SECTION 4 Service Requirements and Responsibilities

4 – 1 New and Existing Service Installations

General

4 – 1a Customer/Contractor

- Fulfill the Customer/Contractor Requirements in the How to Obtain Service section at the beginning of this booklet.
- Submit a completed Service Request form before beginning any electrical work. Only one service of the same voltage is available to a customer's premises. Any deviations are at the company's discretion, subject to the NEC and the total service limitations defined in New Service Less Than 600 Volts.
- Ensure that the minimum service entrance and service equipment be rated at **100 amperes** for residential and commercial (exceptions are at the discretion of the company).
- Size services according to the NEC to meet both customer load and voltage drop requirements.
- Provide, install, own, and maintain all service entrance conductors, service laterals, and service equipment. Customer must install **copper** type cable if service is run from handhole or manhole.
- Provide, own, and maintain meter sockets, enclosures, and multiple metering installations.
- Provide a certificate of electrical inspection from an authority having jurisdiction. This must occur before the company will connect the new service installation, rewire, or upgrade to the company's distribution system.
- Reimburse the company for its expense in locating a fault on any service lateral repair.

4 – 1b Company

- Recommend that the capacity of service equipment be greater than the required minimum to provide for future growth.
- Determine the type of construction, route of the service connection, and location of metering equipment.
- Permit an exception for traffic signals or similar low consumption usage equipment.
- Provide current and voltage transformers for services greater than 400 amperes.
- Install, own, and maintain adequate metering to measure the energy and demand use in accordance with its rates.
- Connect and energize the service after receipt of the electrical inspection certificate.
- Refuse to connect and energize the service lateral tap if not installed in accordance with the company's underground specifications and the NEC.

4 – 2 Pullbox

Customer rewires or upgrades the premise service that has RG&E cables terminated in a pullbox, the pullbox will be removed and the meterbox must be moved outside. The customer must consult with the company to determine the type of service to be provided before proceeding with the installation of wiring or ordering electrical equipment.

Accessible by Ladder
Capable of being reached from the ground at level grade with a 24-foot extension ladder.

Customer Premise Wiring shall be accessible by *Ladder Reference Drawing*. (Refer to Figure 9 on page 26)

1. Capable of being reached from the ground at level grade with a 24-foot extension ladder (without climbing off ladder.) Ladders shall be used only on stable and level surfaces unless secure.

   1A. **Acceptable** for final grade:
      1. Grass/dirt
      2. Blacktop driveway
      3. Sidewalk

   1B. **Unacceptable**
      1. Stamped concrete patio
      2. Decks
      3. Sloped yard

2. Ensure that the point of attachment is not less than 12 feet or more than 25 feet above final grade. The point of attachment must be of sufficient height to provide minimum clearances. These clearances are required by the *NEC, Article 230*, and vary dependent on the type of service and types of terrain the service drop crosses.

3. Any exception made for posting a service will be via conversation with RG&E and the inspector or meeting with RG&E and the inspector on-site.

4. Electrical inspection by the authority having jurisdiction – Final Inspection Service Determination Inspector by field verification and approval; references *NYSCE, NFPA Electrical Inspection Manual, NEC Article 90.7 Examination of Equipment for Safety, Article 110.2 Approval, Article 110.3 Examination, Identification, Installation, and Use of Equipment.*

Any exceptions for RG&E or electrician posting a service will be by conversation with RG&E and the Electrical Inspector. The exception will be documented in RG&E's Service Notification and the Electrical Inspector will document on the Final Inspection Certificate (cut in card) with specific exception information and RG&E contact references.

References

RG&E	*Accident Prevention Manual July 1, 2017-Fall Protection 1.12 (E) Ladders*
RG&E	*Ladder Selection and Safety*
RG&E	*Requirements for Installation of Electric Services and Meter Booklet September 2004*
NEC	*Adopted National Electrical Code by NYS*
NFPA-70	*National Electrical Code*
NFPA-70E	*Standard for Electrical Safety in the Workplace*
NYSCE	*New York State Code Enforcement*

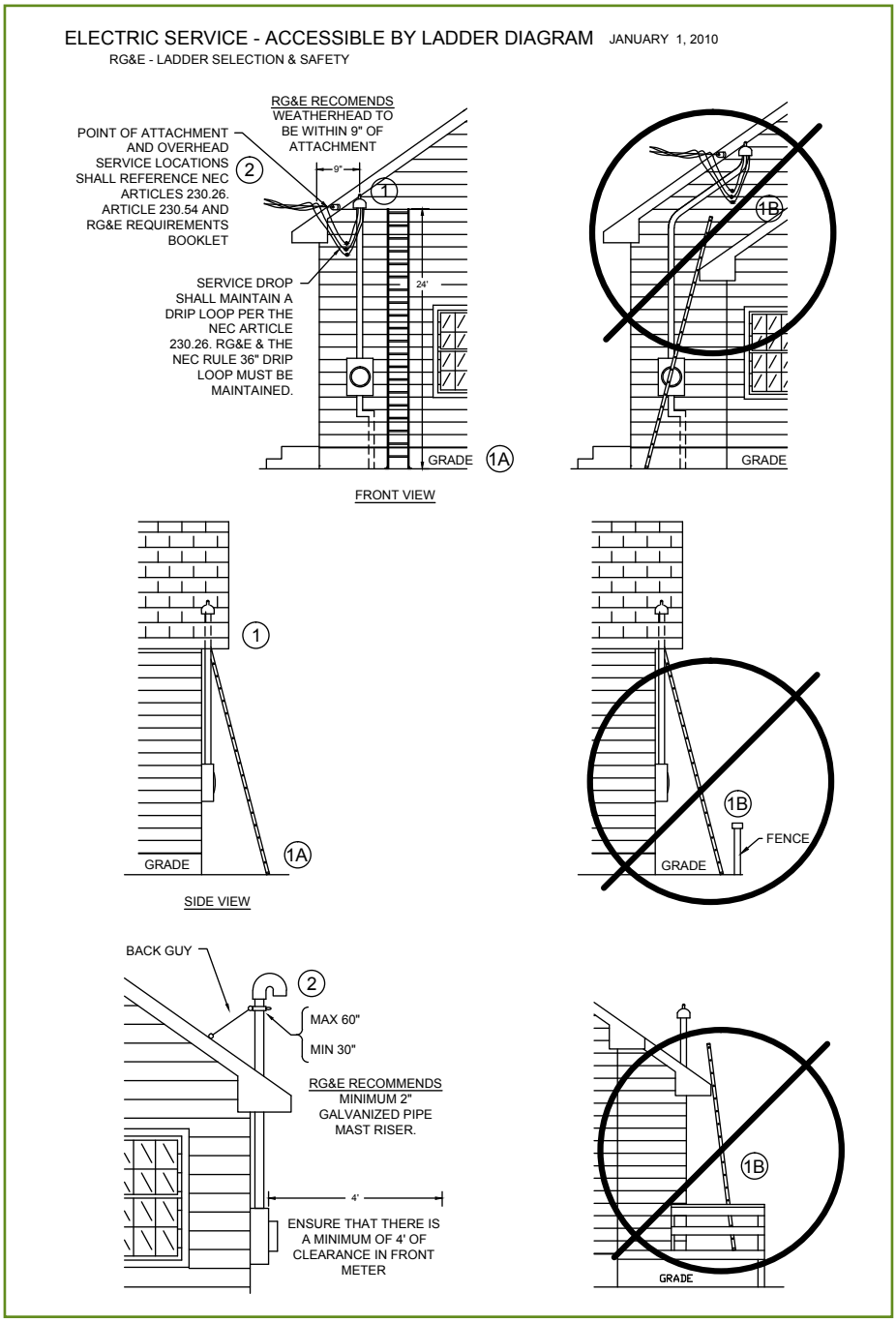
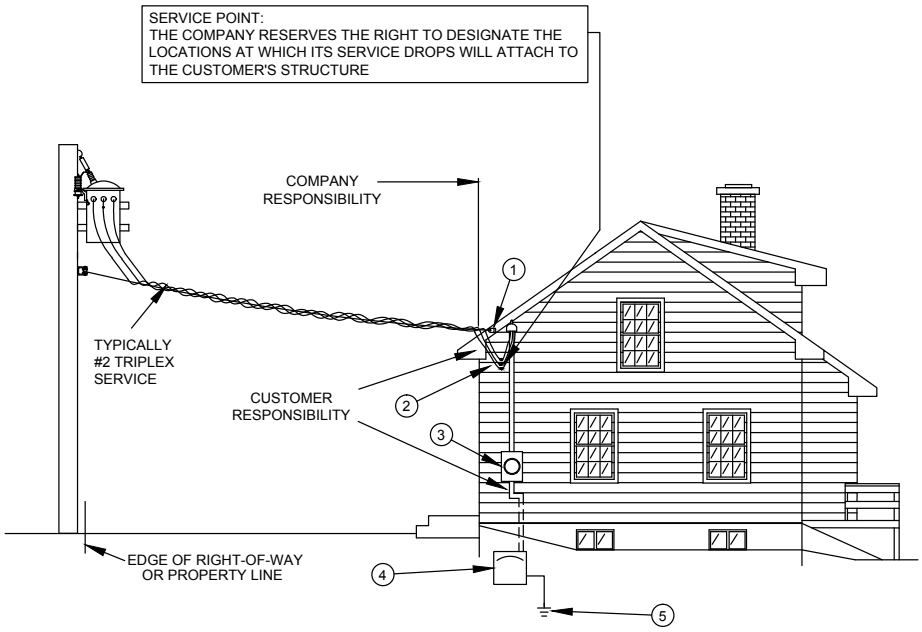


Figure 9

4 – 3 Residential Overhead Service

RESIDENTIAL OVERHEAD SERVICE

THE COMPANY INSTALLS, OWNS, AND MAINTAINS THE OVERHEAD SERVICE DROP.



CHECK LIST-BEFORE OBTAINING AN ELECTRICAL INSPECTION APPROVAL AND SCHEDULING WITH COMPANY

1. 600V INSULATOR INSTALLED AT PROPER HEIGHT TO MAINTAIN CLEARANCE. MUST BE ACCESSIBLE BY LADDER FROM GROUND.

2. DRIP LOOP- 36" MINIMUM LOOP FORMED ON INDIVIDUAL CONDUCTORS, TO PREVENT THE ENTRANCE OF MOISTURE.
   A. OPEN CONDUCTORS- 3' MINIMUM FROM WINDOW.

3. METER BOX- MOUNT 3' TO 6' FROM CENTER OF METER TO GRADE MAINTAIN 4' OF WORKING CLEARANCE IN FRONT OF METER BOX.
   A. UL-LISTED CERTIFICATION.
   B. CONDUCTORS TERMINATED IN METER BOX ACCORDING TO COMPANY REQUIREMENT AND THE NEC.
   *C. INSPECTION AGENCY STICKER ON RIGHT SIDE OF BOX, SIGNED BY INSPECTOR.

4. PANEL INSTALLED WITH MAIN
   A. CONDUCTORS TERMINATED IN MAIN DISCONNECT PANEL ACCORDING TO THE NEC.

5. MAIN DISCONNECT GROUNDED ACCORDING TO THE NEC.

* ELECTRICAL INSPECTION STICKER OF CERTIFICATION REQUIRED ON METER BOX:

1. NEW SERVICE INSTALLATION 2. CUSTOMER REWIRES AND/OR SERVICE UPGRADES
   A. DISCONNECTS AND RECONNECTS SERVICE RISER LEADS FOR CUSTOMER TO INSTALL SERVICE AND RECONNECTED BY THE COMPANY.
   B. SCHEDULES ELECTRICAL INSPECTOR ON SITE AFTER COMPANY DISCONNECTS SERVICE FOR CUSTOMER TO INSTALL SERVICE AND RECONNECTED BY THE COMPANY.

Figure 10

In addition to fulfilling the requirements listed in Section 4 – 1a and 4 –1b, these additional requirements apply.

