CUSTOMER INFORMATION GUIDE

Saskatoon Light & Power

2025

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Customer Information Guide

2025

City of Saskatoon

SASKATOON LIGHT & POWER

Reliable . Responsive .

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0 Contact Information

Visit Saskatoon Light & Power online at Saskatoon.ca/SLP, contact us via email at Saskatoon.Light.Power@Saskatoon.ca, or call us at 306-975-2414.

Saskatoon Light & Power – Outages/Emergencies (24/7 Line)

For reporting power outages or other electrical emergencies.

306-975-2414 option 1

Saskatoon Light & Power – Accounts

For information about power bills, new accounts, or changes to an existing account.

306-975-2414 option 2

Saskatoon Light & Power – Customer Connections

For inquiries about upgrading an existing service or installing a new service.

306-975-2414 option 3

Saskatoon Light & Power – Meter Shop

For inquiries about metering or to schedule a cut/reconnect.

306-975-2414 option 4

Saskatoon Light & Power – Operations Scheduling

For scheduling construction after receiving a Work Order number from Saskatoon Light & Power.

306-975-2414 option 5

Saskatoon Light & Power – General Inquiries

For all other inquiries.

306-975-2414 option 0

Powerline Locates

Contact Sask 1st Call to schedule underground powerline locates when you plan to dig or excavate.

1-866-828-4888

Sask1stCall.com

Customer Self-Generation Programs

For more information on customer self-generation programs and applications.

306-975-2585

SelfGenerationProgram@Saskatoon.ca

Schedule witness test of self-generation systems.

306-975-2414 option 4

Electrical Inspections and Permits

Schedule inspections and obtain permits from the *Technical Safety Authority of Saskatchewan* (TSASK) before any electrical work is performed by the electrical contractor.

1-866-530-8599

TSASK.ca

1 General Information

1.1 Mission

Our mission is to be relentless in the pursuit of improvements to our programs and services to meet the changing needs of our customers. We achieve this by seeking opportunities to improve environmental sustainability, maintain our financial sustainability, and build and maintain a robust grid that meets the needs of the future.

The information in this guide is intended to help existing and future customers to connect with our system in a safe, responsible, and professional manner when planning upgrades or new construction.

1.2 Values

Service and system design standards used by Saskatoon Light & Power (SL&P) are intended to provide a high level of service to customers, minimizing the number and duration of power outages. Consideration needs to be made for an electrical installation to not only serve the load in a safe, efficient, and convenient manner now, but to provide capacity for future load growth. Installations with adequate capacity and convenient arrangement are essential to secure the full benefits of electrical service. This is important for commercial and industrial customers where an inadequate installation could result in production limitations, power losses and excessive maintenance costs.

Every effort will be made to comply with a customer's service request, but SL&P reserves the right to determine the supply voltage and load limitation, depending on available system capacity. Each request for service is reviewed with a view of the whole system. On behalf of the utility and its customers, SL&P will not make uneconomical investments for connecting customers.

Customers should apply for service early in their planning stages to help ensure that SL&P can meet the customer's project time schedule and to ensure that installation will be satisfactory.

Disclaimer

The information in this manual provides guidelines necessary to expedite the connection of electric service. Where details are shown, they are provided to assure the safety of individuals in the immediate vicinity of the electrical service entrance. It is the responsibility of the customer, their engineers, and their contractors to ensure that the installation meets all applicable codes. Saskatoon Light & Power does not assume this responsibility.

Saskatoon Light & Power may refuse to provide or continue with electrical service if the customer fails to adhere to this manual.

2 Definitions

Building: A structure that stands alone or that is cut off from adjoining structures by firewalls, unpierced or with openings, protected by approved fire doors.

Customer service: Electrical conductors between a demarcation point and a service box.

Demarcation point: A point where a supply service and a customer service connect.

Dwelling, multiple unit: A structure or a portion thereof designed for or occupied as three or more dwelling units, but not including a motel, hotel, converted dwelling, street townhouse or townhouse.

