1) #12 THHN
1 – Green (X2) #12 THHN
(NOTE: Check CT burden table to verify wire size)

1 – Green #12 THHN to ground meter socket



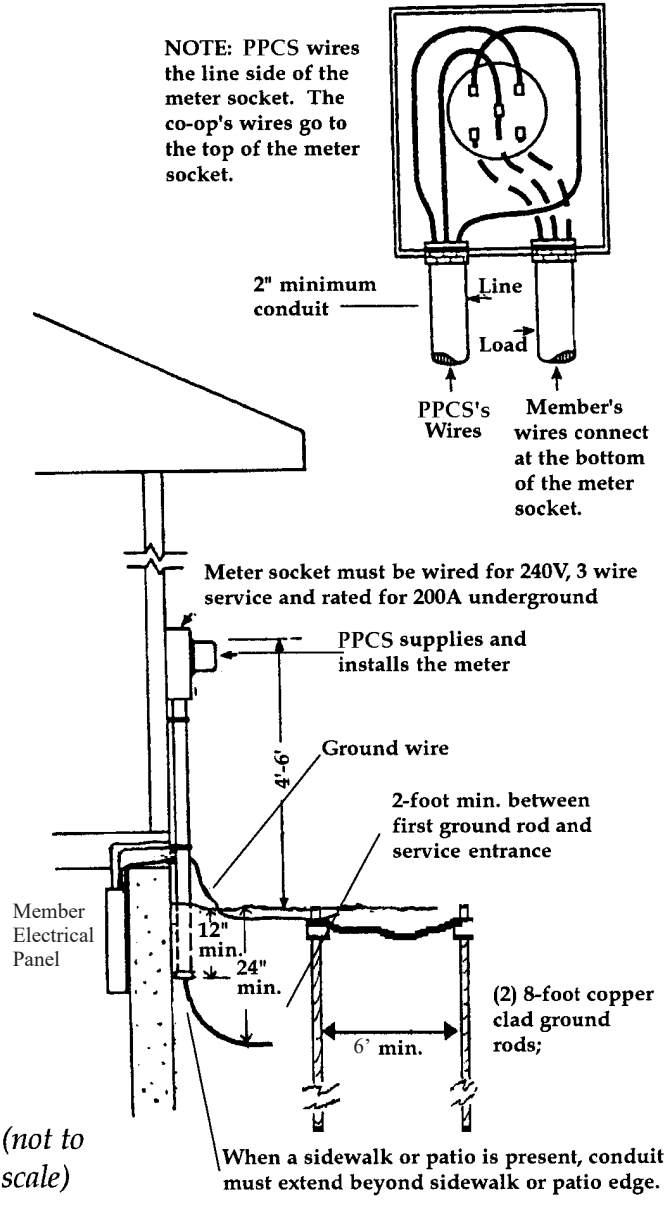
NOTE:
5-Jaw meter socket mounted outside of house.

Conduit between meter socket and CT enclosure: Minimum ¾" ID

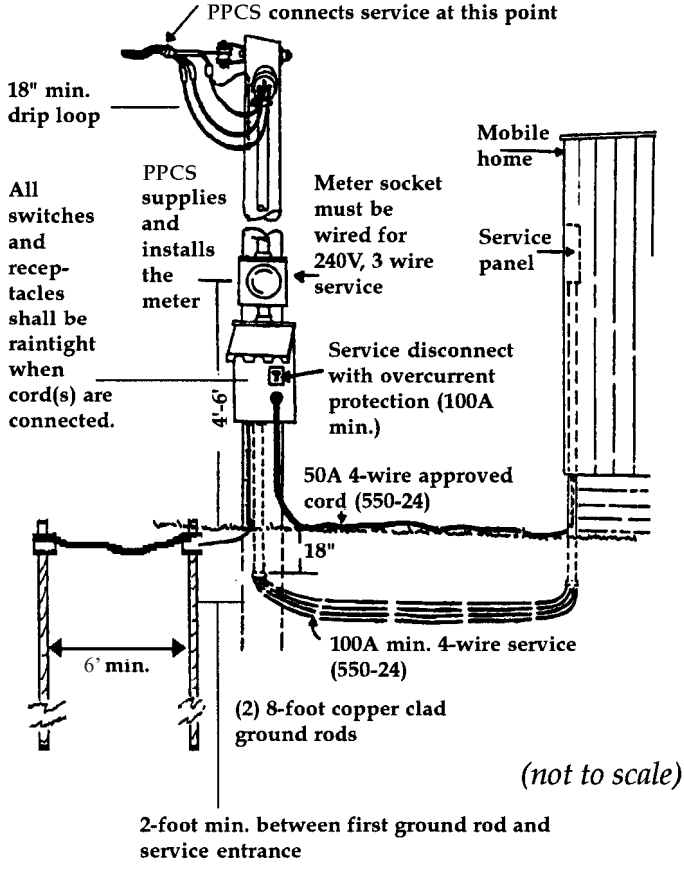
Underground Home

Diagram E

Underground Service Installation on Home



Underground Mobile Home



Specifications for Mobile/ Manufactured Home Service

1) Service to mobile homes shall comply with the NEC and the Wis. Adm. Code as they apply.

2) Service equipment (meter and disconnect) shall be located adjacent to the mobile home but not in or on it. Service equipment shall be located in sight from and not more than 30 feet from the mobile home it serves. NEC 550.32(A).

3) Service equipment (meter and disconnect) may be installed in or on a manufactured home, provided that all seven of the conditions of NEC 550.32(B) are met.