4 – 3a Customer/Contractor

- Contact the company for the point of attachment for new services or if the service point attachment changes. Connections must be accessible by ladder from the ground at level grade.
- Determine the location of the service drop.
- Ensure that the point of attachment is **not less than 12 feet or more than 25 feet above final grade**. The point of attachment must be of sufficient height to provide minimum clearances. These clearances are required by the *NEC, Article 230*, and vary dependent on the type of service and types of terrain the service drop crosses.
- Provide and install service drop attachments for single-phase services (600-volt insulator applications). Generally, an overhead service drop is limited to supply service equipment rated 800 amperes or less. The company recommends an underground service for a service larger than 800 amperes.

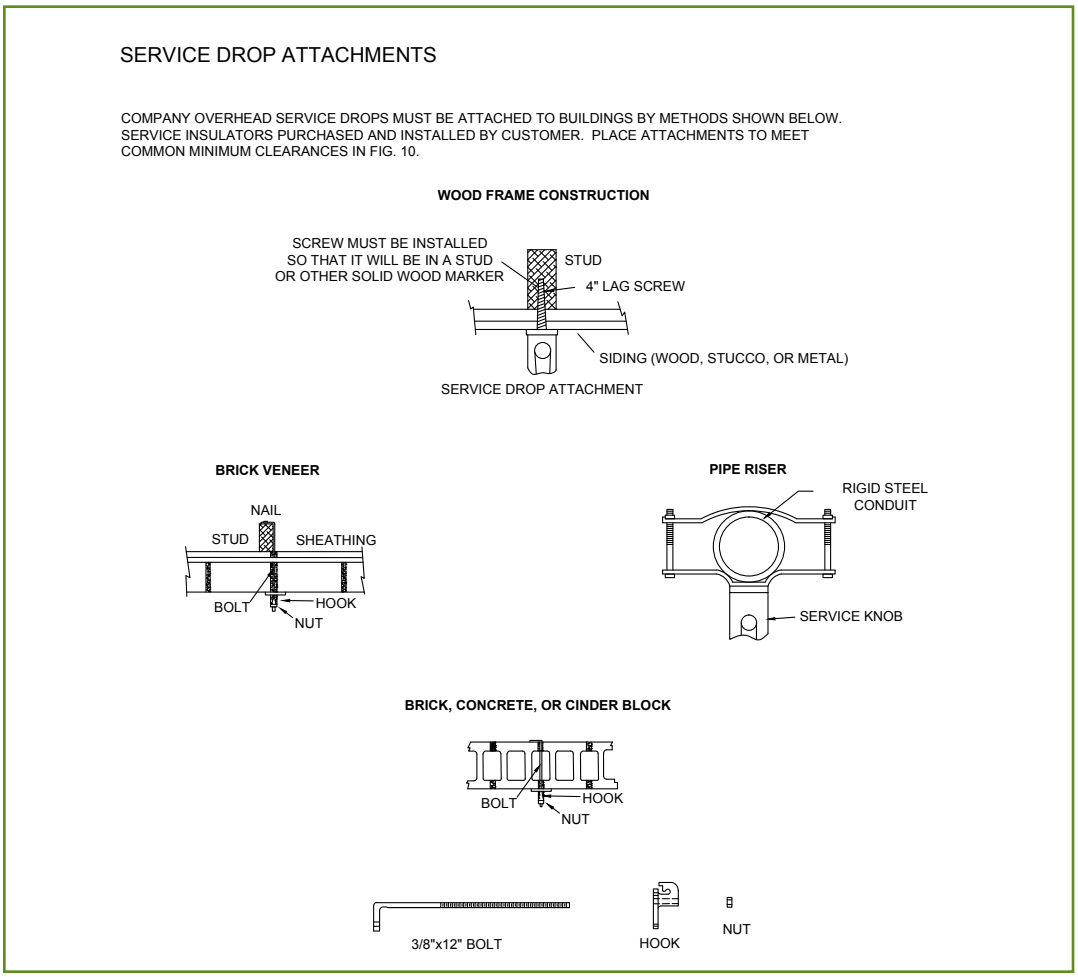


Figure 11

4 – 3b Customer/Contractor

- Ensure that there is a minimum of four feet of clearance in front of the meter.

4 – 3c Company

- Designate the location of the service, if there is an obstruction or clearance issue.

4 – 4 Service Head and Riser (Weatherhead)

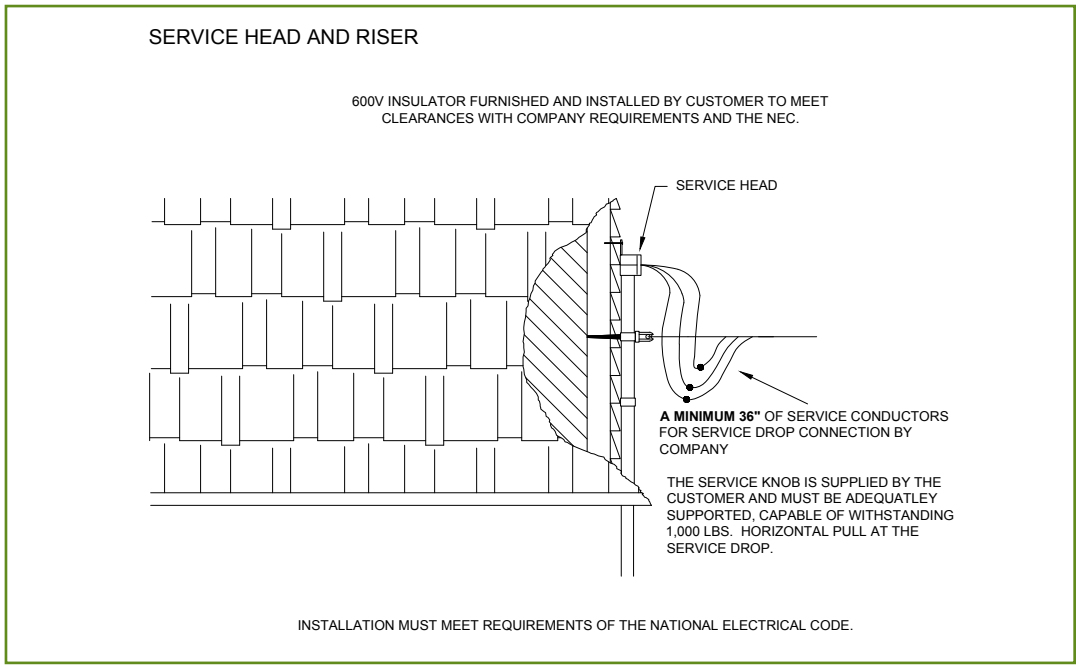


Figure 12

4 – 5 Pipe Mast Riser

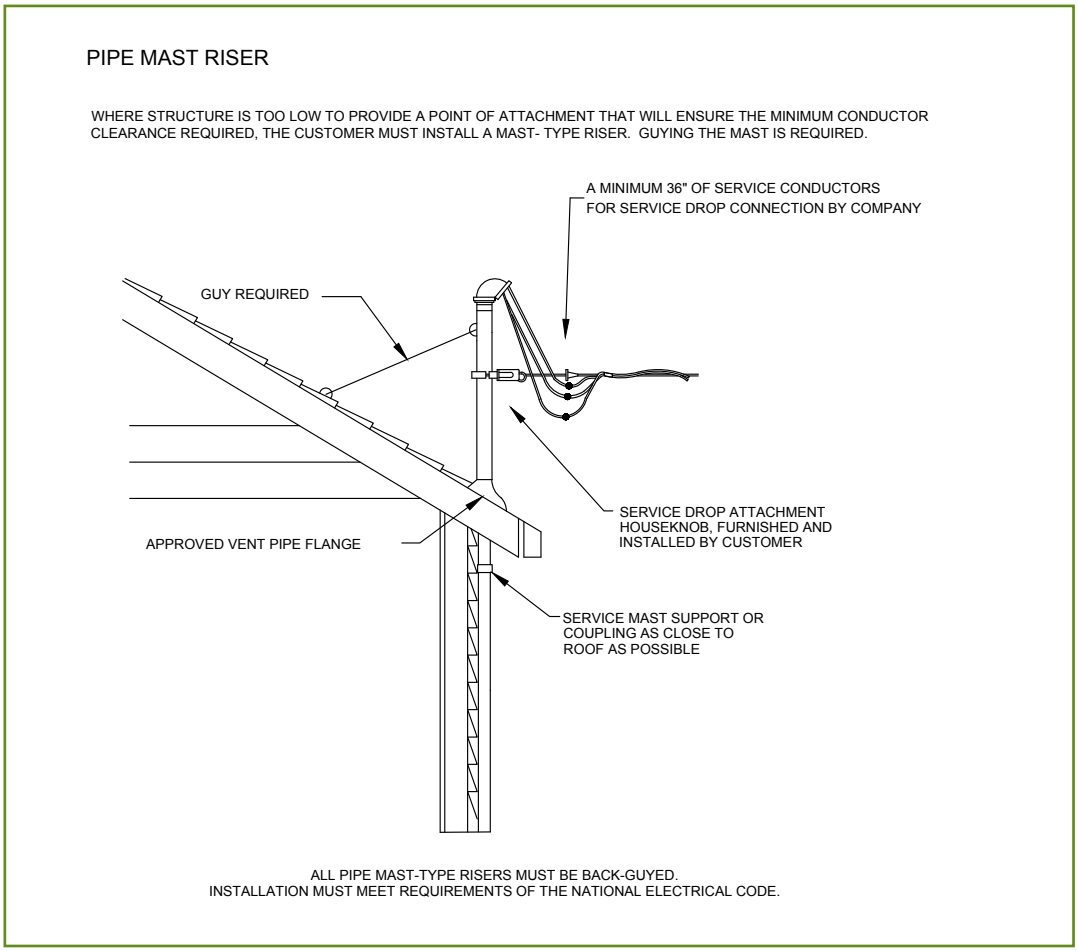


Figure 13

4 – 6 Common Minimum Clearances

MINIMUM CLEARANCES

MINIMUM CLEARANCES		
1.	3'	FROM WINDOWS, DOORS, PORCHES, FIRE ESCAPES, ETC.
2.	3'	ROOF WITH 4" IN 12" SLOPE OR GREATER (LIMITED 300V)
3.	10'	ABOVE ACCESSIBLE ROOFS, DECKS, OR PROJECTIONS, PLATFORMS OR PROJECTIONS FROM WHICH THEY MIGHT BE REACHED
4.	12'	ABOVE FINAL GRADE, SIDEWALKS, AND RESIDENTIAL DRIVEWAYS, 25 FEET MAXIMUM HEIGHT OF ATTACHMENT TO LOWEST WIRE ABOVE FINAL GRADE
5.	15'	ABOVE AUTOMOBILE PARKING LOT, DRIVE-IN ESTABLISHMENTS, AND SIMILAR COMMERCIAL AREAS NOT SUBJECT TO TRAFFIC OR DUMPSTER PICKUP
6.	18'	ABOVE PUBLIC STREETS, ALLEYS, ROADS, AND DRIVEWAYS OTHER THAN RESIDENTIAL PROPERTY, LAND, ORCHARD, GRAZING, OR FOREST

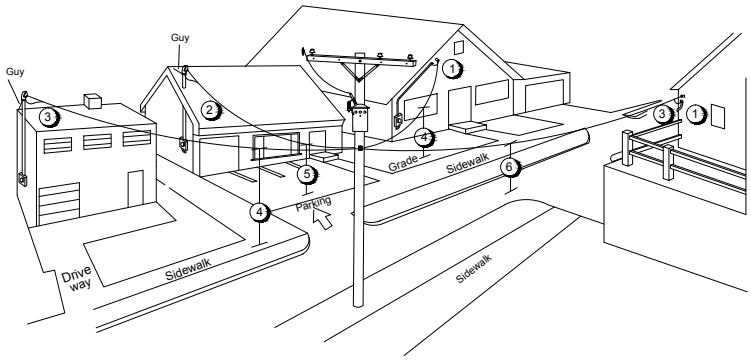


Figure 14

In addition to fulfilling the requirements listed in Section 4 – 1a and 4 –1b, these additional requirements apply.