Dwelling unit: A suite operated as a housekeeping unit, used or intended to be used by one or more persons and usually containing cooking, eating, living, sleeping and sanitary facilities.

Garage suite: A building containing both a garden suite and an area used as a private garage that is accessory to and located in the rear yard of a one-unit dwelling, two-unit dwelling or semi-detached dwelling.

Garden suite: A self-contained, ground-oriented dwelling unit that is accessory to and located in the rear yard of a one-unit dwelling, two-unit dwelling or semi-detached dwelling

Network service: Secondary conductors from a Network System.

Overhead service: A supply service that primarily travels above ground.

Point of attachment: The point where an overhead service connects to a structural member near a weatherhead.

Service box: An assembly consisting of an enclosure that can be locked or sealed, containing either fuses and a switch, or a circuit breaker, and of such design that it is possible to operate either the switch or circuit breaker to the open position by manual means when the box is closed.

Site: An area of land which is under one ownership considered as a unit, having its principal frontage on a public street, and is not divided by a public street.

Supply service: Electrical conductors between a demarcation point and a supply authority’s electrical grid.

Underground service: A supply service that primarily travels below ground.

3 Core Services

3.1 Power

Saskatoon Light & Power provides electrical service to customers within its franchise area, defined roughly by the 1958 City of Saskatoon (City) limits. See Figure 1 on page 38 for details on SL&P service boundaries. Power is purchased in bulk from SaskPower and distributed through a system of transmission lines, substations, and distribution lines. Power is delivered to our customers at a variety of voltage levels and configurations. Metering of the power is provided by our Measurement Canada accredited Meter Shop.

More details regarding electrical services can be found in Section 6, Power, on page 9.

3.2 Street Lighting

The city of Saskatoon illuminates all roadways (except back alleys) and has approximately 35,000 lights. The principal purpose of street lighting is to allow accurate and comfortable visibility at night of possible hazards in sufficient time to allow for appropriate action. For a pedestrian this can mean better visibility of their surroundings and sidewalk, while for the driver of a motor vehicle it will mean having time to stop or maneuver around an obstacle. Good lighting has been shown to significantly reduce the number of accidents at night, especially on urban freeways and on major streets. For most streets and sidewalks, good lighting has been reported to increase the feeling of personal security of pedestrians.

Two service providers own and maintain streetlights in Saskatoon: SaskPower with approximately 6,000 lights, and SL&P with approximately 29,000 lights. The *SL&P Lighting Boundary Map*, available online at Saskatoon.ca/SLP indicates the areas that are served by the two providers.

The designs for roadway lighting systems in Saskatoon are based on the latest edition of *Illuminating Engineering Society of North America's guidelines for roadway lighting (RP-8)*. These guidelines establish appropriate lighting levels, visibility levels and uniformity of lighting levels for a given class and operational characteristics of a roadway. Characteristics that are considered are traffic volume, speed, and pedestrian usage.

The City's Parks Department determines if lighting is warranted in parks and on pathways. SL&P designs, installs, and maintains the lighting systems in all parks and on pathways. Requests for additional lighting are to be directed to the City's Parks Department at 306-975-3300.

3.3 Telecommunication

SL&P is not a public telecommunications provider. Telecommunication companies may lease space on SL&P's facilities provided an agreement is reached prior to installation

of any equipment. Ongoing rental and lease payments will be charged for the use of SL&P infrastructure.

3.3.1 Shared Overhead Installations

Qualified telecommunication companies can install and maintain their overhead systems and equipment on SL&P poles. Installation of antenna structures will be considered on a case-by-case basis.

3.3.2 Shared Underground Installations

The installation of telecommunications equipment in SL&P underground facilities must be performed by SL&P staff.

3.3.3 Communication Infrastructure

SL&P owns and operates various communication systems for the operation and control of its power systems as well as for other City departments.

4 Service Area

Saskatoon Light & Power provides electrical service within the 1958 city boundaries with the exception of the University of Saskatchewan, which is jointly serviced by SL&P and SaskPower. See Figure 1 on page 38 for details on SL&P service boundaries. The areas outside the 1958 boundary are served by SaskPower.

