

2024

SERVICE RULES

Scenic Rivers Energy Cooperative
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Scenic Rivers Energy Cooperative
Wiring/Service Specifications and Recommendations

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Chapter 1 ~ General

Purpose of Service Rules

The following information, detailing the rules and regulations of Scenic Rivers Energy Cooperative (SREC) concerning electric service installations, is published for the convenience of SREC's members and their architects and contractors. These rules are in addition to the Wisconsin Administrative Code, the National Electrical Code (NEC), National Electric Safety Code (NESC), and any other regulations that may apply. SREC reserves the right to make revisions to these rules whenever changes in the article, legal requirements, or other circumstances make it advisable. These rules are intended for standard equipment installations. When, because of physical limitations of the premises, it is impractical to follow them, SREC shall be consulted for permissible modifications. The information contained herein does not specifically cover the requirements of SREC's rate schedules, line extension policy, or general rules. All rules, policies, and pricing are subject to change at any time. SREC shall be consulted for information concerning these matters.

SREC may refuse or discontinue service if a member does not comply with these rules; however, the member will first be notified and afforded reasonable opportunity to comply. Service may be discontinued without prior notice when dangerous conditions exist on the member's premises.

Member Wiring-Code Compliance and Inspection

All wiring shall be done in accordance with requirements of the Wisconsin Administrative (electrical) Code, the NEC, the NESC, and SREC's rules and other local or state requirements which may apply.

As of January 1, 2005, all one and two-family new construction has to be inspected by a state-certified inspector as per Uniform Dwelling Code. For the list of electrical inspectors by county, (see [Appendix 1](#)).

As of January 1, 2020, all new/service upgrades for Commercial and Ag will have to be inspected by a state-certified inspector. For a list of the state electrical inspectors, (see [Appendix 2](#)).

- **SREC will not inspect member's wiring or equipment beyond the metering pedestal or cabinet for compliance with the applicable codes.**
- In new wiring installations or when changes in existing wiring are made which require the removal of meters or the disconnection of service, SREC shall not connect or resume service until the contractor or person doing the wiring furnishes SREC with a Wiring Affidavit of Electric Inspection (see [Appendix 3](#)) showing proof of compliance with the Wisconsin Administrative (electrical) Code and the NEC.
- Inactive accounts where the meter and service have been removed shall be treated as a new service when a request for service is received. (See above paragraphs.)
- **SREC will not interpret the electrical code. Questions concerning code interpretations should be referred to the local or state electrical inspector.**
- SREC will inspect for compliance with its rules and may refuse or discontinue electric service if its rules are not complied with or a hazardous condition exists.

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- Service may be obtained prior to completion of wiring if the service entrance is completed, it complies with SREC rules, Wiring Statement/Certificate of Electric Inspection showing proof of compliance (see [Appendix 3](#)) is completed, and proof of inspection with applicable codes has been received.
- SREC crews setting meters or connecting new services for single-phase one-family dwellings test for infinite resistance at the meter socket load terminals. If this check indicates connected load at the load terminals, the meter will not be set. It is recommended that the service disconnect switch be left open to avoid the indication of connected load at the meter base. *SREC CREWS WILL NOT ENTER A BUILDING TO OPEN OR INSPECT THE SERVICE DISCONNECT SWITCH / BREAKER.*

Service Entrance Equipment

The member shall own, and maintain the service entrance equipment.

It shall be the rules of Scenic Rivers Energy Cooperative that the normal single-phase service shall be a minimum of 200 amps at a location and type to be determined by SREC personnel.

- Single-phase services of 200 to 320 amps shall have proper FCI rated over-current protection at the service point. The minimum breaker AIC rating shall be 10,000 to 42,000 amps interrupting capacity. All equipment must be UL listed and Type 3R outdoor rated. Please contact SREC for approval of all metering equipment and AIC ratings prior to installation. (see [Appendix 4](#)) for approved equipment list and minimum AIC rating chart.
- Single-phase services 400 to 800 amps current transformer rated sockets that will be 6 terminals, include pre-wired test switch, and proper FCI rated over-current protection at the service point. The minimum breaker ratings of 22,000 to 65,000 amps interrupting capacity. All equipment must be UL listed and Type 3R outdoor rated. Please contact SREC for approval of all metering equipment and AIC ratings prior to installation. (see [Appendix 4](#)) for approved equipment list and minimum AIC rating chart.
- Three-phase services (120/208) 400 to 1200 amps current transformer rated sockets will be 13 terminals, include pre-wired test switch, and proper FCI rated over-current protection at the service point. The minimum breaker ratings of 10,000 to 65,000 amps interrupting capacity. All equipment must be UL listed and Type 3R outdoor rated. Please contact SREC for approval of all metering equipment and AIC ratings prior to installation. (see [Appendix 4](#)) for approved equipment list and minimum AIC rating chart.
- Three phase services (277/480) 400 to 1200 amps current transformer rated sockets will be 13 terminals, include pre-wired test switch, and proper FCI rated over-current protection at the service point. The minimum breaker ratings of 10,000 to 42,000 amps interrupting capacity. All equipment must be UL listed and Type 3R outdoor rated. Please contact SREC for approval of all metering equipment and AIC ratings prior to installation. (see [Appendix 4](#)) for approved equipment list and minimum AIC rating chart.
- Service metering shall be rated to at least the rating of any disconnects and over-current protection.
- Insulated neutral conductor of a service entrance shall be identified by white or gray marking.
- Member-owned lightning arresters or other surge-protection devices, if used, shall be installed on the load side of the member's over-current protective devices.

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Application for New Service

Membership Applications can be found on our website (www.sre.coop) or you can call or stop in to one of our offices in Lancaster or Darlington. We will be happy to help with the process in any way we can. Also see [Chapter 2](#) on Services.

Standard Procedure for New Service

- Membership Application and Electrical Service (see [Appendix 5](#)) completed and returned to SREC.
- Credit check performed by SREC and any required deposit will be added to cost of service.
- New member MUST submit a signed Service Data Form (see [Appendix 6](#)) before final cost can be assessed and paperwork sent to the member.
- SREC will schedule a field meeting with the member requesting service (requires a staking fee).
- SREC will determine the location of all routes and service points.
- The cost of the service request will be calculated using the most current Electric Service Agreement. For current pricing, please contact our office for basic service information. (see [Appendix 7](#)).
- Easements shall be obtained prior to any work being performed.
 - For overhead lines, the easements need to be 20 feet on each side of the line.
 - For underground lines, the easements need to be 10 feet on each side of the line.
- All fees and Contribution-In-Aid of Construction (CIAC) shall be paid prior to any work performed by SREC.
- All new services will require a Certificate of Electrical Inspection before SREC will energize the service. (see [Appendix 1](#) or [Appendix 2](#)) for a list of electrical inspectors.

Increased Loads

Members shall notify SREC of any load increase of 10 KW or more.

- Delays, poor service or a burned-out meter or transformer will thus be avoided. This applies to any load additions of 10 KW or more.

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Continuity and Quality Service

SREC will use reasonable care to provide regular supply of service; but shall not be liable for any loss, injury, or damage resulting from interruptions, deficiencies or imperfections of service not due to willful default or negligence on its' part.

SREC shall have the right to cause service to any member to be interrupted or limited at any time, without liability, by automatic devices or otherwise, when in the judgment of SREC such interruption or limitation is necessary or desirable due to safety and emergency conditions.

All motors, appliances or equipment connected to SREC's system shall be so designed, installed, and operated as not to cause interference to other members' service equipment nor to impede SREC in maintaining proper system conditions.

It shall be the responsibility of the member to provide motor protection for under voltage, overcurrent, short circuit, and loss of a phase.

SREC may also curtail or temporarily interrupt the member's electric service in order to make repairs, replacements or changes to SREC's facilities, either on or off the member's premises. SREC will, whenever practical, give notice to members who might be seriously affected by such suspension or curtailment of service, but shall not be liable for any loss, injury, or damages resulting from interruptions, deficiencies, or imperfections of service not due to willful default or negligence on its' part.

It is intended that the voltage provided to the member comply with the requirements of the Wisconsin Administrative Code. This code allows voltage transients of an infrequent nature, which may adversely affect the operation of certain sensitive equipment. Prevention of undesirable operation of sensitive equipment caused by these transients is the responsibility of the member.

SREC strongly recommends the member install surge-protection devices for any/all sensitive electronic equipment.

Resale of Energy

Service shall be for the member's use only and may not be sold, re-metered or otherwise disposed of by the member to lessee, tenants or others, except with the consent of SREC in accordance with SREC's appropriate Rate Schedule permitting such use of service. This does not prohibit the installation of test or check meters for informational purposes.

System Disturbance and Motor Starting

The member shall not use Scenic Rivers Energy Cooperative (SREC) service in any way that causes a safety hazard, endangers SREC's facilities or disturbs electric service to other members. If necessary, it is the member's responsibility to modify its use of SREC's electric service to comply with this provision or pay SREC to modify its electric system to accommodate the member's use of the electric service. Failure to comply with this provision may result in discontinuance of the electric service to the member.

The member shall install only such motors, other apparatus or appliances as are suitable for operation with the character of the service supplied by SREC. Electric energy must not be used in such manner to cause detrimental voltage fluctuations or disturbances on or to SREC's electric distribution system. To facilitate

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this policy, the installation of motors, phase converters and other devices with inrush starting requirements exceeding the following will not be allowed without advance approval.

For motors or other equipment that exceed these limits, it is the member's responsibility to consult with SREC on acceptability of a particular motor at a particular location. SREC will make a determination of acceptability based on motor starting characteristics including anticipated frequency of starting and time of start. To judge the acceptability of motor starting characteristics, SREC will use the applicable IEEE (Institute of Electrical Electronics Engineers Standards from ANSI Standards) and actual or anticipated complaints by other members. The member can modify its use of SREC electric service by limiting motor starting current or frequency and time of motor starting.

Phase Converters

The operating characteristics of any phase converters shall be provided to SREC prior to their installation and operation. SREC will need to review the impact that the phase converter has on the local distribution system. Larger installations, if approved, will be required to have reduced voltage and current starting capabilities.

Power Factor Adjustment

The member agrees to maintain unity power factor as nearly as practical. The Cooperative reserves the right to measure power factor at any time. Should measurements indicate that the average power factor for the month be less than 90% of the Maximum Demand. Billing shall be adjusted according to current cooperative policy.

Equipment Protection

All equipment connected to SREC's lines, which may be damaged by loss of voltage on one phase, shall be protected by the member to ensure that such equipment will be disconnected from the line in case of abnormal voltage conditions. Three-phase motors shall be protected against single-phasing.

Types of Service and Voltages Available

120/240-volt 1 phase – Up to 600 amps, anything above will need SREC approval

120/208-volt 3-phase Y

277/480-volt 3-phase Y

Other Service Requirements

It shall be the practice of SREC to extend service on an area coverage concept, and provide service to prospective members under uniform rates, fees and facility charges in accordance with applicable rate schedules, consistent with sound business practices.

- The "Contribution-In-Aid of Construction" (CIAC) and all required fees must be paid in a lump sum payment prior to the construction of the line extension, or service upgrade. Please note that this cost is based on soil conditions which allows the type of line extension requested. Rocky or abnormal conditions may lead to additional costs. Fees, and (CIAC), on behalf of the applicant, shall not be deemed to vest either interest or individual ownership in any portion of the facilities to the service point. Installed electric facilities up to the point of delivery (service point) remain the ownership of SREC with the exception of when, as determined by authorized SREC personnel, it is the best interest of SREC to either abandon and/or transfer ownership of said facilities.

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- Easements shall be obtained, along with any required permits prior to the installation of any service.
- SREC reserves the right to make the final determination as to the type of construction (overhead or underground), the routing of the line extension, and placement of poles and equipment.
- SREC reserves the right to determine the point of origin for any and all service construction. A point of origin includes poles, transformers, underground sectionalizing cabinets, and secondary or metering pedestals with the capabilities for additional service connections.

Chapter 2 ~ Services

SREC will extend service to members as promptly as practical consistent with prevailing conditions and will cooperate with contractors and members in order to provide proper service connections. Due to equipment and material lead times, advance notice shall be given to SREC, especially if any special or large circumstances exist.

Where there is a question concerning the meaning or applications of SREC rules, unnecessary delays or expenses may be avoided by consulting SREC in advance of any construction. Members, their architects, engineers or contractors shall consult SREC concerning the installation of special circuits for separate metering or controls to meet the rate requirements of SREC and permit adequate service.

To be considered “ready for service” the member must have all the items on the Service Checklist (see [Appendix 8](#)) completed. The checklist can be obtained from any of our three offices or on our website (www.sre.coop). Additional charges shall apply if multiple trips are required due to service not being ready.

Service Location

The location of the member’s service entrance shall in all cases be designated by SREC. SREC or its representatives shall make all connections to its lines, and in no case shall these connections be made by other than SREC representatives. To avoid misunderstanding and additional expense, SREC shall be consulted concerning all new service connections and locations.

- Meter sockets are recommended to be a maximum of 20 feet from the transformer, remain readily accessible by SREC employees, and have a minimum rating of 200 amps with over-current protection at the service point. SREC has the final decision on all equipment locations up to and including the service point. (see [Appendix 9](#))
- No new services shall be installed on buildings or structures.
- Service upgrades on existing services installed on buildings or structures can only remain as long as the point of attachment does not move or change, and meets current rules and codes.
- No new or upgraded services will be permitted to use pole top disconnects, or remain on a SREC primary structure. Any damaged pole top disconnects beyond repair will be required to be brought up to our current service rules.
- All services must have a means of disconnect with over-current protection to disconnect the premise wiring from SREC wiring at the service point.

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- All multiple ganged sockets will be permanently marked on a permanent surface to the location of each meter.
- Multi-site metering is subject to Cooperative approval.
- **No member's equipment shall be mounted on SREC primary structures.** Existing equipment such as lighting, fence equipment or any other member-owned equipment shall be removed from SREC's primary structures. This is to meet SREC rules, NESC codes and ensure the safety of our membership and contractors.

Overhead Service

Conductor Clearances

In selecting the location of the point of attachment of the service drop, SREC will give careful consideration to code clearance requirements, location of its supply lines, SREC rules, and the needs of the member and the property of others. It is recommended that the metering points be a maximum of 20 feet from the transformer. Rare exceptions will be considered if extenuating circumstances exist, and are approved by SREC (i.e. land obstructions or road crossings).

- The member's service entrance shall be located so that SREC service wires will not be interfered with by trees and so that buildings and other obstructions are cleared vertically and horizontally in accordance with requirements of the State Electrical Code. Right-of-Way easements shall also be secured for SREC services.
- The member shall furnish a cleared right-of-way without cost to SREC adequate for construction of the line extension along a route approved by SREC. The right-of-way shall be a minimum of 20 feet either side of the nearest conductor for overhead lines. If right-of-way clearing is completed by SREC, the member must reimburse SREC for the entire cost.
- Overhead Conductor Clearances (see [Appendix 10](#))

Overhead service or line conductors:

- Shall not pass over swimming pools or the surrounding land within 20 feet from the outside edge of the pool. Consult SREC when it is necessary for service or line conductors to pass over this area.
- Shall not pass over areas where material is regularly stored and handled by cranes or other types of high machinery unless the clearance of the service drop is adequate to permit full use of the equipment.
- Shall not pass over above-ground storage tanks (LP gas tanks over 1000 gallon) and the area extending 8 feet horizontally from the tank if the voltage is 300 volts to ground or less, 20 feet horizontally if above 300 volts to ground.
- Shall not pass over wells within a horizontal distance of not less than $\frac{3}{4}$ of the required vertical clearance. Or a minimum of 25 feet whichever is greater.
- After SREC installs power lines any new additions or structures that encroach on the established right-of-way that SREC has must be reported to SREC, this is to ensure member and SREC safety. If corrections must be made to fix a safety issue, it will be the member's responsibility to pay for corrections.

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Service Conductor Termination

- SREC will install the attachment device on a SREC set pole. SREC installed attachment device shall hold SREC service wires only.
- In all cases the member shall be required to extend his or her service entrance to a sufficient height, or location not ordinarily exceeding 30 feet, to meet all of the minimum ground clearance requirements for overhead service installation.
- The member's service entrance weatherhead shall be installed 6 inches above the designated point of the meter pole service attachment approved by SREC.
- Service entrance conductors shall project at least 30 inches beyond the service head to permit the proper connections to the service wires. The neutral or grounded entrance conductor shall be permanently identified with a white or gray marking.

Underground Service

The member shall furnish a cleared right-of-way without cost to SREC adequate for construction of the line extension along a route approved by SREC. The right-of-way shall be a minimum of 10 feet either side of the nearest conductor for underground lines. If right-of-way clearing is completed by SREC, the member must reimburse SREC for the entire cost.

SREC will install and maintain (SREC-owned) underground electric facilities at current cooperative costs. Equipment location, meter location, and service termination shall be specified by SREC. (see [Appendix 15](#)) for pad transformer location clearance specs from a building.

Member Requirements

The member shall identify all privately-owned underground equipment on the Service Data Form (see [Appendix 6](#)) provided by SREC prior to the installation of SREC underground electric facilities. Damage to member-owned underground equipment not located and/or identified by the member shall be the member's responsibility.

The member shall grant rights-of-way with an easement satisfactory to SREC for the installation and maintenance of the underground electric facilities. (see [Appendix 11](#)) for right-of-way specifications.

The member shall provide the following at no expense to SREC:

- The right-of-way shall be cleared of trees and other obstructions.
- A signed and notarized Right-Of-Way easement for 10 feet on either side of the nearest conductor.
- The right of way shall be within 4" of finished grade.
- Space for underground service conduit and conductors shall be clear of obstructions extending a minimum of 30" below grade.
- Members may be required to provide an SREC approved open trench a minimum of thirty (30) inches deep and four (4) inches wide for underground services between the transformer and the meter at the member's expense.
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- If underground equipment (i.e. transformers and meter pedestals) are located in a high traffic area, SREC may require the member to install adequate barriers to protect equipment.
- SREC conductors located beneath pavement, drivable areas or other obstructions shall be placed in schedule 80 electrical conduit extending six (6) feet beyond the obstruction. If obstructions are placed on the service right-of-way after the service is installed, additional repair costs incurred due to the obstruction will be billed to the member if repairs to the service become needed.

SREC will backfill and repair all excavating as close as possible to the original condition. The underground cable will be installed so that no buildings or other structures; including decks, patios, septic systems, and garages; are over or within any distance that would cause a code violation, (see the National Electric Safety Code Sections 31 and 35), or infringe on SREC right-of-way easement.

Should a building or similar structure be built over the underground cable, SREC shall notify the landowner of the code violation and request a meeting with the landowner to determine remedial action. Any remedial costs shall be the responsibility of the landowner. If a meeting between SREC and the landowner cannot be arranged, SREC shall make necessary corrections to SREC facilities and bill the landowner for such corrections.

SREC shall not be liable for damage to trees, lawn, fences, sidewalks or other obstructions incident to the installation, maintenance or replacement of underground facilities, unless caused by its own negligence.

Terminating Underground Service Conductors

Underground service conductors shall terminate at the metering point.

All underground premises wiring shall have overcurrent/disconnect protection in accordance with the ampacity of the underground conductor located at the service point.

- Single-phase services of 200 to 320 Amps shall terminate at the meter socket.
- All meter sockets shall be a minimum 200-amp rating with 4 terminals (no matter what size load) with proper FCI rated overcurrent protection at the service point. All equipment must be UL listed and Type 3R outdoor rated. Please contact SREC for approval of all metering equipment prior to installation.
- For single-phase or three-phase multiple socket installations, the member shall provide a single-point of termination for SREC underground service conductors.
- Current transformer metering will be required on services larger than 320 amp. An SREC approved CT cabinet with overcurrent protection incorporated will be installed and maintained by the member. SREC shall be consulted for conduit or pedestal location and installation specifications. For the Approved Equipment List (see [Appendix 9](#)). Contact SREC for approval of any equipment not on the list with the part number and make of requested equipment.

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- Conduit risers shall have a sleeve placed around the conduit where the conduit passes through a concrete slab.
- Expansion joints are required between the metering / CT cabinets and the ground line at the member's expense.
- Soil or ground water conditions generally require the installation of above ground entry of underground service conductors to prevent seepage or water entering through the entrance conduit. SREC will not be responsible for any damage caused by water seeping into the buildings through the member's raceway or conduit.
- Ground rods and the grounding conductor shall not be installed within 2 feet of the underground cable route. The grounding shall not be installed in the conduit or pedestal with underground service entrance conductors.

Temporary Service

1. Checklist for service must be completed along with a SREC Membership Application.
2. All required fees must be paid prior to service.
3. Member provided temporary meter loops.
4. All temporary services can remain for a period of **90** days. Additional fees will apply for each month thereafter for a maximum of one year.

For Contractors, DOT, Bridge Companies, all temporary services alike use the following steps:

1. Requires a Membership Application.
2. Will be set up the same as a new service, along with associated costs.
3. Required to pay a \$500.00 deposit.
4. All required costs must be paid prior to service installation.
5. Usage and facility charge will be billed monthly.
6. All costs associated with any special requirements (distance, location, etc.) will be billed on a time and material basis.

Temporary meter loops shall be wired to SREC rules and state and national codes. Inspection and a wiring affidavit for temporary services are required prior to connecting.

Relocation of Services

Relocation of SREC lines requested by the member will be at the member's expense. SREC will provide a field check with a written cost for such work upon request. SREC will have the final decision of the new location, type of construction, scheduling and costs.

Charges will be calculated on a per foot basis. Under special circumstances, changes may be based off of percentages or time and material rates with approval by SREC.

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Chapter 3 ~ Cooperative Equipment on Member's Premises

SREC shall have the right to install, inspect and maintain its equipment on the member's premises as is necessary to furnish proper service. All such equipment shall remain SREC property, and SREC shall have the right to remove it on discontinuance of service. The member shall be responsible for damages and losses resulting from interference or tampering with such equipment caused or permitted by the member. In the event that SREC equipment is interfered with or damaged, SREC may require the member to change his/her wiring, at his/her own expense, to permit the installation of other SREC equipment or to permit the relocation of SREC equipment to avoid further interference or damage.

Sealing of Equipment

Meters and all associated metering equipment, service termination boxes, wire raceway, and service entrance switches containing unmetered conductors are sealed by SREC. This equipment must be designed with provisions for seals or locks as specified by SREC.

Unauthorized removing of SREC seals is unlawful and may result in a billing for the investigation and replacement of the seal as well as criminal prosecution and tampering charges.

Theft of Service

SREC will investigate for the possibility of theft of service whenever tampering with meter seals, meters, service conductors, and service connections is reported or detected. Only SREC authorized persons are permitted to make connections to SREC lines.