4 – 7 Temporary Service

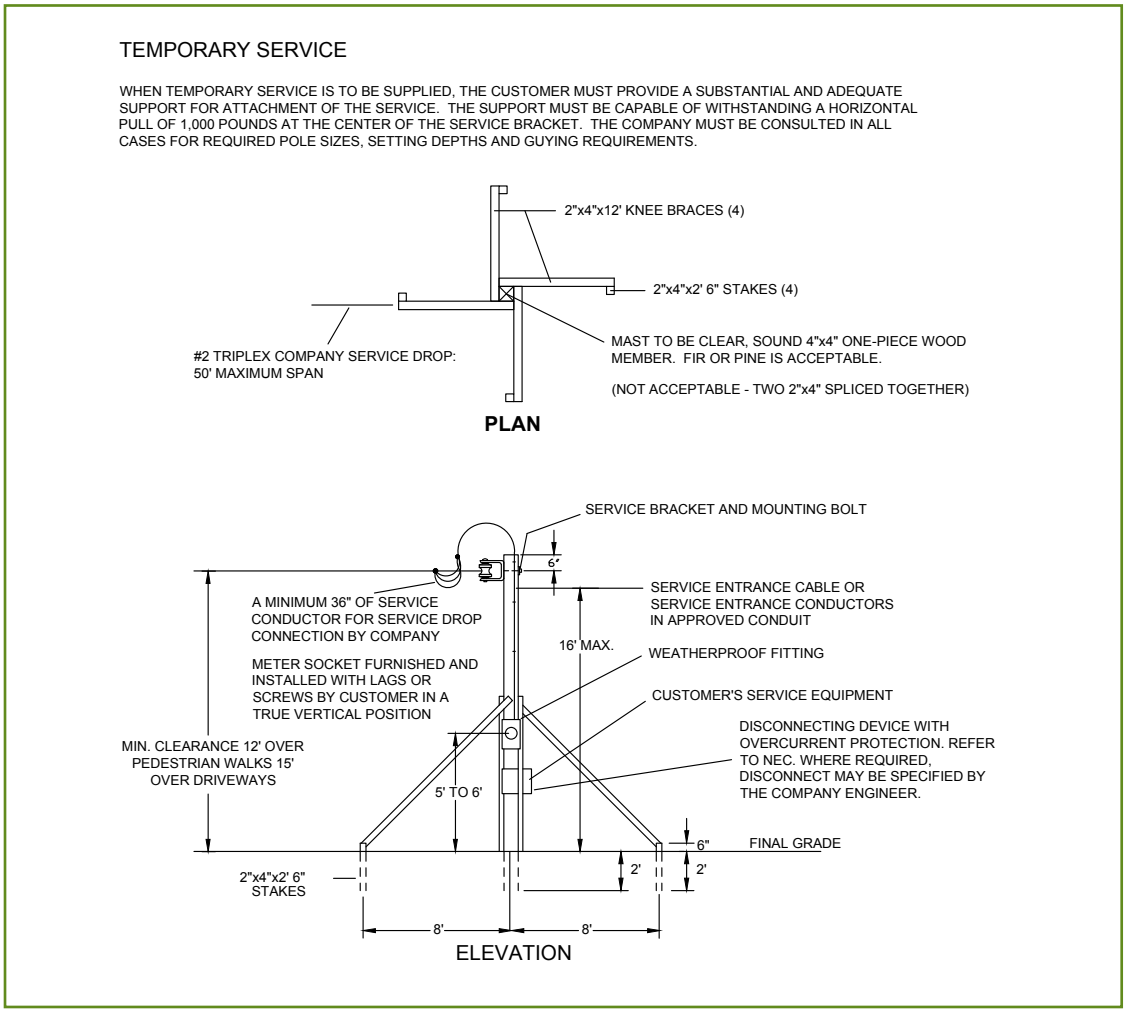


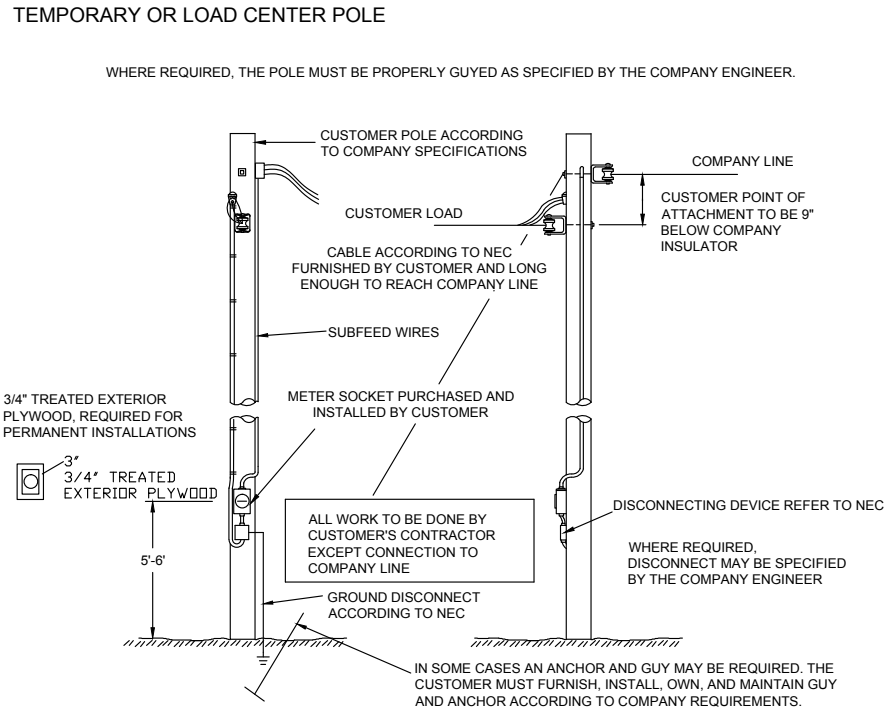
Figure 15

In addition to fulfilling the requirements listed in Section 4 – 1a and 4 –1b, these additional requirements apply.

4 – 7a Customer/Contractor

- Pay the cost of installation and removal of temporary service in accordance with the *Tariff Schedules for Electric Service.*

4 – 8 Load Center Pole (Distribution Point, Refer to NEC 547.2)



ON CONSTRUCTION, FARMS OR OTHER PREMISES WHERE TWO OR MORE BUILDINGS UNDER A SINGLE OCCUPANCY OR MANAGEMENT ARE SUPPLIED THROUGH ONE METER, IT MAY BE APPROPRIATE TO INSTALL A TEMPORARY OR LOAD CENTER POLE (METER ON POLE). IN SUCH CASES, THE METER POLE WITH NECESSARY GUYS MUST BE FURNISHED, INSTALLED, OWNED, AND MAINTAINED BY CUSTOMER.

POLE TYPES

PERMANENT INSTALLATION
POLE MUST BE UTILITY GRADE AND **BRAND NEW**
MINIMUM 25' HIGH, 5' IN GROUND
SUPPORT METER BOX WITH 3/4" TREATED EXTERIOR PLYWOOD
SECURELY FASTENED TO THE METER BOX AND POLE
WITH MINIMUM 3" AROUND THE PERIMETER OF THE METER BOX

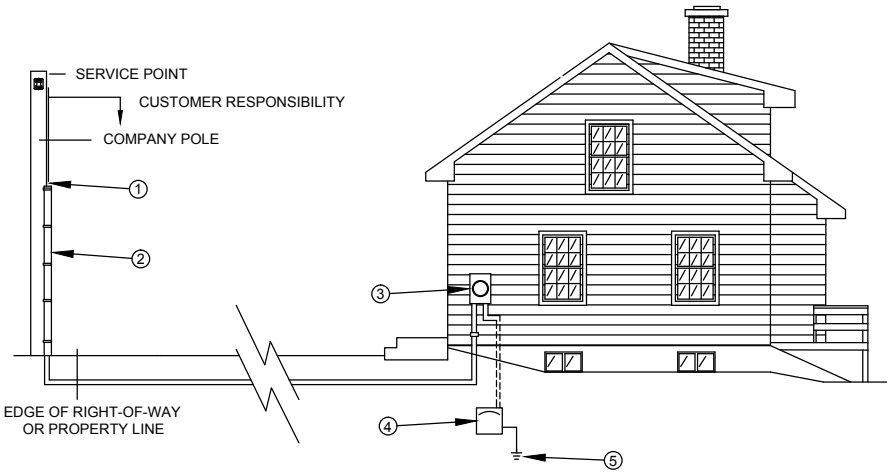
TEMPORARY INSTALLATION POLE MUST BE UTILITY GRADE
MINIMUM 25' HIGH, 5' IN GROUND ATTACH METER BOX TO POLE OR TO
3/4" TREATED EXTERIOR PLYWOOD AS DESCRIBED ABOVE

Figure 16

4 – 9 Residential Underground Service Connection from Overhead Lines Less Than 600 Volts

RESIDENTIAL UNDERGROUND SERVICE

THE CUSTOMER MUST FURNISH, INSTALL, OWN, AND MAINTAIN THE NECESSARY FACILITIES AT THE CUSTOMER'S EXPENSE. THE SERVICE CABLES AND THE INSTALLATION MUST BE IN ACCORDANCE WITH COMPANY REQUIREMENTS AND THE NEC AND IS MAINTAINED BY THE CUSTOMER.



CHECK LIST-BEFORE OBTAINING AN ELECTRICAL INSPECTION APPROVAL AND SCHEDULING WITH COMPANY

1. CABLE LENGTH MUST BE SUFFICIENT TO REACH COMPANY SECONDARY PLUS 48". COIL AND SECURE CABLE TO POLE.
2. STAND PIPE AND BEND MUST MEET COMPANY AND NEC REQUIREMENTS FOR PROTECTION AGAINST DAMAGE.
3. METER BOX- MOUNT 3' TO 6' FROM CENTER OF METER TO GRADE. MAINTAIN 4' OF WORKING CLEARANCE IN FRONT OF METER BOX .
   - A. UL- LISTED CERTIFICATION
   - B. CONDUCTORS TERMINATED IN METER BOX ACCORDING TO COMPANY REQUIREMENTS AND THE NEC
   - *C. INSPECTION AGENCY STICKER ON RIGHT SIDE OF BOX, SIGNED BY INSPECTOR
4. PANEL INSTALLED WITH MAIN
   - A. CONDUCTORS TERMINATED IN MAIN DISCONNECT PANEL ACCORDING TO THE NEC.
5. MAIN DISCONNECT GROUNDED ACCORDING TO THE NEC.

* ELECTRICAL INSPECTION STICKER OF CERTIFICATION REQUIRED ON METER BOX:

1. NEW SERVICE INSTALLATION
2. CUSTOMER REWIRES AND/OR SERVICE UPGRADE
   - A. REWIRES FROM OVERHEAD TO UNDERGROUND
   - B. SCHEDULES ELECTRICAL INSPECTOR ON SITE AFTER COMPANY DISCONNECTS SERVICE FOR CUSTOMER TO INSTALL SERVICE AND RECONNECTED BY THE COMPANY

Figure 17

In addition to fulfilling the requirements listed in Section 4 – 1a and 4 –1b, these additional requirements apply.

4 – 9a Customer/Contractor

- Consult the company if requesting an underground service lateral from the company's overhead line.

- Install and maintain the service cable.

  Note: For residential services, the company recommends the use of a single three-phase conductor (2-4/0 & 1-2/0) aluminum direct burial 200 amp. 600-volt cable for up to 250 feet.

- Choose between these two options if the underground service is longer than 250 feet:
  1. Install a metering pedestal as detailed in Section 8.
  2. Request the installation of primary cables and padmount transformer on the customer's premise (premises).

- Fulfill these requirements if Option 2 is selected:
  1. Follow the *Common Utility Trench Requirements*, Section 4–20.
  2. Provide a trench according to company specifications from the company's distribution system to the transformer location.
  3. Provide an excavation on the customer's property for the transformer pad according to company specifications.
  4. Coordinate the installation of gas and/or communication facilities, if these will be installed in the same trench. (Refer to Section 4–20)
  5. Consult the company before work begins so that the company can locate the service point at the pole, the conduit location from which service will be taken, the route to be followed, and the meter location.

