

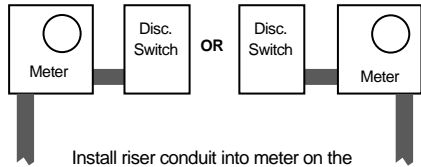
CONSUMER TO PROVIDE AND HAVE INSTALLED:

1. WEATHERHEAD
2. CONDUIT
3. WEATHERPROOF CONDUIT TO BOX HUBS
4. 6" LONG CONDUIT NIPPLE
5. THREE WIRE INSULATED SERVICE ENTRANCE CABLES
6. WEATHERPROOF DISCONNECT SWITCH
7. BONDING JUMPER FOR SERVICE EQUIPMENT (#6 CU. MINIMUM)
8. CONNECTOR FOR BONDING JUMPER TO #6 CU. POLE GROUND WIRE
9. 6" x 6" SQUARE OR 5" ROUND AT TOP BY 18 FOOT POST
10. NO. 6 COPPER GROUND WIRE
11. 5/8 INCH X 8 FOOT COPPER CLAD GROUND ROD AND CLAMP
12. 5/8" GALV. EYE BOLT
13. LOCKNUT AND END BUSHINGS

NOTES:

1. IT IS RECOMMEND CONSUMER'S WIRING BE DONE BY A LICENSED ELECTRICIAN, AND ALL OF CONSUMER'S WIRING COMPLY WITH THE NATIONAL ELECTRIC CODE.
2. CO-OP WILL FURNISH THE METER.
3. CONSUMER TO FURNISH AND HAVE THE METER BASE INSTALLED AND THE CONNECTIONS OF THE WIRES INSIDE THE METER BASE.
4. THE ELECTRIC COOPERATIVE WILL NOT CONNECT AND PROVIDE SERVICE IF THE SERVICE ENTRANCE DOES NOT AT LEAST MEET THE REQUIREMENTS OF THIS DRAWING.
5. PHYSICAL LOCATION OF THE POLE WILL BE APPROVED BY THE CO-OP.

OVERHEAD SERVICE  
120/240 VOLT – SINGLE PHASE



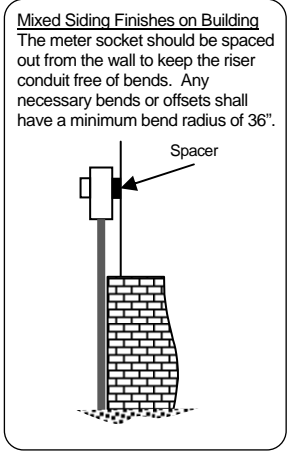
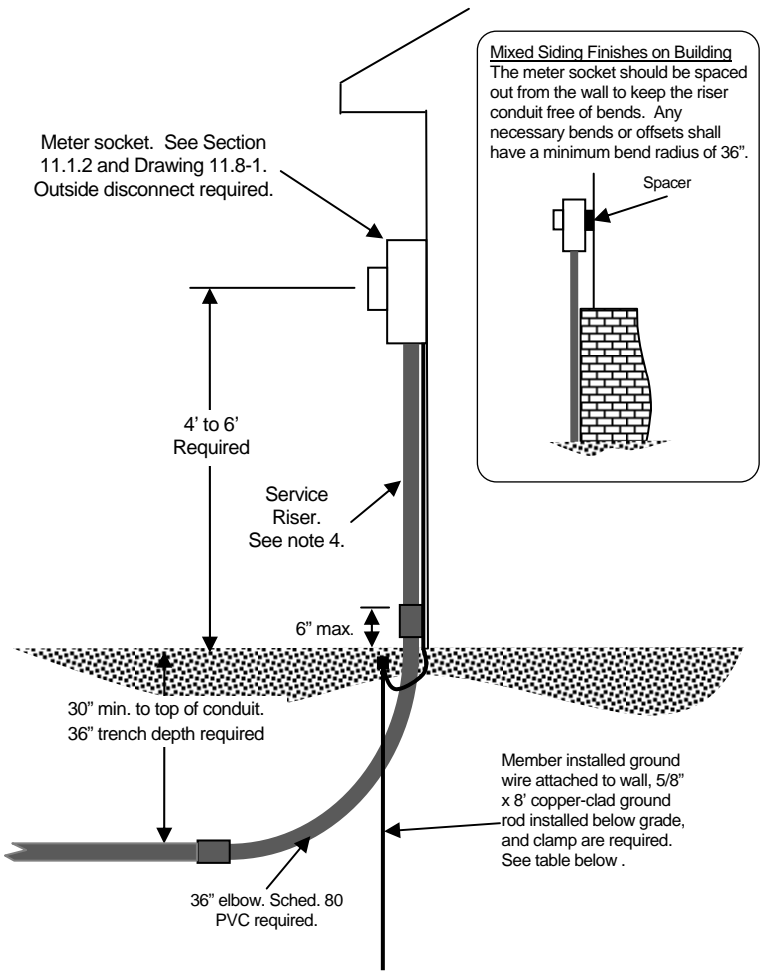
Install riser conduit into meter on the side opposite the disconnect switch. 6" space between boxes required. See note 8.