If the investigation determines that electricity is being stolen, the service shall be disconnected. Before the service can be reconnected, the member shall make payment in full for the estimated amount of unmetered electricity.

Theft of service may result in criminal prosecution.

Chapter 4 ~ Meters

Wiring for Meters

- SREC will under no circumstances permit "Jumpers" to be placed in meter sockets, which results in unbilled energy.
- Metered and unmetered conductors shall not be installed in the same conduit or raceway.
- On group installations each service switch, breaker, meter pedestal socket or cabinet shall bear a distinctive, permanent marking clearly identifying the location to be served. The location being served shall be identified in the same manner.
- SREC shall not permit meters or instruments other than its own to be connected to its meter wiring.

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Meter Locations

- The clear working space in front of meter panels shall be a minimum of 4 feet and a vertical clearance of 6 feet 6 inches. Two feet of horizontal clearance on either side shall also be provided. Free space in front of instrument transformer cabinets shall be 2 feet beyond the cover in the extended position or a minimum of 4 feet whichever is greater.
- If changes are made on the member's premises making the existing meter location unsafe or inaccessible for reading and testing, the member shall be required to make changes in the wiring so that the meter may be located to comply with these rules and codes. Failure of the member to correct his or her wiring within a reasonable length of time after written notification shall be considered as noncompliance with these rules. SREC reserves the right to discontinue electric service until the member has changed his wiring as outlined above.
- The member shall be responsible for providing protection for the meter(s) from damage caused by falling ice, snow or other objects. In locations where the meter is not protected, the member shall provide a protective shield. (see [Appendix 12](#)) for structure specs.

The service specifications and diagrams for individual service requirements are as follows:

Specifications and Diagrams

The information in this section addresses questions most commonly asked by our members when applying for electric service. While this information covers Scenic Rivers Energy Cooperative's 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 02169-7471
(800) 344-3555

Wisconsin State Electric Code

Madison, WI 53702

NOTE: Per State law and code you must contact a Wisconsin licensed master electrician to perform any electrical work.

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Conductor Types and Sizes

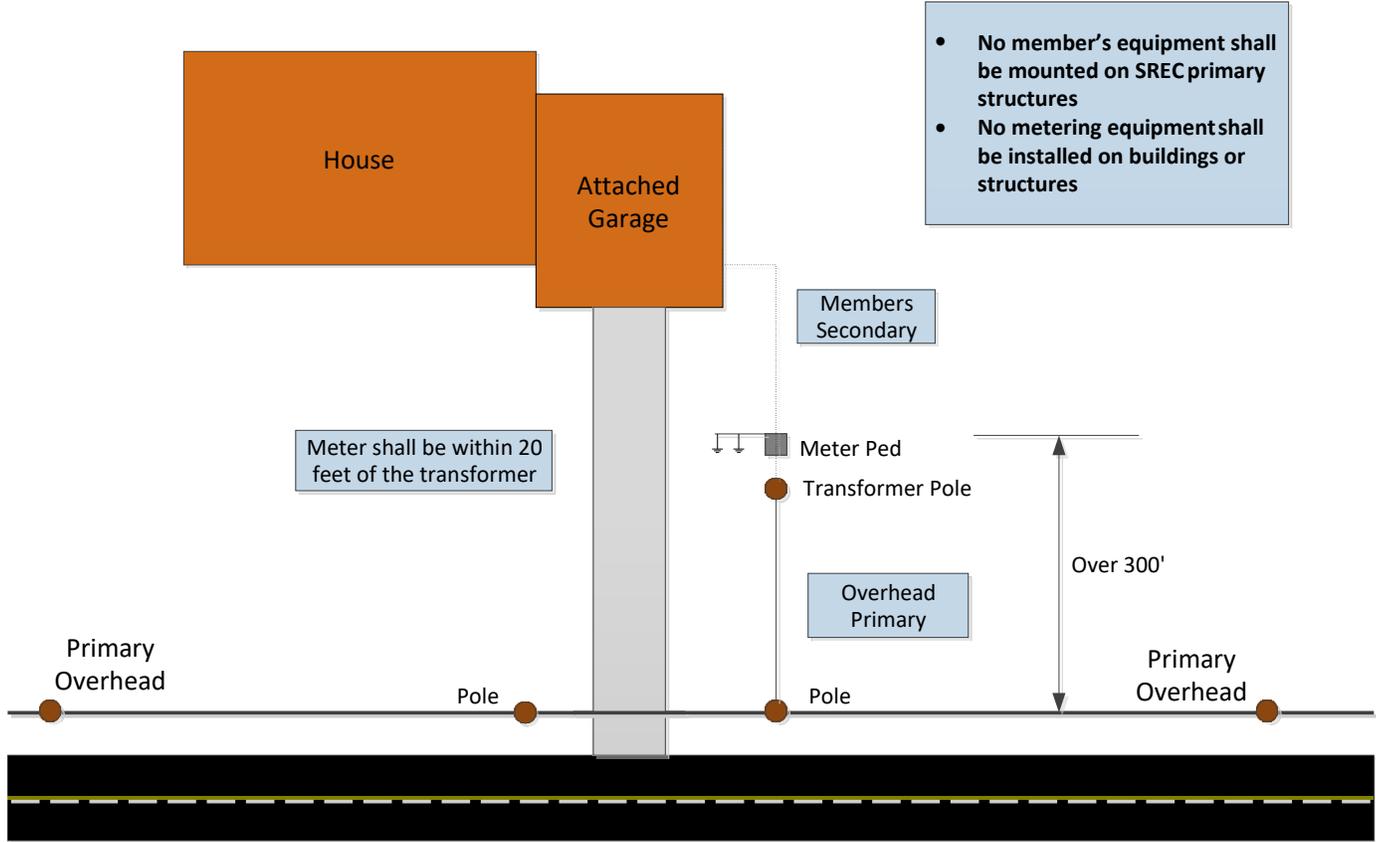
<u>Service Size</u>	<u>Minimum Sizes</u>	
	Copper	Aluminum
200-amp	No. 2/0	No. 4/0
320-amp	No. 4/0	No. 350MCM

Please see current code requirements for wire type and size.

Single-Family Dwellings

- Minimum meter sockets shall be 200-amp rating with 4 terminals (no matter what size load) with proper FCI rated overcurrent protection at the service point. All equipment must be UL listed and Type 3R outdoor rated. Please contact SREC for approval of all metering equipment prior to installation.
- Single family dwellings may have only one main service disconnect. Exception: A second main may be installed for (1) a different rate (Controlled Electric Heat). Service metering shall be rated to at least the rating of any disconnects and overcurrent protection

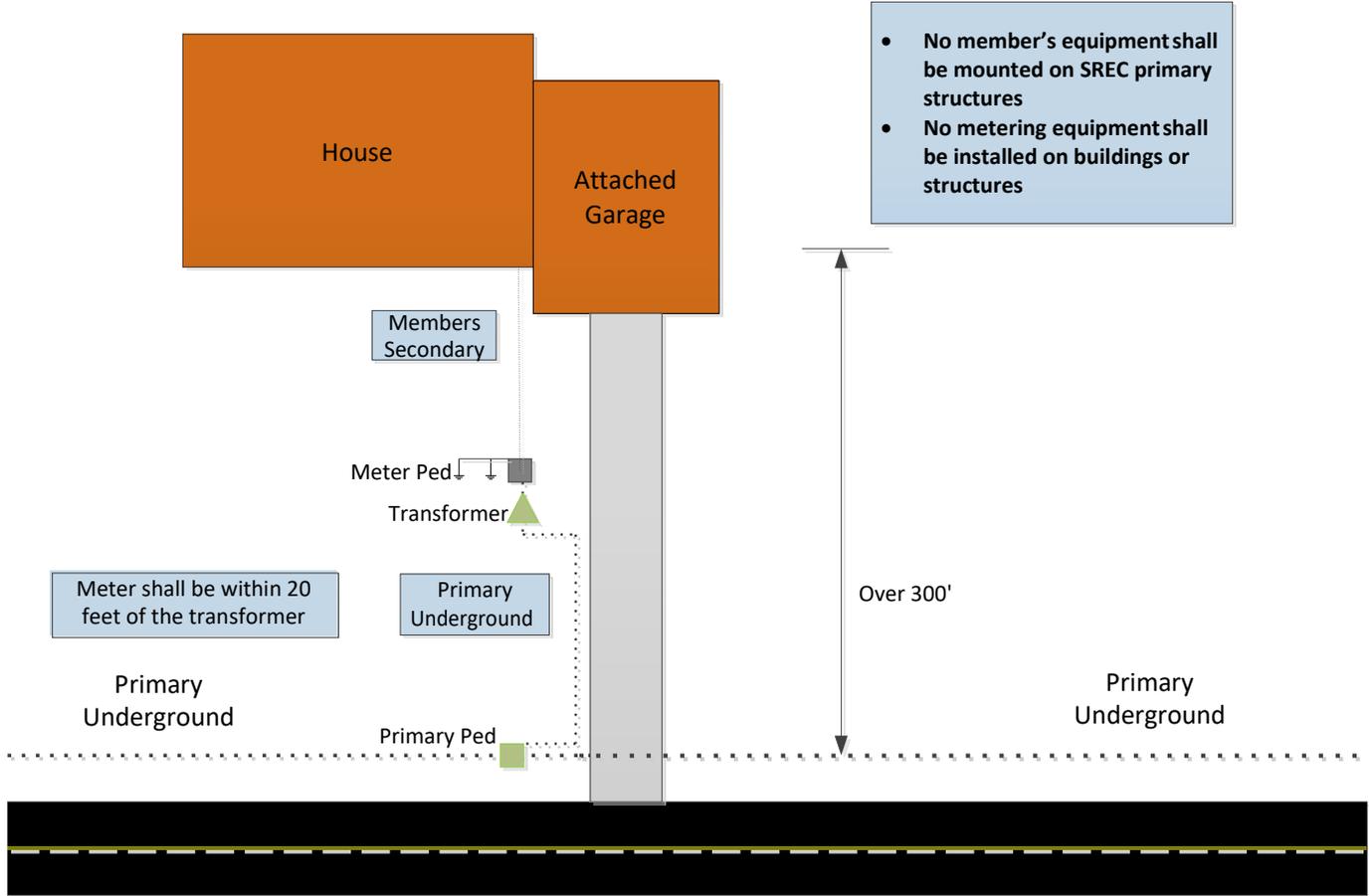
Placement Guide
New Service Metering Point
Over 300' From SREC Facilities
Primary Overhead line



Total Secondary (Utility and Member) Not to Exceed 300' to the Main Service Location

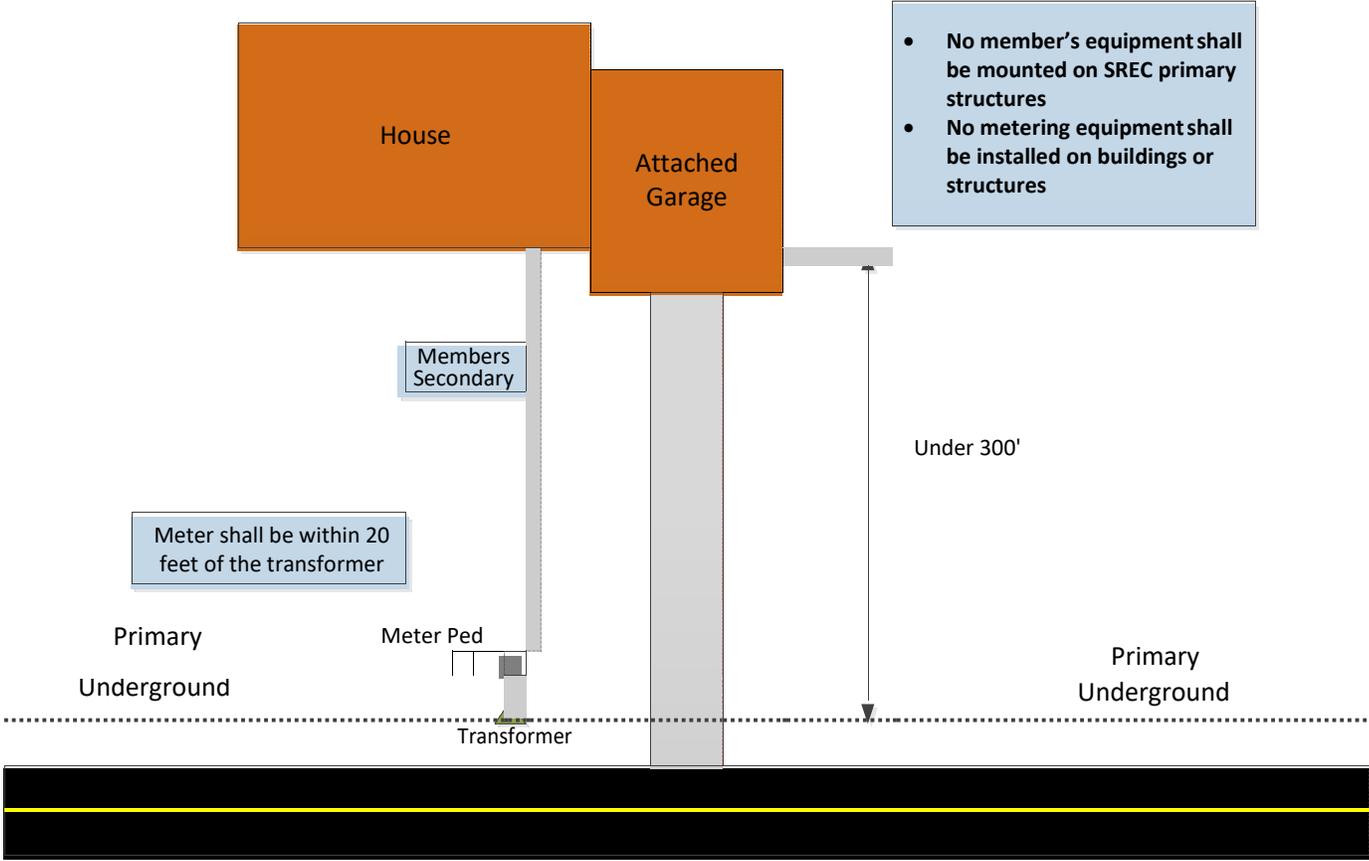
Last Revision Date: 1/20/2017

Placement Guide
New Service Metering Point
Over 300' From SREC Facilities
Underground Primary Line



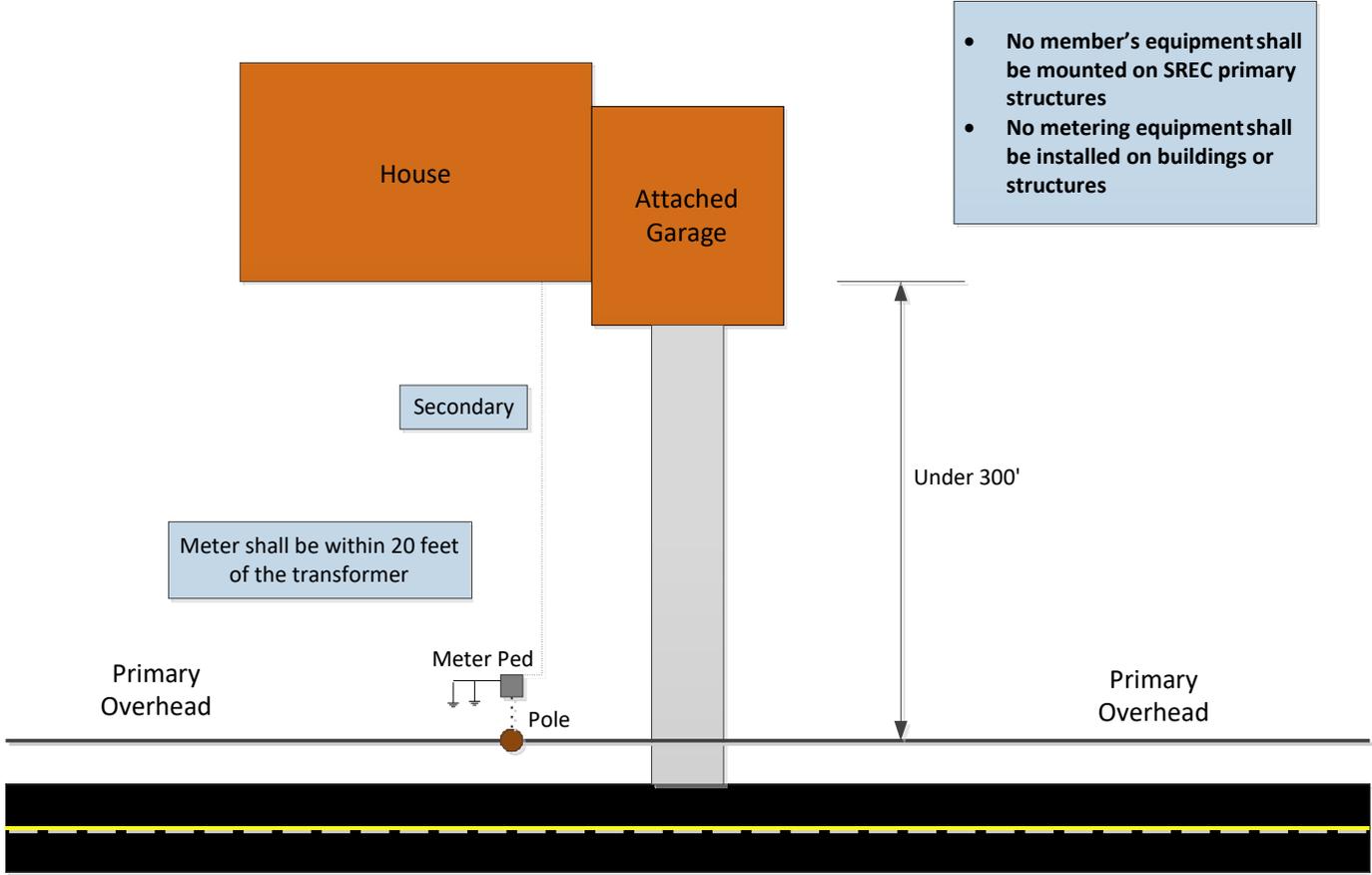
Total Secondary (Utility and Member) Not to Exceed 300' to the Main Service Location

Placement Guide
New Service Metering Point
Under 300' From SREC Facilities
Underground Primary Line



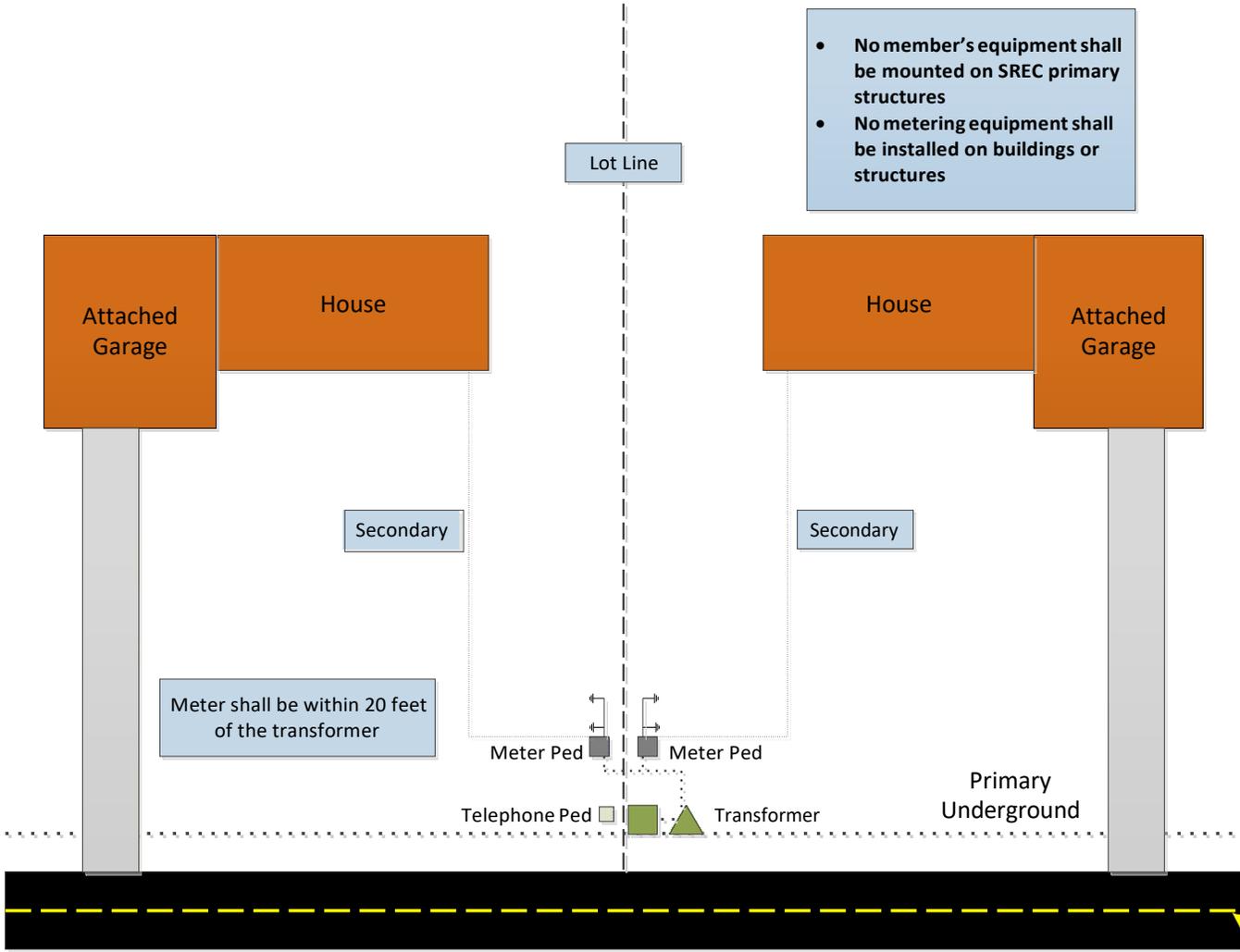
Total Secondary (Utility and Member) Not to Exceed 300' to the
Main Service Location

Placement Guide
New Service Metering Point
Under 300' From SREC Facilities
Overhead Primary Line



