Electric and Natural Gas Service Requirements

Residential & Commercial
Revised March 2019
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Purpose of this Booklet</td>
<td>3</td>
</tr>
<tr>
<td>2. Cooperative Membership</td>
<td>3</td>
</tr>
<tr>
<td>3. Membership Deposit</td>
<td>3</td>
</tr>
<tr>
<td>4. Electric Line Extension Costs and Contract</td>
<td>3</td>
</tr>
<tr>
<td>5. Line Extension Procedure Checklist</td>
<td>3</td>
</tr>
<tr>
<td>6. Electric Service Types and Voltages Available</td>
<td>3-4</td>
</tr>
<tr>
<td>7. Electric Service Location and Size</td>
<td>4</td>
</tr>
<tr>
<td>8. Codes and Ordinances</td>
<td>4</td>
</tr>
<tr>
<td>*LVE Line Extension Request Application</td>
<td>5-6</td>
</tr>
<tr>
<td>9. Permits</td>
<td>7</td>
</tr>
<tr>
<td>10. Easements</td>
<td>7</td>
</tr>
<tr>
<td>11. Electric Service Basics</td>
<td>7</td>
</tr>
<tr>
<td>12. Point of Delivery</td>
<td>7</td>
</tr>
<tr>
<td>13. Temporary Service</td>
<td>8</td>
</tr>
<tr>
<td>14. Temporary Construction Meter Loop</td>
<td>8</td>
</tr>
<tr>
<td>15. Relocation of Services and Facilities</td>
<td>8</td>
</tr>
<tr>
<td>16. Underground Electric Services</td>
<td>8</td>
</tr>
<tr>
<td>17. Conversion from Overhead Service to Underground</td>
<td>8</td>
</tr>
<tr>
<td>18. Excavation</td>
<td>8</td>
</tr>
<tr>
<td>19. Trench Depth and Backfill</td>
<td>8</td>
</tr>
<tr>
<td>20. Joint Use of Trench</td>
<td>9</td>
</tr>
<tr>
<td>21. Warning Tape</td>
<td>9</td>
</tr>
<tr>
<td>22. Trench Season</td>
<td>9</td>
</tr>
<tr>
<td>23. Trench and Conduit Inspection</td>
<td>9</td>
</tr>
<tr>
<td>24. Electric Meter Installation</td>
<td>9</td>
</tr>
<tr>
<td>25. Electric Meter Clearances</td>
<td>9-10</td>
</tr>
<tr>
<td>26. Electric Meter Access</td>
<td>10</td>
</tr>
<tr>
<td>27. Electric Meter Seals</td>
<td>10</td>
</tr>
<tr>
<td>28. Multiple Electric Meter Installations</td>
<td>10</td>
</tr>
<tr>
<td>29. Current Transformer Metering</td>
<td>10-11</td>
</tr>
<tr>
<td>30. Member’s Equipment, Devices and Character of Service</td>
<td>11</td>
</tr>
<tr>
<td>31. Motor Protection</td>
<td>11</td>
</tr>
<tr>
<td>32. Motor Starting</td>
<td>12</td>
</tr>
<tr>
<td>33. Interfering Loads/Power Quality</td>
<td>12</td>
</tr>
<tr>
<td>34. Power Factor</td>
<td>12</td>
</tr>
<tr>
<td>35. Emergency or Standby Generators</td>
<td>12</td>
</tr>
<tr>
<td>36. Available Fault Current</td>
<td>12</td>
</tr>
<tr>
<td>37. Natural Gas Availability</td>
<td>12</td>
</tr>
<tr>
<td>38. Natural Gas Line Extension Costs and Contract</td>
<td>13</td>
</tr>
<tr>
<td>39. Natural Gas Service Location and Size</td>
<td>13</td>
</tr>
<tr>
<td>40. Natural Gas Meter Location</td>
<td>13</td>
</tr>
<tr>
<td>41. Natural Gas Meter Protection</td>
<td>13</td>
</tr>
<tr>
<td>42. Natural Gas Meter Sets</td>
<td>13</td>
</tr>
<tr>
<td>43. Multiple Natural Gas Meter Sets</td>
<td>14</td>
</tr>
</tbody>
</table>
Table of Contents (continued)

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>44. Member-Owned Buried Fuel Lines</td>
<td>14</td>
</tr>
<tr>
<td>45. Trenching for Natural Gas Lines</td>
<td>14</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Drawings</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meter Base and CT Cabinet Clearance Requirements</td>
<td>SR-1</td>
</tr>
<tr>
<td>Single-Phase CT Metering Outside of Transformers</td>
<td>SR-2</td>
</tr>
<tr>
<td>Current Transformer (CT) Cabinet Requirement</td>
<td>SR-3</td>
</tr>
<tr>
<td>Meter Cabinet Dutch Door Requirement</td>
<td>SR-4</td>
</tr>
<tr>
<td>Assembly Guide of Overhead Service Mast</td>
<td>SR-5</td>
</tr>
<tr>
<td>Guide for Underground Service Entrance</td>
<td>SR-6</td>
</tr>
<tr>
<td>Guide to Meter Lift Pole Installation</td>
<td>SR-7</td>
</tr>
<tr>
<td>Unistrut H-Frame Meter Installation</td>
<td>SR-8</td>
</tr>
<tr>
<td>Minimum Transformer Clearance Requirements</td>
<td>SR-9</td>
</tr>
<tr>
<td>Underground Distribution Transformer Pad Details</td>
<td>SR-10</td>
</tr>
<tr>
<td>Natural Gas Regulator Clearance Requirements</td>
<td>SR-11</td>
</tr>
<tr>
<td>Natural Gas Meter Installation</td>
<td>SR-12</td>
</tr>
<tr>
<td>Electric Trench Detail without Natural Gas</td>
<td>SR-13</td>
</tr>
<tr>
<td>Electric Trench Detail with Natural Gas</td>
<td>SR-14</td>
</tr>
<tr>
<td>Trench Detail – Natural Gas Distribution</td>
<td>SR-15</td>
</tr>
<tr>
<td>Index</td>
<td>31-32</td>
</tr>
</tbody>
</table>
1. Purpose of this Booklet
This booklet was prepared to help Lower Valley Energy (LVE) members establish new or upgrade existing electric or natural gas service. We encourage you to contact us by calling the LVE office to discuss your electric and/or gas service requirements. Call our Jackson office at (307) 733-2446, or our Afton office at (307) 885-3175. Additional copies of this booklet are available at both the Jackson and Afton offices or on LVE’s website at www.LVEnergy.com. It is the goal of LVE to provide you, the member, with high-quality, safe, affordable electric and/or gas service.

2. Cooperative Membership
LVE is a non-profit cooperative owned by its members. Membership is therefore a condition of receiving electric and/or gas service. Membership is available upon application to individuals, husband and wife jointly, partnerships, associations, public or private corporations, or governmental agencies. New members may be required to pay a deposit and/or an advance for line extension (see below). In some instances the waiver of a deposit is possible with an approved letter of credit from another utility or a positive credit check.

3. Membership Deposit
Membership is required prior to receiving service. For a new service where previous billing history is not available, a deposit may be required for both gas and electric service, the amount determined by averaging the projected usage. The minimum deposit is $200 for residential service and $400 for commercial service for each gas and/or electric service. The deposit will be refunded with interest after twelve (12) consecutive months’ bills have been paid in full by the due date. The refunded deposit will be applied to the bill.