For additional information and a more detailed map of the franchise area visit us at Saskatoon.ca/SLPAboutUs.

5 Safety Information

5.1 Clearances

For a complete list of clearances required by SL&P, see Table 2 on page 57.

5.1.1 Overhead Lines

When working in proximity to SL&P overhead lines, one must:

- Comply with the *Saskatchewan Employment Act & Occupational Health and Safety Regulations* to ensure worker safety.
- Consult with SL&P prior to any beginning any work.
- Cover all costs of either de-energizing SL&P's overhead line or installing cover-ups on the line if required for any installation or maintenance of structures.
- Accept all responsibility and liability should any mishap occur related to the presence of their structures.

See Table 1, on page 56, for the minimum clearances to overhead lines that must be maintained by persons, equipment, and permanent structures.

See Table 2, on page 57, for the minimum clearances that must be maintained between overhead service conductors and various surfaces, such as a driveway, a peaked roof, etc.

5.1.2 Underground Lines

When working in proximity to SL&P underground lines, one must:

- Contact Sask 1st Call (see Section 0, Contact Information, on page 0) to request a cable locate and to receive a clearance for underground cables and duct banks within the SL&P franchise area. Requests must be made a minimum of three (3) days in advance.
  - Be advised that there may be customer owned underground cables on the property which SL&P will not locate.
- Once located, if excavating within 1.0 m of markings, hand expose or hydro-vac cables and duct banks.
- If conductors need to be de-energized, call SL&P at 306-975-2414 option 0. A minimum notice of three (3) working days is required.
- Before backfilling, call SL&P at 306-975-2414 option 0 to allow for inspection of cables and duct banks.

See Table 2, on page 57, for the minimum clearances that must be maintained between underground service conductors and various objects, such as a gas line, a pool, etc.

5.1.3 Power Poles

Before excavating within 3 metres of a power pole, one must contact SL&P and provide details of the excavation to occur.

5.2 Customer Recommendations

Customers must ensure that their electrical infrastructure is in good condition prior to service changes, installations, and/or upgrades. For fire safety, efficiency, and reliability, it is recommended that all customers have adequate surge protection and proper grounding. It is also recommended that commercial and industrial customers consider including power factor correction and phase loss protection schemes. Consult your electrical contractor and/or engineering consultant for more information on load side reliability and/or protection schemes.

DANGER

NEVER HANDLE CONDUCTORS UNDER ANY CIRCUMSTANCES!

If accidental contact occurs, immediately report the incident to SL&P Outages/Emergencies at 306-975-2414 option 1.

If emergency services are required, call 911.

6 Power

6.1 Connections

SL&P offers the following secondary service voltages:

- 120/240V 1-phase 3-wire
- 120/208V 2-phase 3-wire
- 120/208V 3-phase 4-wire
- 347/600V 3-phase 4-wire

SL&P will provide a maximum of one point of service for each property. If additional information on servicing is required, please contact SL&P Customer Connections at 306-975-2414 option 3.

SL&P does not offer 240V 3-phase 3-wire service as an upgrade or perform upgrades on existing 240V 3-phase 3-wire systems.

For information on primary service, please contact SL&P Customer Connections at 306-975-2414 option 3.

The electrical wiring past the demarcation point between the customer and the utility must satisfy the current *Canadian Electric Code (CEC)* and Technical Safety Authority of Saskatchewan (TSASK) requirements. Service conductors on the customer's end are to be colour coded as per the *CEC* requirements for both overhead and underground services.

Saskatoon Light & Power has the right to refuse energizing any service if there is a concern regarding safety.

It is the duty of the customer to contact SL&P to gather all the information prior to the start of construction.

6.2 Service Request Process

Saskatoon Light & Power will provide design estimates for new or upgraded electrical services by an informal request but will not order equipment without a written/signed acceptance of the design and costs associated with the upgrade.

SL&P may require a site plan and single-line diagram.

In most cases, SL&P requires a 4.0 m x 6.0 m area on customer property for a pad-mount transformer and a 2.0 m x 3.0 m area for the splitter required to provide electrical service.