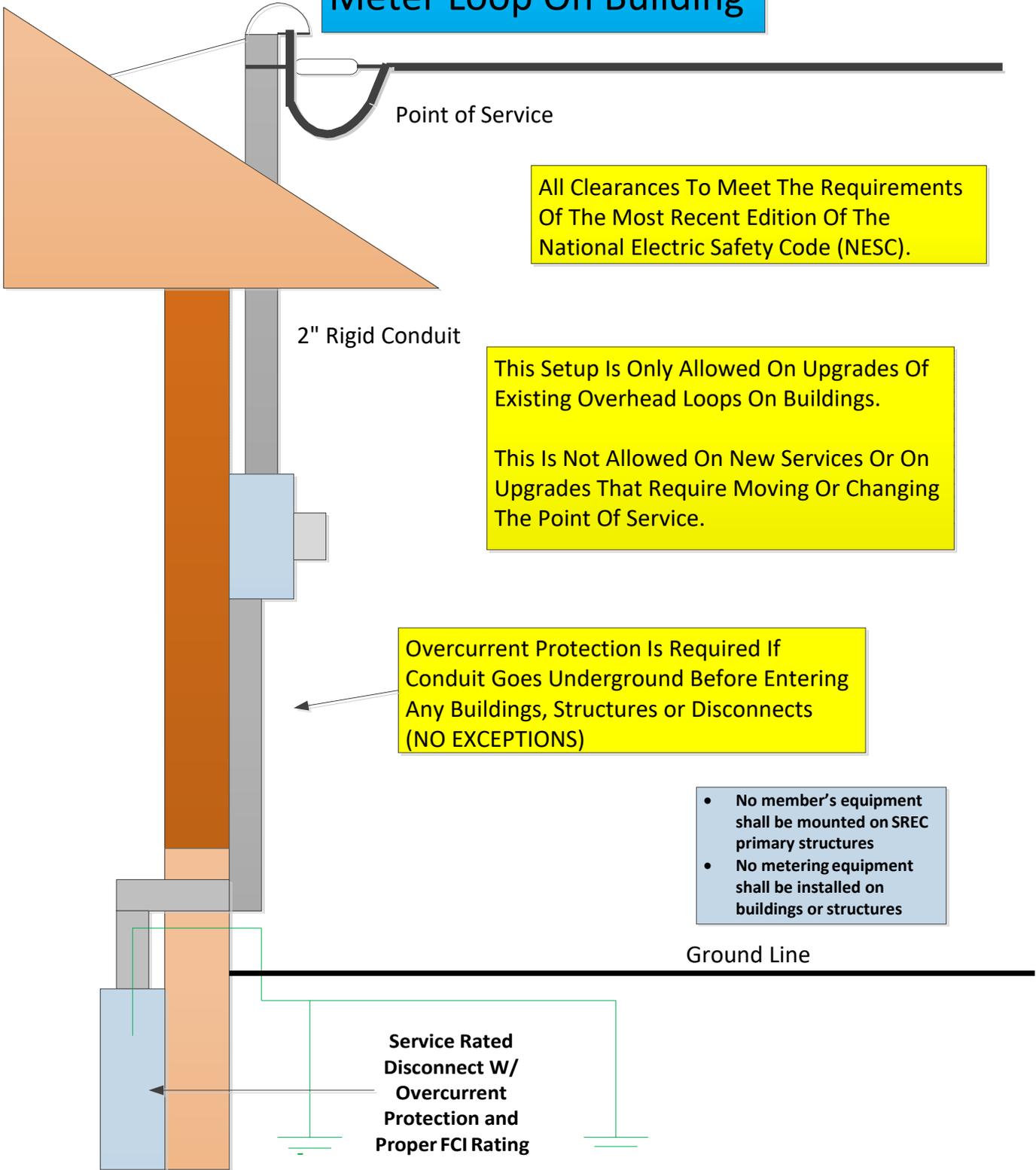
Total Secondary (Utility and Member) Not to Exceed 300'

Placement Guide New Service Metering Point Shared Lot Line



Total Secondary (Utility and Member) Not to Exceed 300' to the Main Service Location

Meter Loop On Building



All Clearances To Meet The Requirements Of The Most Recent Edition Of The National Electric Safety Code (NESC).

This Setup Is Only Allowed On Upgrades Of Existing Overhead Loops On Buildings.
This Is Not Allowed On New Services Or On Upgrades That Require Moving Or Changing The Point Of Service.

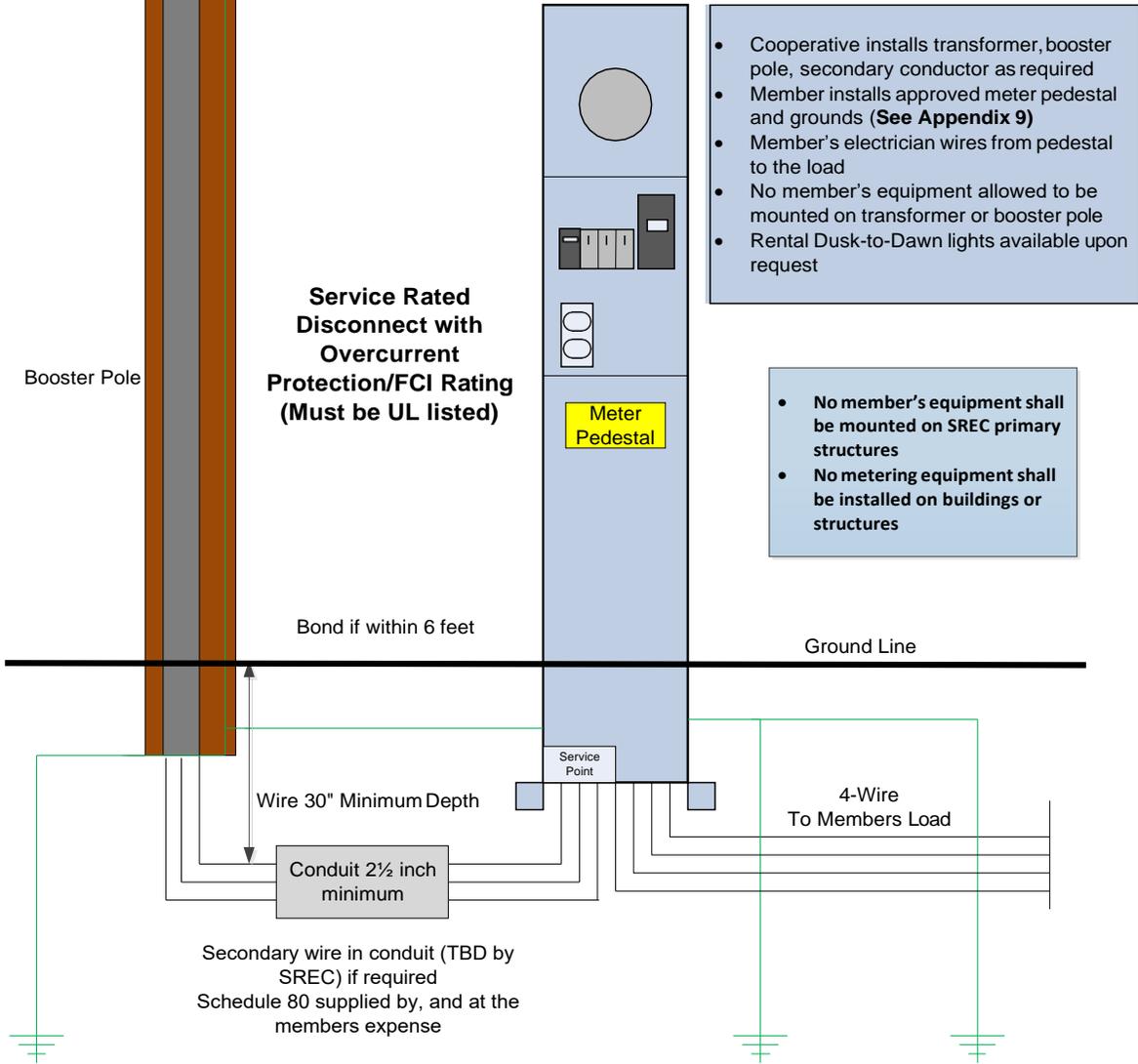
Overcurrent Protection Is Required If Conduit Goes Underground Before Entering Any Buildings, Structures or Disconnects (NO EXCEPTIONS)

- No member's equipment shall be mounted on SREC primary structures
- No metering equipment shall be installed on buildings or structures

Scenic Rivers Energy Cooperative
 Wiring/Service Specifications and Recommendations

**Booster Pole and 200/320 Amp
 Meter Pedestals**

- Voltage 120/240
- Transformer size TBD by SREC
- Available for circumstances that require a booster pole (Approved by SREC)



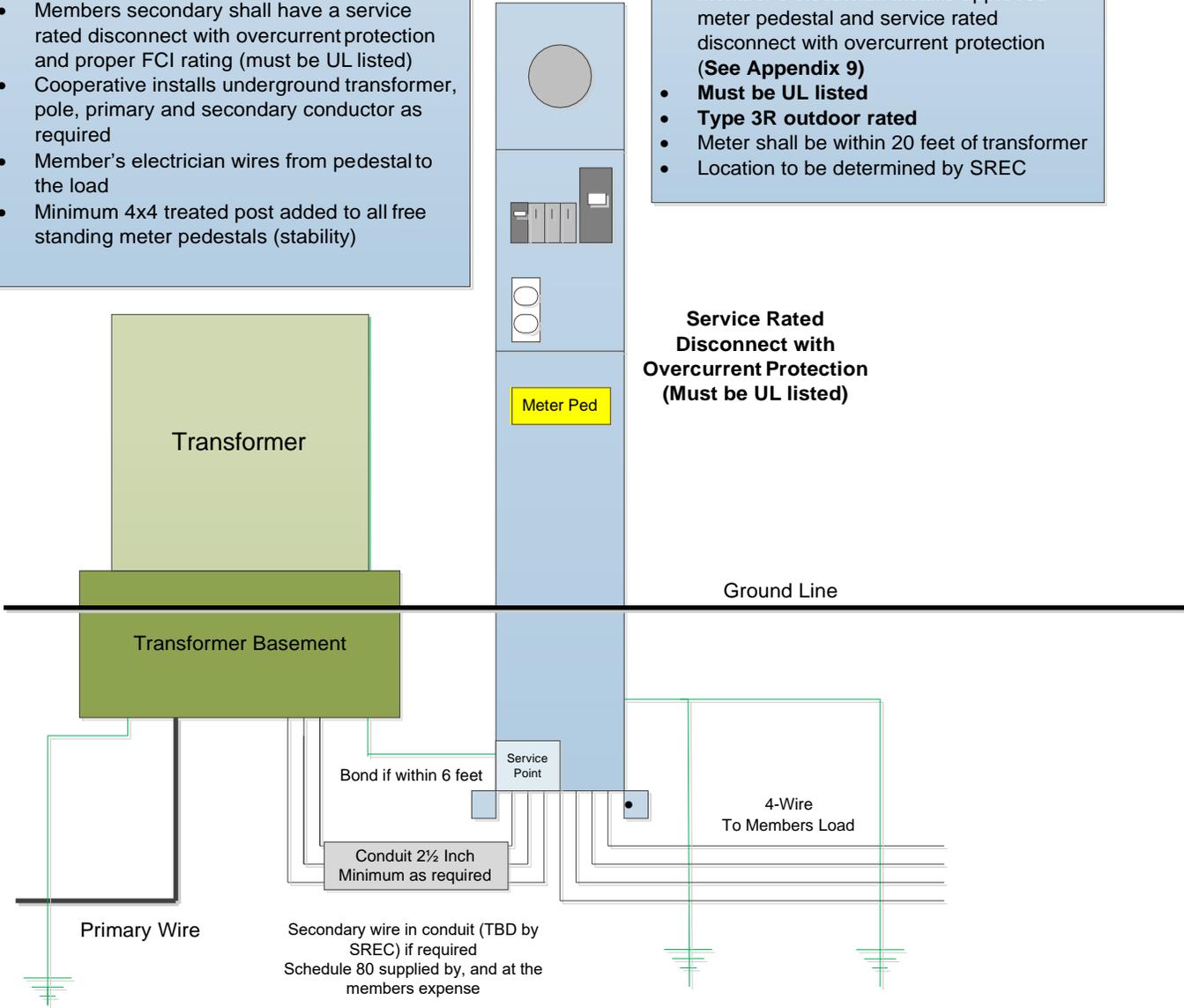
Scenic Rivers Energy Cooperative
 Wiring/Service Specifications and Recommendations

200 Amp Meter Pedestal

- Voltage 120/240
- Transformer size TBD by SREC
- KVA charge over 25KVA
- Location within 20 feet of transformer
- Transformer placement TBD by SREC

- Members secondary shall have a service rated disconnect with overcurrent protection and proper FCI rating (must be UL listed)
- Cooperative installs underground transformer, pole, primary and secondary conductor as required
- Member's electrician wires from pedestal to the load
- Minimum 4x4 treated post added to all free standing meter pedestals (stability)

- Member's electrician installs approved meter pedestal and service rated disconnect with overcurrent protection **(See Appendix 9)**
- **Must be UL listed**
- **Type 3R outdoor rated**
- Meter shall be within 20 feet of transformer
- Location to be determined by SREC



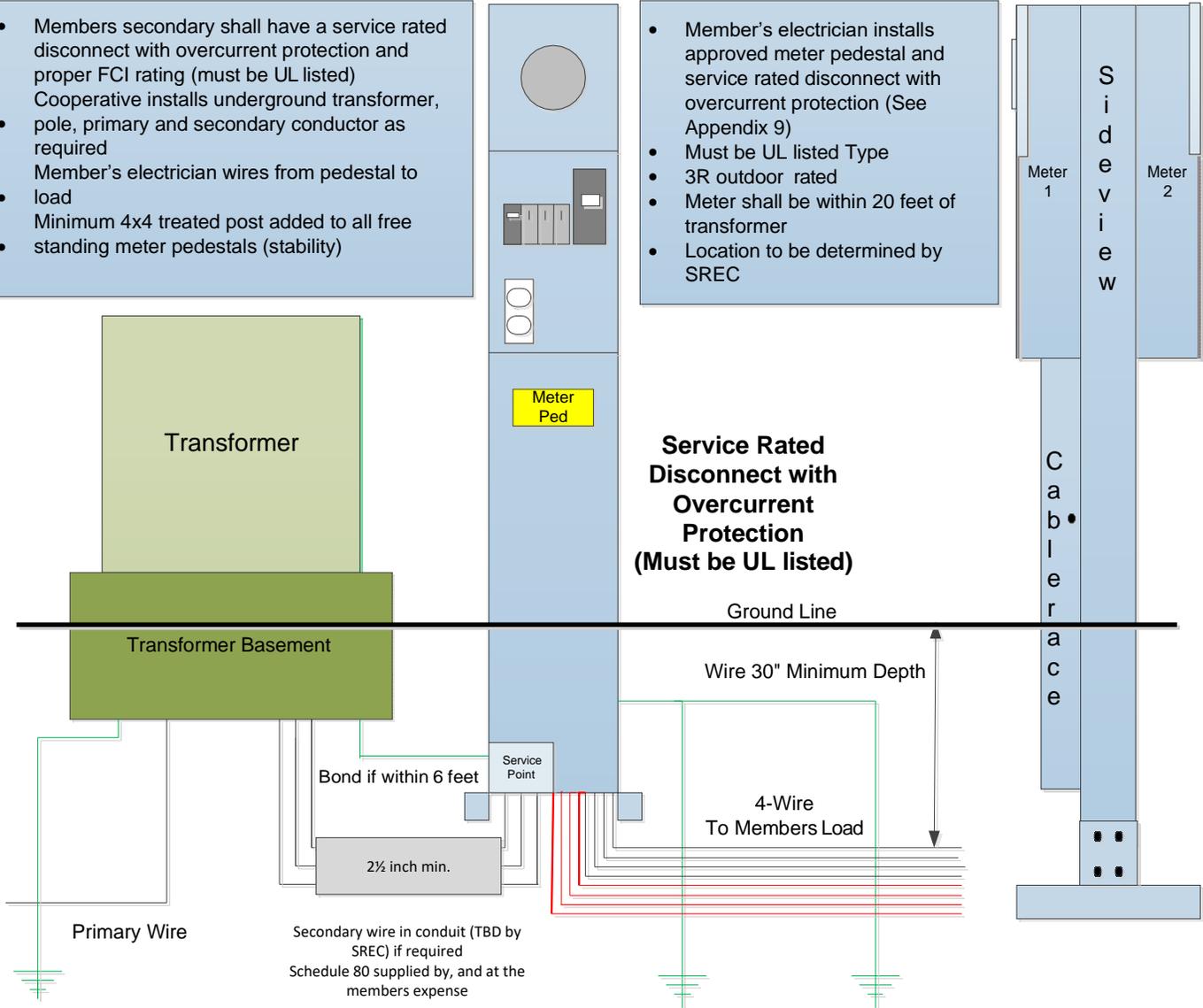
Scenic Rivers Energy Cooperative
 Wiring/Service Specifications and Recommendations

200 Amp Double Meter Pedestal

- Voltage 120/240
- Transformer size TBD by SREC
- KVA charge over 25KVA
- Location within 20 feet of transformer
- Transformer placement TBD by SREC

- Members secondary shall have a service rated disconnect with overcurrent protection and proper FCI rating (must be UL listed)
 Cooperative installs underground transformer, pole, primary and secondary conductor as required
- Member's electrician wires from pedestal to load
- Minimum 4x4 treated post added to all free standing meter pedestals (stability)

- Member's electrician installs approved meter pedestal and service rated disconnect with overcurrent protection (See Appendix 9)
- Must be UL listed Type
- 3R outdoor rated
- Meter shall be within 20 feet of transformer
- Location to be determined by SREC



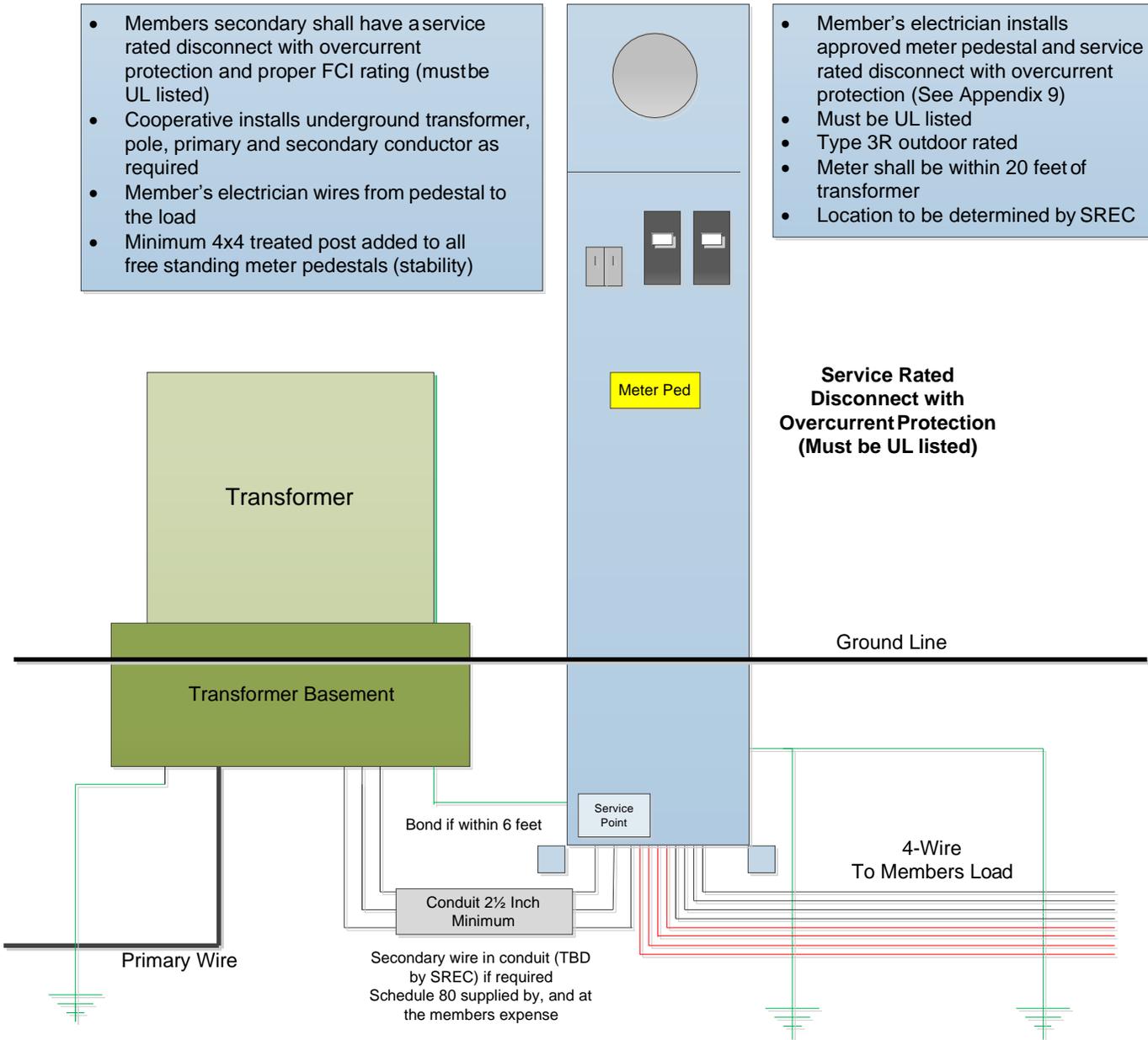
Scenic Rivers Energy Cooperative
 Wiring/Service Specifications and Recommendations

320 Amp Meter Pedestal

- Voltage 120/240
- Transformer size TBD by SREC
- KVA charge over 25KVA
- Location within 20 feet of transformer
- Transformer placement TBD by SREC