4. Electric Line Extension Costs
Members requesting design of a line extension may be charged a $200, non-refundable engineering deposit for each line extension. If the member elects to move forward with the construction of the line extension, the deposit will be applied to the member’s contribution in aid of construction. Where it is necessary for LVE to extend lines, install transformers, increase capacity of any part of its system, or do other work, the member will pay in advance the estimated cost. Credit for any salvage value of the recovered material will be subtracted from the project costs.

5. Line Extension Procedure Checklist
The following information summarizes the action required by both the member and LVE. To speed the process, please read through the following steps and provide the needed information.

Line Extension Application: Please complete the Line Extension Request Application on page 5 and submit to the nearest LVE office. Applications should be submitted to either the Jackson or Afton LVE office.

Site Plan: Please provide a service location on a site plan. The plan should depict the building outlines, future buildings, property layout, driveway and landscaping areas, the location of water, sewer and other utilities, and the proposed transformer and meter locations for both electric and gas services.
**Warranty Deed:** Please provide a current warranty deed with a legal description and parcel identification number for the property on which service is requested.

**Load Calculations:** Residential, commercial and industrial members will provide load information for electric and gas load calculations. One line diagrams are required for services larger than 200 amps.

Once the above items are completed, LVE can begin design work.

6. **Electric Service Types and Voltages Available**
Electric service available is 60-Hertz Alternating Current (AC), single-phase or three-phase. The normal voltages supplied by LVE to its members are given below:

**OVERHEAD**
- Single-phase, 120/240 volts
- Three-phase, 120/208 volts
- Three-phase, 277/480 volts

**UNDERGROUND**
- Single-phase, 120/240 volts
- Three-phase, 120/208 volts
- Three-phase, 277/480 volts

LVE provides all poles, transformers, meters and primary voltage facilities. LVE will provide the conduit (except rigid steel conduit) and conductor from the transformer to the Point of Delivery (see section 12 for a definition of the Point of Delivery).

7. **Electric Service Location and Size**
The location of the service entrance on the member’s premises is an important consideration to both the member and LVE. The member and LVE must agree on the service route, location of the transformer, location of the electric meter, and the size of the electrical service. Should any of those change, LVE must be notified immediately. A change in length, size or location of the service could result in an increase in the cost and possible delay of installation. The service entrance shall be located to make the meter and service easily accessible from LVE’s distribution lines and convenient for the installation, operation and maintenance of meters and equipment.

8. **Codes and Ordinances**
It is necessary that the construction of new or upgraded installations conform to current and applicable provisions of the National Electrical Code, the National Electrical Safety Code, and federal, state, and local regulations, as well as LVE Rules and Regulations.

Prior to any new electric service being energized, the member’s electric facilities will need the proper permit (see page 7).
LVE Line Extension Request Application

Date: ___________________  Member #: ___________________

Name: __________________________________________________________

Mailing Address: ___________________________________________ E-mail: _________________

City: ___________________________ State: ___________ Zip Code: _________________

Cell Phone: ___________________ Work Phone: __________________________

Service Location Physical Address: ______________________________

Description: __________________________________ Square Footage: _________________

Contractor: ___________________________________ Phone: _______________________

Electrician: ___________________________________ Phone: _______________________

Mechanical / Plumber: ___________________________ Phone: _______________________

Excavator: ___________________________________ Phone: _______________________

Architect: ___________________________________ Phone: _______________________

Engineer: ___________________________________ Phone: _______________________

Type of Heating System: ___________________________ Type of Water Heat: ______________

Electric Service Type (OH/UG): ______________ Temp. Construction Loop (Mem. /LVE): ______________

Service Size (Main Switch Amps): __________ Secondary Voltage: __________ Gas BTU’s: ______________

Trench (Customer/LVE): ______________ Conduit Installation (Qualified Installer/LVE): ______________

Customer needs to submit the following with application:

1. Site Plan, Electrical Loads and/or Natural Gas Loads plus electrical one line diagram
2. Copy of Deed with legal description and parcel identification number
3. $200 Engineering fee
4. Membership application and deposit if applicable
5. If signing as representative, LVE requires a letter of authorization
6. Conduit Installation - if done by Customer, must be installed by a Qualified Installer

I, the undersigned, agree with LVE on the location of the transformer, location of the electric and/or gas meter, and the size of the electrical service and/or gas service. Should any of those change, I agree to notify LVE immediately. I understand that a change in length, size or location of the service could result in an increase in the cost and possible delay of installation.

Member/RepresentativeSignature: ___________________________ Date: _________________

Printed Name: _______________________________________________
For Internal Use Only

WO #’s: ____________________________________________________________

Pin #: _____________________________________________________________

Legal: __________________________________________________________________

Phase: ______ Volts: _______ Rate: _______ Engineer: ____________________________

Primary Cost for Labor and Materials: $ __________________

Secondary Cost for Labor and Materials: $ __________________

Trenching: $ __________________

Temporary Loop: $ __________________

Less Engineering Deposit: $ __________________

Total Electric: $ __________________

Gas Service Line: $ __________________

Gas Meter: Size __________ $ __________________

Gas Other: $ __________________

Total Gas $ __________________

Total Due: $ __________________

Section: _______ Township: _______ Range: _______

Being a part of: ____________________________________________________________

__________________________________________________________________________

Beginning / Commencing at a point being the: ________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________
9. Permits
For electric permits in Lincoln and Sublette counties contact the State of Wyoming Department of Fire Prevention and Electrical Safety at (307) 777-7288 or by e-mailing wsfm-electricalpermit@wyo.gov. For electric permits within the Town of Jackson call the Building Department at (307) 733-0520 and for Teton County call the Building Department at (307) 733-7030. For electrical inspection in both Teton County and the Town of Jackson call 733-4732. For electrical permits in Bonneville and Caribou counties call the State of Idaho Electric Bureau at (208) 334-2183 or go to the permit website at http://dbs.idaho.gov/electrical/permits_inspections.html. Permit applications can also be obtained from our Jackson and Afton offices. Permits must be affixed to the exterior of the meter base prior to service connection.

New gas services within the Town of Jackson and Teton County require a piping permit. Application for piping permits can be made by a licensed plumber by calling (307) 733-0520 in Jackson and (307) 733-7030 in Teton County. All new house lines must be pressure-tested as part of the piping permit requirements.

10. Easements
LVE will construct, own, operate and maintain facilities only on easements or rights-of-way satisfactory to LVE. As a condition of service, LVE may require execution of an easement, or easements, providing suitable right-of-way for the construction and maintenance of the distribution lines. Easements are to be kept clear of all obstacles restricting access for maintaining electric and gas facilities. No foliage may be planted within ten feet of the door opening of pad-mounted transformers and vaults.

11. Electric Service Basics
For secondary voltage service, LVE will provide, install and maintain transformers and service conductors. The member will provide, install, and maintain all service equipment, including switches, enclosures, and CT cabinets, and will provide access for the installation and maintenance of LVE’s facilities.