  Note: The cable must be carefully coiled, capped, and fastened to the pole above the conduit.

  6. Install standpipe and bend. (Refer to Figure 18 on page 36)
  7. No more than two (2) electrical conduits on any company pole.
  8. If #2 ground wire is already installed on the pole, it can be used for grounding customer standpipe.

4 – 9b Company

- Install a pole and appropriate guy on the customer premises to be served, if the company's distribution is on the opposite side of the highway. Charges may be applied according to the *Tariff Schedules for Electric Service*.

- Allow only two electrical conduits on any company pole.

- Provide and install, without charge, the protective covering above the standpipe, the necessary cable supports and fittings.

- Connect the cable to its secondary system.
- Install primary cables and transformer pad in the customer-provided trench and excavation, if the customer chooses to have a padmount transformer placed on the customer's premise (premises) (service lateral longer than 250 feet). Install padmount transformer foundation and padmount transformer.
- Require that all buried conductors pass a 1,000 volt direct current (VDC) megger test performed by the company, after the trench is backfilled and prior to energization. The minimum acceptable megger resistance value for new cables is 2,000 megaohms.

4 – 10 Standpipe and Bend on Pole

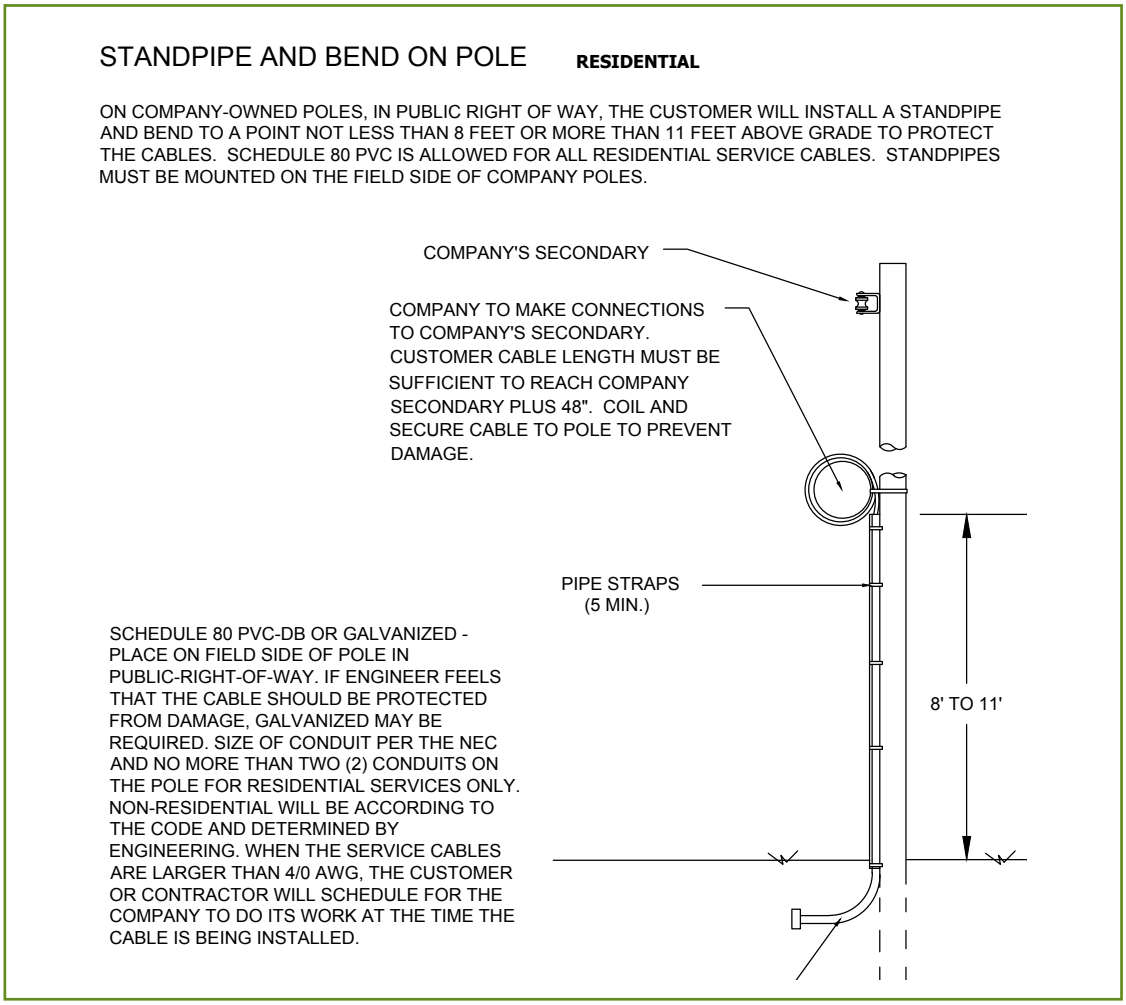


Figure 18

4 – 11 Meter Pedestals (Refer to Section 8)

4 – 12 Residential Underground Service Lateral

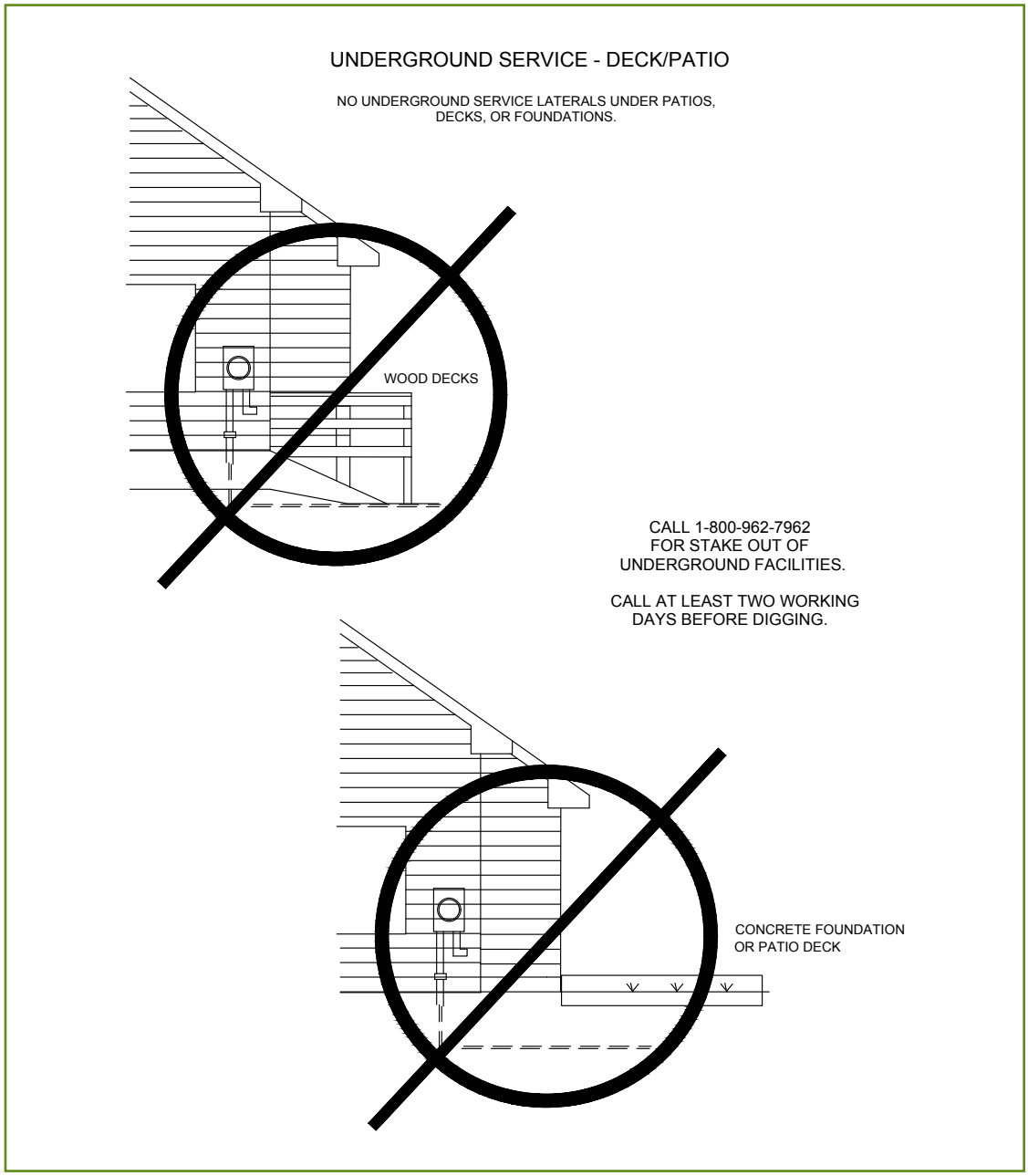


Figure 19

In addition to fulfilling the requirements listed in Section 4 – 1a and 4 –1b, these additional requirements apply.

4 – 12a Customer/Contractor

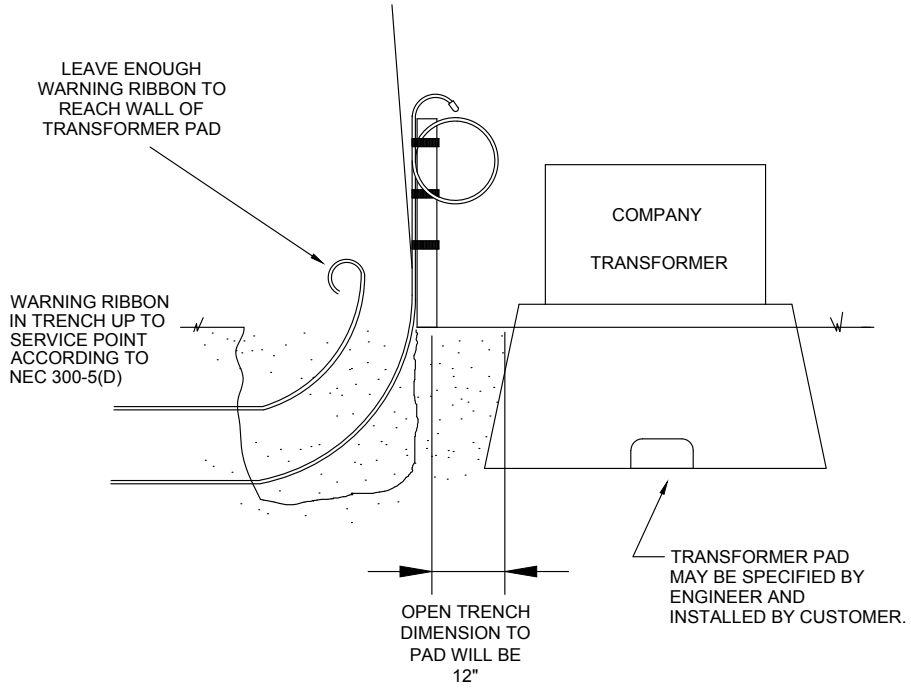
- Install and maintain underground service cable in accordance with the NEC and company requirements.

4 – 13 Transformer Pad

TRANSFORMER PAD

CUSTOMER MUST:

- LEAVE 9 FEET OF CABLE COILED AND SECURED ABOVE GRADE.
- LEAVE 4 FEET OF TRENCH OPEN WITH CABLE 12 INCHES AWAY FROM TRANSFORMER PAD WALL, WITH ACCEPTABLE SOIL PROVIDED FOR COMPANY CREW TO BACKFILL TRENCH AND CABLE.



CONTRACTOR MUST REFER TO THE COMPANY ENGINEERING SKETCH FOR SERVICE POINT LOCATION. THE BUILDER/DEVELOPER HAS THE SKETCH ON FILE AND THE SERVICE REQUEST WILL BE RETURNED WITH THIS INFORMATION. IF THE CONTRACTOR RUNS THE SERVICE TO THE WRONG SERVICE POINT LOCATION, THE SERVICE WILL NOT BE ENERGIZED AND IT WILL HAVE TO BE RELOCATED AT THE CONTRACTOR'S EXPENSE TO THE RIGHT LOCATION. COMPANY MAY CHARGE FOR A SECOND TRIP.