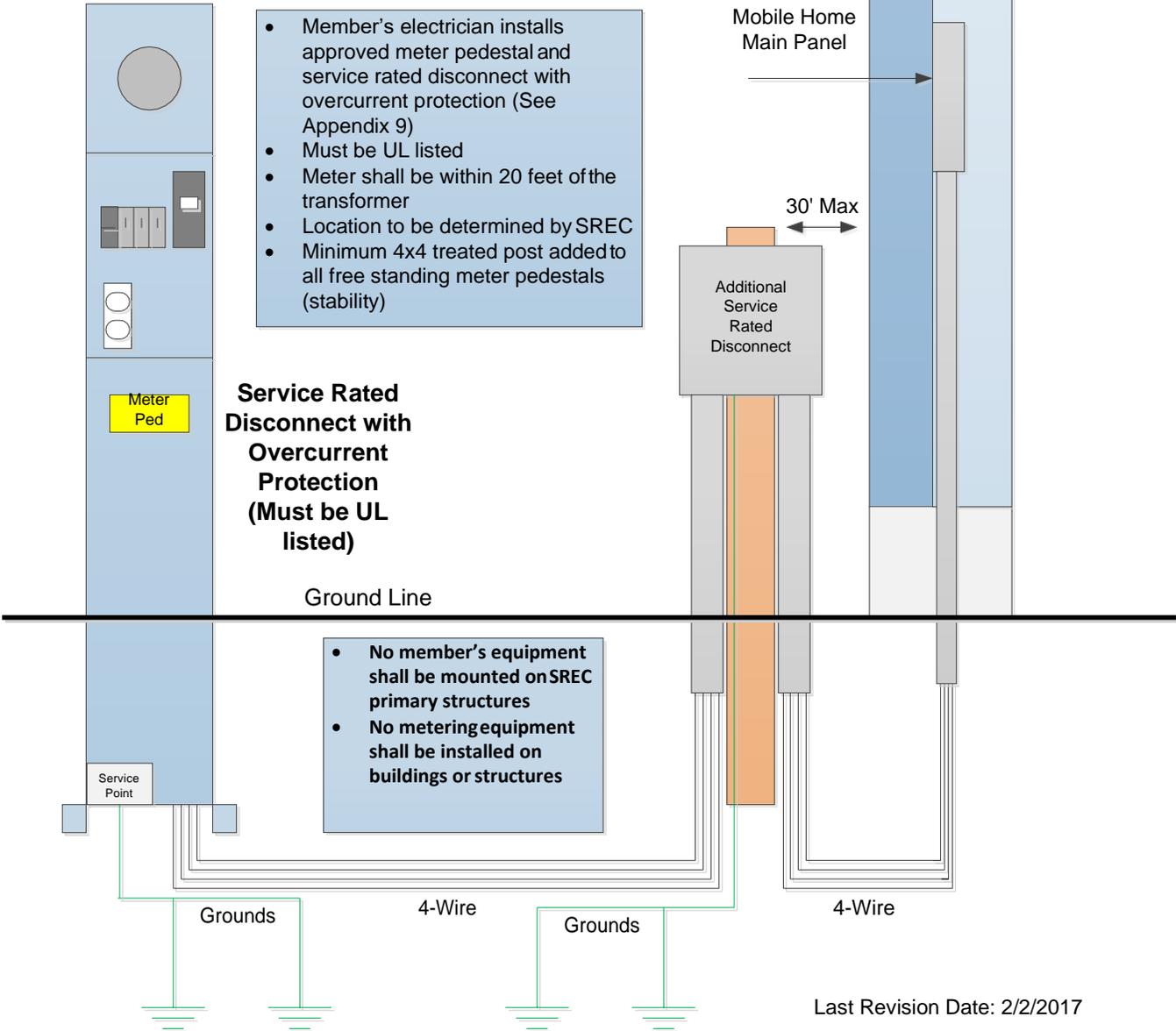
- Members secondary shall have a service rated disconnect with overcurrent protection and proper FCI rating (must be UL listed)
- Cooperative installs underground transformer, pole, primary and secondary conductor as required
- Member's electrician wires from pedestal to the load
- Minimum 4x4 treated post added to all free standing meter pedestals (stability)

- Member's electrician installs approved meter pedestal and service rated disconnect with overcurrent protection (See Appendix 9)
- Must be UL listed
- Type 3R outdoor rated
- Meter shall be within 20 feet of transformer
- Location to be determined by SREC



Guide for Mobile Home

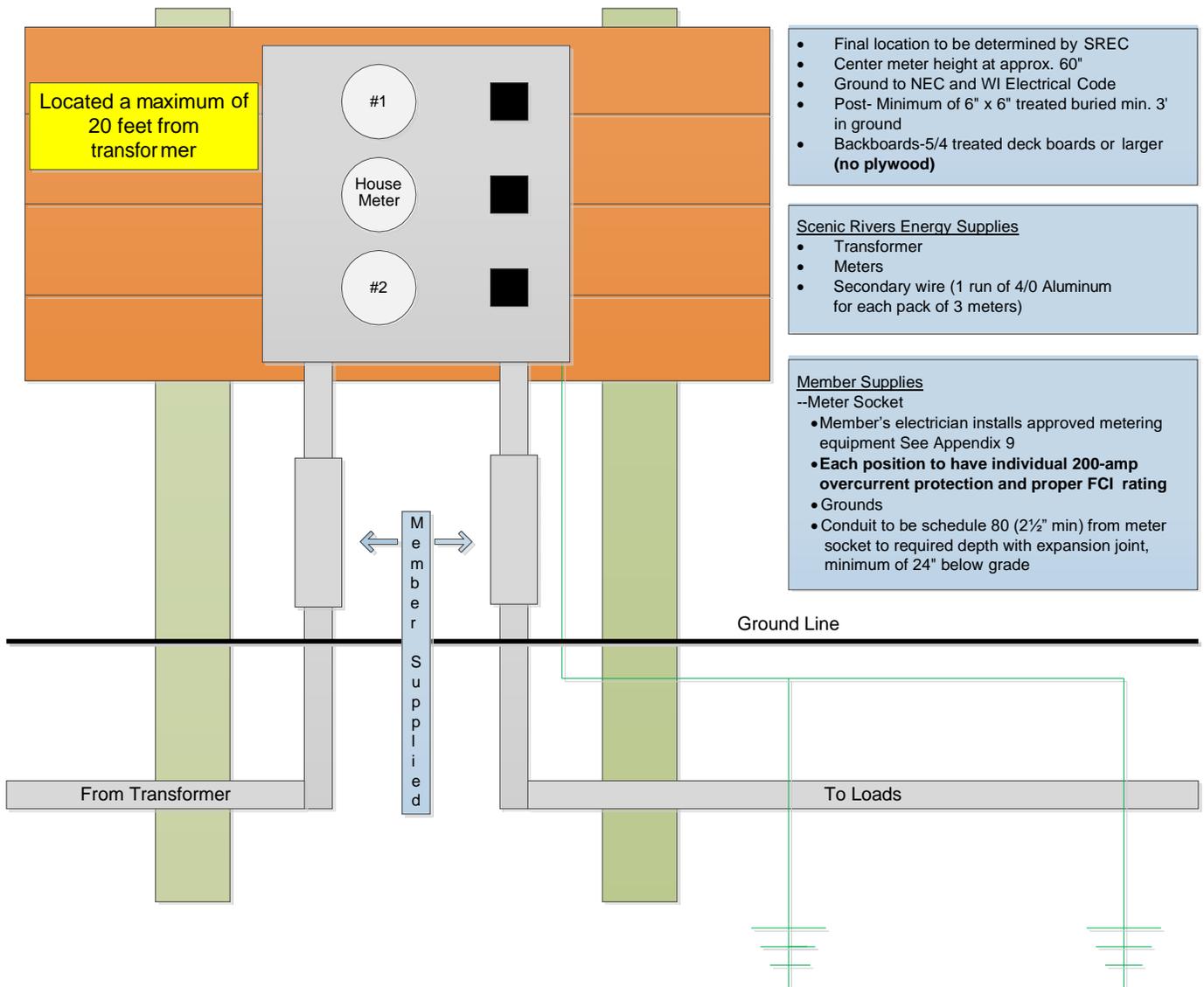
- Voltage 120/240
- Transformer size TBD by SREC
- KVA charge over 25 KVA
- Meter located within 20 feet of transformer
- If meter is more than 30 feet from home, an additional disconnect is required



Last Revision Date: 2/2/2017

Duplex Metering

- Voltage 120/240
- Transformer size TBD by SREC (Max. 50 KVA per 3 pack)
- Metering shall be located within 20 feet of the transformer
- Transformer location to be determined by SREC
- For pedestals with more than 2 meters, verification of meter locations must be made by both SREC and electrician prior to meter installation



Last Revision Date: 03/01/2021

Scenic Rivers Energy Cooperative
Wiring/Service Specifications and Recommendations

400 to 600 Amp Single Phase

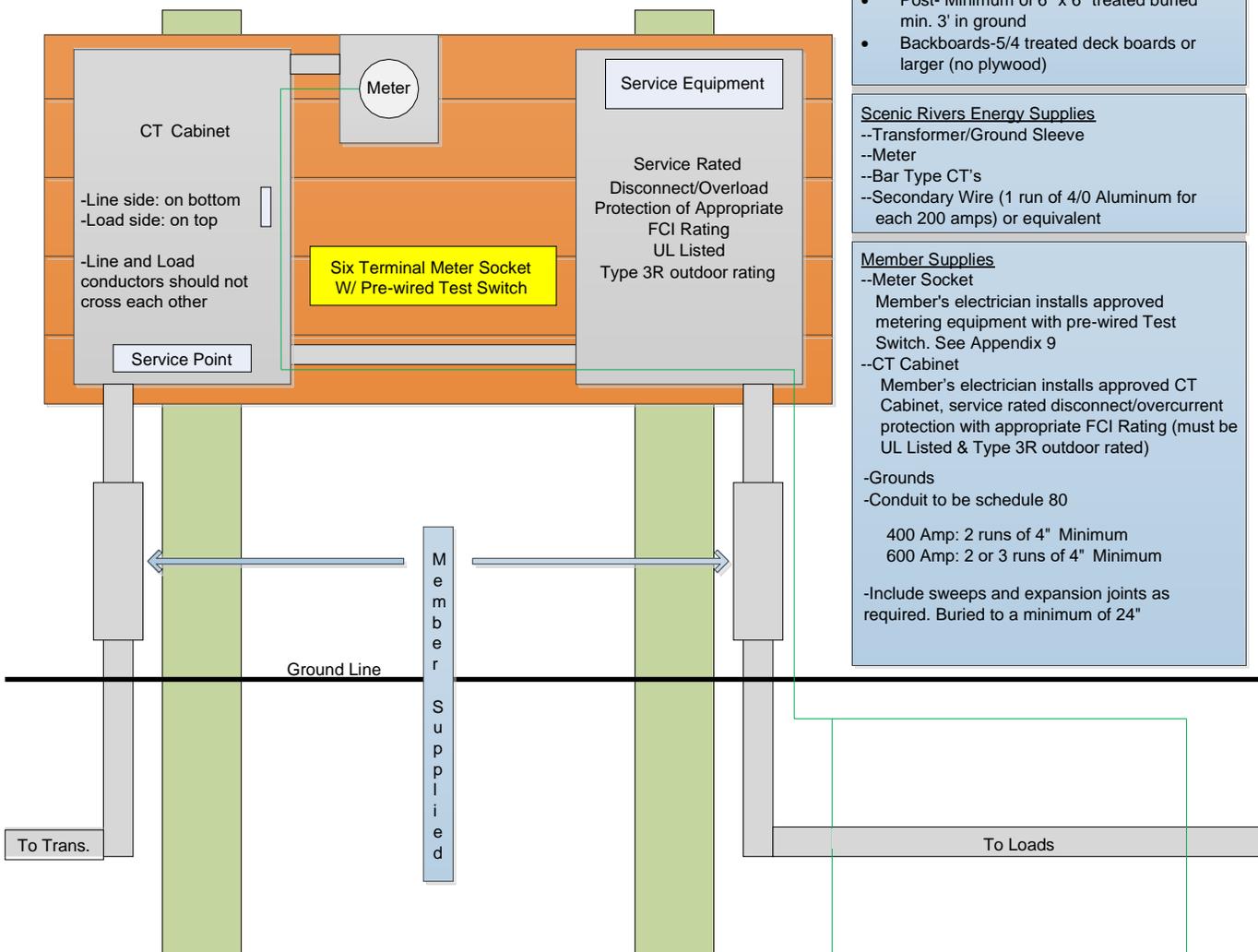
- Voltage 120/240
- Transformer size TBD by SREC
- KVA charges per rate schedule
- Bond CT cabinet & meter socket to code

- Location within 20 feet of transformer
- Minimum of 12' from transformer if agricultural

- Meter height at approx. 60"
- Ground to NEC and WI Electrical Code
- Post- Minimum of 6" x 6" treated buried min. 3' in ground
- Backboards-5/4 treated deck boards or larger (no plywood)

- Scenic Rivers Energy Supplies
- Transformer/Ground Sleeve
 - Meter
 - Bar Type CT's
 - Secondary Wire (1 run of 4/0 Aluminum for each 200 amps) or equivalent

- Member Supplies
- Meter Socket
Member's electrician installs approved metering equipment with pre-wired Test Switch. See Appendix 9
 - CT Cabinet
Member's electrician installs approved CT Cabinet, service rated disconnect/overcurrent protection with appropriate FCI Rating (must be UL Listed & Type 3R outdoor rated)
 - Grounds
 - Conduit to be schedule 80
400 Amp: 2 runs of 4" Minimum
600 Amp: 2 or 3 runs of 4" Minimum
 - Include sweeps and expansion joints as required. Buried to a minimum of 24"



- Location to be determined at meeting with Cooperative Engineering Staff
- Any single-phase over 600 amp must have prior approval of Cooperative Engineering Staff

- **No member's equipment shall be mounted on SREC primary structures**
- **No metering equipment shall be installed on buildings or structures**

Scenic Rivers Energy Cooperative
Wiring/Service Specifications and Recommendations

400 to 600 Amp Single Phase w/Transfer Switch

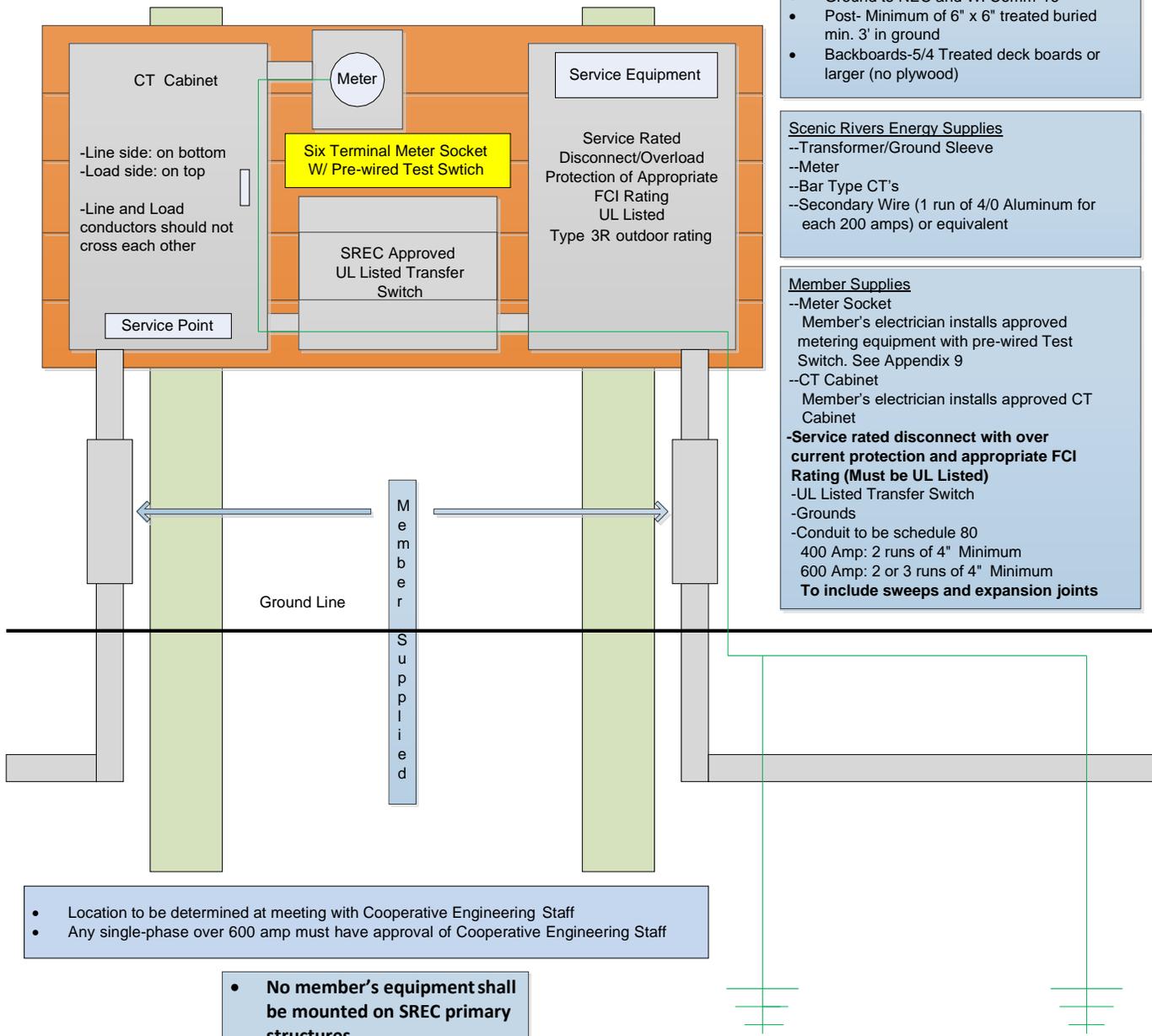
- Voltage 120/240
- Transformer size TBD by SREC
- KVA charges per rate schedule
- Bond CT cabinet & meter socket to code

- Location within 20 feet of transformer
- Minimum of 12' from transformer if agricultural

- Meter height at approx. 60"
- Ground to NEC and WI Comm 16
- Post- Minimum of 6" x 6" treated buried min. 3' in ground
- Backboards-5/4 Treated deck boards or larger (no plywood)

- Scenic Rivers Energy Supplies
- Transformer/Ground Sleeve
 - Meter
 - Bar Type CT's
 - Secondary Wire (1 run of 4/0 Aluminum for each 200 amps) or equivalent

- Member Supplies
- Meter Socket
 - Member's electrician installs approved metering equipment with pre-wired Test Switch. See Appendix 9
 - CT Cabinet
 - Member's electrician installs approved CT Cabinet
 - Service rated disconnect with over current protection and appropriate FCI Rating (Must be UL Listed)**
 - UL Listed Transfer Switch
 - Grounds
 - Conduit to be schedule 80
 - 400 Amp: 2 runs of 4" Minimum
 - 600 Amp: 2 or 3 runs of 4" Minimum
 - To include sweeps and expansion joints**



- Location to be determined at meeting with Cooperative Engineering Staff
- Any single-phase over 600 amp must have approval of Cooperative Engineering Staff

- **No member's equipment shall be mounted on SREC primary structures**
- **No metering equipment shall be installed on buildings or structures**

400 to 800 Amp Three Phase

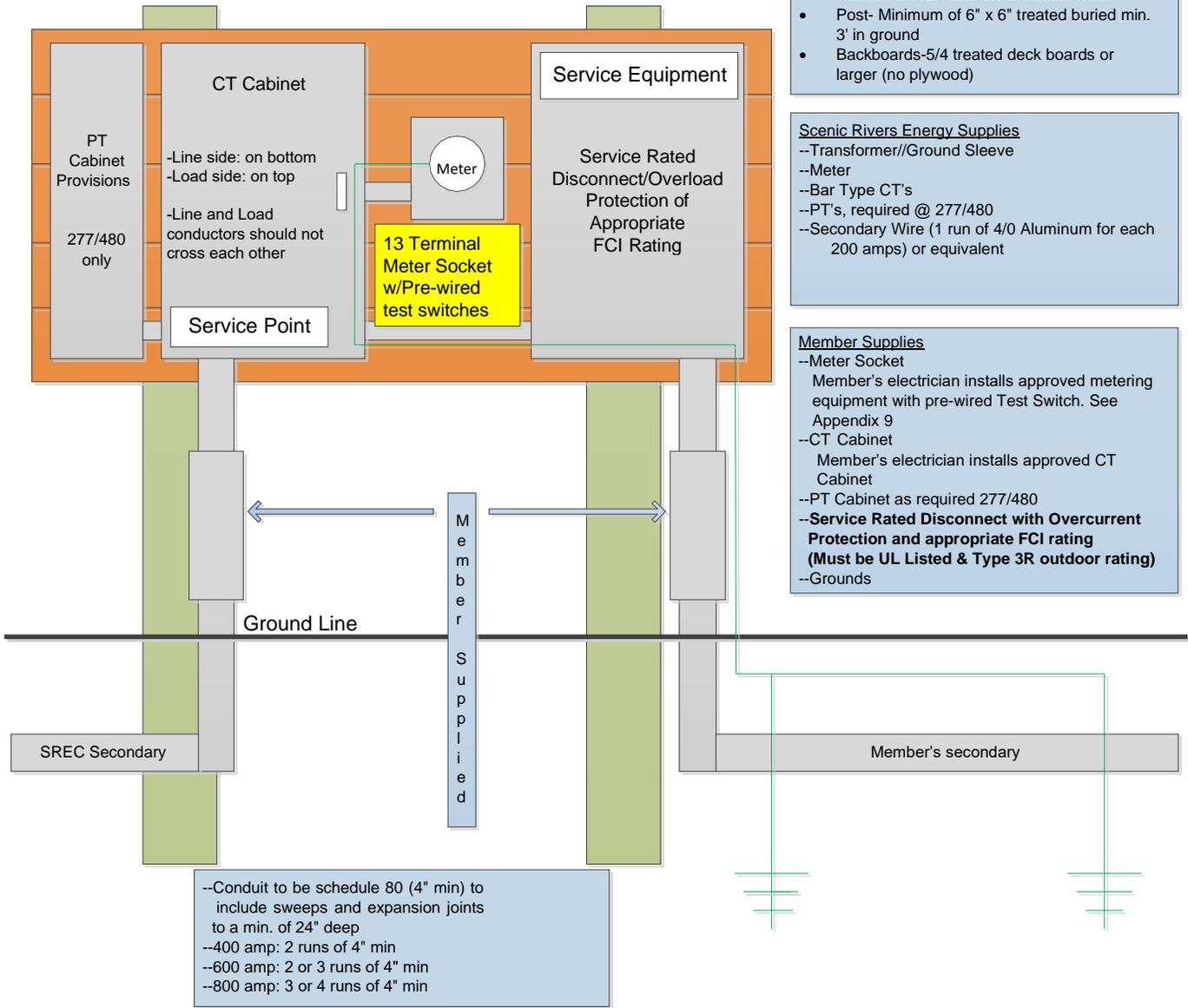
- Voltage 120/208 or 277/480
- Transformer size (225 KVA or smaller)
- KVA charges per rate schedule
- Metering located within 20 feet of transformer,
- Minimum of 12' if agricultural
- Bond CT cabinet & meter socket to code

- **No member's equipment shall be mounted on SREC primary structures**
- **No metering equipment shall be installed on buildings or structures**

- Meter Height at Approx. 60"
- Ground to NEC and WI Electrical Code
- Post- Minimum of 6" x 6" treated buried min. 3' in ground
- Backboards-5/4 treated deck boards or larger (no plywood)

- Scenic Rivers Energy Supplies
- Transformer//Ground Sleeve
 - Meter
 - Bar Type CT's
 - PT's, required @ 277/480
 - Secondary Wire (1 run of 4/0 Aluminum for each 200 amps) or equivalent