A building will be supplied with electricity through only one set of service conductors at one location. Multiple services to a building will not be allowed unless the services are of different voltages. This will require prior approval by LVE.

12. Point of Delivery
The electric Point of Delivery is that location where LVE's facilities and the member’s facilities are interconnected. For underground 200/300-Amp services, the Point of Delivery is the landing lugs on the top side of the Meter Base (see drawings SR-6 and SR-8). For underground services exceeding 300 Amps in capacity, the Point of Delivery is the line side lugs of the CT Mounting Base in the CT Cabinet (see drawing SR-3). For a multi-meter pack, the Point of Delivery is the landing lugs on the line side of the device. Where multiple meter packs and/or CT services are used the Point of Delivery is the line side of the CT Cabinet. This will require prior approval by LVE. For overhead services, the Point of Delivery is the drip loop connectors at the service mast or weather head (see drawings SR-5 and SR-7).
13. Temporary Service
Temporary service may be supplied when requested. State inspection and/or permits for Sublette, Lincoln, Bonneville, Caribou, or Teton counties are required before connection can be made. In addition to the cost of energy used, the member may be billed for the cost of installation and removal.

14. Temporary Construction Meter Loop
The member has the option of purchasing a temporary construction meter loop from LVE at a cost of $500. If the member chooses to return meter loop undamaged and unmodified within one (1) year, LVE will buy loop back for $300. If construction takes longer than one (1) year, LVE will consider a buy-back of the temporary loop at a price to be determined. LVE construction loops have a (1) 30-amp 240 volt receptacle, and (2) 20-amp 120 volt capacity receptacles.

15. Relocation of Services and Facilities
If a member requests a relocation of LVE’s facilities, such relocation is usually possible at the member’s expense.

16. Underground Electric Services
Before making any preparation for underground service, the member must obtain approval and specification from LVE covering the proposed installation and the member’s responsibilities.

LVE will connect conduit to the member-provided rigid steel riser from a surface-mounted meter base or CT cabinet (refer to drawings SR-2, SR-6 and SR-8). Underground conductors shall not be located under a structure. All service laterals must be designed for exterior meter installation (refer to drawings SR-1 and SR-3).

17. Conversion from Overhead Service to Underground
Members adequately served by existing overhead distribution facilities, but desiring underground service, will pay for all costs of conversion.

18. Excavation
Wyoming State law requires that all utilities be notified at least two (2) full business days prior to excavation, and that excavation must not be started until locates have been made or the utility has notified the excavator that they have no facilities in the area. Repairs for damages to any facilities due to excavation without such notification, or without regard to facility location provided by LVE, will be paid for by the excavator. Before excavating in Wyoming, call Wyoming One-Call at (800) 849-2476. Before excavating in Idaho, call Idaho Dig line at (800) 342-1585.

19. Trench Depth and Backfill
The trench shall be a minimum of 42 inches deep for electric primary cable, 36 inches deep for electric secondary, service cable, natural gas main, and 24 inches deep for gas service lines. If depth requirements are not possible, please contact LVE for alternatives (refer to drawings SR-13, 14 and 15). The selected backfill material must not contain any sharp or foreign objects. Selected backfill around electric cable or conduit or gas line shall be smooth, free of rocks, and must be able to sift through a ¼” screen (refer to drawings SR-13, 14 and 15). Conductors shall not be energized nor gas lines pressurized until backfill is complete. No member-owned wire may be placed in the trench with electric conductors or gas lines unless approved by LVE.
20. Joint Use of Trench
Communication cables may be placed in the same trench as LVE’s electric conductors, provided that the installation is in accordance with LVE specifications and is mutually agreed to by all parties concerned (refer to drawings SR-13, 14, and 15). Neither sewer nor water lines may be placed in the same trench with LVE electric or gas lines.

21. Warning Tape
Installation of warning tape is required in all electric and gas trenches 12 inches below finished grade. The warning tape will be provided by LVE. Tape colors are red for electric and yellow for gas.

22. Trench Season
LVE will not provide excavation services between November 1st and April 15th.

23. Trench and Conduit Inspection
LVE must inspect all member-installed conduit and trench depth. If not inspected, the trench will be rejected. If the member is installing conduit, it must be installed by a Qualified Installer.

24. Electric Meter Installation
LVE will provide a meter base with an internal lever bypass. An LVE-supplied meter base is required for all services except multi-meter packs with internal lever bypasses. Meter bases for multi-meter packs must be supplied by the member.

LVE’s rate schedules require that each class and type of electrical service must be separately metered. Members are not authorized to relocate any meter belonging to LVE or interfere in any way with the meter or its connection.

Meter bases must be level and square in all directions and securely mounted to a rigid surface. Conductors must be securely fastened to their respective terminals and must be arranged in a manner that will not interfere with the installation of the meter and cover or with the operation of the bypass lever. If a meter is made inaccessible (i.e., by the installation of a fence or enclosure), the member shall move the meter socket to an accessible location or remove the obstruction at their expense. See SR-1 for meter base clearance and height requirements.

The meter base must be permanently mounted to a lift pole, unistrut H-frame structure, or exterior building wall five (5) to six (6) feet above the finished grade (refer to drawings SR-5, 6, 7 and 8).

Meters for a manufactured home, on a permanent foundation, must be installed on an exterior wall of the structure. Meters for a modular home, not on a permanent foundation, must be mounted on a unistrut H-frame pedestal (refer to drawing SR-8) or similar meter pedestal approved by the LVE Metering Supervisor.

25. Electric Meter Clearances
The Occupational Safety and Health Code require that a 36-inch working space be maintained in front of self-contained metering installations and that a 48-inch working space is maintained for installations requiring current transformer cabinets. All meters and metering equipment must be
at least 36 inches horizontally from a gas meter (refer to drawing SR-11). The meter shall not be installed over window wells, steps in stairways, or in other unsafe or inconvenient locations. No plants, foliage or other obstructions can be placed or exist within the working spaces described above. Refer to drawing SR-1 for additional meter clearance requirements.

26. Electric Meter Access
If meter bases or CT cabinets are covered, LVE must approve the enclosure design prior to construction and energize. Doors must be accessible at all times and meet LVE requirements (refer to drawing SR-4).

27. Electric Meter Seals
The purpose of meter seals placed by LVE on meters and associated service equipment is to prevent injury and/or tampering. Seals are not to be removed, except by LVE authorized personnel. If an emergency should require seal removal without prior notification, LVE must be notified as soon as possible so the installation can be inspected and the seal replaced.

28. Multiple Electric Meter Installations
All multi-metered installations require each meter to have an internal lever bypass. Each meter socket shall be plainly and permanently marked by the property owner, by means of a metal or hard plastic engraved label. Service will not be energized until multi-metered installations are properly labeled, indicating the apartment, office or space served by each meter.

29. Current Transformer Metering
Services requiring current capacity greater than 300 amps will need to be metered through current transformers (CTs). It is the member’s responsibility to purchase and install the CT cabinet, landing lugs, CT mounting base and rigid steel conduit between the CT cabinet and the meter base. The member’s CT cabinet and CT mounting base must conform to LVE’s specifications (refer to drawing SR-3). Consult LVE for available fault current before purchasing electric service equipment.