**NOTICE**

This drawing illustrates SCAEC requirements only, and is not intended to be a comprehensive guide for the installation of an electrical service. To insure a safe, quality installation that complies with the National Electrical Code and local code requirements, the Cooperative recommends that work be done by a qualified, licensed electrical contractor.

**Also see Drawing 8.6-1 for underground service conduit system installation requirements.**

To Cooperative's power source. See Drawing 8.6-1 for conduit system installation requirements.



**Notes**

- Member provides and installs: conduit from transformer or pedestal to the meter socket; meter socket; service disconnect switch; ground rod and wire; and all related materials. All work shall comply with Cooperative standards, the National Electrical Code, and authorities having jurisdiction. Cooperative provides and installs service lateral conductors from SCAEC transformer or secondary pedestal to the meter.
- This service shall be installed at a location mutually agreed upon by the member and the Cooperative.
- Riser conduit shall be Schedule 80 PVC, and shall be flush with wall when installed. 45° or 90° elbows around footings are not permitted. If required, offsets shall have a minimum bend radius of 36".
- Member shall install conduit system to the Cooperative's power source. See Drawing 8.6-1 for conduit system requirements.
- All above ground conduits and elbows shall be electrical grade EMT, IMC, RMC, or Schedule 80 PVC. All conduit connections to be raintight.
- Underground conduit shall be electrical grade Schedule 40 or Schedule 80 PVC. Meter riser and all elbows shall be Schedule 80 PVC.
- Meter and disconnect enclosures must be grounded and bonded together using special means per NEC 250.92. Standard locknuts or bushings are not acceptable. Factory assembled meter and disconnect enclosures are also acceptable.