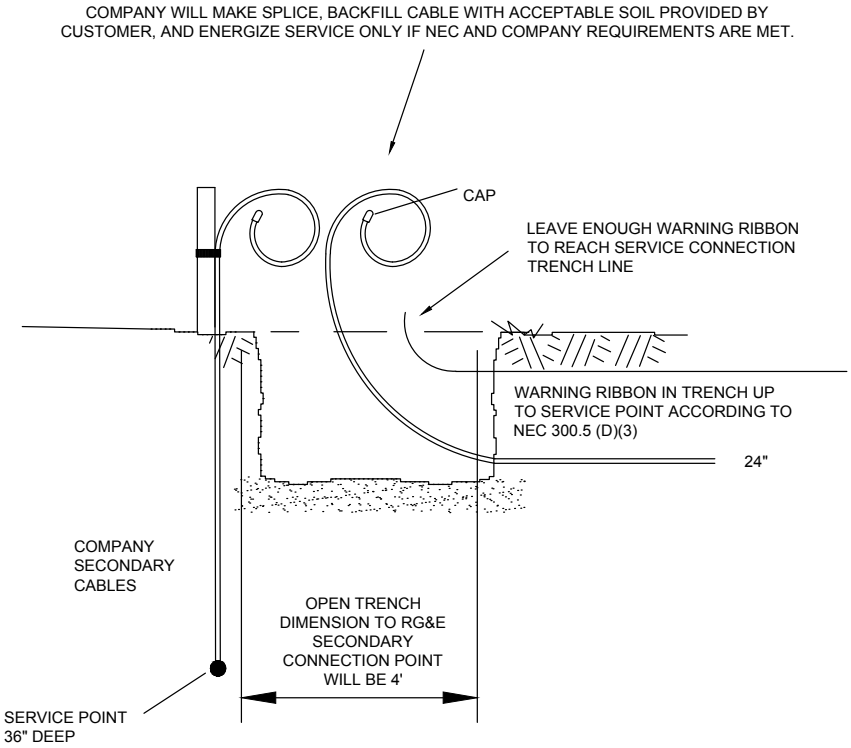
Figure 20

4 – 14 Service Point (Property Line)

SERVICE POINT

CUSTOMER MUST
- LEAVE 9 FEET OF CABLE COILED AND SECURED ABOVE GRADE.
- LEAVE 4 FEET OF TRENCH OPEN FROM COMPANY SECONDARY CABLES.

CUSTOMER MUST CALL 811 PRIOR TO ANY TRENCHING.
COMPANY CREW MUST HAVE TRENCH OPEN UPON ARRIVAL.



COMPANY CONNECTION WILL BE MADE AND BURIED AT THE PROPERTY CORNER

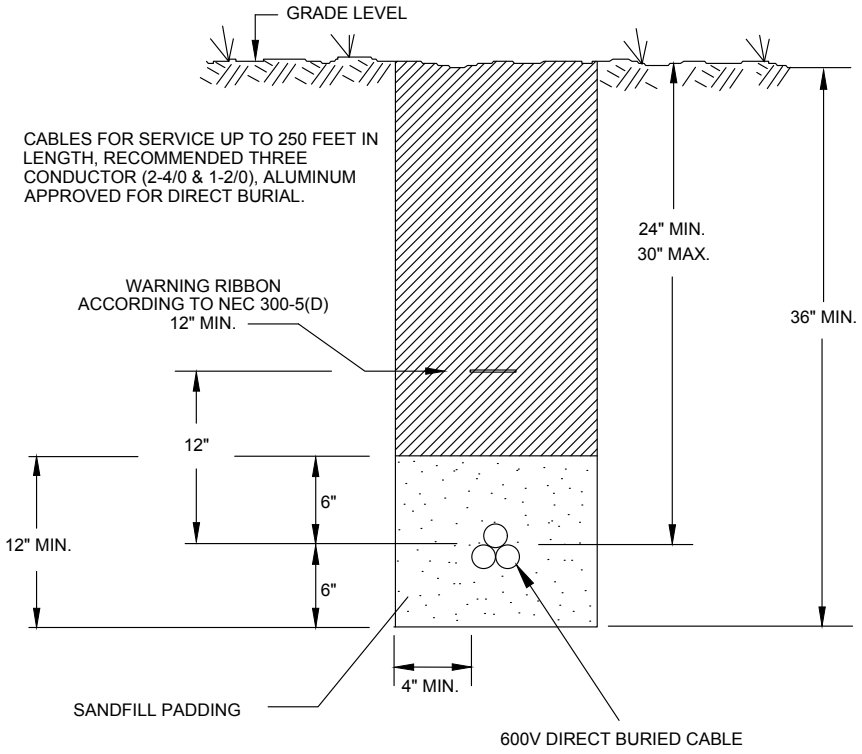
CONTRACTOR MUST REFER TO THE COMPANY ENGINEERING SKETCH FOR SERVICE POINT LOCATION. THE BUILDER/DEVELOPER HAS THE SKETCH ON FILE AND THE SERVICE REQUEST WILL BE RETURNED WITH THIS INFORMATION. IF THE CONTRACTOR RUNS THE SERVICE TO THE WRONG SERVICE POINT LOCATION, THE SERVICE WILL NOT BE ENERGIZED AND IT WILL HAVE TO BE RELOCATED AT THE CONTRACTOR'S EXPENSE TO THE RIGHT LOCATION. COMPANY MAY CHARGE FOR A SECOND TRIP.

Figure 21

4 – 15 Direct Buried Service Lateral

DIRECT BURIED SERVICE LATERAL

UNDERGROUND SERVICE CABLES MUST BE INSTALLED AND MAINTAINED BY THE CUSTOMER. CABLES MUST BE BURIED A MINIMUM OF 24 INCHES BELOW FINAL GRADE LAID IN THE CENTER OF A 12-INCH VERTICAL LAYER OF ACCEPTABLE SAND PADDING, WITH WARNING RIBBON ACCORDING TO NEC REQUIREMENTS. BACKFILL MUST BE CLEAN EARTH WITH NO DEBRIS OR ROCKS OVER 2 INCHES IN DIAMETER FOR THE FIRST 12 INCHES OF COVER OVER THE SAND PADDING. NO ROCKS LARGER THAN 6 INCHES IN DIAMETER ARE ALLOWED IN THE REMAINING BACKFILL.



IF CUSTOMER REQUESTS TO RUN SERVICE GREATER THAN 250 FEET, AN APPROVED METER PEDESTAL MUST BE INSTALLED. THE PEDESTAL LOCATION WILL BE DESIGNATED BY THE COMPANY.

Figure 22

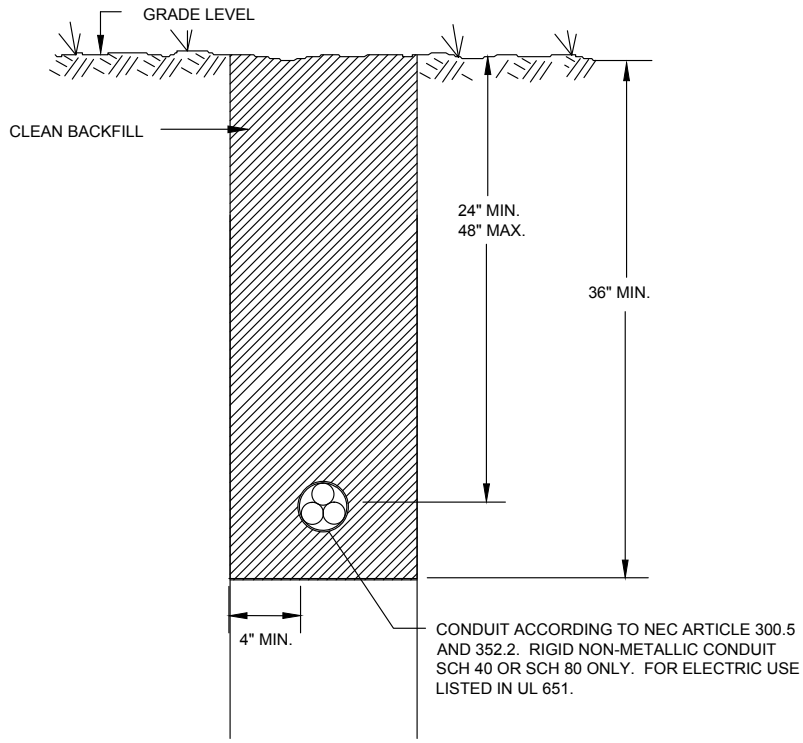
4 – 16 Service Lateral Installed in Conduit

SERVICE LATERAL INSTALLED IN CONDUIT

IF UNDERGROUND SERVICE CABLES ARE TO BE INSTALLED IN CONDUIT, THE CONDUIT SYSTEM MUST BE SCHEDULE 40 PVC DB, LISTED RIGID NON-METALLIC CONDUIT IN ACCORDANCE WITH ARTICLE 300 OF THE NEC AND MAINTAINED BY THE CUSTOMER.

CABLES FOR SERVICE UP TO 250 FEET IN LENGTH, RECOMMENDED THREE CONDUCTOR (2-4/0 & 1-2/0) ALUMINUM.

IF CUSTOMER REQUESTS TO RUN SERVICE GREATER THAN 250 FEET, AN APPROVED METER PEDESTAL MUST BE INSTALLED. THE PEDESTAL LOCATION WILL BE DESIGNATED BY THE COMPANY.



CONDUIT MUST BE USED UNDER ROADS OR DRIVEWAYS.

Figure 23

Note: If customer chooses to install more than 250 horizontal feet with 600-volt service cables, a metering pedestal must be installed. The company will designate the location for this type of installation. (Refer to Section 8)