CT wiring and conduit will be installed according to drawing SR-2 or SR-3. All conduit runs shall be rigid steel with a minimum diameter of ¾ inches. Only LVE conductors will be permitted in the rigid steel conduit between the CT Cabinet and the Meter Base.

The current transformers will be provided and installed by LVE. Wiring between the CTs and meter bases will be completed by LVE.

The CT cabinet must be provided by the member and must be mounted in a readily accessible location, acceptable to LVE. It must contain only the service conductors and LVE equipment, plus the member’s service conductors landed on the load side of the CT mounting base. LVE will make up the line side connections, landed on the line side lugs of the CT mounting base. Sealing and locking by LVE is required on all CT Cabinets.
CT cabinets must be rain-tight and weather-proof. Acceptable minimum CT cabinet sizes are shown below:

<table>
<thead>
<tr>
<th>Phase</th>
<th>Ampacity</th>
<th>Minimum Cabinet Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 or 3</td>
<td>400-600 amps</td>
<td>36” x 36” x 11”</td>
</tr>
<tr>
<td>1 or 3</td>
<td>800 amps</td>
<td>48” x 48” x 11” &amp; Hinged Door Required</td>
</tr>
<tr>
<td>1 or 3</td>
<td>Larger than 800 amps</td>
<td>Consult with LVE</td>
</tr>
</tbody>
</table>

Landing lugs must be provided by the member and must accommodate the size and number of conductors on both the line and load sides of the CT Cabinet.

The CT mounting base must be provided by the member and shall accept bar type current transformers for capacities up to and including 800 Amps. For service sizes exceeding 800 Amps, consult with LVE. Include panel schedule and the number and size of conductors on the load side of the CT cabinet.

The member shall install all meter bases, with the exception of three-phase transformer-rated 13-point bases mounted on the transformer. The meter base shall be located within two feet (2’) of the CT cabinet and connected with ¾” rigid steel conduit. No more than 270 degrees of bends will be allowed between the CT Cabinet and the Meter Base.

**30. Member’s Equipment, Devices and Character of Service**
The member’s electrical equipment and devices are to have characteristics such that the LVE distribution system is efficiently utilized and undue interference with LVE service to other members does not occur. The member’s equipment shall be designed to perform satisfactorily within the standard voltage ranges and frequency provided on LVE’s system (see section 6 - Electric Service Types Available).

LVE reserves the right to inspect and test any equipment connected to its lines and to require any information necessary to determine the operating characteristics of the equipment. The member shall submit information to LVE regarding any equipment that may cause interference with service to other members, or require additional facilities for its satisfactory operation.

Electric service supplied by LVE may be subjected to voltage disturbances that will not normally affect the performance of lighting, appliances, heating, motors, or other typical electrical equipment, but may result in the improper operation of voltage-sensitive equipment, such as computers or microprocessors. Voltage-sensitive equipment is defined as equipment that is adversely affected by power disturbances, sags, spikes, or harmonic distortion. It is the responsibility of the member to provide the power-conditioning devices that may be required to provide the quality of power necessary for optimum performance of voltage-sensitive equipment.

**31. Motor Protection**
To ensure adequate safety to personnel and equipment, it is required that the member provide and maintain NEC code-approved protective devices to protect motors against overloading, short circuits, ground faults and low voltage, and to protect all three-phase motors against single-phasing.
32. Motor Starting
Reduced-voltage starters are required on all motors rated 10 horsepower or larger. No additional LVE facilities will be installed to reduce voltage fluctuations caused by starting of motors on an individual member’s service until approved reduced-voltage starters have been installed by the member. If additional facilities are required, they will be installed at the member’s expense.

33. Interfering Loads / Power Quality
When a member’s equipment causes power quality issues to other LVE members, the member shall be required to make changes in such equipment, or additional equipment will be installed at member’s expense to eliminate the issue. Additional facilities, such as LVE transformers and a separate service, can be used to minimize voltage fluctuations on secondary voltage circuits.

Interfering loads that cause power quality issues shall be designed to operate within the accepted parameters of IEEE 519.

Variable Frequency Drives (VFD) installed on motors rated 10 horsepower or larger are required to have filters installed that meet the IEEE 519 harmonic standard.

34. Power Factor
The current LVE rate schedule specifies a charge for excessive reactive demand. Power factor may be measured at any time. Should such measurements indicate that the power factor during the member’s daily peak demand is less than 90%; the demand for billing purposes will be increased 1% for each 1% by which the power factor is less than 90% lagging.

35. Emergency or Standby Generators
Emergency or standby generators are to be connected to the member’s wiring system by a permanently installed transfer switch intended for that purpose. The transfer switch is to disconnect all ungrounded conductors connected to LVE’s system prior to connecting the generator to the conductors supplying the load. The transfer switch is to be designed and installed so that the connection of the generator to LVE’s system is prevented for any mode of operation. Compliance with these provisions is necessary to prevent serious or possibly fatal accidents. Portable generators shall not be connected to a permanent wiring system at any time, unless the interconnection is made with a permanently installed transfer switch. All transfer switches and/or transfer-operating schemes must meet applicable building and electrical codes and LVE approval.

36. Available Fault Current
Upon request, LVE will supply the information on available fault current at the Point of Delivery. It is the member’s responsibility to furnish equipment that will interrupt the maximum available fault current. Consult LVE about available fault current before purchasing electric equipment.

37. Natural Gas Availability
See the inside and outside back cover of this booklet for areas where LVE natural gas is available.
38. **Natural Gas Line Extension Costs and Contract**
The member may be required to pay for a portion or all of the cost for main line installation. Allowances may be given for service line installations.

39. **Natural Gas Service Location and Size**
The location of the service entrance on the member’s premises is an important consideration to both the member and LVE. The member and LVE must agree on the service route, location of the gas meter, and the size of the gas service. Should any of those change, LVE must be notified immediately. A change in length, size or location of the service could result in an increase in the cost and possible delay of installation. The service entrance shall be located to make the meter and service easily accessible from LVE’s distribution lines and convenient for the installation, operation and maintenance of meters and equipment.

40. **Natural Gas Meter Location**
   1. Natural gas meters shall be located so as to be readily accessible for reading, routine maintenance and removal. AMR (automatic meter reading) – line of sight of the electric meter.
   2. Gas meters shall be installed on an outside exterior wall of the structure, on a gable end of the building (refer to drawing SR-11).
   3. Gas meters shall not be installed where they might be subjected to damage, as in driveways, public passages and roof snow or ice load, unless suitable protective guards are provided and installed by the member.
   4. Each meter installed cannot be less than three (3) feet from any source of ignition or any source of heat that might damage the meter.
   5. Meter sets, which include service regulators, should not be installed within three (3) feet horizontally of operable windows, doors; fresh air intakes, electric service entrances or other openings to buildings (refer to drawing SR-11).
   6. Meters should be hung a minimum of twelve (12) inches above the finished grade. (refer to drawing SR-12).

41. **Natural Gas Meter Protection**
Meter protection, such as a barrier or concrete-filled steel post, may be required to protect the meter from vehicular traffic. A shelter/roof over the meter may be required to protect the meter from falling debris, such as ice or snow. Any required meter protection is the responsibility of the member and will need to be coordinated with LVE.