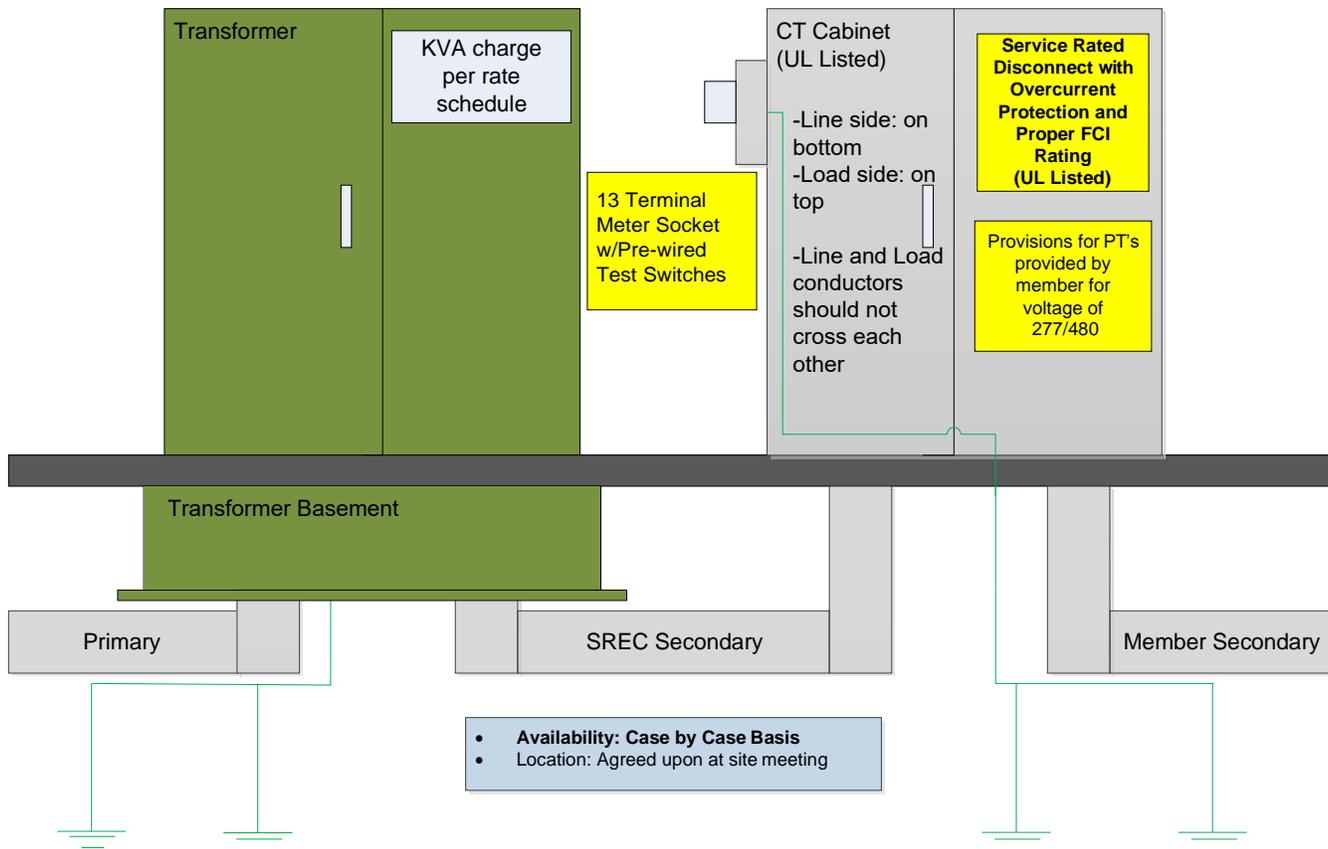
- Member Supplies
- Meter Socket
Member's electrician installs approved metering equipment with pre-wired Test Switch. See Appendix 9
 - CT Cabinet
Member's electrician installs approved CT Cabinet
 - PT Cabinet as required 277/480
 - Service Rated Disconnect with Overcurrent Protection and appropriate FCI rating (Must be UL Listed & Type 3R outdoor rating)**
 - Grounds



Scenic Rivers Energy Cooperative
Wiring/Service Specifications and Recommendations

1000 Amp and Larger Three-Phase

- Voltage 120/208 or 277/480
- Transformer size 300 KVA or Larger (KVA charges based on size of service)
- CT cabinet to be a minimum of 12' from the transformer if agricultural, maximum of 20' from transformer
- Final location to be determined by the Cooperative
- Bond CT cabinet & meter socket to code



Member Supplies
 --Meter Socket
 Member's electrician installs approved metering equipment with pre-wired 10 pole test switch. See Appendix 9
 --Cement Pad to incorporate
 --CT Cabinet/Overcurrent Protection (**UL Listed**)
 --CT cabinet **W/Service Rated Disconnect W/Overcurrent Protection and proper FCI Rating (Must be UL Listed)**
 --PT provisions as required (277/480V)
 --Raceway and/or required conduit for SREC secondary
 --Grounds per NEC and WI Elec. Code

--Conduit to be schedule 80 (6" min) per run between Transformer and CT Cabinet

Scenic Rivers Energy Supplies
 --Transformer/Ground Sleeve
 --Meter
 --Bar or Finger Type CT's as determined by SREC
 --PT's for (277/480 only)
 --Secondary Wire (1 run of 4/0 Aluminum for each 200 amps) or equivalent.

- **No member's equipment shall be mounted on SREC primary structures**
- **No metering equipment shall be installed on buildings or structures**

Scenic Rivers Energy Cooperative

Wiring/Service Specifications and Recommendations

Meter Sockets

- Meter sockets shall be installed in a level and plumb position securely attached to a solid backing. Minimum of 5/4 deck boards or equivalent. (No plywood)
- SREC approved meter pedestals are also permitted. Check with SREC for approved specifications.
- Both meter sockets and pedestals will be secured to a solid base to ensure stability. **Minimum 4x4 treated post added to all free-standing meter pedestals.**
- Meter sockets to be furnished and installed by the member or electrician, and located so it is accessible to SREC personnel at all times.
- Meter sockets shall have connection lugs suitable for aluminum or copper conductors. All meter sockets shall be rated at a minimum of 200 amps regardless of the size of the load.
- Single-phase and three-phase meter sockets mounted on a backboard shall be installed so that the center of the meter is 5 feet +/- 6 inches above finished grade for overhead and underground services and 3 feet above finished grade for underground services for free standing meter pedestals.
- 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.
- For off-peak service metering, please contact SREC's member services department.
- No services or member's equipment will be allowed on SREC's primary (main line) poles.
- Corrosion inhibitor shall be used on all connections to aluminum conductors.
- On group installations the meter sockets group or ganged sockets shall have a single point of termination for SREC conductors.

Important

Accounts connecting to one of SRECs Controlled Electric Heating programs will require a second meter. The installation of a double meter socket or equivalent shall be installed on any new installations. Overcurrent protection is required for each meter socket.

Grounding Metering Equipment

Grounding Required at Metering Installations and Service Entrances

- The grounding electrode conductors from the ground rods shall **not** be installed in the conduit with SREC service conductors, nor can it be spliced or terminated in the meter socket, or in the utility side of the meter pedestal, or CT cabinet.

Scenic Rivers Energy Cooperative
Wiring/Service Specifications and Recommendations

- Two grounds are required; the first being two (2) feet from the service entrance and the second being a minimum of six (6) feet away from the first.
- Ground rods must be copper clad steel, and at least five eighths (5/8) inch in diameter by eight (8) feet in length.

Ground wire

- Ground wire must meet current code requirements. Grounding conductors shall be continuous. Ground wire shall be attached to the service entrance neutral at the main panel.
- Main panel must be bonded to the neutral with bonding screw. Neutral and ground bus bar shall be bonded only at central service location.

Chapter 5 ~ Motors and Motor Regulations

All motor equipment connected to SREC's system is subject to approval by SREC with respect to starting characteristics and frequency of starts. SREC shall be consulted before installation of any single-phase motors larger than 10 hp.

Motor installations including starting devices, if necessary, shall be required to have starting characteristics which will not cause an instantaneous voltage drop to other members' service nor cause objectionable lighting flicker.

Installations of motors used to drive equipment requiring a variable torque, such as compressors, reciprocating type pumps, sawmills, etc., shall be required to limit the variation of the motor current so that it will not interfere with service to other members. SREC reserves the right to require the member to provide, at his/her own expense, equipment to control the fluctuations within limits prescribed by SREC. The maximum allowable variation of motor current for each specific installation may be obtained by contacting SREC. The maximum allowable variation of motor current for each specific installation may be obtained by contacting SREC.

All member-owned equipment shall be protected from excessive current which may result from overload, under voltage, single-phase operation of three-phase motor, etc., with fuses, thermal cutouts, overload relays, or other protective devices designed to protect the individual motor. The protective equipment shall be provided by the member.

<u>Cooperative Service</u>	<u>Inrush kVA</u>	<u>Inrush amps</u>	<u>Maximum Motor Size</u>
Single-phase 120/240 volt	60	250	10 HP, NEMA Code G
Three-phase 120/208 volt	240	667	40 HP, NEMA Code F
Three-phase 277/480 volt	240	289	40 HP, NEMA Code F

Maximum motor size will vary depending upon NEMA Code Letter (*SREC's engineer must be contacted for additional information*).

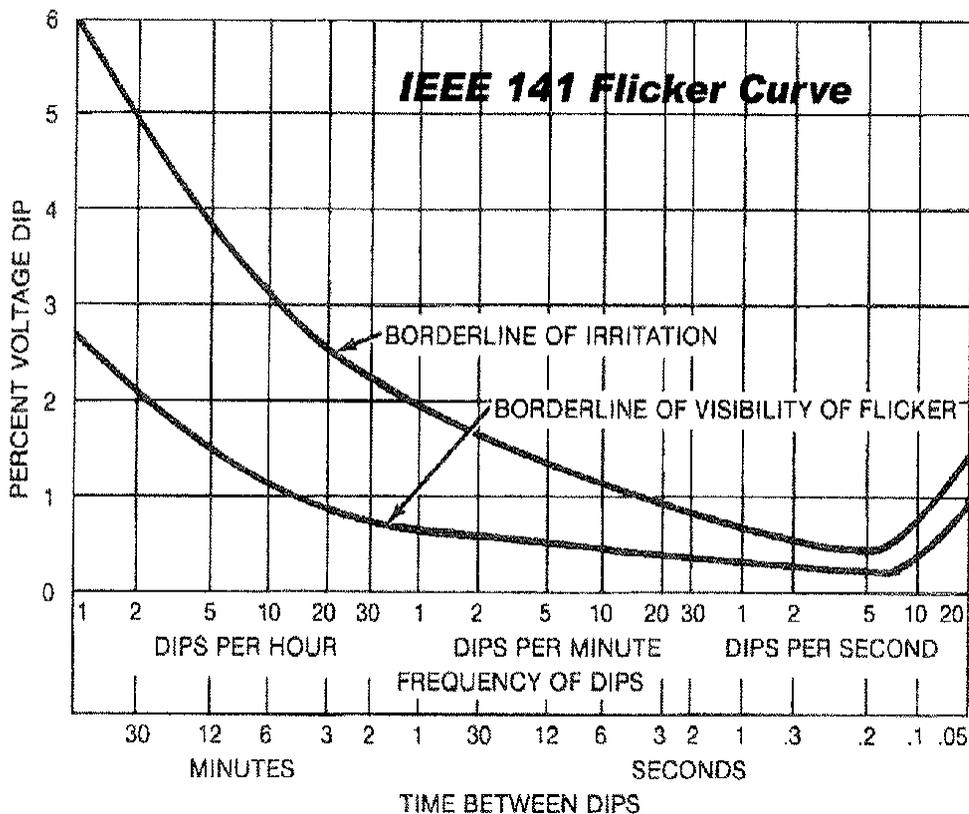
Scenic Rivers Energy Cooperative
Wiring/Service Specifications and Recommendations

Three-Phase Motors

Because of varying conditions on SREC system in different locations, it will be necessary to consult SREC in each case to determine the maximum value of starting current, or less, may be started across the line. Motors with greater starting current may require member equipment to limit the starting current.

At a location where three-phase service is being used and approval has been given for specific motors or motors with starting equipment, other equipment may be installed without further approval as to starting provided that the starting, duty and frequency is no more severe than existing motors. Additional load which will increase the maximum load by 25% or more over a present authorization shall be approved by SREC. This will permit SREC to arrange for proper transformer capacity.

To safeguard the installation, it shall be the responsibility of the member to provide motors with protective and control equipment such as protection against low voltage, overcurrent, phase failure, short circuit, and against phase reversal where reverse operation of a three-phase motor may cause injury or damage.



Any cause in voltage flicker or disturbances which can be determined to have been caused by equipment from service shall be corrected to SREC's standards. These corrections shall be the member's responsibility.

Scenic Rivers Energy Cooperative
Wiring/Service Specifications and Recommendations

Chapter 6 ~ Water Heating

SREC has several programs and incentives available for off-peak electric water heating. Incentives are available based on size, efficiency ratings, and load controlling. Programs are based on electric water heaters being connected to a load management device. There are several different control strategies based upon member needs. Contact your member services department for questions and help in deciding what is right for you.

Chapter 7 ~ Lighting

Dusk-to-Dawn Rental Light:

- A signed Dusk-to-Dawn Light agreement is required (see [Appendix 13](#)).
- Reference to Dusk-to-Dawn Light FAQ's (see [Appendix 14](#)).
- Lights available are LED Dusk To Dawn lights. (Subject to change)
- Dusk-to-Dawn light extensions must be from a Scenic Rivers Energy Cooperative (SREC) source of power as determined by SREC. The maximum distance from the source of power to the pole is 150 feet.
- Extensions from a meter socket will not be allowed.
- After initial installation there is an additional charge for requests to change the Dusk-to-Dawn light location and/ or direction. Contact SREC for current pricing and approved installations.

Chapter 8 ~ Controlled Electric Heating

SREC offers a Controlled Electric Heat rate. Connection to this service requires the installation of a second electric meter and disconnecting equipment, which will allow electric heating loads to be controlled at the appropriate times. In return, the member receives a lower controlled electric heat rate. Contact your member services department for questions and help in deciding what is right for you.

Chapter 9 ~ Load Management and Rebate Programs

Load management programs are designed to lower SREC's demand levels during peak demand times. This helps reduce the need for new power plants or the purchase of expensive market priced power during these peak times, and allows Dairyland Power Cooperative, our power supplier, to utilize their existing facilities in the most efficient manner, which helps keep our members rates as low as possible. Those members participating in the load management programs will also receive the benefit of qualifying for either Off-Peak rates, or monthly load control credits. Scenic Rivers Energy Cooperative offers the following load management programs. Please contact SREC member services department for specific requirements.

Controlled Electric Heating Program

This controlled electric heating program requires the use of a second meter, disconnecting equipment, as well as an automatic back-up heating system. Geo-thermal, air source heat pumps, electric boiler systems

Scenic Rivers Energy Cooperative
Wiring/Service Specifications and Recommendations

are some of loads allowed on this program. These loads will be energized except during peak demand periods, at which time they can be turned off up to a maximum 6 hours out of 12 hours. In return, the consumption of these loads will be metered at the Controlled Electric Rate.

Electric Thermal Storage Program

This controlled electric heating program requires the use of a second meter and disconnecting equipment. Loads eligible for this program include electric thermal storage room units, centrally ducted electric thermal storage systems and electric boiler in-floor storage systems. Loads on this program will be energized 10 1/2 hours per day Monday – Friday and turned off 13 1/2 hours each day. On weekends loads will be energized 24 hours except during peak alert periods, at which time they would be controlled. In return, the consumption of these loads will be metered at the Controlled Electric Off-Peak Storage Rate.

Electric Water Heater Program

This program consists of a load management receiver that is installed on the water heater disconnect at the home or business by a representative of SREC, at no cost to the member. This load management receiver is connected to the water heater circuit and controls the water heater during peak demand periods. In return the member receives a daily credit on their monthly bill for participating in this program.

Air Conditioning Program

A load management receiver is installed on the ac unit disconnect at the home or business by a representative of SREC, at no cost to the member. This load management receiver is connected to the air conditioning circuit to be controlled during peak demand periods. It will be controlled 15 minutes on and 15 minutes off.

Rebate Programs

SREC offers its members various incentives to participate in load management programs and to encourage energy conservation. To see what rebates and incentives are currently available stop by or contact SREC member services department or visit our website (www.sre.coop).

Chapter 10 ~ Member Generating Equipment

Standby Generating Equipment

SREC shall be consulted before any generating equipment is connected to any circuits which are or may be supplied from SREC's service lines.

The member shall install an approved double pole / double throw (transfer) switch that is mechanically interlocked, of adequate current and voltage rating so that the connected member's generating equipment cannot energize SREC's supply lines.

The double pole / double-throw (transfer) switch may be manually or automatically operated. Member-owned generating equipment shall not operate in parallel with SREC's system except under specific contract with SREC covering the conditions of such operation.

Distributed Generation System

SREC offers members the ability to sell electricity back into the grid. Usually this is accomplished through solar electric, wind turbine(s), and anaerobic digester(s). All these systems must follow the interconnection

Scenic Rivers Energy Cooperative
Wiring/Service Specifications and Recommendations

rules, fill out the proper forms and abide by all applicable codes. All systems must be tested for proper operation before startup and on an annual basis thereafter. Please visit our website (www.sre.coop) for an application and guidelines.

Scenic Rivers Energy Cooperative

WIRING/SERVICE SPECIFICATIONS AND RECOMMENDATIONS/FORMS Appendix

Scenic Rivers Energy Cooperative
Wiring/Service Specifications and Recommendations

Appendix 1: Electrical Inspectors

Grant County

Brad Smrcina
PO Box 94
Mt Sterling WI 54645
Office: 608-734-9970
Cell: 608-799-6229
bsmrcina@centurytel.net

Mike Reuter
50 Eastside Road
Platteville WI 53818
Office: 608-348-3627
Cell: 608-642-0463 Fax:
608-348-3617
Toll Free: 888-596-5387
nspectormike@yahoo.com

TOWN	BUILDING INSPECTOR
BEETOWN	
BLOOMINGTON	SMRCINA
BOSCOBEL	SMRCINA
CASSVILLE	REUTER
CASTLE ROCK	SMRCINA
CLIFTON	SMRCINA
ELLENBORO	REUTER
FENNIMORE	
GLEN HAVEN	SMRCINA
HARRISON	REUTER
HAZEL GREEN	REUTER
HICKORY GROVE	SMRCINA
JAMESTOWN	REUTER
LIBERTY	
LIMA	REUTER
LITTLE GRANT	SMRCINA
MARION	SMRCINA
MILLVILLE	SMRCINA
MT HOPE	SMRCINA
MT IDA	SMRCINA
MUSCODA	REUTER
NORTH LANCASTER	REUTER
PARIS	REUTER
PATCH GROVE	SMRCINA
PLATTEVILLE	REUTER
POTOSI	REUTER
SMELSER	REUTER
SOUTH LANCASTER	REUTER
WATERLOO	SMRCINA
WATTERSTOWN	
WINGVILLE	SMRCINA
WOODMAN	SMRCINA
WYALUSING	SMRCINA

Scenic Rivers Energy Cooperative
Wiring/Service Specifications and Recommendations

Crawford County

Brad Smrcina

PO Box 94
Mt Sterling WI 54645
Office: 608-734-9970
Cell: 608-799-6229
bsmrcina@centurytel.net

Josh Copsey

Cell: 608-697-2905

Wayne Haugrud

Home: 608-625-2661
Cell: 608-606-3872

Vincent Schmitz

Cashton WI
Home: 608-654-5642
Cell: 608-487-4642

Mike Reuter

50 Eastside Road
Platteville WI 53818
Office: 608-348-3627
Cell: 608-642-0463
Fax: 608-348-3617
Phone: 888-596-5387
nspectormike@yahoo.com

TOWN	BUILDING INSPECTOR
BELL CENTER VILLAGE	SMRCINA
BRIDGEPORT	SMRCINA
CLAYTON	SMRCINA
DESOTA VILLAGE	SMRCINA
EASTMAN	SMRCINA
EASTMAN VILLAGE	SMRCINA
FERRYVILLE VILLAGE	SMRCINA
FRANKLIN	SMRCINA
FREEMAN	SMRCINA
GAYS MILLS VILLAGE	HAUGRUD
GAYS MILLS	HAUGRUD
HANEY	COPSEY
KICKAPOO	SMRCINA
LYNXVILLE VILLAGE	SMRCINA
MARIETTA	REUTER
MT STERLING VILLAGE	SMRCINA
PRAIRIE DU CHIEN	SMRCINA
PRAIRIE DU CHIEN CITY	SMRCINA
SCOTT	SMRCINA
SENECA	SMRCINA
SOLDIERS GROVE VILLAGE	SMRCINA
STERLING	SCHMITZ
STEUBEN VILLAGE	SMRCINA
UTICA	SMRCINA
WAUZEKA	
WAUZEKA VILLAGE	
WHEATLAND	SMRCINA
RICHWOOD	REUTER

Scenic Rivers Energy Cooperative
Wiring/Service Specifications and Recommendations

Lafayette County

Scott Jelle
343 Harris St
Mineral Point WI 53565
Cell: 608-963-0652
totalinspectionsservices@gmail.com