**CALL 48 HOURS BEFORE YOU DIG - Dial 811**

**It shall be the member's responsibility to stay clear of all underground facilities.**

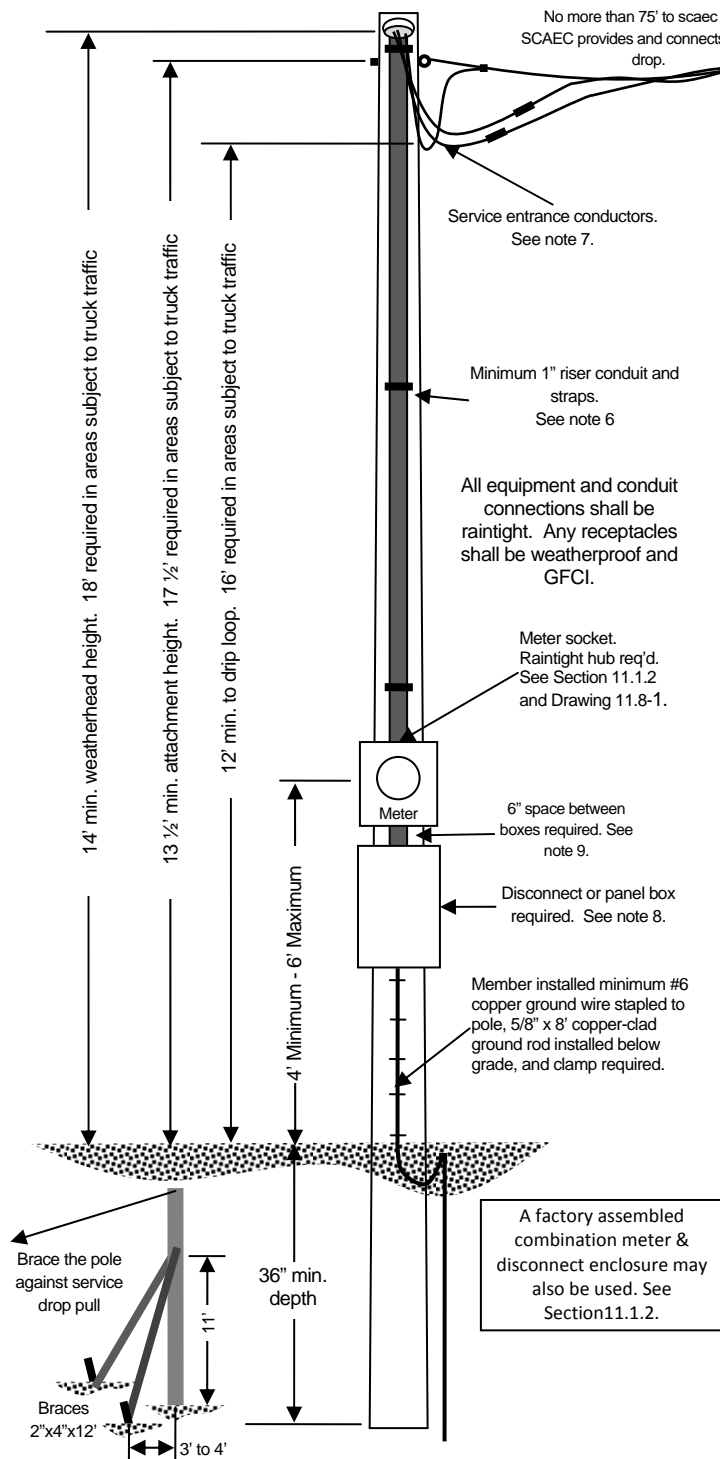
Member Installation Minimum Wire and Conduit Size

Service Rating	Conduit Size		Aluminum (Insulation per NEC)	Copper (Insulation per NEC)	Neutral	Ground Wire Size
	Single Phase	Three Phase				
100A	2"	3"	#2	#4	Same as phase	#6 CU
200A	2"	3"	4/0	2/0	Same as phase	#4 CU
320A	3"	4"	500 kcmil	350 kcmil	See NEC	#2 CU

**Underground Meter On Home or Building**  
 Served From Underground Source  
 Single or Three Phase Service Up to 320A

NOT TO SCALE





**Notes**

1. Member provides and installs: pole; bracing; service drop attachment; conduits; weatherhead; meter socket; disconnect switch; ground rod and wire; and all related materials. All equipment and conduit connections shall be raintight. Any receptacles shall be weatherproof and GFCI. All work shall comply with Cooperative standards, the National Electrical Code, and authorities having jurisdiction. Refer to the *FECC member Installation Standards for Electric Service* for more information.
2. The Cooperative provides the meter and service drop and makes connections at the weatherhead.
3. This service shall be installed at a location mutually agreed upon by the member and the Cooperative. The location should be located away from traffic areas to avoid damage.
4. Pole shall be minimum 6" round or 6"x6" treated wood. Pole length shall be minimum 17' or 21' depending on weatherhead height requirement. Pole shall be braced against service drop pull. See illustration below.
5. Service drop attachment point: member installed 1/2" galvanized steel eyebolt and 2"x2" square washer required.
6. Riser conduit shall be sized per table below. Install conduit straps within 12" of weatherhead and meter, and along conduit with a maximum 3' spacing for conduit 1" or less, or 5' spacing for larger conduit. All conduits to be electrical grade EMT, IMC, RMC, or Schedule 80 PVC. All conduit connections to be raintight.
7. Service entrance conductors shall be sized per table below, and extend 36" out of weatherhead; neutral may be bare or shall be insulated and marked with white tape. When air conditioned or electrically heated construction trailers are to be served, minimum 100A rated service is required.
8. A main disconnect is required for 7 or more breakers. All receptacles shall be weatherproof and GFCI.
9. Meter and disconnect enclosures must be grounded and bonded together using special means per NEC 250.92. Standard locknuts or bushings are not acceptable.