42. **Natural Gas Meter Sets**
   1. Single meter sets shall be made according to drawings SR-11 and SR-12.
   2. Large meter sets are those that have inlet and outlet connections that are normally horizontal, are 2 inches in diameter or larger and have a connected load of 1.2 million BTUs per hour or more.
   3. When installed with threaded connections, large meters shall be connected with proper unions.
   4. Large meter sets are normally designed for a particular installation. The design and installation of large meter sets may include bypass and onsite test provisions.
   5. In some cases a concrete pad may be required, provided by the member.
43. **Multiple Natural Gas Meter Sets**
   1. For multiple meter sets such as apartment houses, a plan shall be formulated and approved by LVE before work is begun.
   2. Multiple meter sets shall be marked at the meter with a permanent type of identification, indicating the apartment, office or space served by each meter.

44. **Member-Owned Buried Fuel Lines**
The Public Service Commission of Wyoming has determined that the inspection and maintenance of all member-owned buried fuel lines is the responsibility of LVE. A member-owned buried fuel line is defined as any buried line external to the member’s structure carrying natural gas which extends underground from LVE’s meter set to the member’s exterior wall or roof top.

Most fuel lines are internal to the structure, leaving the meter set and going directly through the wall into the building.

If your fuel line is buried between the meter location and the structure, here are some guidelines to follow:

   1. Steel fuel lines must be wrapped with a protective coating resistant to corrosion and must have cathodic protection. Bare steel fuel lines will not be accepted by LVE.

   2. Materials and labor required to bring the line into compliance will be at the expense of the member.

   3. Polyethylene pipe (PE) should be bedded in sandy material and all joints must be fused by a trained, qualified technician.

   4. Buried fuel lines will be constructed of polyethylene pipe (PE) and anode-less risers.

   5. LVE will perform leak surveys on all buried polyethylene lines as defined in the tariff. LVE will perform leak surveys on all steel fuel lines annually.

   6. If leaks or cathodic problems are detected during the course of an inspection, LVE will work with the homeowner to schedule the repair. The cost to correct the problem will be billed to the member.

45. **Trenching for Natural Gas Lines**
Service lines and member-owned fuel lines shall not be located under any permanent structures. Refer to drawings SR-14 and SR-15 for trenching information. For additional information on trenching and excavation, refer to sections 18 through 23.
METER BASE & CT CABINET CLEARANCE REQUIREMENTS

NOTES:
1. 36" WORKING CLEARANCE MUST BE MAINTAINED IN FRONT OF METER.
2. 36" HORIZONTAL CLEARANCE MUST BE MAINTAINED BETWEEN METER BASE AND GAS REGULATOR (SEE DWG. 5R-11).
3. FOR MORE DETAIL ON METER CLEARANCES SEE SECTION 25 OF LVE'S ELECTRIC AND NATURAL GAS SERVICE REQUIREMENTS.
NOTES:

ALL RIGID STEEL CONDUIT, FASTENERS FOR RIGID CONDUIT, LANDING LUGS, AND THE CT CABINET SHALL BE SUPPLIED AND INSTALLED BY THE CUSTOMER.

LVE WILL SUPPLY THE CURRENT TRANSFORMERS, THE METER BASE AND METER.

LVE WILL SUPPLY THE CONDUCTORS FROM THE TRANSFORMER TO THE TOP LANDING LUGS IN THE CT CABINET AND WILL ALSO CONNECT THE PVC CONDUIT FROM THE TRANSFORMER TO THE CUSTOMER'S RIGID STEEL RISER.

LVE SHALL DO ALL WIRING FROM THE TRANSFORMER TO THE SOURCE-SIDE CT CABINET LANDING LUGS AND FROM THE LANDING LUGS TO THE CT METER BASE.

THE CUSTOMER IS RESPONSIBLE FOR THE WIRING FROM THE CT CABINET LANDING LUGS TO THE MAIN DISCONNECT.

LVE WILL NOT ENERGIZE THE SERVICE UNTIL THE LOAD SIDE IS PROPERLY CONNECTED TO THE MAIN DISCONNECT AND THE REQUIRED METER BASE IS INSTALLED WITH THE ELECTRIC PERMIT IN PLACE.

GROUNDING AND CONNECTIONS TO THE CUSTOMER'S PANEL SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND STATE AND LOCAL CODES.

LVE REQUIRES AT LEAST TWO DRIVEN GROUND RODS OR ONE UFFER AND ONE DRIVEN GROUND ROD TO PROVIDE A VISIBLE GROUND ON NEW CONSTRUCTION OR AT LEAST TWO DRIVEN GROUND RODS ON UPGRADES OR RELOCATES. DRIVEN GROUND RODS TO BE EIGHT FEET.

SEALING AND LOCKING PROVISIONS ARE REQUIRED ON ALL CT CABINETS.

48" OF WORKING CLEARANCE IS REQUIRED IN FRONT OF THE CT CABINET.
1Ø SERVICE

METER BASE

¾" RIGID STEEL

SOURCE

(POINT OF DELIVERY)

LOAD

CUSTOMER SERVICE ENTRANCE

C.T. MOUNTING BASE
SINGLE PHASE

UTILITY SERVICE
LATERAL CONDUCTORS

Depending on service size, multiple conduits may be required.

PHASE AMPACITY MINIMUM CABINET SIZE
1 OR 3 400-600 AMPS CAPACITY 36" X 36" X 11"
1 OR 3 800 AMPS CAPACITY 48" X 48" X 11"
1 OR 3 LARGER THAN 800 AMPS *(Hinged Door Required)
CONSULT WITH LVE

LOWER VALLEY ENERGY

CURRENT TRANSFORMER (C.T.) CABINET REQUIREMENT

Drawn by: LTM 3-24-98

Dwg. name: ESPECT2a.DWG

Sheet 1 of 2

Scale: NOT TO SCALE

Revision: 2/23/2016 WKJ

SR-3
NOTES

CONSULT LOWER VALLEY ENERGY REGARDING ANY EXCEPTIONS TO THESE REQUIREMENTS.

(1) WHEN THE SERVICE SIZE EXCEEDS 800 AMP, CONSULT LVE ENGINEERING DEPARTMENT. INCLUDE PANEL SCHEDULE, NUMBER OF AND SIZE OF CONDUCTORS ON LOAD SIDE OF C.T. CABINET.

(2) LANDING LUGS SHALL BE PROVIDED BY THE CUSTOMER AND MUST ACCOMMODATE SIZE AND NUMBER OF CONDUCTORS. CONSULT LVE FOR SIZE AND NUMBER OF SOURCE-SIDE CONDUCTORS.

(3) THE MOUNTING BASE SHALL BE PROVIDED BY THE CUSTOMER AND SHALL ACCEPT BAR TYPE CURRENT TRANSFORMERS.

(4) CONSULT LOWER VALLEY ENERGY FOR AVAILABLE FAULT CURRENT BEFORE PURCHASING ELECTRIC SERVICE EQUIPMENT.

(5) CABINETS SHALL BE RAIN TIGHT AND WEATHER PROOF.

(6)* CABINETS LARGER THAN 36" X 36" X 11" SHALL HAVE HINGED COVER.

(7) LOWER VALLEY ENERGY WILL PROVIDE AND INSTALL CURRENT TRANSFORMERS.