Customers are not permitted to remove a meter and/or perform a service disconnect under any circumstances.

Report any unsafe conditions to the SL&P Meter Shop at 306-975-2414 option 4.

For any new electrical service or to make changes to an existing service, the following steps are followed:

Contact

1. **The Customer** submits an Electrical Service Request form to Saskatoon.Light.Power@Saskatoon.ca. This form can be obtained online at Saskatoon.ca/SLPElectricalService or by calling SL&P Customer Connections at 306-975-2414 option 3 and providing your email address.
2. **SL&P** responds to the inquiry within five to seven (5 to 7) business days to gather more information on the service request change.

Design

3. **The Customer**, if requesting commercial or instrument-rated services, is required to submit all project drawings (e.g. building, single-line, switchgear, etc.) to SL&P for review.
4. **SL&P Engineering** typically completes a preliminary design within five (5) business days based on the information gathered.
5. **The Customer** and **SL&P Engineering** work on the design details until a design is mutually agreed upon, listing the responsibilities of each party.

Note**:** To help prevent the need for expensive, inconvenient, and inferior designs, **the Customer** must consult **SL&P Engineering** on the placement of the demarcation point, meter location, cable routing, and transformer location (if applicable) prior to construction.

Quote

6. **SL&P Engineering** estimates costs associated with the work. A one (1) year revenue investment may be included for new customers.
7. **SL&P Engineering** sends a Cost Acceptance and Pre-Payment Form and the final design plan to **the Customer** for approval.
    a. Note that Cost Acceptance and Pre-Payment forms and other quotes issued by SL&P are valid for a maximum of one year.
8. **The Customer** signs and returns the Cost Acceptance and Pre-Payment Form and the final design to **SL&P Engineering**.

Work Order

9. **SL&P Engineering** initiates a Work Order and informs **the Customer** of the Work Order number.
10. **SL&P** sends an invoice to **the Customer** for the pre-payment amount as outlined in the Cost Acceptance and Pre-Payment Form.

11. **The Customer** pays the invoice.
12. **SL&P Operations** prepares for the job and adds the Work Order to the preliminary schedule.

Note: If any changes are made at this stage by the customer, SL&P will return the project file to the Design stage and the process is repeated.

Construction

13. **The Customer** completes their responsibilities listed on the design.
    - To avoid extra costs or delays, **the Customer** must not backfill excavations before receiving approval from **SL&P Engineering**.
14. **SL&P Engineering** inspects the work and informs **SL&P Operations** and **the Customer** if they can proceed with scheduling.
    - Any customer completed trenching, conduit selection and/or placement is subject to inspection and approval by SL&P for infrastructure compatibility and adherence to design requirements prior to backfilling. This will be in the form of site visit(s) with written approval. At the discretion of SL&P Engineering, digital submission with photos of the trench and the conduit layout including clear depth measurements may be accepted.
15. **The Customer** contacts **SL&P Operations** at 306-975-2414 option 5 for scheduling, providing the Work Order number and address for reference.
    - **SL&P Operations** does not schedule a project until **the Customer** is ready for service and the project has been inspected for conformance with SL&P requirements.
16. **SL&P Operations** completes the job within four to six (4 to 6) weeks, depending on the nature of the work.

Energization and Closing

17. **The Customer** ensures they have an account for each utility meter required. An account can be set up in the following ways:
    a. *In person* at City Hall at 222 3rd Avenue North,
    b. *Over the phone* at 306-975-2400 or 1-800-667-9944,
    c. *Or via email* at Revenue@Saskatoon.ca
18. **A licensed electrical contractor** contacts the **SL&P Meter Shop** at 306-975-2414, option 4 and provides the TSASK Electrical Permit number. An energization sticker must be attached to the meter socket prior to meter installation.
19. The **SL&P Meter Shop** installs the meter.
20. **SL&P** sends the final invoice, as applicable.

6.3 Infill Development

The City's *Neighbourhood Infill Development Strategy* permits the construction of additional residential units in established neighbourhoods of Saskatoon. Infill usually occurs by adding an additional residential unit within a house by adding a garage and garden suite or the demolition of a house and subdividing the land to create additional residential lots.