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Member's installation minimum wire and conduit size

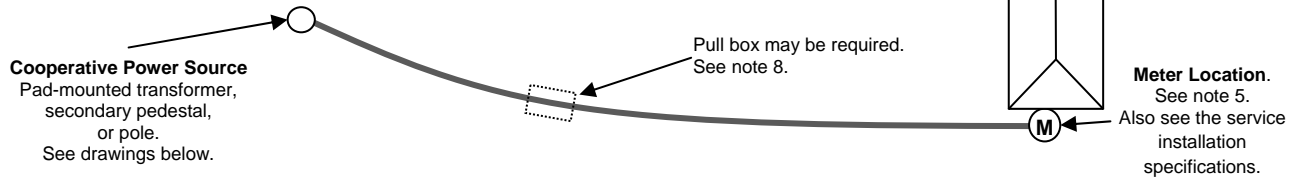
Service Rating	Phase Conductor	Conduit	Ground Wire	Neutral Conductor
60A Minimum	#6 CU	1"	#6 CU	Same as Phase
	#4 AL			
100A	#2 CU	1 1/2"	#6 CU	
	1/0 AL			
200A	3/0 CU	2"	#4 CU	
	250 AL			

**Temporary Meter Pole  
 (Builder's Pole)  
 Underground Load Connection  
 Single Phase Meter up to 200A**

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### Underground Service Conduit System

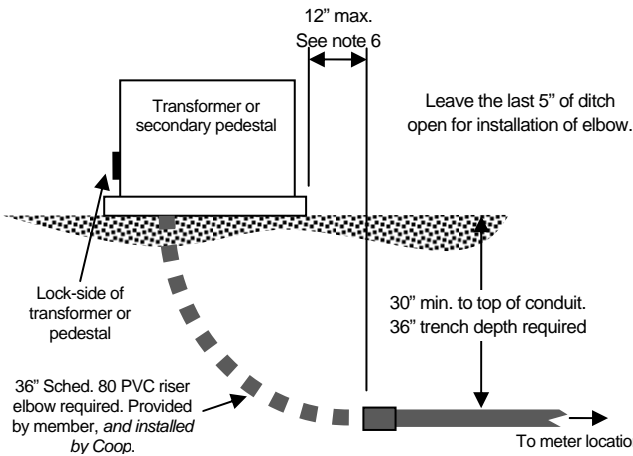
For services rated up to 320A.  
Should be less than 200' from meter to source with no more than 3 elbows, including risers.



**Important:** The member's service conduit system shall be located completely within the member's property boundary, and cannot cross any public roadway.

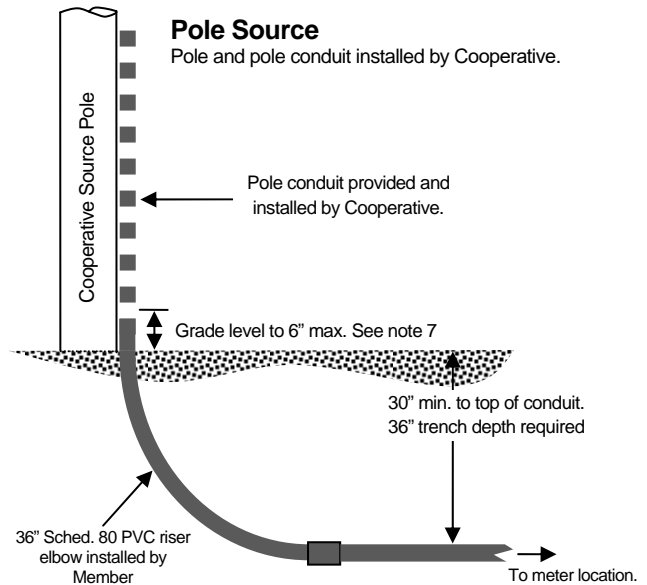
### Transformer or Secondary Pedestal Source

Transformer or secondary pedestal installed by Cooperative.



### Pole Source

Pole and pole conduit installed by Cooperative.