(8) THE CUSTOMER SHALL PROVIDE AND INSTALL CABINET. C.T. MOUNTING BASE SHALL BE PROVIDED AND INSTALLED BY CUSTOMER ON MULTI-METERED SERVICES.

(9) THE CUSTOMER SHALL INSTALL ALL METER BASES, WITH THE EXCEPTION OF 3-PHASE TRANSFORMER-RATED BASES MOUNTED ON THE TRANSFORMER.

(10) LOWER VALLEY ENERGY WILL MAKE UP THE SOURCE SIDE CONNECTIONS.

(11) CONSULT WITH LOWER VALLEY ENERGY METERING ON C.T. CABINET LOCATION. METER BASE SHALL BE LOCATED WITHIN TWO FEET (2') OF C.T. CABINET AND CONNECTED WITH 3/4" RIGID STEEL CONDUIT.

(12) SEALING AND LOCKING PROVISIONS ARE REQUIRED ON ALL CT CABINETS.

(13) THE CT CABINET AND METER BASE MUST BE GROUNDED TO ONE DRIVEN GROUND ROD AND THE FOUNDATION UNDER GROUND, OR TWO DRIVEN GROUND RODS SEPARATED HORIZONTALLY BY 6 FEET.
METER SOCKETS OR CT CABINETS REQUESTED TO BE ENCLOSED
SHALL BE EASILY ACCESSIBLE WITH HINGED DUTCH DOORS.

2' MIN
3' MAX

DUTCH DOOR REQUIREMENT

Sheet 1 of 1

LOWE}

R-3

R-3
2" X 4" BLOCKING BETWEEN RAFTERS. MUST BE SOLIDLY INSTALLED.

SERVICE MAST

RIGID STEEL CONDUIT

METER BASE

METER

GROUND WIRE TO GROUND ROD

STUD CONSTRUCTION

INSULATED CONDUIT CLEVIS

CUSTOMER'S CONDUCTORS LEAVE 18" LEADS FOR HOOKUP

COMPRESSON CONNECTORS PROVIDED BY LVE (POINT OF DELIVERY)

CLEARANCE MUST MEET NATIONAL ELECTRICAL SAFETY CODE REQUIREMENTS

35" MAX. FOR #4 AND #6

23" MAX. FOR #2

NOTES:

* CONDUIT SHALL BE OF 2" RIGID STEEL FOR SERVICES UP TO 200 AMPERS. IF LENGTH OF CONDUIT EXCEEDS TEN FEET, COUPLING WILL BE PERMITTED ON END ADJACENT TO METER.

METER TO BE LOCATED 6 FT. FROM GROUND LEVEL.

CUSTOMER'S CONDUCTOR SHALL BE INSTALLED IN ACCORDANCE WITH CURRENT NEC REGULATIONS.

MAXIMUM TENSION OF CONDUCTOR NOT TO EXCEED 50% OF ULTIMATE STRENGTH.

WATER PIPE AND WATER PIPE FITTINGS WILL NOT BE APPROVED FOR USE AS CONDUITS. CONDUIT OTHER THAN RIGID STEEL ELECTRICAL GRADE WILL NOT BE ALLOWED.

METER BASE SUPPLIED BY LVE, INSTALLED BY CONTRACTOR OR CUSTOMER.

GROUNDING AND CONNECTIONS TO THE CUSTOMER'S PANEL SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE, LOCAL AND STATE CODES. LOWER VALLEY ENERGY REQUIRES AT LEAST TWO DRIVEN OR ONE UFFER AND ONE DRIVEN GROUND ROD TO PROVIDE A VISIBLE GROUND. DRIVEN GROUND RODS TO BE 8'. REQUIRED ELECTRIC PERMIT STICKER NEEDS TO BE ATTACHED TO METER BASE BEFORE LOWER VALLEY ENERGY CAN ENERGIZE THE SERVICE.

** WHEN RISER CONDUIT EXTENDS MORE THAN 36" ABOVE RAFTER ATTACHMENT, GUY AND ANCHOR MUST BE PROVIDED AND APPROVED BY LVE.
TWO LOCK NUTS TO SECURE CONDUIT.

METER BASE SUPPLIED BY LVE, INSTALLED BY CONTRACTOR OR CUSTOMER.

TRENCH DEPTH 36" 5' TO 6' 3' MAX.

56027 LVE OR THE CUSTOMER CAN PROVIDE A 90° ELECTRICAL BONDING BUSHING.

GRADE SCHEDULE 40 ELBOW AND CONDUIT TO THE TRANSFORMER.

CAN PROVIDE A 90° ELECTRICAL BONDING BUSHING.

RIGID STEEL* CONDUIT

THE SERVICE WIRES TO THE SOURCE SIDE OF THE METER TERMINALS.

AND THE PROPER GROUNDING. LVE WILL INSTALL AND PROVIDE THE METER BASE, RISER, LOCK NUTS, BONDING BUSHINGS.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR OR CUSTOMER TO INSTALL THE METER BASE, RISER, LOCK NUTS, BONDING BUSHINGS AND THE PROPER GROUNDING. LVE WILL INSTALL AND PROVIDE THE SERVICE WIRES TO THE SOURCE SIDE OF THE METER TERMINALS. (POINT OF DELIVERY)

NOTES:

THIS SKETCH IS INTENDED TO SHOW THE BASIC ITEMS USED IN A 200-AMPERE SERVICE ENTRANCE, AND IS NOT TO BE CONSTRUED AS AN APPROVED DESIGN FOR ALL SERVICES. FOR EXAMPLE, THIS DOES NOT ILLUSTRATE THE INSTALLATION OF A MAIN DISCONNECT SWITCH OR ANY OTHER EQUIPMENT.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR OR CUSTOMER TO INSTALL THE METER BASE, RISER, LOCK NUTS, BONDING BUSHINGS AND THE PROPER GROUNDING. LVE WILL INSTALL AND PROVIDE THE SERVICE WIRES TO THE SOURCE SIDE OF THE METER TERMINALS. (POINT OF DELIVERY)

IN ALL CASES, THE METER LOCATION SHALL BE APPROVED BY LVE BEFORE INSTALLATION BY THE CONTRACTOR OR CUSTOMER.

GROUNDING AND CONNECTIONS TO THE CUSTOMER'S PANEL SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE, LOCAL AND STATE CODES. LVE REQUIRES AT LEAST TWO DRIVEN OR ONE UPP 1/4 1 1/2 DRIVEN GROUND ROD TO PROVIDE A VISIBLE GROUND. (8' GROUND RODS)

• CONDUIT SHALL BE OF 2 1/2" RIGID STEEL FOR SERVICES UP TO 200-AMPERES. SERVICES LARGER THAN 200-AMPERES WILL REQUIRE LARGER CONDUIT AS SPECIFIED BY LVE.

THE REQUIRED ELECTRIC PERMIT STICKER NEEDS TO BE ATTACHED TO THE METER BASE BEFORE LVE CAN ENERGIZE THE SERVICE.
WEATHER HEAD

NOTE:
THIS SKETCH IS INTENDED ONLY AS A GUIDE TO SHOW THE BASIC ITEMS USED IN A 200 AMP SERVICE.