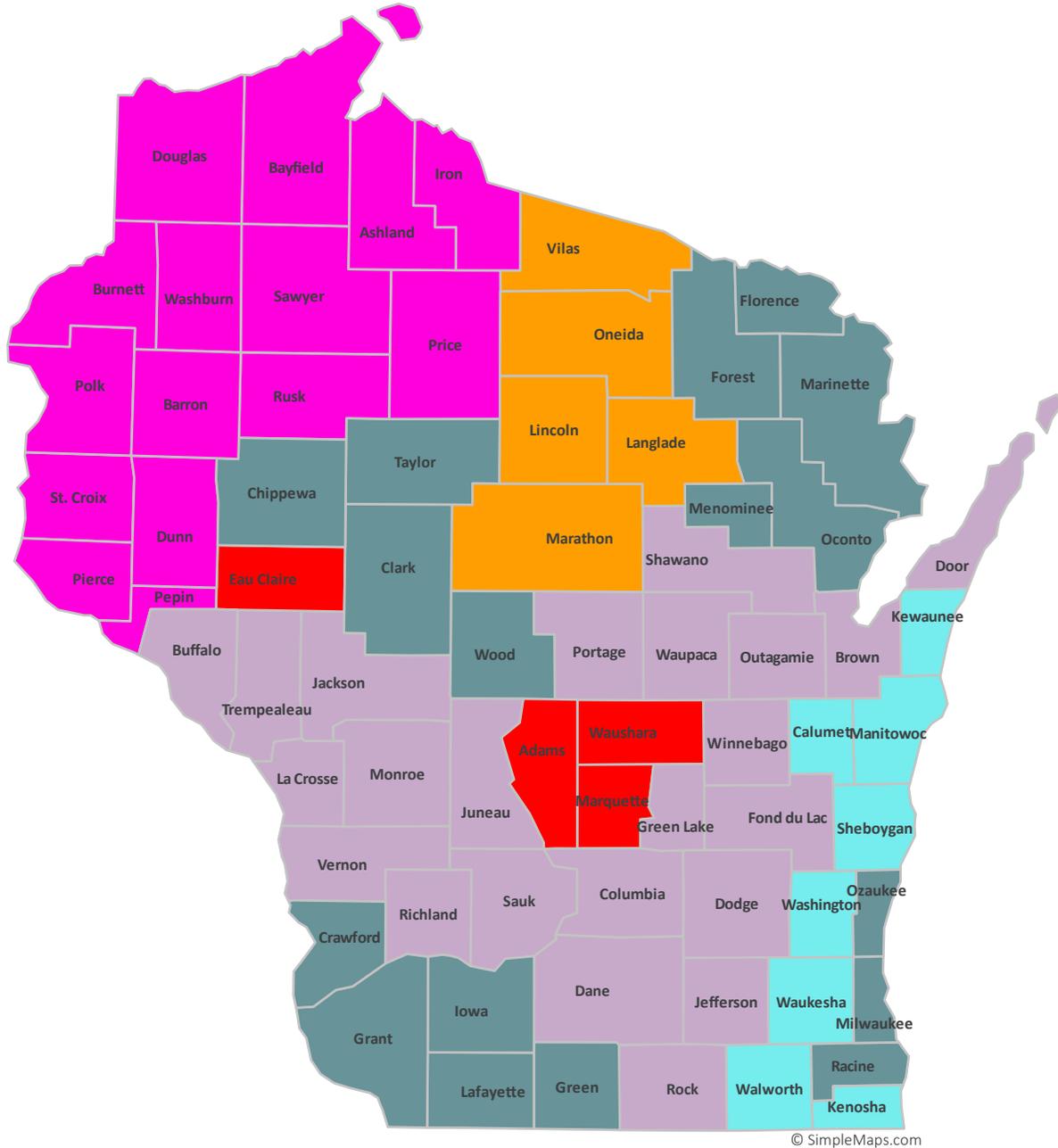
Brad Smrcina
PO Box 94
Mt Sterling WI 54645
Office: 608-734-9970
Cell: 608-799-6229
bsmrcina@centurytel.net

Mike Reuter
50 Eastside Rd
Platteville WI 53818
Office: 608-348-3627
Cell: 608-642-0463
Fax: 608-348-3617
Toll Free: 888-596-5387
nspectormike@yahoo.com

TOWN	BUILDING INSPECTOR
ADAMS	JELLE
ARGYLE	REUTER
BELMONT	JELLE
BENTON	FENLEY
BLANCHARD	REUTER
DARLINGTON	REUTER
ELK GROVE	REUTER
FAYETTE	REUTER
GRATIOT	JELLE
JORDAN	JELLE
KENDALL	REUTER
LAMONT	REUTER
MIFFLIN	SMRCINA
MINERAL POINT	SMRCINA
MONTICELLO	REUTER
MOSCOW	
NEW DIGGINGS	REUTER
SEYMOUR	REUTER
SHULLSBURG	REUTER
WALDWICK	
WAYNE	SMRCINA
WHITE OAK SPRINGS	REUTER
WILLOW SPRINGS	REUTER
WIOTA	



Electrical Program Permitting and Inspection Map



WHO IS MY CONTACT FOR PERMITTING AND INSPECTION SERVICES?

Municipalities delegated for commercial electrical permitting and inspections are listed [here](#). If your municipality is not delegated, use the contact list below.

- | | | | |
|---|--|---|--|
|  | Email REM Inspecting , Phone 715-302-7456 |  | Contact county directly |
|  | Email SAFEbuilt , Phone 262-328-7638 |  | Email BTS Inspections , Phone 414-719-3850 |
|  | Email Badger State Consulting , Phone 715-212-1483 |  | Email General Engineering , Phone 608-745-8233 |

Scenic Rivers Energy Cooperative

Wiring/Service Specifications and Recommendations

Appendix 3: Wiring Statement/Certificate of Electric Inspection



231 N. Sheridan St –Lancaster, WI 53813
 300 Barth Dr –Darlington WI 53530
 15985 State Hwy 131 – Gays Mills, WI 54631
 800-236-2141
 www.sre.coop

WIRING AFFIDAVIT/CERTIFICATE OF ELECTRIC INSPECTION

This certificate is required for all electrical services that Scenic Rivers Energy Cooperative energizes

Member Name: _____ Owner of Premise: _____

Service Address: _____

City: _____ State: _____ Zip: _____

County: _____ Township: _____

Electrical Contractor: _____ Address: _____
 (Please print)

I certify that this information is correct. I hereby understand and acknowledge that if Scenic Rivers Energy Cooperative must make a return trip to the above location because of either an error or omission on this certificate, or to disconnect this service due to a code violation as determined by the electrical inspector, I will be responsible for any charges Scenic Rivers Energy Cooperative incurs for their services.

Owner's Signature _____

The electrician being first duly sworn on oath says the following wiring for electricity was done:					
Type of service (check appropriate boxes):					
<input type="checkbox"/> Residence	<input type="checkbox"/> (Temp.) Service	<input type="checkbox"/> 1-Phase service entrance	_____AMPS	_____VOLTS	
<input type="checkbox"/> Farm	<input type="checkbox"/> Center Yd. Pole	<input type="checkbox"/> 3-Phase service entrance	_____AMPS	_____VOLTS	
<input type="checkbox"/> Commercial	<input type="checkbox"/> Permanent	<input type="checkbox"/> Rewire/Upgrade	_____AMPS	_____VOLTS	
<input type="checkbox"/> Swing to Perm.	<input type="checkbox"/> Overhead	<input type="checkbox"/> Underground	<input type="checkbox"/> Other: _____		

Valid Contractor's License # _____

Licensed Electrical Contractor Signature _____

Master Electrician License # _____

Master Electrician Signature _____

On the premises described above and in doing said wiring the electrician complied with the provisions of the Wisconsin State Electrical Code. Prior to energizing the above service, this form must be signed by the electrician/electrical inspector (Section 101.862 WIS. Statutes) and returned to Scenic Rivers Energy Cooperative. (Section 101.865 WIS. Statutes)

Inspector Use Only
WI UDC Certified Inspector #: _____
Date Approved: _____
Electrical Inspector (please print): _____
Electrical Inspector Signature: _____

Office Use Only
SREC Acct. #: _____
SREC Location #: _____
Work Order Number: _____
Perm. Service Connect Date: _____
Date UDC Certificate Received: _____
By SREC: _____

Scenic Rivers Energy Cooperative
Wiring/Service Specifications and Recommendations

Appendix 4: Maximum Available Secondary Fault Currents

Maximum Available Secondary Fault Currents

With one Service Entrance connected to transformer: Select the **Total Amps** from the left-hand column that equals or exceeds the service entrance rating.

With multiple Service Entrances connected to transformer: Select the **Total Amps** from the left-hand column that equals or exceeds the sum of all service entrance ratings.

If the load is fixed and the transformer to be used is smaller than the largest typical transformer, then the maximum fault amps and typical minimum equipment kAIC rating corresponding to that transformer size can be used.

Equipment with other kAIC ratings is available and can be used as long as the kAIC rating exceeds the maximum fault current.

Table 1 - Single-Phase Center-Tapped Transformer: 120/240 volt, 3-wire					
Total Amps of all Service Entrances Connected to Transformer	Largest Typical Transformer to be used with Total Amps			Maximum Fault Current (Amps)	Typical Minimum Equipment kAIC Rating (Amps)
	1-PH kVA	%Z	Full Load Amps		
60	10	1.5	41.7	4,274	10,000
100	15	1.5	62.5	6,410	10,000
100	25	1.5	104.2	10,684	22,000
200	37.5	1.5	156.3	16,026	22,000
200	50	1.5	208.3	21,368	22,000
300	50	1.5	208.3	21,368	22,000
300	75	1.6	312.5	30,048	42,000
400	100	1.7	416.7	37,707	42,000
500	100	1.7	416.7	37,707	42,000
600	167	1.8	695.8	59,473	65,000
700	167	1.8	695.8	59,473	65,000
800	167	1.8	695.8	59,473	65,000

Notes:

1. Maximum Fault Currents are based on infinite source impedance which provide worst case values.
2. Maximum Fault Currents are at secondary terminals of the transformer.
3. The maximum Three-Phase and Line-to-Neutral fault currents are the same since there is no source impedance.
4. No secondary cable is included. Adding secondary cable will lower the fault current value at the service entrance.
5. The transformer impedance shown is the lowest expected but lower impedances are possible which would result in higher maximum fault currents. The Engineer is to be contacted when the impedance is lower than shown.
6. No fault contribution from motors is included.

By: Power System Engineering, Rev. May 7, 2020

Scenic Rivers Energy Cooperative
Wiring/Service Specifications and Recommendations
Maximum Available Secondary Fault Currents

Table 2 - Three-Phase: 120/208 volt, 4-wire wye					
Total Amps of all Service Entrances Connected to Transformer	Largest Typical Transformer bank to be used with Total Amps			Maximum Fault Current (Amps)	Typical Minimum Equipment kAIC Rating (Amps)
	3-PH kVA	%Z	Full Load Amps		
Three 1-PH Overhead or Three 1-PH Underground					
200	3-10	1.5	83.3	5,552	10,000
200	3-15	1.5	124.9	8,327	10,000
300	3-25	1.5	208.2	13,879	22,000
300	3-37.5	1.5	312.3	20,819	22,000
400	3-37.5	1.5	312.3	20,819	22,000
400	3-50	1.5	416.4	27,758	42,000
500	3-50	1.5	416.4	27,758	42,000
600	3-75	1.6	624.6	39,035	42,000
700	3-75	1.6	624.6	39,035	42,000
800	3-100	1.7	832.7	48,985	65,000
900	3-100	1.7	832.7	48,985	65,000
1000	3-100	1.7	832.7	48,985	65,000 contact engineering
1200	3-167	1.8	1387.9	77,106	65,000 contact engineering
1600	3-167	1.8	1387.9	77,106	65,000 contact engineering
3-PH Pad-Mount					
200	45	2.0	124.9	6,246	10,000
300	75	2.0	208.2	10,409	22,000
300	112.5	2.0	312.3	15,614	22,000
400	112.5	2.0	312.3	15,614	22,000
400	150	2.0	416.4	20,819	22,000
500	150	2.0	416.4	20,819	22,000
600	225	2.0	624.6	31,228	42,000
700	225	2.0	624.6	31,228	42,000
800	300	2.0	832.7	41,637	42,000
900	300	2.0	832.7	41,637	42,000
1000	300	2.0	832.7	41,637	42,000
1200	500	3.0	1387.9	46,263	65,000
1600	500	3.0	1387.9	46,263	65,000
2000	750	5.3	2081.9	39,280	65,000
2400	1000	5.3	2775.8	52,374	65,000 contact engineering
3000	1500	5.3	4163.7	78,560	65,000 contact engineering

Scenic Rivers Energy Cooperative
Wiring/Service Specifications and Recommendations

Table 3 - Three-Phase: 277/480 volt, 4-wire wye and 480 volt, 3-wire delta					
Total Amps of all Service Entrances Connected to Transformer	Largest Typical Transformer bank to be used with Total Amps			Maximum Fault Current (Amps)	Typical Minimum Equipment kAIC Rating (Amps)
	3-PH kVA	%Z	Full Load Amps		
Three 1-PH Overhead or Three 1-PH Underground					
100	3-15	1.5	54.1	3,609	10,000
100	3-25	1.5	90.2	6,014	10,000
200	3-37.5	1.5	135.3	9,021	10,000
200	3-50	1.5	180.4	12,028	22,000
300	3-75	1.6	270.6	16,915	22,000
300	3-100	1.7	360.9	21,227	22,000
400	3-100	1.7	360.9	21,227	22,000
500	3-167	1.8	601.4	33,412	42,000
600	3-167	1.8	601.4	33,412	42,000
800	3-250	2.0	902.1	45,107	65,000
3-PH Pad-Mount					
100	45	2.0	54.1	2,706	10,000
100	75	2.0	90.2	4,511	10,000
200	112.5	2.0	135.3	6,766	10,000
200	150	2.0	180.4	9,021	10,000
300	225	2.0	270.6	13,532	22,000
300	300	2.0	360.9	18,043	22,000
400	300	2.0	360.9	18,043	22,000
500	500	3.0	601.4	20,047	22,000
600	500	3.0	601.4	20,047	22,000
800	750	5.3	902.1	17,021	22,000
1000	750	5.3	902.1	17,021	22,000
1200	1000	5.3	1202.8	22,695	42,000
1600	1500	5.3	1804.3	34,043	42,000
2000	1500	5.3	1804.3	34,043	42,000
2400	2000	5.3	2405.7	45,391	65,000
3000	2500	5.3	3007.1	56,738	65,000

Notes:

1. Maximum Fault Currents are based on infinite source impedance which provide worst case values.
2. Maximum Fault Currents are at secondary terminals of the transformer.
3. The maximum Three-Phase and Line-to-Neutral fault currents are the same since there is no source impedance.
4. No secondary cable is included. Adding secondary cable will lower the fault current value at the service entrance.
5. The transformer impedance shown is the lowest expected but lower impedances are possible which would result in higher maximum fault currents. The Engineer is to be contacted when the impedance is lower than shown.
6. No fault contribution from motors is included.

By: Power System Engineering, Rev. May 7, 2020

Scenic Rivers Energy Cooperative

Wiring/Service Specifications and Recommendations

Appendix 5: Application for Membership & Electric Service

Member Number _____

Location Number _____

*APPLICATION FOR MEMBERSHIP AND ELECTRIC SERVICE
SCENIC RIVERS ENERGY COOPERATIVE, LANCASTER, WISCONSIN*

The undersigned (hereinafter called the "Applicant") hereby applies for membership in and agrees to purchase electric energy from Scenic Rivers Energy Cooperative (hereinafter called the "Cooperative", upon the following terms and conditions:

1. The application for membership by husband and wife shall be deemed as joint tenant member with right of survivorship unless the applicant designates in writing on this application for membership.
2. The Applicant will, when electric energy becomes available, purchase from the Cooperative all electric energy used on the premises described below and will pay therefore monthly or annually at rates to be determined from time to time by the board of directors, it being understood that all amounts paid by applicant in excess of operating costs and expenses of the Cooperative properly chargeable against the furnishing of such electric energy are furnished by the applicant as capital. The Applicant will pay a minimum monthly or annual bill established by the board of directors for the class service regardless of the energy consumed.
3. The Applicant will cause the applicant's premises to be wired in compliance with the Wisconsin State Electrical Code. The Cooperative reserves the right at its option to terminate electric service if in the opinion of the Cooperative the condition of the wiring facilities is hazardous.
4. The Applicant will comply with and be bound by the provisions of the articles of incorporation and bylaws of the Cooperative, and such rules and regulations as may from time to time be adopted by the Cooperative.
5. The Applicant, by becoming a member, assumes no personal liability nor responsibility for any debts or liabilities of the Cooperative, and it is expressly understood that under the law the Applicant's private property is exempt from execution of any such debts or liabilities.
6. The Applicant will grant to the Cooperative a right-of-way easement to construct, operate and maintain an electric line or system on the land owned by the Applicant.
7. The Cooperative is authorized to enter a subscription in the Applicant's name to the *Wisconsin REC News*, to be paid by the Cooperative.
8. The Applicant consents and agrees to pay interest or penalties in such manner as the board of directors may specify on any past due accounts which may be deducted from any sums due to the Applicant or the Applicant's survivors or estate.

The acceptance of this application by the Cooperative shall constitute an agreement between the Applicant and the Cooperative, and the contract for electric service shall continue in force until canceled.

PLEASE COMPLETE AND RETURN TO THE COOPERATIVE. THANK YOU.

Date _____

Date for Service to Start _____

Use Full Legal Name as in Property Records

Applicant (please print) _____ Applicant #2 (please print) _____

Driver's License No. _____ Driver's License No. #2 _____

Soc. Sec. No./Federal Id No. _____ Social Security No. #2 _____

Employer _____ Employer #2 _____

Email Address _____

Mailing Address _____

Meter Location Address _____

Is this a residence? (please circle) Yes No If No, please explain: _____

Telephone Number _____

Owner Renter If renter who is landlord? _____

Operation Roundup is a fund that is used to help individuals that experience some disaster (fire, flood, etc.) or health crisis. And the fund is used to donate to non-educational fundraisers, non-profit organizations, etc. If a member signs up for Operation Round up, the amount a member would contribute is less than \$6 per year.

If you do not wish to participate in Operation Roundup, please circle: No to Operation Roundup

Applicant Signature _____ Applicant #2 Signature _____

As recipients of federal assistance, Scenic Rivers Energy Cooperative is required to identify and document as accurately as possible the racial/ethnic data on the eligible population in our service area. Your response is optional. The information you provide will be used only for federal government reporting purposes.

- | | |
|---|--|
| <p>Racial/Ethnic Group:</p> <p><input type="checkbox"/> American Indian or Alaskan Native</p> <p><input type="checkbox"/> Asian or Pacific Islander</p> | <p><input type="checkbox"/> Black (not of Hispanic Origin)</p> <p><input type="checkbox"/> Hispanic</p> <p><input type="checkbox"/> White (not of Hispanic Origin)</p> |
|---|--|

Scenic Rivers Energy Cooperative
Wiring/Service Specifications and Recommendations

Appendix 6: Service Data Form

Service Data Form

231 N. Sheridan Street • Lancaster, WI 53813 • 800-236-2141 • Fax 608-723-2688 • www.sre.coop

Please complete this data sheet to the best of your knowledge. We must have this information to locate your property and properly size your electric service.

SREC- USE ONLY

Loc#: _____
Acct#: _____
Date Rec'd: _____
WO#: _____
Name: _____

Name: _____

Current Mailing Address: _____

Service Location Address: _____
(include Fire # if possible) Fire # and Street Address

Phone: _____
Daytime Evening

E-Mail Address: _____ **Mobile/Cell #:** _____

PROPERTY INFORMATION

Description: Mobile Manufactured Modular Conventional Pole Shed Other

Location: _____
County Township Section

Your nearest neighbor: _____ **is** _____ **ft.** **from your location**
Name/Address N-S-E-W

Does your work require the UDC Electrical Inspection Certificate? Yes No
(An answer is required. If you can't answer this question, please contact your town clerk/chair or county zoning department.)

TYPE OF SERVICE DESIRED:
 Permanent
 Temporary/Construction - Construction Company
 Temporary/Construction - member-supplied
 Overhead service preferred
 Underground service preferred
 200 amp 320 amp 400 amp 600 amp

CONTRACTOR NAME(S) AND PHONE NUMBER(S):
Building contractor: _____
Electrical contractor: _____
_____ Please contact my _____ contractor
Building or electrical
I am doing my own wiring
_____ I would like to meet a Scenic Rivers engineer on site

LOCATION OF ELECTRIC METER (Bypass meter required):
(See reverse side for meter location sketch)
 Underground post/pedestal

ELECTRICAL APPLIANCES & EQUIPMENT:
(CHECK ONLY THOSE THAT WILL BE ELECTRIC)
Transformer or service wire upgrades due to incorrect load information may result in added charges.
KW = wattage x 1,000
⚡ Water heater gallons _____
⚡ Central air size _____
⚡ Heating kw/type _____
⚡ Off-Peak Heat kw/type _____

DUSK TO DAWN LIGHT DESIRED:
 Dusk to Dawn pole needed*
 LED 74 watt light
*If underground service to dusk to dawn light is preferred, a per foot fee for trenching will apply.

OTHER LARGE ELECTRIC APPLIANCES OR EQUIPMENT
(include kw if known, attach separate sheet if necessary):

Scenic Rivers Energy Cooperative
Wiring/Service Specifications and Recommendations

Service Data Form

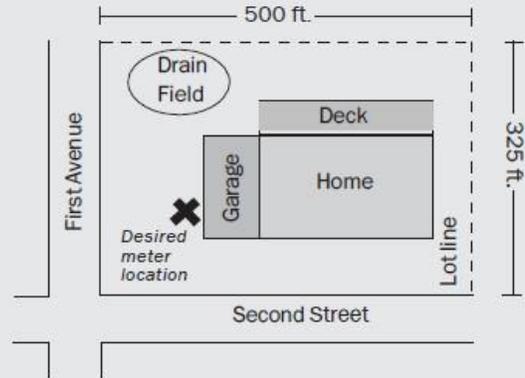
231 N. Sheridan Street • Lancaster, WI 53813 • 800-236-2141 • Fax 608-723-2688 • www.sre.coop

Please indicate in box below:

- 1) Lot line
- 2) Lot dimensions
- 3) Location of house relative to street
- 4) Desired location of meter(s), as indicated by an "X."
Meter cannot be located on structures, in an area where it will be blocked by future construction. Must be within 20 feet of the transformer.
- 5) Septic and drain field, and all other conflicts

The actual line route and location of the meter will be dictated by the location of Scenic Rivers power source. Please consult with the cooperative before installing the meter socket.

EXAMPLE DRAWING:



Scenic Rivers Energy Cooperative
Wiring/Service Specifications and Recommendations

Appendix 7: Line Department Service Structure

Service requirements and fees are subject to change at any time.

Line Department Service Structure	
**Non-refundable staking fee will be required to be paid prior to any site visit	*
**The staking fee is applied towards the Electric Service Agreement for a period of 1 year	*
<u>Electric Service Agreement Fees – Single-Phase:</u>	
Service Installation Fee 2S meter	*
CIAC /foot cost	*
<u>Electric Service Agreement Fees – Three-Phase:</u>	
Service Installation Fee S meter	*
CIAC /foot cost	*
Add/Move Enclosure/Pole 1 Phase/3 Phase	*
Road Crossing / Bore Fee (plus any local fees)	*
Temporary Service Charge + Monthly Facility & Usage	*
Misc./Special Circumstance Costs	*
Directional boring charge will be applied when plowing isn't feasible	*
Frost charge may apply Nov 1 st to April 1 st or until frost conditions do not exist	*
Rocky/wet conditions or special circumstances may lead to additional costs	*

*For current pricing, contact our Line Department at 608-723-2121 or 800-236-2141 extension 564.