4 – 17 Service Lateral Under Driveway

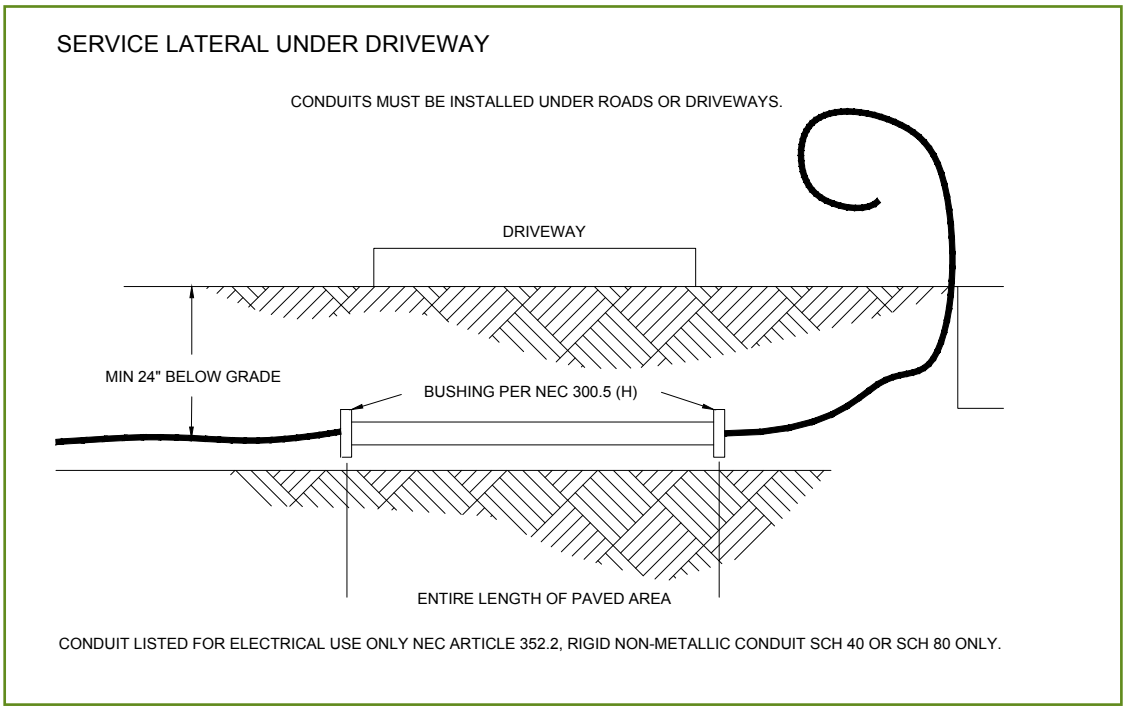


Figure 24

4 – 18 Continuous Service Lateral Riser

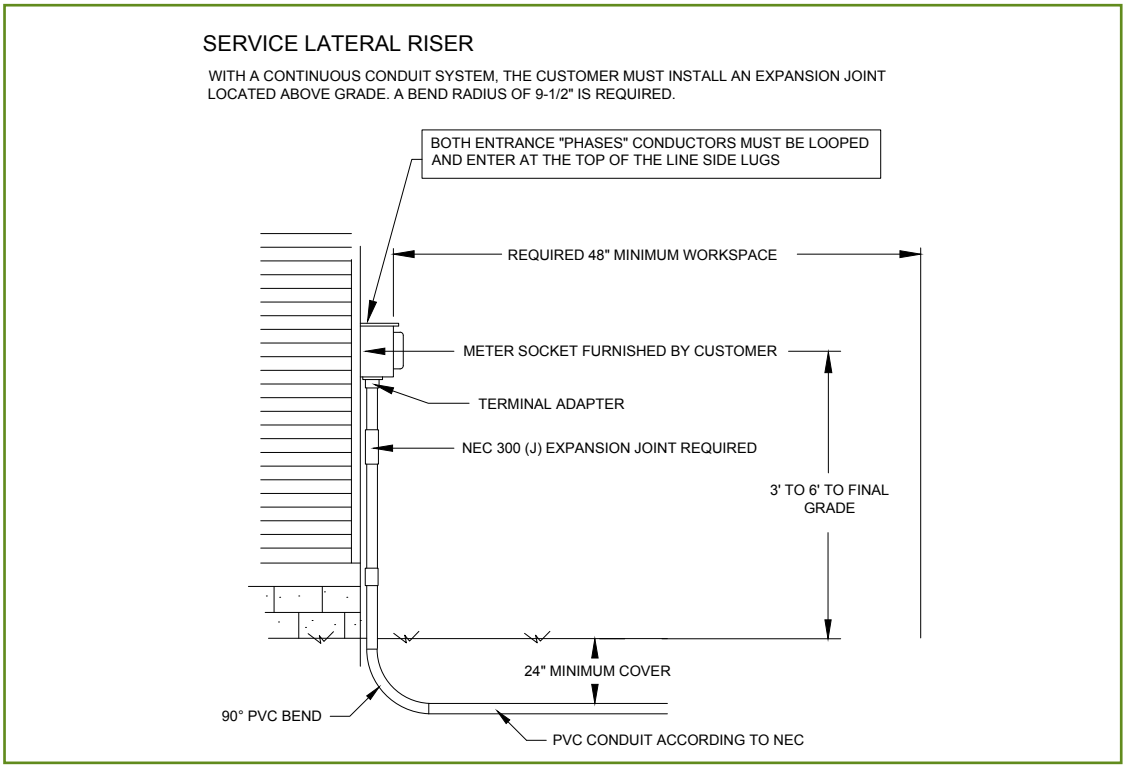


Figure 25

4 – 19 Service Lateral Riser – Direct Buried

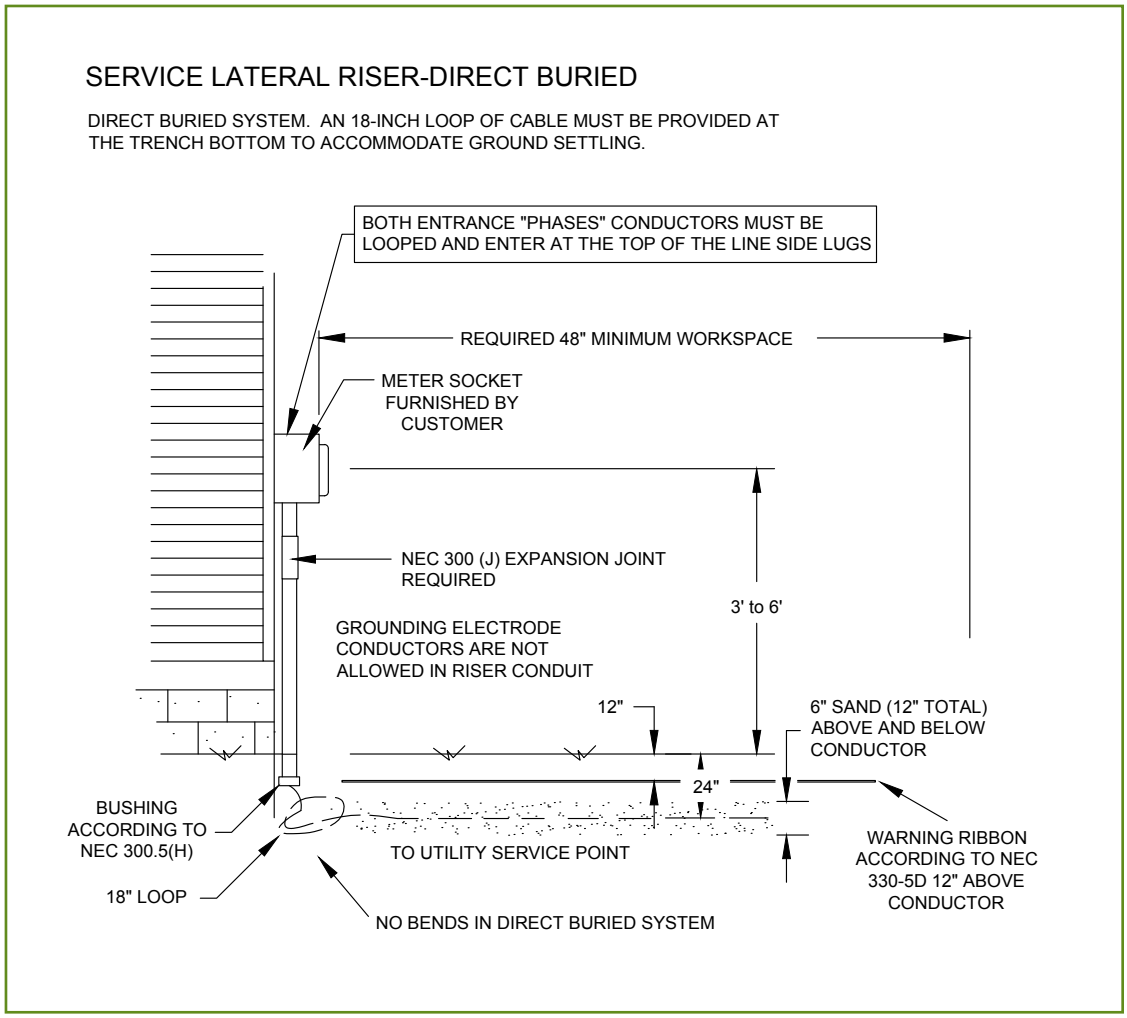


Figure 26

4 – 20 Common Utility Trench (See Requirements in Section 4 and 10)

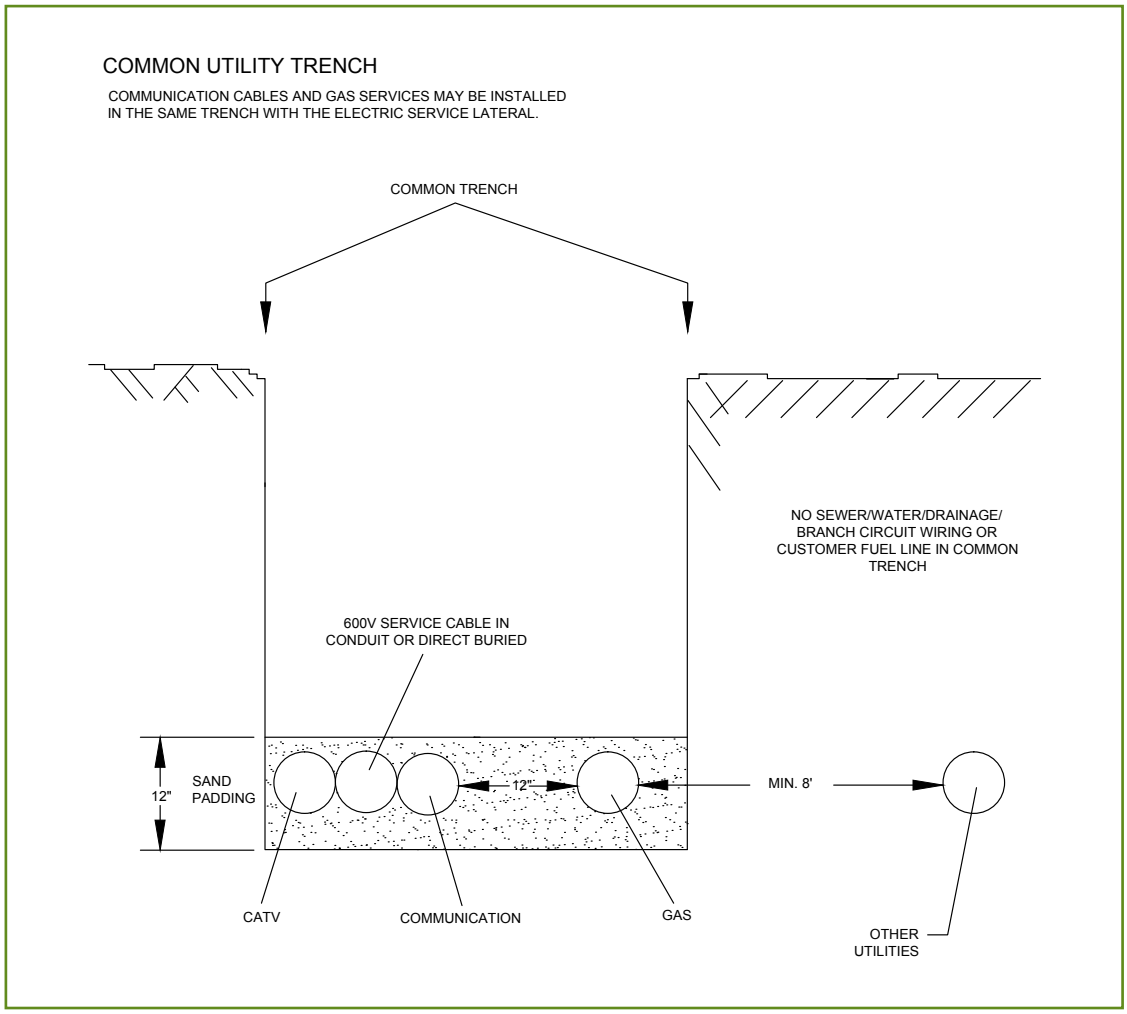


Figure 27

In addition to fulfilling the requirements listed in Section 4 – 1a and 4 –1b, these additional requirements apply.

4 – 20a Customer/Contractor

- Contact the appropriate utility to coordinate the communication cable installation. The trench width will vary depending on occupancy from a minimum of eight inches for electric, telephone, and CATV, to 18 inches when a gas fuel line is included.
- Ensure a 12-inch separation between all cables and the gas fuel line.

  Note: Under no circumstances will other occupants such as sewer, water, drainage systems, feeders, or branch circuit wiring be allowed in the service trench.
- Maintain a minimum eight-foot separation from other occupants to the service lateral.
- Maintain a minimum of two feet of vertical separation if other utilities cross the common trench.