Checklist for New Electric Service

- ❑ Complete application, new construction worksheet, right-of-way easement, and provide site plot with meter location.
- ❑ Return all forms to *PPCS*.
- ❑ Constructions fees must be paid before *PPCS* will begin electric service construction. *PPCS* will notify you of fees due once the above forms are received.
- ❑ For temporary electric service: See page 7 in this handbook for wiring diagrams.
- ❑ For overhead electric service: See pages 5, 8, 9, 10, 11, 12 in this handbook for wiring diagrams.
- ❑ For underground electric service: See pages 5, 6 in this handbook for wiring diagrams.
- ❑ It is the member's responsibility to provide a clear, unobstructed path for *PPCS*'s electric cables, and to notify *PPCS* of stump or demolition burial areas on your property.
- ❑ It is the member's responsibility to locate the septic system, underground cables, and any other underground facilities owned by you on your property.
- ❑ The grade and landscaping of your property must be within four (4) inches of final grade.
- ❑ Additional charges may apply if new service installation is performed during ground frost conditions.
- ❑ Notify *PPCS* when all above requirements are fulfilled.
- ❑ Contact *PPCS* if you have any questions whatsoever. ***We're here to help!***

Call Before You Dig!

DIGGERS HOTLINE®

Call 811 or (800) 242-8511

Email-A-Locate: www.diggershotline.com

For your safety, please contact Diggers Hotline three (3) business days before beginning excavation work so your underground wires and other facilities can be located.

Be sure to have the following information ready for the operator:

1. Name
2. Telephone Number
3. Fire Number and Address
4. Cross Street
5. Type of work being done
6. Start Date
7. Township
8. County
9. Marking Instruction

Generac Generators

Power up your home with a Generac generator!
Are you building a new home or renovating an existing one? Don't forget to consider reliable backup power! *PPCS* has you covered with Generac, the #1 selling brand of standby generators. From providing a quote, to installation of the generator, our Master Electrician is an expert in keeping you connected. Generac home backup generators are designed to keep your lights on, appliances running, and your family comfortable during unexpected outages.

Why choose Generac?

1. Peace of Mind: A permanently installed Generac home generator automatically protects your home. You won't have to worry about power disruptions.

2. Fuel Options: Generac generators run on natural gas, liquid propane (LP), or diesel, providing flexibility and convenience.

3. Outdoor installation: Just like your central air conditioning unit, Generac generators sit outside, blending seamlessly with your home's exterior.

4. Whole-Home Coverage: Whether you need power for essential appliances or your entire home, Generac delivers power directly to your electrical system.

Get started today! Call *PPCS* at 800-924-2133 for a quote to keep your home powered, rain or shine!

Prepare for the Future

Make sure your garage is wired to install an EV Charger!

There's no telling how quickly consumers will adopt electric vehicles (EVs) but you can future-proof your home now by ensuring your garage is wired to allow future installation of an EV charger.

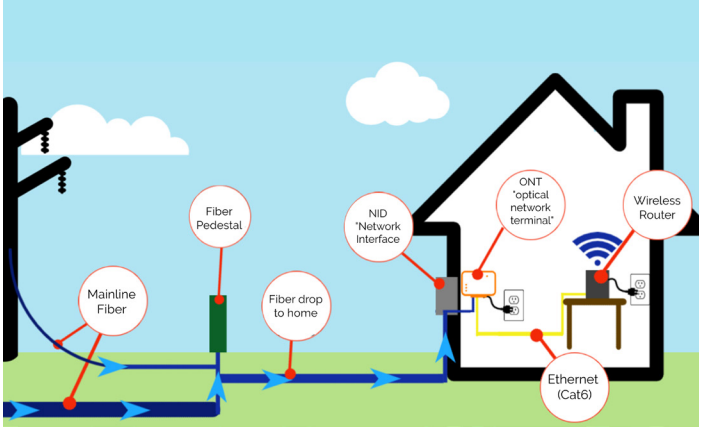
Specs:

PPCS Charger Sizes	Corresponding Breaker Sizes
7.7KW	40A Breaker
9.6KW	50A Breaker
11.5KW	60A Breaker
15.4KW	80A Breaker

Level 2 home charging requires a 240 Volt power supply at 40 to 80 Amps.

PPCS is your local dealer for Level 2 EV smart chargers. We also have a master electrician on staff who can connect you!

Broadband New Construction Guidelines



SWIFTCURRENT® CONNECT
BROADBAND POWERED BY PPCS

New Service Checklist

- **Sign up for service**
  Visit www.swiftcurrent.coop, click the "check now" button, and enter your address. You will be guided through the order process. Please enter "New Construction" when prompted.

- **Pick the location for your new router**
  To optimize performance, pick a central location within your home. Many people like to have their electrician run an ethernet cable from that spot to an exterior wall or utility room.

- **Contact us**
  Let us know before you take occupancy so we can schedule a home installation around the same time you move in. If you have any questions, you can contact us directly at (715) 350-7033!

Broadband
Frequently Asked Questions

Can I upgrade or downgrade my service level after installation?
Yes! We can make speed changes without changing any wiring.

Will my SwiftCurrent bill be merged with my Pierce Pepin bill?
No, you will receive separate, prorated billing from SwiftCurrent around the 1st of the next month after final installation.

Can I move my router to a new location after installation?
Yes, you may move your router to any location within your home by running ethernet cord (cat6 or greater, shown in the diagram on pg. 22).

What if I have an outbuilding I want to connect? If you would like to connect an additional building, you can run cat6 line to the building up to 328 feet. You can also contact us to see if there are any other options that are available.

PIERCE PEPIN

COOPERATIVE SERVICES

Live Better®

A Touchstone Energy® Cooperative

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