GROUNDING AND CONNECTIONS TO THE CUSTOMER'S PANEL SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND STATE CODES. LVE REQUIRES AT LEAST TWO DRIVEN RODS TO PROVIDE A VISIBLE GROUND.

GROUND WIRE. METER BASE MUST BE PROPERLY CONNECTED TO GROUND.

NOTE: THE REQUIRED ELECTRICAL PERMIT MUST BE ATTACHED TO THE METER BASE BEFORE LVE CAN ENERGIZE THE SERVICE.

2" RIGID STEEL CONDUIT
12' REQUIRED FOR A 25' POLE,
13' FOR A 30' POLE, OR
17' FOR A 35' POLE.

POLE FURNISHED AND INSTALLED BY LVE

METER BASE FURNISHED BY LVE, BUT INSTALLED BY THE CUSTOMER OR HIS LICENSED ELECTRICAL CONTRACTOR.

NOTE: THE REQUIRED ELECTRICAL PERMIT MUST BE ATTACHED TO THE METER BASE BEFORE LVE CAN ENERGIZE THE SERVICE.

CIRCUIT BREAKER OR FUSED DISCONNECT

DRIP LOOP COMPRESSION CONNECTORS PROVIDED BY LVE (POINT OF DELIVERY)

LEAVE 18" LEADS FOR HOOK-UP.

6' - 7'

18" MIN.

SERVICE TO HOUSE CONDUIT CIRCUIT BREAKER OR FUSED DISCONNECT BUSHING METER BASE FURNISHED BY LVE, BUT INSTALLED BY THE CUSTOMER OR HIS LICENSED ELECTRICAL CONTRACTOR.

NOTE: THE REQUIRED ELECTRICAL PERMIT MUST BE ATTACHED TO THE METER BASE BEFORE LVE CAN ENERGIZE THE SERVICE.

GROUND WIRE. METER BASE MUST BE PROPERLY CONNECTED TO GROUND.

NOTE: THE REQUIRED ELECTRICAL PERMIT MUST BE ATTACHED TO THE METER BASE BEFORE LVE CAN ENERGIZE THE SERVICE.

2" RIGID STEEL CONDUIT
12' REQUIRED FOR A 25' POLE,
13' FOR A 30' POLE, OR
17' FOR A 35' POLE.

POLE FURNISHED AND INSTALLED BY LVE

METER BASE FURNISHED BY LVE, BUT INSTALLED BY THE CUSTOMER OR HIS LICENSED ELECTRICAL CONTRACTOR.

NOTE: THE REQUIRED ELECTRICAL PERMIT MUST BE ATTACHED TO THE METER BASE BEFORE LVE CAN ENERGIZE THE SERVICE.

CIRCUIT BREAKER OR FUSED DISCONNECT

DRIP LOOP COMPRESSION CONNECTORS PROVIDED BY LVE (POINT OF DELIVERY)

LEAVE 18" LEADS FOR HOOK-UP.

6' - 7'

18" MIN.
NOTES:

1. LOWER VALLEY ENERGY WILL PROVIDE AND INSTALL THE SERVICE WIRES TO THE SOURCE SIDE OF THE METER TERMINALS.

2. THE METER BASE IS PROVIDED BY LVE AND INSTALLED BY THE CUSTOMER OR HIS LICENSED ELECTRICAL CONTRACTOR.

3. ALL OTHER ITEMS ARE PROVIDED AND INSTALLED BY THE CUSTOMER OR CONTRACTOR.

4. GROUNDING AND CONNECTIONS TO THE CUSTOMER'S PANEL SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE, LOCAL AND STATE CODES. LOWER VALLEY ENERGY REQUIRES TWO DRIVEN GROUND RODS TO PROVIDE A VISIBLE GROUND.

5. THE REQUIRED ELECTRIC PERMIT MUST BE ATTACHED TO THE METER BASE EXTERIOR BEFORE LVE CAN ENERGIZE THE SERVICE.
NOTE:

1. No obstructions allowed over transformer.

2. No foliage may be planted within 10’ of the door opening of a pad mounted transformer or vault.

3. Clearances from combustible materials must be increased, depending on application.

4. Clearances may be reduced for transformers filled with FR3 oil.
NOTE:
1. CONCRETE TO HAVE COMPRESSIVE STRENGTH OF 3,000 P.S.I. AT 28 DAYS.
2. PVC CONDUIT NEEDS TO BE PROVIDED FOR PRIMARY AND SECONDARY CONDUCTORS AND STUBBED OUT PAST TRANSFORMER PAD.
3. ANY PAD SUBJECT TO VEHICULAR TRAFFIC NEEDS TO HAVE BOLLARDS PLACED AT ALL TRANSFORMER PAD CORNERS WHICH VEHICLES COULD HIT. SEE DRAWING TPB FOR BOLLARD DETAILS.

<table>
<thead>
<tr>
<th>TYPE</th>
<th>TRANSFORMER SIZE</th>
<th>Y BARS</th>
<th>X BARS</th>
<th>Z BARS</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>45, 75, 150, 225 &amp; 300 kVA</td>
<td>(6) #4 6'-10&quot; LG.</td>
<td>(4) #4 5'-6&quot; LG.</td>
<td>(3) #4 3'-7&quot; LG.</td>
</tr>
<tr>
<td>II</td>
<td>500, 750 &amp; 1000 kVA</td>
<td>(6) #4 7'-6&quot; LG.</td>
<td>(4) #4 5'-6&quot; LG.</td>
<td>(4) #4 3'-10&quot; LG.</td>
</tr>
<tr>
<td>III</td>
<td>1500, 2000 &amp; 2500 kVA</td>
<td>(6) #4 8'-6&quot; LG.</td>
<td>(6) #4 6'-0&quot; LG.</td>
<td>(4) #4 3'-10&quot; LG.</td>
</tr>
</tbody>
</table>
3'-0" MINIMUM CLEARANCE REQUIRED BETWEEN ELECTRIC METER AND GAS REGULATOR AND BETWEEN ANY OPENING AND GAS REGULATOR.
NOTES:

1. METER SPECS FOR TYPICAL INSTALLATION OF 250,000 BTU OR LESS. IF BTU LOAD EXCEEDS 250,000 BTU, PLEASE CALL LVE FOR SPECIFICS ON DIMENSIONS SHOWN.

2. METER TO BE LOCATED UNDER GABLE END OF STRUCTURE TO PREVENT SNOW AND ICE DAMAGE.
NOTES:

WHEN ELECTRICAL CONDUCTORS CROSS OVER OR UNDER WATER AND/OR GAS PIPES THERE SHALL BE A MINIMUM OF 12" VERTICAL SEPARATION. IN ADDITION, THE ELECTRICAL CONDUCTORS SHALL BE PROTECTED WITH NOT LESS THAN 48" LENGTH OF SUITABLE PVC OR RIGID STEEL CONDUIT WITH NO LESS THAN 24" ON EITHER SIDE OF THE CROSSING.

CUSTOMER INSTALLED CONDUIT MUST BE INSPECTED BY LVE PRIOR TO BACKFILLING. IF NOT INSPECTED, TRENCH MAY BE REJECTED.

ALL TRENCHES ARE TO BE INSPECTED PRIOR TO BACKFILLING.