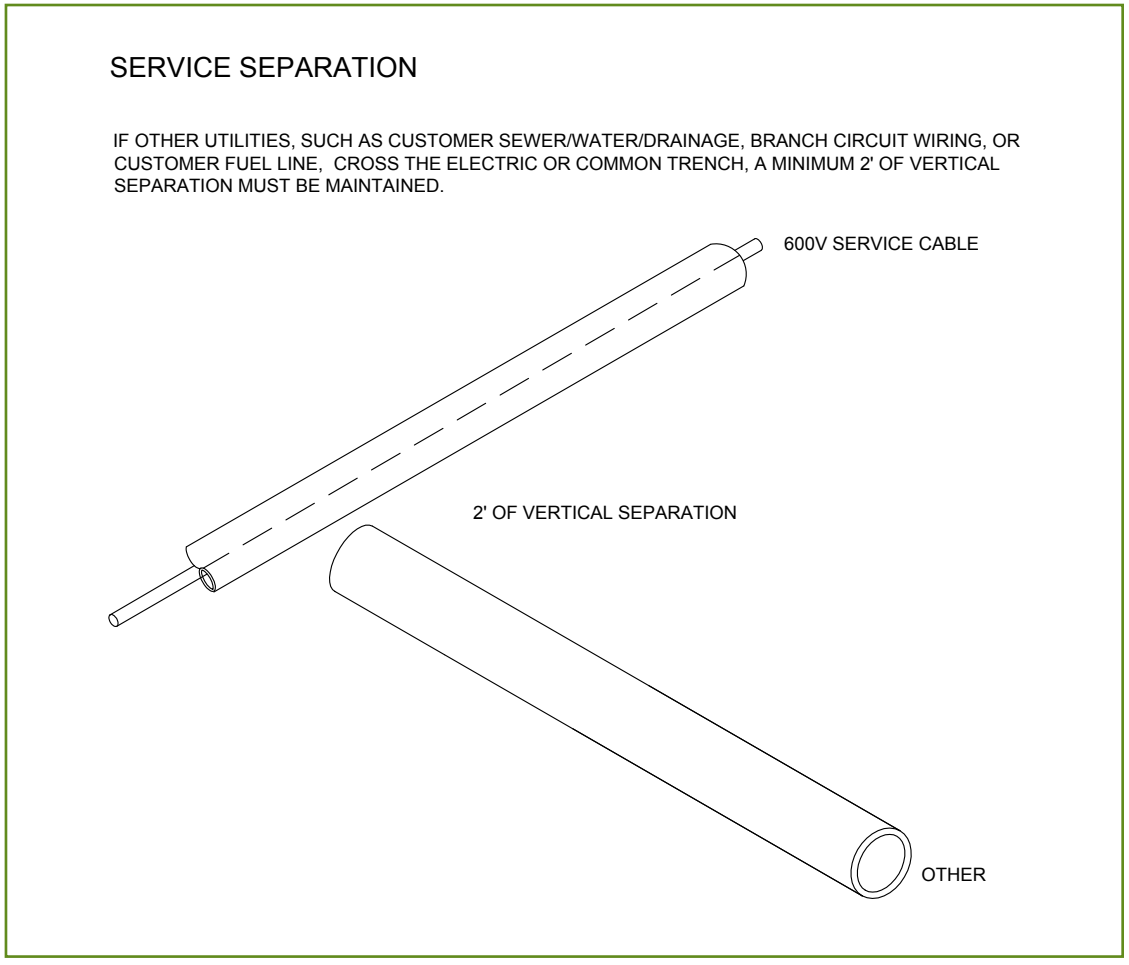
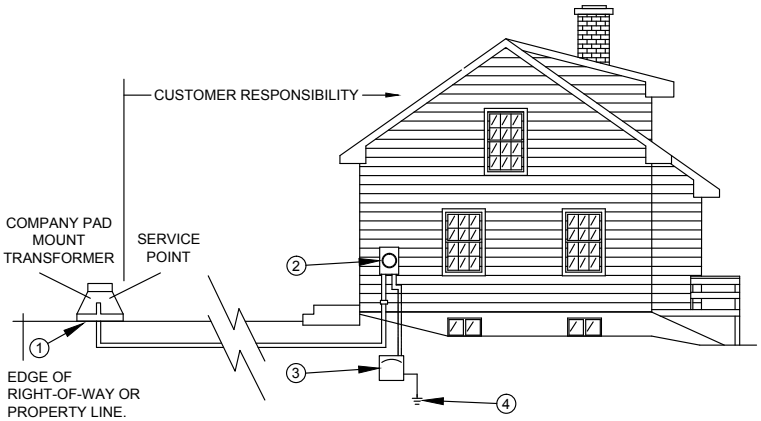


Figure 28

4 – 21 Underground Residential Distributions (URD)

UNDERGROUND RESIDENTIAL DISTRIBUTION (URD)

CUSTOMER-INSTALLED UNDERGROUND SERVICE LATERALS MUST BE MAINTAINED BY THE CUSTOMER. THE INSTALLATION MUST BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND THE COMPANY SPECIFICATIONS WHEN APPLICABLE. THE APPLICANT MUST PROVIDE, INSTALL, AND MAINTAIN ALL SINGLE-PHASE METER BOXES.



10' MINIMUM SPACE REQUIREMENT FOR TRANSFORMERS FOR URD INSTALLATIONS IN SUBDIVISIONS FROM ANY STRUCTURE WALL.

CHECK LIST-BEFORE OBTAINING AN ELECTRICAL INSPECTION APPROVAL AND SCHEDULING WITH COMPANY

1. CABLE INSTALLED AND PROTECTED ACCORDING TO COMPANY REQUIREMENTS AND THE NEC
2. CONDUCTORS TERMINATED IN METER BOX ACCORDING TO COMPANY REQUIREMENTS AND THE NEC
   - A. UL-LISTED CERTIFICATION
   - *B. INSPECTION STICKER ON WALL OF ENCLOSURE
3. CONDUCTORS TERMINATED IN MAIN DISCONNECT PANEL ACCORDING TO THE NEC
4. MAIN DISCONNECT PANEL GROUNDED ACCORDING TO NEC

* ELECTRICAL INSPECTION STICKER OF CERTIFICATION REQUIRED ON METER BOX:

1. NEW SERVICE INSTALLATION
2. CUSTOMER REWIRES AND/OR SERVICE UPGRADES
   - B. SCHEDULES ELECTRICAL INSPECTOR ON SITE AFTER COMPANY DISCONNECTS SERVICE FOR CUSTOMER TO INSTALL SERVICE AND RECONNECTED BY THE COMPANY

Figure 29

General
Underground residential distribution (URD) systems are provided to a government-approved subdivision consisting of five or more dwelling units or to a multiple dwelling of four or more units. Underground systems are required for most new residential developments. The design and installation of this type of system requires close coordination between customer/developer and the company. The company must be consulted during the earliest planning stages. Information on URD and related installation costs is available through the company's website. The company will not install the underground electric facilities until water and sewer are installed and the site is within six inches of final grade. The developer must rough grade the easement strip, and place and maintain construction survey stakes indicating grades, property lines, and location of other utilities. The service cable and its installation must be in accordance with the NEC and company requirements and must be maintained by the party of ownership.

In addition to fulfilling the requirements listed in Section 4 – 1a and 4 –1b, these additional requirements apply.

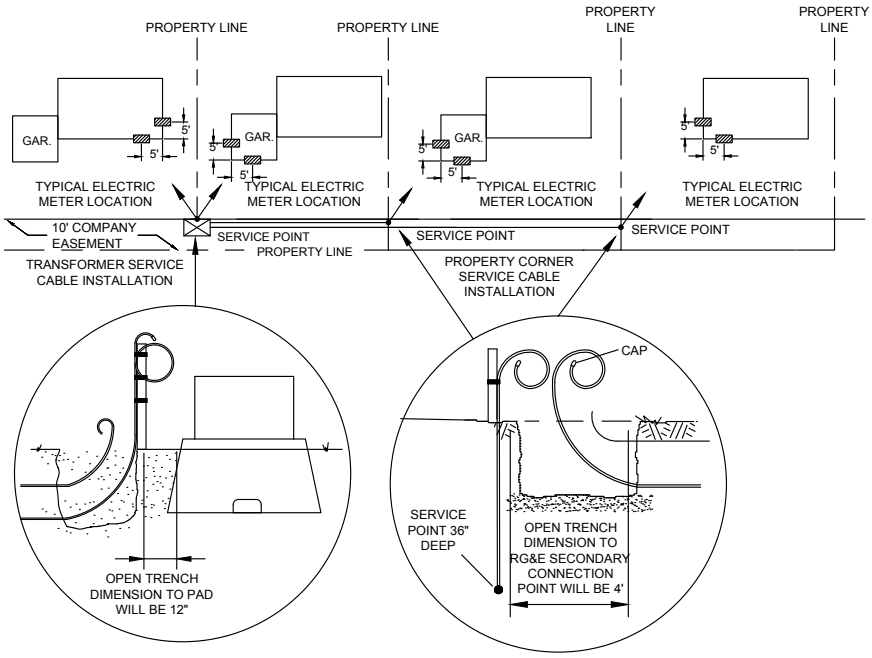
4 – 21a Customer/Contractor

- Ensure trench is open for inspection by the authority having jurisdiction before backfilling.
- Correct the violation and then have the same agency reinspect, if the service fails to meet approval.

4 – 22 Service Point and Meter Locations

SERVICE POINT AND METER LOCATIONS

THE METER BOX MUST BE A MAXIMUM OF 5 FEET FROM THE BUILDING CORNER (INCLUDING GARAGES) CLOSEST TO THE COMPANY'S SERVICE POINT (TRANSFORMER OR PROPERTY CORNER). THE METER BOX MUST HAVE A UL-LISTED LABEL.



● SERVICE POINTS: CONNECTIONS TO COMPANY DISTRIBUTION SYSTEM

CONTRACTOR MUST REFER TO THE COMPANY ENGINEERING SKETCH FOR SERVICE POINT LOCATION. THE BUILDER/DEVELOPER HAS THE SKETCH ON FILE AND THE SERVICE REQUEST WILL BE RETURNED WITH THIS INFORMATION. IF THE CONTRACTOR RUNS THE SERVICE TO THE WRONG SERVICE POINT LOCATION, THE SERVICE WILL NOT BE ENERGIZED AND IT WILL HAVE TO BE RELOCATED AT THE CONTRACTOR'S EXPENSE TO THE RIGHT LOCATION. COMPANY MAY CHARGE FOR A SECOND TRIP.

Figure 30

4 – 23 Permanent Service Prior to Framing

SERVICE PRIOR TO FRAMING

PERMANENT CUSTOMER-INSTALLED UNDERGROUND SERVICE LATERAL MAY BE ENERGIZED PRIOR TO FRAMING OF THE BUILDING (RESIDENTIAL APPLICANTS ONLY), ONLY IF THE SERVICE MEETS NEC REQUIREMENTS FOR WEATHERPROOFING SERVICE EQUIPMENT IN AN EXPOSED BASEMENT.

FOR WEATHERPROOFING, CUSTOMER MUST INSTALL A PLASTIC COVER SEAL TIGHT TO BASEMENT WALL OR INSTALL THE DECK.

PANEL MUST BE GROUNDED ACCORDING TO NEC REQUIREMENTS.

METER BOX MUST HAVE PROPER SUPPORT, AND THE METER BOX MUST HAVE A "UL APPROVED" LABEL.