Additional Fees

- If a new service is connected to an existing installed line of less than five years of age, the new member may be required to pay a share of the initial cost of installing the original line.
- In addition to normal line extension rates, any fees such as local permits charged to Scenic Rivers Energy Cooperative (SREC) for extending and constructing the electric service to a new location will be passed on to the member requesting the service.
- There will be an additional charge for boring under obstructions (i.e. roads, driveways, waterways) for underground installations.
- For underground service performed after November 1 and until winter conditions cease, the following additional charges and requirements will apply:
 - There is an additional charge per foot for winter conditions that impede progress of the installation. There also may be an additional labor and/or equipment charge associated with digging our lines into equipment that is required due to frost such as transformers, enclosures, or the meter socket.
- Brushing fees will apply when proposed route warrants clearing (40 ft path for Overhead, 20 ft path for Underground).
- Road permit fees from Township/County are an additional cost.

Special Notes

- Once full payment is received and all service requirements are met, extensions are scheduled on a first-come, first-served basis. For emergency requests of installation of electric service, there will be a three business-day minimum wait for locating underground utilities through Digger's Hotline.
- Signed Easements required prior to any construction.

Scenic Rivers Energy Cooperative
Wiring/Service Specifications and Recommendations

Appendix 8: Service Checklist

Service Checklist

- Contact Scenic Rivers Energy Cooperative (SREC), schedule an appointment if necessary.
- Complete and sign Application for Membership & Electric Service (see [Appendix 5](#)) form and Service Data form (see [Appendix 6](#)), along with any required staking fees and costs.
- Locate the septic system, underground cables, and any other private underground facilities owned by you on your property. Exposing any private facilities in the flagged path is recommended. SREC is not responsible for any damage due to unmarked or incorrectly marked private facilities.
- Review proposed cable route staked with white flags by SREC engineer. If you wish to meet with the engineer while staking, please request an appointment. Flags shall not be moved without SREC authorization.
- Credit check performed and any required deposits will be added to costs.
- Complete (in black ink) the Right-Of-Way Easement form with complete legal description, parcel I.D. number and have your signature notarized. Faxes cannot be accepted by the Register of Deeds for recording. SREC may assist in this process if able to obtain at first contact.
- If a Dusk-to-Dawn light is desired, request a Dusk-to-Dawn light agreement form and complete. (see [Appendix 13](#))
- Return all completed forms to SREC.
- Have your electric service with approved meter socket wired to SREC and code specifications. Additional charges apply to a second trip if not wired correctly, or service is not completed.
- Complete and submit the Uniform Dwelling Code Electrical Inspection Certificate, which has been signed by the building inspector – if an inspection is required. If an inspection is not required, have the person doing the wiring complete and return an SREC Wiring Affidavit/Certificate of Electric Inspection. (see [Appendix 3](#))
- Provide a clear, unobstructed path for SREC electric cables, and notify SREC of stump or demolition burial areas on your property. (see [Appendix 11](#)) for right-of-way clearing specs.
- The grade and landscaping of your property must be within four (4) inches of final grade.
- Construction fees and any required deposits must be paid before SREC will schedule electric service construction. SREC will notify you of fees due once we receive the above forms. **Additional fees could apply for rock sawing and frost trenching**
- Meter socket / Pedestal installed and inspected. (see [Appendix 1](#) & [Appendix 2](#)) for Inspectors List.
- Notify SREC when all the above requirements are met. SREC will schedule a preconstruction inspection to ensure job is ready to be built when all requirements have been met. Additional trip charges shall apply if SREC is notified that the service is ready for connection and it is not ready when the crew installs line extension.

Scenic Rivers Energy Cooperative
Wiring/Service Specifications and Recommendations

Appendix 9: Approved Equipment List

Single-Phase 200-320 Amp			
200 AMP - All meter sockets shall be a minimum 200-amp rating with 4 terminals (No matter what size load) with proper FCI rated overcurrent protection at the service point. All equipment must be UL listed and Type 3R outdoor rated. Please contact SREC for approval of all metering equipment prior to installation.			
200 Amp Single-Phase Meter Sockets			
Milbank	U1773-XL-TG-KK	U7040-XL-TG-KK-ALT	U5168-XLT-200-KK
Milbank	U3850-0-TG-KK	U5871-XL-200	U5059-X-2/200-K3L-IL
Milbank	U6317-0-2/200-K3L		
Eaton	UHTRS233CCH	MB816B200BTSD	MBT48B200BTS
Siemens	UAT417-XGF		
Square D	UTRS213B	RC816F200C	
Erickson	CU414		
Durham	UT-RS213CMP		
200 Amp Single-Phase Meter Pedestals			
Milbank	U5136-0-200S-ALT	U5925-0-200-KK-ALT	NU8990-0-200-KK-CECHA
Eaton	1008846CH w/ ARP00119CH		
Siemens	UAP317-PPWI		
320 Amp Single-Phase Meter Sockets			
Milbank	U1779-RRL-K3-K2-ALT	U3000-0-K3L-K2L-ALT	U6317-0-2/200-K3L
Milbank	U5059-X-200/100-K3L-ALT	U1129-0-K3L-K2L	
Eaton	UTH4330UCH		
Siemens	48104-82WI		
Durham	UT-H4309U		
320 Amp Single-Phase Meter Pedestals			
Milbank	U3849-0-2/200	U3849-0-200-100-ALT	
Eaton	1009018CH		
Siemens	47604P-9WI		
Square D	UTH4330T		
320 Amp Meter Sockets May Require Separate Lug Connector Kits			
Milbank	K1540 (4-600 MCM)		
Eaton	LK3R9EM (#2-600 kcmil)		

Scenic Rivers Energy Cooperative
Wiring/Service Specifications and Recommendations

Appendix 9: Approved Equipment List

Single-Phase 400-800 Amp				
400 AMP - All Single-phase 120/240 Volt, 400 amp and above current transformer rated sockets will be 6 terminals, include prewired test switch, and proper FCI rated overcurrent protection at the service point. All equipment must be UL listed and type 3R outdoor rated. Please contact SREC for approval of all metering equipment prior to installation.				
400-800 Amp Single-Phase Meter Sockets				
Milbank	UC7532-XL-401-ALT	with factory wired test switch	TS07-0105	
400-800 Amp Single-Phase – 120/240 Volt Current Transformer Enclosures				
	A.M.P.	ERICKSON	MILBANK	EMI
400	ALIECT4-3	CT41 ALI	ALIM-413UGBX	ALICT140
600	ALIECT6-3	CT61 ALI	ALIM-613UGBX	ALICT160
800	ALIECT8-3	CT81 ALI	ALIM-813UBBX	ALICT180

Three-Phase 400-1200 Amp				
400-1200 AMP Three phase 120/208- or 277/480-Volt current transformer rated sockets will be 13 terminals, include prewired test switch, and proper FCI rated overcurrent protection at the service point. All equipment must be UL listed and type 3R outdoor rated. Please contact SREC for approval of all metering equipment prior to installation.				
400-1200 Amp Three-Phase Meter Socket				
Milbank	UC7449-XL-871-ALT	w/factory wired test switch	TS10-0109	
400-1200 Amp Three-Phase – 120/208 Current Transformer Enclosures				
	A.M.P.	ERICKSON	MILBANK	EMI
400	ALIECT4-4	CT44-ALI	ALIM-434UGBX	ALICT340
600	ALIECT6-4	CT64-ALI	ALIM-634UGBX	ALICT360
800	ALIECT8-4	CT84-ALI	ALIM-834UGBX	ALICT380
1200	ALIECT12-4	CT124-ALI	ALIM-1234UGBX	ALICT312
400-1200 Amp Three-Phase 277/480 Current & Voltage Enclosures				
	A.M.P.	ERICKSON	MILBANK	EMI
400	ALIECT4-4PT	CT44-PT-ALI	ALIM-464UGBX	ALICT340P
600	ALIEPCT6-4PT	CT64-PT-ALI	ALIM-664UGBX	ALICT360P
800	ALIEPCT8-4PT	CT84-PT-ALI	ALIM-864UGBX	ALICT380P
1200	ALIEPCT12-4PT	CT124-PT-ALI	ALIM-1264UBGX	ALICT312P
CT Cabinets can be ordered with Left or Right hinge mount. Please note on your PO when ordering.				

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Appendix 10: Overhead Conductor Clearances

Please check with Scenic Rivers Energy Cooperative (SREC) for current clearance requirements for any new buildings or structures constructed near SREC facilities. Code changes and crane rules have increased clearance requirements considerably. Any new construction which is in violation of current clearance requirements will be the responsibility of the owner of said facilities. This includes costs for any changes required to meet the current codes and industry standards SREC is required to abide by.

(see [Appendix 10 clearance charts](#)) for required clearances per the NESC.

Please contact SREC prior to any grain bin construction near SREC facilities and lines. This will avoid any conflict or costs to the members for building too close to SREC lines.

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Appendix 10: Clearance Code Diagrams

Application Guide for 2012 NESC Table 232-1 - see NESC for details and exceptions

Railroads*

Grade B
Table 242-1

12 ft - Rule 231C

Vertical Clearance at Largest Vertical Sag Table 232-1

Neutral or Comm.	Grounded Span Guy	TPX	7.2/12.5 kV	14.4/25 kV	19.9/35 kV
23.5 ft		24.0 ft	26.5 ft		

**Railroad company may require greater clearance*

Trucks Over 8 Feet*

Grade B - for limited access highway
Grade C - over other areas subject to truck traffic
Table 242-1

4 ft - Rule 231A

Vertical Clearance at Largest Vertical Sag Table 232-1

Neutral or Comm.	Grounded Span Guy	TPX	7.2/12.5 kV	14.4/25 kV	19.9/35 kV
15.5 ft		16.0 ft	18.5 ft		

**DOT may require greater clearance*

Water - No Sailboats

Grade B - when a crossing permit is required
Table 242-1

Vertical Clearance at Largest Vertical Sag Table 232-1

Neutral or Comm.	Grounded Span Guy	TPX	7.2/12.5 kV	14.4/25 kV	19.9/35 kV
14.0 ft		14.5 ft	17.0 ft		

**see NESC for sailboat clearances*

Over fields, orchards, forest, etc.

Vertical Clearance at Largest Vertical Sag Table 232-1

Neutral or Comm.	Grounded Span Guy	TPX	7.2/12.5 kV	14.4/25 kV	19.9/35 kV
15.5 ft		16.0 ft	18.5 ft		

**used by vehicles over 8 feet tall or riders on horseback*

Pedestrians Only*

Grade C
Table 242-1

Vertical Clearance at Largest Vertical Sag Table 232-1

Neutral or Comm.	Grounded Span Guy	TPX	7.2/12.5 kV	14.4/25 kV	19.9/35 kV
9.5 ft		12.0 ft	14.5 ft		

**Not normally used by trucks or riders on horseback (very steep hills, swamps, etc.)*

Oversized Vehicles - greater than 14 feet in height

Vertical Clearance at Largest Vertical Sag Table 232-1

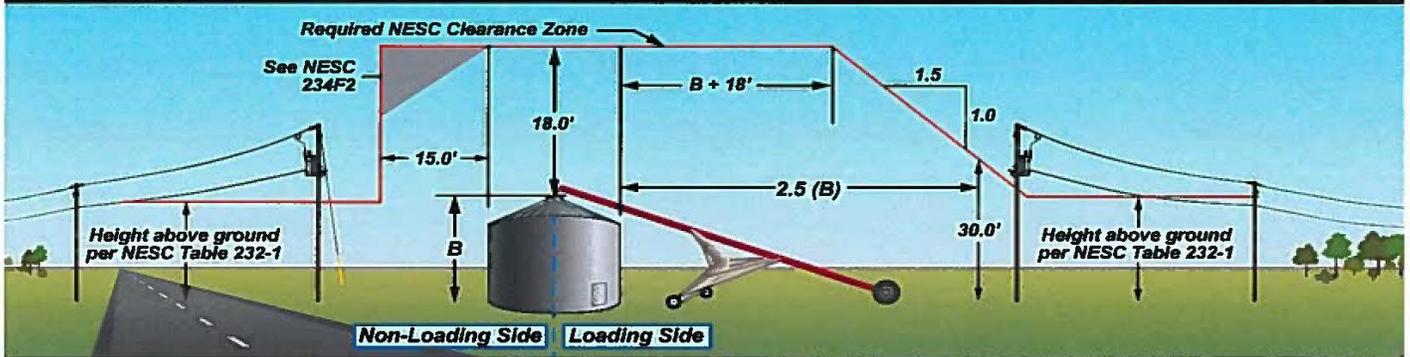
Neutral or Comm.	Grounded Span Guy	TPX	7.2/12.5 kV	14.4/25 kV	19.9/35 kV
X + 1.5 ft		X + 2 ft	X + 4.5 ft		

X = Known Height of oversized vehicle

Appendix 10: Clearance Code Diagrams

Application Guide for 2012 NESC - see NESC for details and exceptions

Clearance* Near Grain Bins Loaded by Portable Auger NESC 234F2

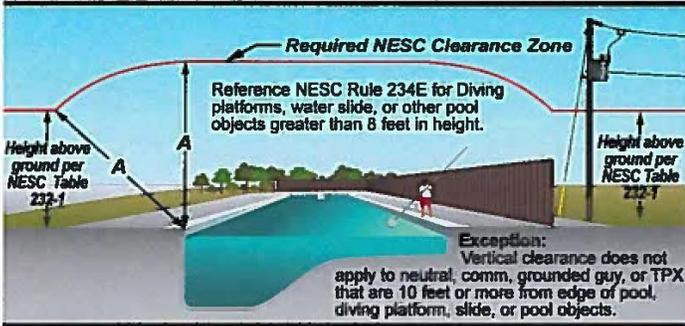


B = Vertical height to highest filling or probing port
 Note: Vertical height of conductors is 30 feet at a distance equal to 2.5 times B

- Non-Loading Side is when use of portable auger is limited by:**
1. Permanent building/structure
 2. Physical obstruction
 3. Public road or other right of way
 4. Designation or agreement

*Largest vertical sag

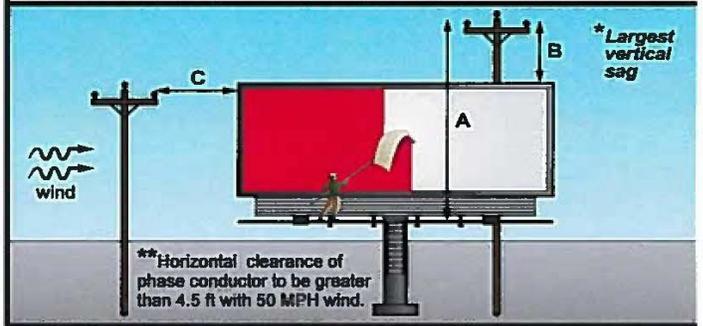
Clearance Over* or Near Swimming Pools NESC 234E1



Neutral	TPX	7.2/12.5 kV	14.4/25 kV	19.9/35 kV
22.0 ft	22.5 ft	25.0 ft		

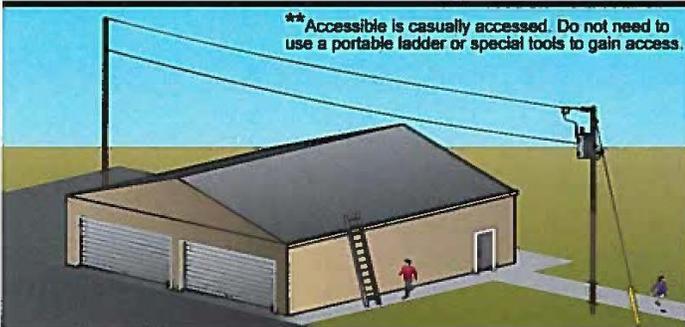
*Largest vertical sag

Clearance Over* or Near Billboards NESC 234C



	Neutral	TPX	7.2/12.5kV	14.4/25kV	19.9/35kV
A - Where personnel walk	10.5 ft	11.0 ft	13.5 ft		
B - Other Surfaces	3.0 ft	3.5 ft	8.0 ft		
C - Horizontal**	4.5 ft	5.0 ft	7.5 ft		

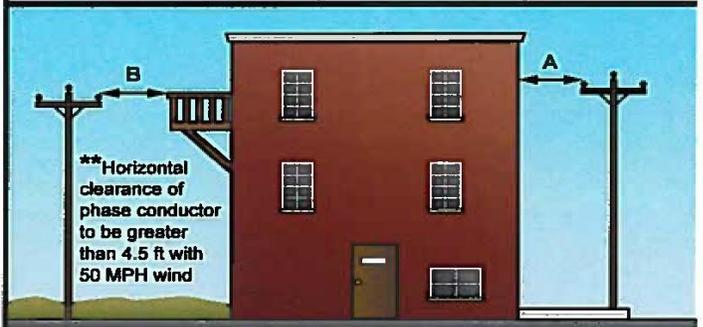
Vertical Clearance Over* Buildings NESC 234C



Roof	Neutral	TPX	7.2/12.5kV	14.4/25kV	19.9/35kV
Accessible**	10.5 ft	11.0 ft	13.5 ft		
Non-Accessible	3.0 ft	3.5 ft	12.5 ft		

*Largest vertical sag

Horizontal Clearance Adjacent to Buildings NESC 234C

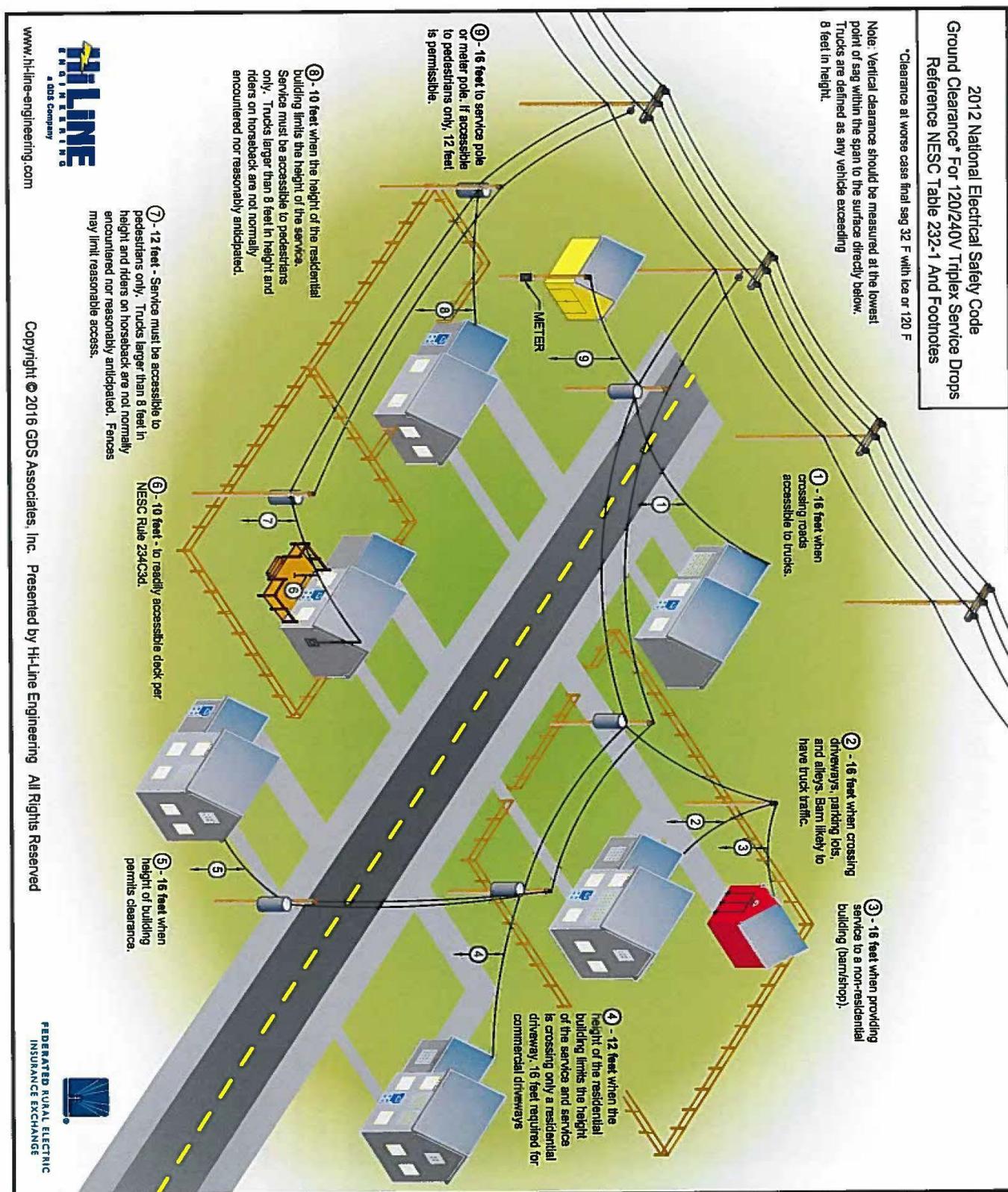


	Neutral	TPX	7.2/12.5kV	14.4/25kV	19.9/35kV
A - To Walls**	4.5 ft	5.0 ft	7.5 ft		
B - Accessible Areas**	4.5 ft	5.0 ft	7.5 ft		



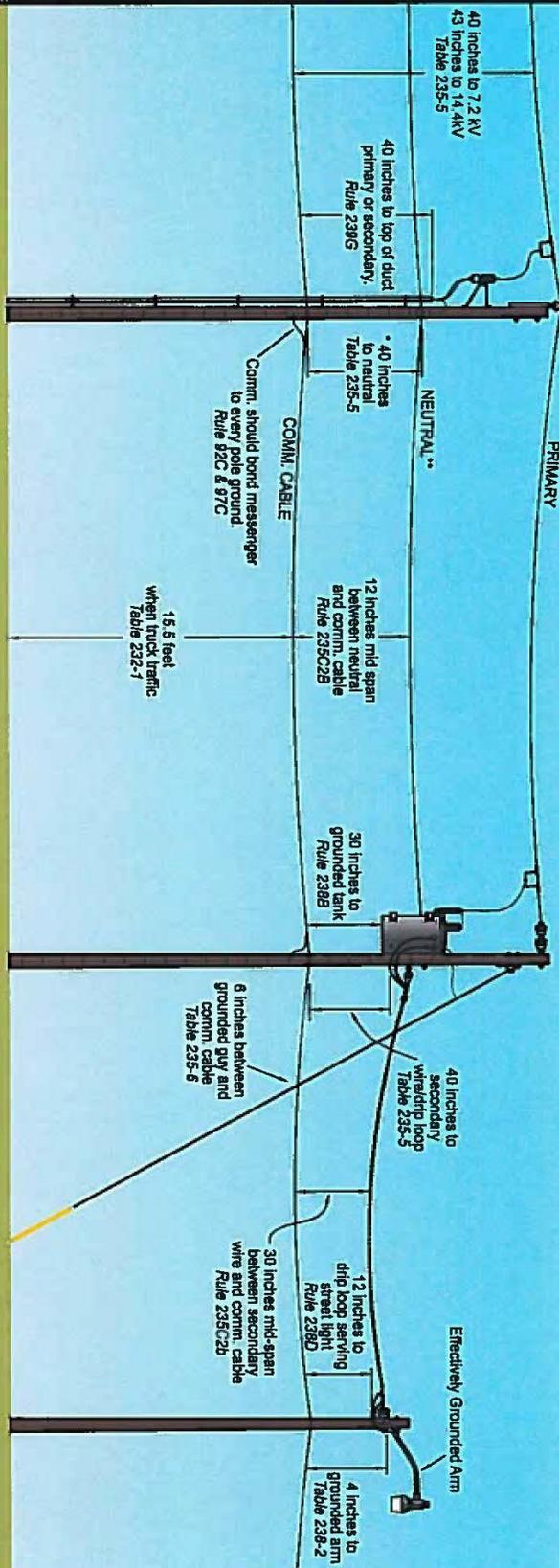
Scenic Rivers Energy Cooperative Wiring/Service Specifications and Recommendations

Appendix 10: Clearance Code Diagrams



Appendix 10: Clearance Code Diagrams

Summary of NESC Clearances to Communication Cables - see NESC for details and exceptions



- * 30 inches is allowed if the communication messenger is bonded to the neutral throughout the service area. Table 235-5
- ** Fiber Optic Cables in the supply space (Rule 224A) will have the same required clearance as a multi-ground neutral (Rule 235C)

A communication worker safety zone is 40 inches of clearance between communication lines and supply lines/equipment per Rule 235C4 & 238E



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FEDERATED RURAL ELECTRIC INSURANCE EXCHANGE

Scenic Rivers Energy Cooperative
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Appendix 11: Right-of-Way Specifications

Right-Of-Way Width Specifications

Scenic River Energy Cooperative's (SREC) **Rural** right-of-way widths are 20 feet from the nearest conductor (both single and multiphase lines), measured perpendicularly from the centerline of the nearest conductor outward 20 feet in both directions.