**Notes:**

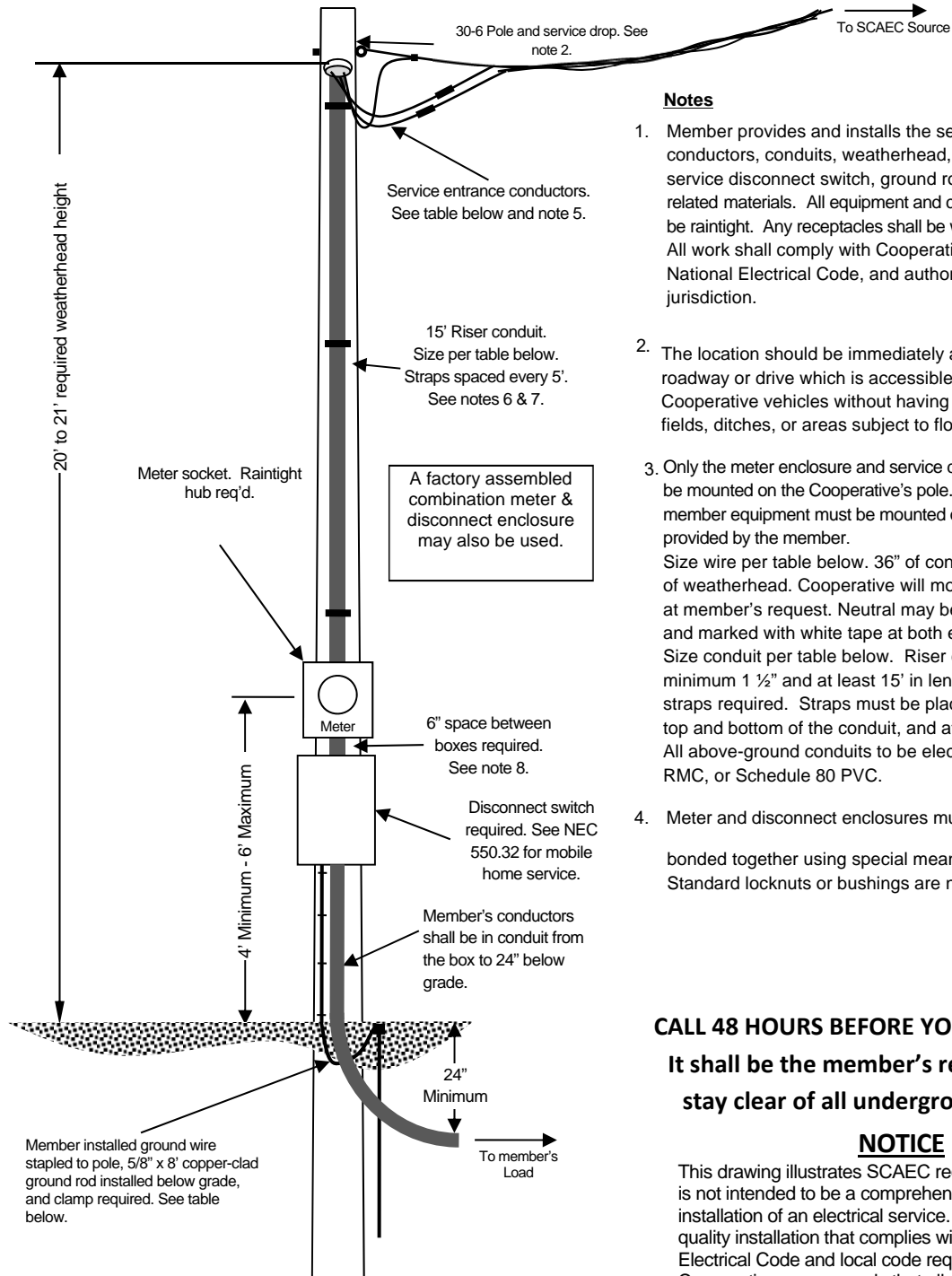
- This drawing illustrates SCAEC requirements only, and is not intended to be a comprehensive guide for the installation of an electrical service. To insure a safe, quality installation that complies with the National Electrical Code and local code requirements, the Cooperative recommends that all electrical work be done by a qualified, licensed electrical contractor.
- The member shall provide and install all secondary conduit; conduit shall have an 80lb non-metallic pull line installed. See table below for conduit diameter. Consult Cooperative for service above 320A.
- Service conductor is normally provided and installed by Cooperative for services rated up to 320A. The member provides and installs service conductor for services rated above 320A. Consult Cooperative for services above 320A.
- Underground conduit shall be electrical grade Schedule 40 or Schedule 80 PVC. All elbows must be min. 36" Schedule 80 PVC. All cut ends shall be beveled. All joints and connections shall be cleaned and securely joined using an approved solvent.
- Meter riser conduit shall be Schedule 80 PVC. Riser conduit shall flush with wall, and not contain any elbows around footings. If necessary, the PVC shall be heated and bent to produce an offset with each bend having a radius of at least 36".
- Transformer or pedestal source - member shall install conduit system to within 12" of the transformer pad or secondary pedestal. End of conduit shall be sealed and location marked. Cooperative will install conduit riser elbow into the transformer or pedestal enclosure.
- Pole source - member shall install conduit system so that riser elbow is against the base of the source pole and at grade level or not more than 6" above grade. End of conduit shall be sealed to prevent entry of dirt or other material. Services rated above 320A may require more than one riser conduit and will require stand-off type brackets; in this case the riser elbows must be installed 7" from the base of the pole.
- Member may be required to install a pull box for any length over 200'. A pull box is required for any installation using more than three 90° elbows (or any combination of elbows exceeding 270°) including riser elbows. Consult the Cooperative for pull box type and location.
- Underground service conduit shall be separated from telephone or cable TV by not less than 3" of concrete, 4" of brick masonry, or 12" of well tamped earth. Water or gas lines are not permitted in the same trench with electrical line, and shall be separated by at least 12" of undisturbed earth.