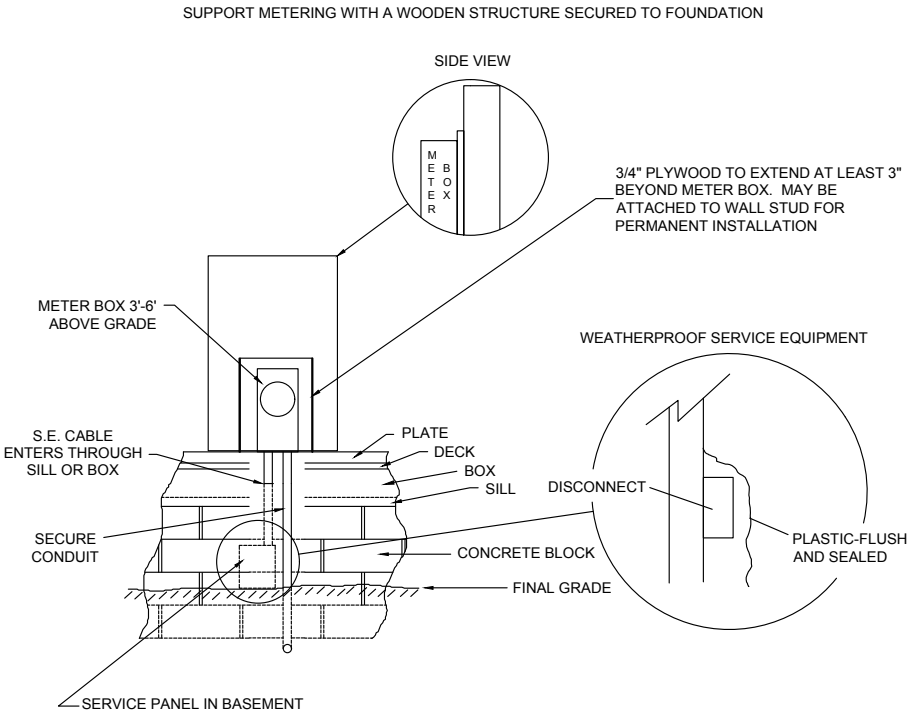


Figure 31

4 – 24 Non-Residential Overhead Services

General
A Non-Residential overhead service is a service that feeds single-phase or three-phase to a person, corporation, or other entity who is not a residential applicant requesting overhead service from the company. Generally, an overhead service drop is limited to supply service rated 800 amperes or less. The company recommends an underground service for services larger than 800 amperes.

In addition to fulfilling the requirements listed in Section 4 – 1a and 4 –1b, these additional requirements apply.

4 – 24a Customer/Contractor

- Install all three-phase metering equipment (refer to Section 8 for metering requirements).
- Provide and install service drop 600-volt insulator attachments for single-phase and three-phase services.

4 – 24b Company

- Designate the location of the service, if there is an obstruction or clearance issue.

4 – 25 Non-Residential Underground Service Connections from Overhead Lines Less Than 600 Volts

General
A Non-Residential underground service is a service that feeds single-phase or three-phase to a person, corporation, or other entity who is not a residential applicant requesting underground service from the company.

In addition to fulfilling the requirements listed in Section 4 – 1a and 4 –1b, these additional requirements apply.

4 – 25a Customer/Contractor

- Consult with the company if requesting a single-phase or three-phase underground service lateral from the company's overhead distribution line.
- Contact the company before work begins to designate the service point at the pole, the conduit location from which service will be taken, the route to be followed, and the meter location.

  Note: If the municipality refuses to permit the overhead crossing, the customer is responsible for obtaining a permit, then excavating or boring, and installing the road crossing to the company's existing distribution facilities according to company specifications.

  Note: For Non-Residential underground services, an exception may be made for more than two conduits on the pole. **The exception must be approved by company engineering and meet the NEC requirements so that the service cables meet the service loading.**
- Install standpipe and bend. (Refer to Figure 32 on page 52)
- If #2 ground wire is already installed on the pole, it can be used for grounding customer standpipe.

4–25b Company

- Install a pole and appropriate guy on the customer premises to be served, if the company's distribution is on the opposite side of the highway. Charges may be applied according to the *Tariff Schedules for Electric Service.*
- Number of service conduits for Non-Residential will be proposed to company with sets of cables, RG&E engineering to review and approve before installed. If cables are larger than 4/0 AWG, the customer or contractor will schedule for the company to do its work at the time the cable is being installed.
- Provide and install, without charge, the protective covering above the standpipe, the necessary cable supports and fittings.
- Connect the cable to its secondary system.

4 – 26 Standpipe and Bend

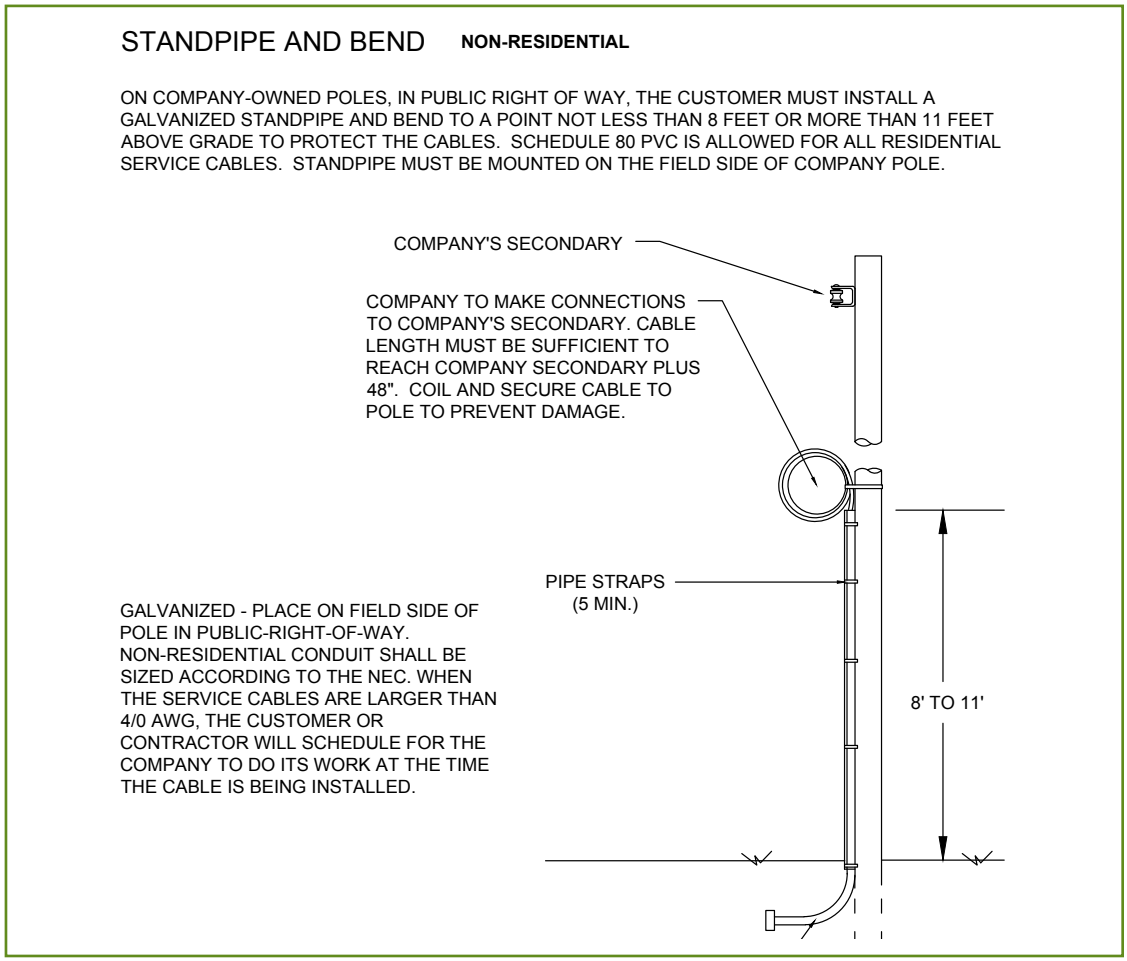


Figure 32

In addition to fulfilling the requirements listed in Section 4 – 1a and 4 –1b, these additional requirements apply.

4 – 27 Non-Residential Underground Service Connection in Padmounted Transformers

General

A Non-Residential underground service is a service that feeds single-phase or three-phase to a person, corporation, or other entity, who is not a residential applicant, requesting underground service from the company.

4 – 27a Customer/Contractor

- Provide the company with final approved site plans.
- Allow sufficient lead time for the company to design the underground electric facilities.
- Provide property on which to construct the transformer foundation and paved access by vehicle to the transformer pad according to company requirements.
- Install, own, and maintain the concrete pad foundation for the transformer according to company specifications.
- Ensure proper grounding system is in place.
- Install and maintain service laterals, service cables, and conduits in accordance with the NEC and company requirements.
- Ensure cables are long enough to form a coil at the floor of the pad to the roof, plus eight feet of additional cable for support.
- Ensure cables are insulated and terminated at the **dead** transformer end with Burndy Type YA or approved equivalent type lugs, one-half-inch stainless steel or bronze bolts, washers, and nuts, according to company specifications. The customer must purchase bronze bolts, washers, and nuts, and ensure that these lugs have a two-hole NEMA drilled tongue and a long shank for a minimum of two compression indents one-and-three-quarter inches in width.

  Note: If there is an existing padmounted transformer, the customer must make shutdown arrangements to de-energize the transformer. In addition, the customer must pull in new service cables terminated with one-and-three-quarter-inch lugs according to company specifications. The company must terminate on the transformer's two-hole spade on the customer's additional cables.
- Contribute to the cost of the service connection as well as the charges associated with the shutdown if it occurs after regular working hours.

The company will refuse to energize services until all requirements are met.

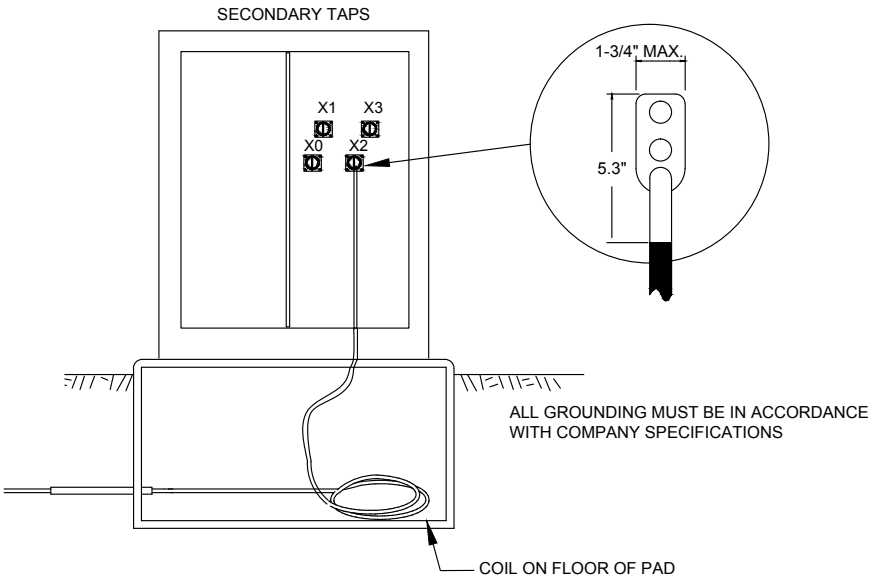
4 – 27b Company

- Provide underground distribution systems to Non-Residential service loads using at-grade transformers and switchgear.
- Supply design requirements for the installation of this type of service.
- Provide to the customer a copy of the design sketch and copies of the company standards for Outdoor Three-Phase Padmounted Transformer and Customer Provided Primary Conduit Systems. The company will provide the sketch and cost estimate.

PADMOUNTED TRANSFORMER

THREE-PHASE PAD-MOUNTED INSTALLATIONS MUST BE INSTALLED IN ACCORDANCE WITH COMPANY SPECIFICATIONS.

THE CUSTOMER'S CABLES MUST BE INSULATED STRANDED CABLE TERMINATED AT THE TRANSFORMER END WITH BURNDY TYPE YA (OR APPROVED EQUIVALENT) COMPRESSION-TYPE LUGS. THESE LUGS MUST HAVE A TWO-HOLE NEMA-DRILLED TONGUE AND A LONG SHANK FOR A MINIMUM OF TWO COMPRESSION INDENTS 1 3/4" WIDE. THE CUSTOMER MUST TERMINATE THE LUGS ON THE DE-ENERGIZED TRANSFORMER SPADES ACCORDING TO COMPANY REQUIREMENTS.



THE CUSTOMER/DEVELOPER MUST INSTALL, OWN, AND MAINTAIN THE CONCRETE PAD FOUNDATION FOR THE TRANSFORMER. THE FOUNDATION MUST BE INSTALLED IN ACCORDANCE WITH COMPANY SPECIFICATIONS.

Figure 33