The infill purchase listings note that the utilities, such as natural gas, electric power, and phone service will be provided from the property line to a point to be determined by the respective utility agencies. SL&P will provide an underground service in such cases unless circumstances dictates that an overhead service be installed. SL&P will review the conditions during the design process and method of delivery will be conveyed to the customer at that time. Costs associated with the service connection are the responsibility of the customer.

Please contact SL&P Customer Connections at 306-975-2414 option 3 for more information on the method of delivery and the costs associated with the delivery of electrical power to the property.

Saskatoon Light & Power will determine service connection design for infill developments.

It is the responsibility of the customer to contact SL&P to gather all requirements prior to service connection.

Saskatoon Light & Power may refuse service if required clearances/requirements cannot be provided.

6.4 Single-Dwelling Residential Services

Single-dwelling residential service requirements apply to all sites with only one dwelling unit.

Note that, including certain duplexes and condominiums, any non-detached dwellings where the units and associated lands are individually titled are typically serviced individually and subject to the requirements of this section. However, SL&P may require that these sites be serviced together, and therefore comply with the requirements of Section 6.5, Multiple-Dwelling Residential Services, if individual servicing is impractical.

Properties with garden suites, garage suites, or other detached dwellings which are accessory to a main dwelling are subject to the requirements of Section 6.5, Multiple-Dwelling Residential Services.

A single meter shall measure energy consumed by a single customer in any individual site, including individual dwellings within a multiple unit dwelling (e.g., an apartment).

If a single customer requires more than 200 A, instrument-rated metering will be required. See Section 7, Metering, on page 28 for more information.

SL&P will provide only one supply service per building.

The meter location shall be chosen according to the preferences shown in Figure 5 on page 42. If none of the preferred locations meet clearance requirements, the customer

will be responsible to supply and install a free-standing meter base/pedestal which will be the point of service. Please contact SL&P Engineering prior to the installation of a free-standing meter base/pedestal.

Underground services are typically provided for all upgrades, new builds, and infills. However, SL&P may allow an overhead service to remain or be provided. Overhead service options are limited to a supply service of 600 A for 120/240 V or 120/208 V, or 200 A for 347/600 V.

6.4.1 Underground Services

Single-dwelling residential underground service options include:

- If the supply service is less than or equal to 200 A:
  - Loop box and meter socket.
    - See Figure 3 on page 40 for more information on this service option.
- If the supply service is greater than 200 A:
  - External splitter and instrument-rated metering.

The below requirements apply to single-dwelling residential underground services. The demarcation point is the line-side lugs of the meter socket.

The Customer must inform SL&P of any proposed changes to non-SL&P underground facilities.

- The Customer is responsible to ensure the clearances listed in Table 2 are maintained.
  - **SL&P may refuse service if the required clearances are not provided.**

Conduit and Trench Route

- The Customer is responsible for trenching on property.
- The Customer is responsible to supply and install rigid PVC conduit from the demarcation point to the property line per the SL&P design, of the size and quantity specified in Table 3. See Figure 2 on page 38 for more info on typical trench routes.
- The Customer is responsible to supply and install SaskTel-provided conduit and Rogers-provided conduit from an appropriate location to the property line per the SL&P design.
  - Any conduits occupied by communication cables must not terminate or have any openings in facilities specified for power/electrical distribution use.
  - For information on obtaining SaskTel conduit, see https://www.sasktel.com/business/industries/cat-5e-wire-at-no-charge-for-developers.
  - For information on obtaining Rogers conduit, email warehousesas@sjrb.ca and MbxProjectManagerSaskatchewan@sjrb.ca.
- Conduit at property line must be clean and capped.
- The routing of the conduit will be agreed upon during the design stage. See Figure 2 on page 38 for more information on typical conduit routing.