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Service Rating	Minimum Conduit Size	
	Single Phase	Three Phase
100A	2"	3"
200A	2"	3"
320A	3"	4"
Above 320A – Consult NEC		

**Underground Service Conduit System Specifications**  
Services Rated up to 320A

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**Notes**

1. Member provides and installs the service entrance conductors, conduits, weatherhead, meter enclosure, service disconnect switch, ground rod and wire, and all related materials. All equipment and conduit connections shall be raintight. Any receptacles shall be weatherproof and GFCI. All work shall comply with Cooperative standards, the National Electrical Code, and authorities having jurisdiction.
2. The location should be immediately adjacent to a roadway or drive which is accessible at all times to Cooperative vehicles without having to cross yards, fields, ditches, or areas subject to flooding or irrigation.
3. Only the meter enclosure and service disconnect switch may be mounted on the Cooperative's pole. Control panels or other member equipment must be mounted on a separate structure provided by the member.  
Size wire per table below. 36" of conductor shall extend out of weatherhead. Cooperative will mount service assembly at member's request. Neutral may be bare, or insulated and marked with white tape at both ends.  
Size conduit per table below. Riser conduit shall be minimum 1 1/2" and at least 15' in length with 3 conduit straps required. Straps must be placed within 12" of the top and bottom of the conduit, and at the middle.  
All above-ground conduits to be electrical grade EMT, IMC, RMC, or Schedule 80 PVC.
4. Meter and disconnect enclosures must be grounded and bonded together using special means per NEC 250.92. Standard locknuts or bushings are not acceptable.

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Member's wire and conduit sizes (75° C wire and terminal ratings).  
 Follow NEC requirements for other wire or temperature configurations.

Service Rating	Phase Conductor		Conduit	Ground Wire	Neutral Conductor
	Non – Residential	Residential			
100A	#2 CU	#4 CU	1 1/2"	#6 CU	Same as Phase
	1/0 AL	#2 AL			
200A	3/0 CU	2/0 CU	2"	#4 CU	
	250 AL	4/0 AL			
320A	350 CU	250 CU	3"	#2 CU	See NEC
	500 AL	350 AL			

**Single Phase Meter on Pole**  
**Underground Load Connection**  
**Single Phase Service Up to 320A**  
**DRAWING 7.1-3**  
 June 2014  
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