SREC's **Urban** right-of-way widths are 15 feet from the nearest conductor (both single and multiphase lines), measured perpendicularly from the centerline of the nearest conductor outward 15 feet in both directions. Exceptions to the above, as designated by the authorized SREC representative.

The following guidelines have been established for SREC's right-of-way program:

Definition of Right-of-Way Location:

Rural: Defined as any primary lines not within a maintained lawn area near approved lakeshore, dwelling, or business including the primary maintained driveway entrance.

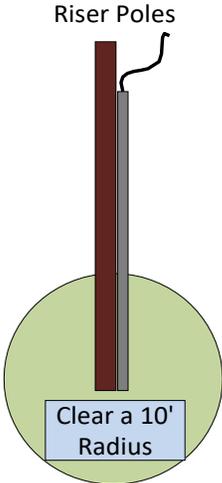
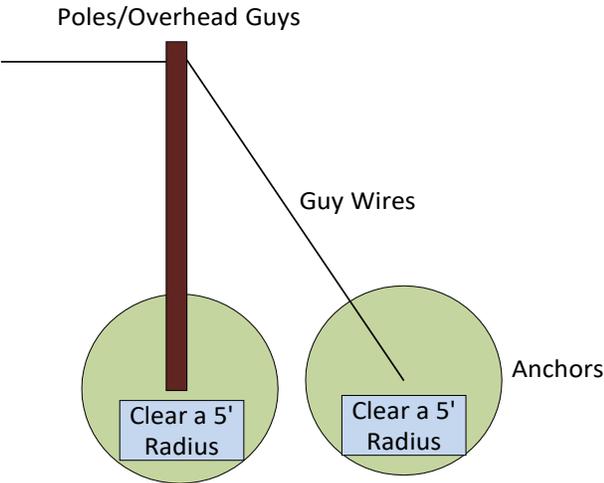
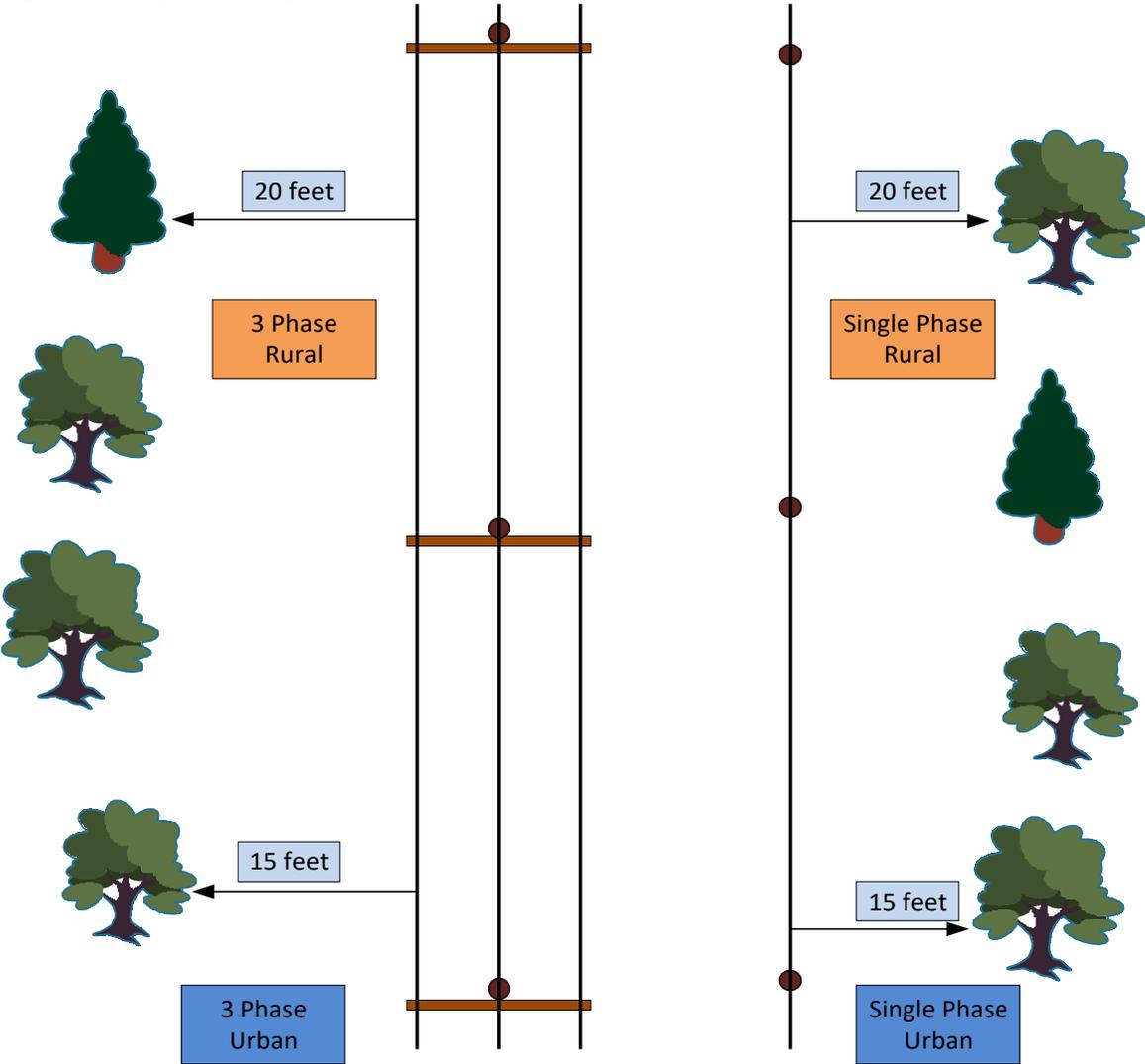
Urban: Defined as any primary lines within a maintained lawn area near approved lakeshore, dwelling, or business *excluding* the primary maintained driveway entrance.

- Only if line is the same side of public road as buildings and it is the same property owner. Cover only the area under the line that is the frontage of the maintained yard area. Not meant to include areas other than parallel to a lakeshore, dwelling, or business.
- Right-of-way on which past vegetation maintenance practices have established *wider limits* shall be maintained to the full extent of the previously maintained width.
- The Contractor shall designate the edges of the desired right-of-way with flagging or other acceptable marking, as required, to maintain a uniform width as specified by the contract documents, attachments, or authorized SREC representative.
- ***Pine Plantations*** or tree/trees that had been planted by a landowner shall be considered as an Urban definition.
- Underground right-of-way is 10' on either side of the line.

Please see **next page (Appendix 11.1)** for the drawings of both the rural and urban line clearance specifications:

Scenic Rivers Energy Cooperative
 Wiring/Service Specifications and Recommendations

Appendix 11.1: Right-of-Way Clearing Guide

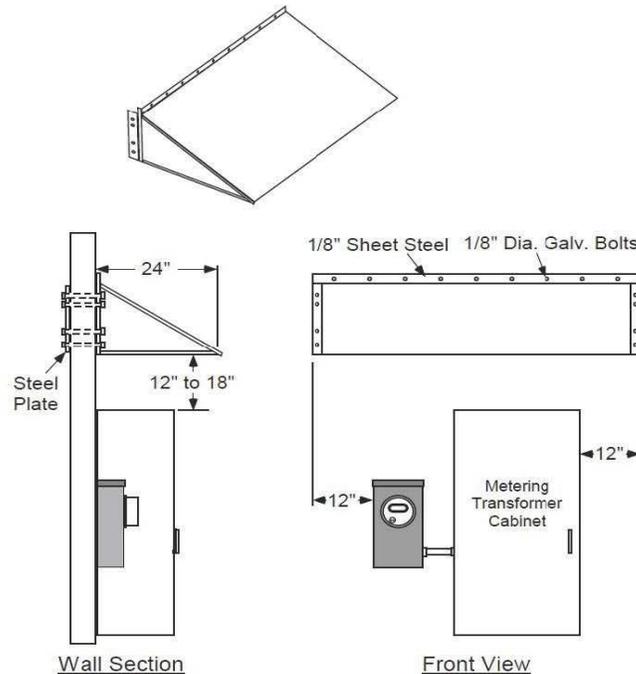


Scenic Rivers Energy Cooperative
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Appendix 12: Metering Equipment Protection-Ice Shield

METERING EQUIPMENT PROTECTION

The member is responsible for protecting Scenic Rivers Energy Cooperative meter(s) and member own metering equipment from damage caused by falling ice, snow or other objects. If protection is not provided for meter equipment by adequate roof overhang the member shall construct a protective shield or the metering equipment location shall be moved to a safe area. The member will be charged for meter replacement if damage occurs and typically an outage will be required to replace any damaged equipment. An adequate roof overhang shall extend a minimum of 18" - 24" out from the face of the wall to which the meter is mounted.



Requirements:

1. Steel to be primed and painted with rust-resistant paint.
2. Shield shall be capable of supporting 50 pounds.
3. Shield may be constructed of steel, treated wood or masonry. Thin sheet metal (tin) is not acceptable.
4. Shield to be so located as to not be a "head bumping" hazard.
5. Width of shield may vary depending on the number of meters being protected.

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Appendix 13: Dusk-to-Dawn Light Application

SCENIC RIVERS ENERGY COOPERATIVE DUSK-TO-DAWN AGREEMENT

231 N. Sheridan Street, Lancaster WI (608) 723-2121 (800) 236-2141 Fax (608) 723-2688

Location _____

Date _____

Dusk-to-Dawn lights are available to all Scenic Rivers Energy Cooperative (SREC) members, subject to the established rules and regulations of the Cooperative. Service is a Dusk-to-Dawn, automatically-controlled, LED light.

The kilowatt-hours used to operate a Dusk-to-Dawn light are not metered, but have a flat, daily rate. This rate takes into consideration any possible downtime and is, therefore, not open to adjustment. Rates and minimum charges are in accordance with SREC current rate schedule, which is subject to change.

Line workers must handle power line maintenance and repairs first; should your Dusk-to-Dawn light not work; it will be repaired in as timely a manner as possible.

SREC Dusk-to-Dawn lights are normally installed on existing cooperative poles where electric service is available. If a transformer is not installed near the light location one can be added, but additional charges may apply. If a new pole is needed, SREC can provide it for a fee of \$300.50 plus \$3.50 per foot for the line extension from SREC source of power (as determined by SREC) to the Dusk-to-Dawn light pole. Extensions cannot be made from the meter socket. For underground installations **performed after November 1**, additional charges and requirements apply for winter conditions.

The member is responsible for providing SREC with the desired size, location, and direction of the Dusk-to-Dawn light; and, if necessary, pole location. If, after initial installation, a request is made to either upgrade or downgrade the light size or change the direction of the light on the pole, a \$84.12 charge may apply. Any such requests must be received within 30 days from the date of installation or account change. If at any time the Dusk-to-Dawn light pole is requested to be relocated, a fee of \$300.50 plus \$3.50 per foot for the line extension will apply.

In requesting a Dusk-to-Dawn light, a SREC member agrees to pay for the service for a minimum of one year. Should the member choose to have the light removed within the first twelve months, one full year of service will be paid in order to help cover the installation, maintenance, and retirement costs incurred by SREC. Repairs to the Dusk-to-Dawn light due to vandalism will be covered only on the first occurrence. Any vandalism after that will result in the light either being removed or the repairs will be charged at the current time and material rate.

TRENCH MARKING AGREEMENT: The below member requests that SREC dig a trench on the member's property located at the above location for installation of underground electrical wire to serve a SREC Dusk-to-Dawn light. Prior to construction, Scenic Rivers will mark the proposed trench route with white flags and/or paint. SREC will call Digger's Hotline for marking of existing underground public utilities, including electric, telephone, natural gas, and cable TV. ***It is the member's responsibility to physically mark the location of any and all other obstacles that lie underground within 10 feet on either side of the proposed trenching route.*** Such obstacles include, but are not limited to septic and sewer systems, buried wires for out-buildings or decorative lighting, and LP gas lines. The member shall mark the location of all obstacles with stakes or flags or by painting the ground. ***The member accepts responsibility*** for damage to any such underground obstacle that the member fails to mark.

I request the installation of the following light(s): 74-Watt LED Quantity: _____

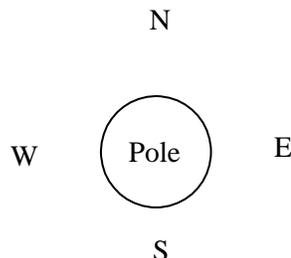
Fees for the new light that requires a pole and line extension are due prior to installation of the light and will be calculated by a SREC representative.

I hereby understand and agree to the above rates and conditions.

Signature

Indicate your desired location for the Dusk-to-Dawn on the SREC pole:

Comment :



Scenic Rivers Energy Coop

WIRING/SERVICE SPECIFICATIONS AND RECOMMENDATIONS

Appendix 14: Dusk to Dawn Light FAQ's

Dusk-to-Dawn Lights Frequently Asked Questions

How much does it cost to install a Dusk-to-Dawn light from Scenic Rivers Energy Cooperative (SREC)?

It depends on the location that you want the light to be installed. There is no charge to install a Dusk-to-Dawn light on an existing pole that has an available power source and is approved by (SREC). If a pole needs to be installed and wire extended to it from an approved power source (usually the transformer), today's installation cost is \$300.50 plus \$3.50 per foot of extension. This distance can be no greater than 150 feet. If there is the need for the installation of a transformer, there is an additional fee.

What types of lights are available and what is the monthly cost?

Dusk-to-Dawn lights installed by SREC are all 74-watt LED. (Subject to change)

- 74-watt LED - \$0.45 per day.
- 100-watt - \$0.45 per day/ existing lights only
- 150-watt - \$0.47 per day/ existing lights only
- 175-watt mercury vapor - \$0.48 per day/ existing lights only
- 250-watt mercury vapor - \$0.51 per day/ existing lights only

The monthly fee includes all electric usage, needed maintenance and replacement if necessary. (Light sizes and rates are subject to change)

Where can a Dusk-to-Dawn light be installed?

SREC's Dusk-to-Dawn lights are normally installed on existing poles where electric service is already available. If a transformer or pole does not exist near the desired light location, one may be installed for an additional charge. An estimation of cost will be provided to you prior to the installation of the light. SREC's Dusk-to-Dawn lights can only be installed on a SREC pole and the distance from an approved power source cannot be greater than 150 feet.

Can I have a switch put on my Dusk-to-Dawn light?

Unfortunately, not, the monthly maintenance fee includes electric usage, needed maintenance and replacement if necessary. Installing and maintaining a switch would raise the cost of the installation and also the monthly fee. Therefore, having a switch would not save you any money. If you would prefer a Dusk-to-Dawn light that can be controlled by a switch, you should contact an electrician for the installation of a privately-owned Dusk-to-Dawn light.

Why are the new Dusk-to-Dawn lights yellow? Are the old white lights still available?

The older fixtures that cast a white light, known as mercury vapor lights, are very inefficient and have been identified by the EPA as harmful to the environment due to mercury content in the bulb. They are no longer sold in the U.S. and components to maintain them are also unavailable. The Sodium lights cast a more yellow light and are also being discontinued. New energy efficient LED lights are replacing all existing lights as replacements are needed. The LED lights casts white light.

How do I get a light installed?

If you are interested in having a Dusk-to-Dawn light installed, please fill out a Dusk-to-Dawn light application, print, sign and send it to SREC.

What if I decide to make a change to the Dusk-to-Dawn light after installation?

If, after initial installation, a request is made to either upgrade or downgrade the light size or change the direction of the light on the pole, a \$84.12 charge will apply. If, at any time, the Dusk-to-Dawn light pole is requested to be relocated, a fee of \$300.50 plus \$3.50 per foot for the line extension will apply.

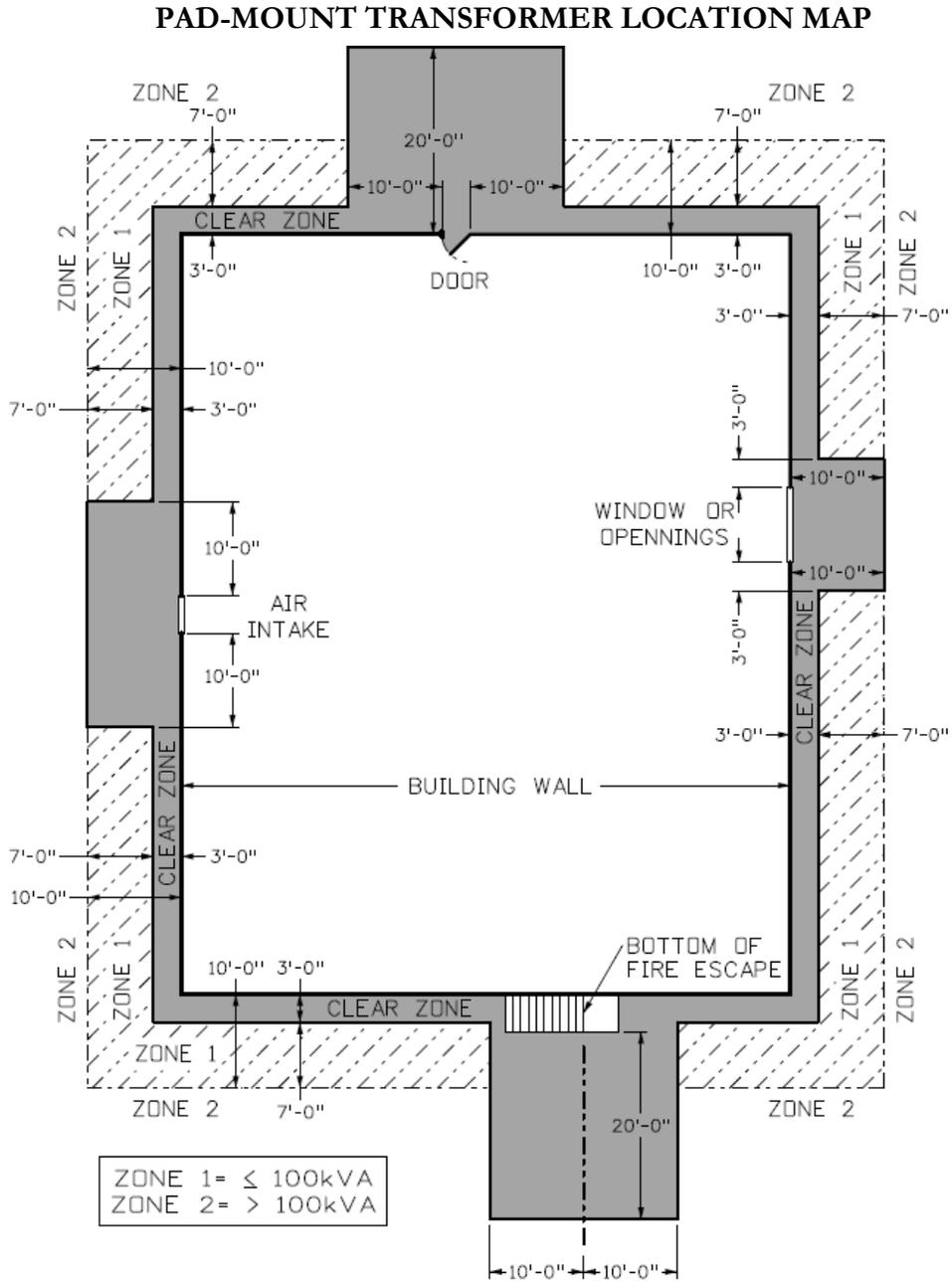
Can I have my Dusk-to-Dawn light turned off?

Dusk-to-Dawn lights are not controlled by switches. Therefore, if a member wants a Dusk-to-Dawn light turned off, SREC removes the light from the pole. If the pole is only there for the purpose of the Dusk-to-Dawn light, SREC will remove the pole as well. There is no cost to the member to remove the light or the pole provided that the one-year minimum service use requirement of the Dusk-to-Dawn light agreement has expired. If the member decides that he/she wants the Dusk-to-Dawn light reinstalled, a new one-year minimum use agreement would be required. If a pole needs to be reinstalled, a new installation fee would be assessed. If a suitable pole is available, only a trip charge would be assessed.

For more information about Dusk-to-Dawn lights, call SREC at 800-236-2141, ext. 564.

Scenic Rivers Energy Cooperative Wiring/Service Specifications and Recommendations

Appendix 15: Pad -Mount Transformer Clearance Location Specs from a Building



Notes:

Clear Zone: (Grey Area) = No transformers shall be located in this zone

Zone 1: (Shaded Area) = Minimum distance for pad-mounted transformer up to 100 kVA

Zone 2: Minimum distance for pad-mounted transformers greater than 100 kVA from a combustible building

An oil-collecting sump shall be installed for transformers over 500kVA if the immediate terrain is pitched toward the building.

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