  - Excluding the bend necessary for exiting the ground at the loop box or external splitter, a maximum of 90-degrees of bending is allowed in the conduit route on customer property.
  - See Figure 5 on page 42 for information on preferred meter socket locations.
- The Customer is responsible to obtain approval from SL&P before backfilling. Failing to obtain approval before backfilling may result in additional costs and delays.
- A garage may be built over an electrical service installed in conduit. See Section 5.1.2, on page 7, for requirements of working near underground conductors. If the electrical service is direct buried, measures must be taken to prevent damage to the cable during construction. Furthermore, the Customer must supply and install rigid PVC conduit, of the size and quantity specified in Table 3, buried between a minimum depth of 600 mm and a maximum depth of 1100 mm below final grade, and extending a minimum of 300 mm beyond the garage pad.

Metering

- Any meter socket, box, cabinet, or fitting designed to accommodate the supply service must be fastened securely in place.
  - Note: A typical approach to satisfying this rule involves fastening the equipment to a 19 mm thick wood backing that is rigidly secured to structural members, such as wooden studs. See Figure 3 on page 40 for more information on a typical residential underground meter socket installation.
- If a loop box is installed, it must satisfy the size requirements of Table 3 and be bonded per CEC requirements.
- If an external splitter is installed:
  - The splitter must satisfy the size requirements of Table 3.
  - The customer must supply line-side lugs.
  - The neutral buss/lugs must be the first point of contact, followed by the phase buss/lugs arrangement.
  - The secondary lugs must be positioned away from the door latching mechanism to prevent accidental contact.
- A frost sleeve must:
  - Measure 600 mm in length.
  - Have a diameter of 25 mm larger than the conduit it surrounds.
  - Not be fixed to ground or structure preventing vertical expansion.
- An expansion joint must be installed and have 100 mm of travel in both directions.
- See Figure 3 on page 40 for additional information on a typical single-dwelling underground service.

6.4.2 Overhead Services

Single-dwelling residential overhead service options include:

- If the supply service is less than or equal to 400 A:
  - Single span of neutral-supported cables to a meter socket.
- If the supply service is greater than 400 A and less than or equal to 600 A:
  - Multiple spans of cable to instrument-rated metering equipment.

Note: Overhead service options are limited to a supply service of 600 A for 120/240 V or 120/208 V, or 200 A for 347/600 V.

Mid-span tap off is typically not a service option.

Please call SL&P Customer Connections at 306-975-2414 option 3 and our Engineering staff will be able to assist you.

To ensure the safety of Powerline Technicians

New service masts must be installed in a way that allows access to the mast from a ladder.

See Section 6.7, Overhead Service Refusals, on page 23.

The below requirements apply to single-dwelling residential overhead services. The demarcation point is the connection between customer conductors and SL&P conductors at the service mast.

- The Customer is responsible to ensure the clearances listed in Table 2 are maintained.
  - **SL&P may refuse service if the required clearances are not provided.**
- The Customer is responsible to supply and install a service mast and attachment point(s) at a location agreed upon between the Customer and SL&P. See Figure 6 on page 43 and Figure 10 on page 46 for more information on overhead services.
  - For a supply service of 120/240 V or 120/208 V and 400 A or less, one (1) attachment point must be installed.
  - For a supply service of 120/240 V or 120/208 V and 600 A, four (4) attachment points must be installed.
  - For a supply service of 347/600 V and 200 A, four (4) attachment points must be installed.
- Any meter socket must be fastened securely in place.
  - Note: A typical approach to satisfying this rule involves fastening the equipment to a 19 mm thick wood backing that is rigidly secured to structural members, such as wooden studs.
- Service conductors must:
  - Not be located directly above a swimming pool.
  - Maintain drip loops immediately before entering the service head.
- Service masts must:
  - Be supported with guy wire attached to a structural member of the roof if the attachment point exceeds 1.5 m above the roof.
  - Be made of metal and assembled with components suitable for service mast use.
- Points of attachment must:
  - Be solidly anchored to the structure or service mast.

- Be on the same side of the building as the service head.
- Include an insulating spool.
- Not have open-loop eyebolts.
- Be accessible via a ladder at a slope of 4:1 (vertical to horizontal).