BEDDING AND SHADING MATERIAL MUST BE SMOOTH, FREE OF ROCKS, AND MUST BE ABLE TO SIFT THROUGH A 1/4" SCREEN (SAND RECOMMENDED).
NOTES:

WHEN ELECTRICAL CONDUCTORS CROSS OVER OR UNDER WATER AND/OR SEWER PIPES THERE SHALL BE A MINIMUM OF 12" VERTICAL SEPARATION. IN ADDITION, THE ELECTRICAL CONDUCTORS SHALL BE PROTECTED WITH NOT LESS THAN 48" OF SUITABLE PVC OR RIGID STEEL CONDUIT WITH NO LESS THAN 24" ON EITHER SIDE OF THE CROSSING.

CUSTOMER INSTALLED CONDUIT MUST BE INSPECTED PRIOR TO BACKFILLING. IF NOT INSPECTED, TRENCH MAY BE REJECTED.

ALL TRENCHES ARE TO BE INSPECTED PRIOR TO BACKFILLING.

18" SEPARATION MUST BE OBTAINED BETWEEN PE GAS PIPE AND POWER CABLE OR TRENCH WILL BE REJECTED.

BEDDING AND SHADING MATERIAL MUST BE SMOOTH, FREE OF ROCKS, AND MUST BE ABLE TO SIFT THROUGH A 1/4" SCREEN (SAND RECOMMENDED).
Bedding and shading materials must be smooth, free of rocks and must be able to sift through a 1/4" screen (sand recommended).

* Gas pipe diameter will vary
## Index

<table>
<thead>
<tr>
<th>Subject</th>
<th>Page/Drawing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Codes and Ordinances</td>
<td>4</td>
</tr>
<tr>
<td>Current Transformer</td>
<td></td>
</tr>
<tr>
<td>Cabinet Clearance Detail</td>
<td>SR-1</td>
</tr>
<tr>
<td>Cabinet Requirements Detail</td>
<td>SR-3</td>
</tr>
<tr>
<td>Metering</td>
<td>9-11</td>
</tr>
<tr>
<td>Metering Detail</td>
<td>SR-2</td>
</tr>
<tr>
<td>Customer’s Equipment, Devices and Character of Service</td>
<td>11</td>
</tr>
<tr>
<td>Easements</td>
<td>7</td>
</tr>
<tr>
<td>Excavation</td>
<td>8</td>
</tr>
<tr>
<td>Fault Current, Available</td>
<td>12</td>
</tr>
<tr>
<td>Fuel Lines, Member-Owned</td>
<td>14</td>
</tr>
<tr>
<td>Gas Availability</td>
<td>12</td>
</tr>
<tr>
<td>Generators, Emergency or Standby</td>
<td>12</td>
</tr>
<tr>
<td>Interfering Loads</td>
<td>12</td>
</tr>
<tr>
<td>Line Extension Application Form</td>
<td>5-6</td>
</tr>
<tr>
<td>Line Extension Checklist</td>
<td>3-4</td>
</tr>
<tr>
<td>Line Extension, Costs and Contract</td>
<td>3</td>
</tr>
<tr>
<td>Electric</td>
<td>3</td>
</tr>
<tr>
<td>Gas</td>
<td>13</td>
</tr>
<tr>
<td>Membership</td>
<td></td>
</tr>
<tr>
<td>Deposit</td>
<td>3</td>
</tr>
<tr>
<td>In LVE</td>
<td>3</td>
</tr>
<tr>
<td>Meter, Electric</td>
<td></td>
</tr>
<tr>
<td>Access</td>
<td>10</td>
</tr>
<tr>
<td>Cabinet Dutch Door Requirement</td>
<td>SR-4</td>
</tr>
<tr>
<td>Clearances</td>
<td>9-10</td>
</tr>
<tr>
<td>Clearance Detail</td>
<td>SR-1</td>
</tr>
<tr>
<td>Installation</td>
<td>9</td>
</tr>
<tr>
<td>Multiple</td>
<td>10</td>
</tr>
<tr>
<td>Seals</td>
<td>10</td>
</tr>
<tr>
<td>Meter, Gas</td>
<td></td>
</tr>
<tr>
<td>Clearance Detail</td>
<td>SR-11</td>
</tr>
<tr>
<td>Installation Detail</td>
<td>SR-12</td>
</tr>
<tr>
<td>Location</td>
<td>13</td>
</tr>
<tr>
<td>Meter Sets</td>
<td>13</td>
</tr>
<tr>
<td>Multiple Meter Sets</td>
<td>14</td>
</tr>
<tr>
<td>Protection</td>
<td>13</td>
</tr>
<tr>
<td>Motor</td>
<td></td>
</tr>
<tr>
<td>Protection</td>
<td>11</td>
</tr>
<tr>
<td>Starting</td>
<td>12</td>
</tr>
<tr>
<td>Permits</td>
<td>7</td>
</tr>
<tr>
<td>Point of Delivery, Electric</td>
<td>7</td>
</tr>
<tr>
<td>Power Factor</td>
<td>12</td>
</tr>
</tbody>
</table>
Index (continued)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Page/Drawing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relocation of Services and Facilities</td>
<td>8</td>
</tr>
<tr>
<td>Conversion from Overhead to Underground</td>
<td>14</td>
</tr>
<tr>
<td>Electric Service Basics</td>
<td>7</td>
</tr>
<tr>
<td>Location and Size</td>
<td>4</td>
</tr>
<tr>
<td>Overhead Detail</td>
<td>SR-5</td>
</tr>
<tr>
<td>Overhead Lift Pole Detail</td>
<td>SR-7</td>
</tr>
<tr>
<td>Types and Voltages Available</td>
<td>4</td>
</tr>
<tr>
<td>Underground</td>
<td>8</td>
</tr>
<tr>
<td>Underground Detail</td>
<td>SR-6</td>
</tr>
<tr>
<td>Unistrut H-Frame Detail</td>
<td>SR-8</td>
</tr>
<tr>
<td>Service, Gas</td>
<td></td>
</tr>
<tr>
<td>Location and Size</td>
<td>13</td>
</tr>
<tr>
<td>Temporary Construction Meter Loop</td>
<td>8</td>
</tr>
<tr>
<td>Temporary Service</td>
<td>8</td>
</tr>
<tr>
<td>Transformer</td>
<td></td>
</tr>
<tr>
<td>Clearance Requirements Detail</td>
<td>SR-9</td>
</tr>
<tr>
<td>Pad Detail</td>
<td>SR-10</td>
</tr>
<tr>
<td>Trench</td>
<td></td>
</tr>
<tr>
<td>Depth and Backfill</td>
<td>8</td>
</tr>
<tr>
<td>Detail, Electric without Gas</td>
<td>SR-13</td>
</tr>
<tr>
<td>Detail, Electric with Gas</td>
<td>SR-14</td>
</tr>
<tr>
<td>Detail, Gas only</td>
<td>SR-15</td>
</tr>
<tr>
<td>Gas</td>
<td>14</td>
</tr>
<tr>
<td>Inspection</td>
<td>9</td>
</tr>
<tr>
<td>Joint Use</td>
<td>9</td>
</tr>
<tr>
<td>Season</td>
<td>9</td>
</tr>
<tr>
<td>Warning Tape</td>
<td>9</td>
</tr>
</tbody>
</table>