6.5 Multiple-Dwelling Residential Services

Multiple-dwelling residential service requirements apply to all sites with two or more dwelling units, such as row-houses, townhouses, apartments, duplexes, quadplexes, and properties with garden/garage suites.

Note that including certain duplexes and condominiums any non-detached dwellings where the units and associated lands are individually titled are typically serviced individually and subject to the requirements of Section 6.4, Single-Dwelling Residential Services. However, SL&P may require that these sites be serviced together; therefore, must comply with the requirements of this section, if individual servicing is impractical.

A single meter shall measure energy consumed by a single customer in any individual site, including individual dwellings within a multiple unit dwelling (e.g., an apartment).

If a single customer requires more than 200 A, instrument-rated metering will be required. See Section 7, Metering, on page 28 for more information.

SL&P will provide only one supply service per building.

The meter location shall be chosen according to the preferences shown in Figure 5 on page 42. If none of the preferred locations meet clearance requirements, the customer will be responsible to supply and install a free-standing meter base/pedestal which will be the point of service. Please contact SL&P prior to the installation of a free-standing meter base/pedestal.

Underground services are typically provided for all upgrades, new builds, and infills. However, SL&P may allow an overhead service to remain or be provided. Overhead services are limited to a supply service of 600 A for 120/240 V or 120/208 V, or 200 A for 347/600 V.

6.5.1 Underground Services

Multiple-dwelling residential underground service options include:

- If the supply service is less than or equal to 400 A:
  - Loop box and multiple-position meter socket with a blank lockable compartment.
    - See Figure 3 on page 40 and Figure 16 on page 52 for more information on this service option.
- If the supply service is less than or equal to 800 A:
  - External splitter and multiple-position meter sockets.
    - See Figure 9 on page 45, Figure 12 on page 48, and Figure 16 on page 52 for more information on this service option.
- For any supply service amperage:
  - External splitter and distribution centre.

    - See Figure 9 on page 45 and Figure 12 on page 48 for more information on this service option.
- For any customer service greater than 200 A, instrument-rated metering is required.

The below requirements apply to multiple-dwelling residential underground services. The demarcation point is the line-side terminations of the splitter or blank lockable compartment of a multiple-position meter socket.

The Customer must inform SL&P of any proposed changes to non-SL&P underground facilities.

- The Customer is responsible to ensure the clearances listed in Table 2 are maintained.
    - **SL&P may refuse service if the required clearances are not provided.**

Conduit and Trench Route

- The Customer is responsible for trenching on property.
- The Customer is responsible to supply and install rigid PVC conduit from the demarcation point to the property line per the SL&P design, of the size and quantity specified in Table 3. See Figure 2 on page 38 for more info on typical trench routes.
- The Customer is responsible to supply and install SaskTel-provided conduit and Rogers-provided conduit from an appropriate location to the property line per the SL&P design.
    - Any conduits occupied by communication cables must not terminate or have any openings in facilities specified for power/electrical distribution use.
    - For information on obtaining SaskTel conduit, see https://www.sasktel.com/business/industries/cat-5e-wire-at-no-charge-for-developers.
    - For information on obtaining Rogers conduit, email warehousesas@sjrb.ca and MbxProjectManagerSaskatchewan@sjrb.ca.
- Conduit at property line must be clean and capped.
- The routing of the conduit will be agreed upon during the design stage. See Figure 2 on page 38 for more information on typical conduit routing.
    - Excluding the bend necessary for exiting the ground at the loop box or external splitter, a maximum of 90-degrees of bending is allowed in the conduit route on customer property.
    - See Figure 5 on page 42 for information on preferred meter socket locations.
- The Customer is responsible to obtain approval from SL&P before backfilling. Failing to obtain approval before backfilling may result in additional costs and delays.
- A garage may be built over an electrical service installed in conduit. See Section 5.1.2, on page 7, for requirements of working near underground conductors. If the electrical service is direct buried, measures must be taken to prevent damage to the cable during construction. Furthermore, the Customer must supply and install rigid PVC conduit, of the size and quantity specified in Table 3, buried between a minimum depth of 600 mm and a maximum depth of 1100 mm below final grade, and extending a minimum of 300 mm beyond the garage pad.

Metering

- Any meter socket, box, cabinet, or fitting designed to accommodate the supply service must be fastened securely in place.
  - A typical approach to satisfying this rule involves fastening the equipment to a 19 mm thick wood backing that is rigidly secured to structural members, such as wooden studs. See Figure 3 on page 40 for more information on a typical residential underground meter socket installation.
- If a loop box is installed:
  - The loop box must satisfy the size requirements of Table 3.
  - The loop box must be bonded per CEC requirements.
  - The multiple-position meter socket must have a blank lockable compartment with line side connections compatible with copper conductors ranging in size from #2 to #4/0 AWG.
  - A frost sleeve must be installed.
  - An expansion joint must be installed.
- If an external splitter is installed:
  - The splitter must satisfy the size requirements of Table 3.
  - The customer must supply line-side lugs.
  - The neutral buss/lugs must be the first point of contact, followed by the phase buss/lugs arrangement.
  - The secondary lugs must be positioned away from the door latching mechanism to prevent accidental contact.
  - Frost sleeves must be installed.
  - Expansion joints must be installed.
- Any frost sleeve must:
  - Measure 600 mm in length.
  - Have a diameter of 25 mm larger than the conduit it surrounds.
  - Not be fixed to ground or structure preventing vertical expansion.
- Any expansion joint must have 100 mm of travel in both directions.

6.5.2 Overhead Services

Multiple-dwelling residential overhead service options include:

- If the supply service is less than or equal to 400 A:
  - Single span of neutral-supported cables to a multiple-position meter socket.
- If the supply service is less than or equal to 600 A:
  - Multiple spans of cable to multiple-position meter sockets.
  - Multiple spans of cable to meter centre.
- For any customer service greater than 200 A, instrument-rated metering is required.

Note: Overhead service options are limited to a supply service of 600 A for 120/240 V or 120/208 V, or 200 A for 347/600 V.

Mid-span tap off is typically not a service option.

Please call SL&P Customer Connections at 306-975-2414 option 3 and our Engineering staff will be able to assist you.

To ensure the safety of Powerline Technicians

New service masts must be installed in a way that allows access to the mast from a ladder.

See Section 6.7, Overhead Service Refusals, on page 23.

The below requirements apply to multiple-dwelling residential overhead services. The demarcation point is the connection between customer conductors and SL&P conductors at the service mast.

- The Customer is responsible to ensure the clearances listed in Table 2 are maintained.
  - **SL&P may refuse service if the required clearances are not provided.**
- The Customer is responsible to supply and install a service mast and attachment point(s) at a location agreed upon between the Customer and SL&P. See Figure 6 on page 43 and Figure 10 on page 46 for more information on overhead services.
  - For a supply service of 120/240 V or 120/208 V and 400 A or less, one (1) attachment point must be installed.
  - For a supply service of 120/240 V or 120/208 V and 600 A, four (4) attachment points must be installed.
  - For a supply service of 347/600 V and 200 A, four (4) attachment points must be installed.
- Any meter socket must be fastened securely in place.
  - A typical approach to satisfying this rule involves fastening the equipment to a 19 mm thick wood backing that is rigidly secured to structural members, such as wooden studs.
- Service conductors must:
  - Not be located directly above a swimming pool.
  - Maintain drip loops immediately before entering the service head.
- Service masts must:
  - Be supported with guy wire attached to a structural member of the roof if the attachment point exceeds 1.5 m above the roof.
  - Be made of metal and assembled with components suitable for service mast use.
- Points of attachment must:
  - Be solidly anchored to the structure or service mast.
  - Be on the same side of the building as the service head.
  - Include an insulating spool.
  - Not have open-loop eyebolts.

- Be accessible via a ladder at a slope of 4:1 (vertical to horizontal).

6.6 General Services

General service requirements apply to all non-residential sites (i.e., sites that lack dwelling units).

A single meter shall measure energy consumed by a single customer in any individual site.

If a single customer requires more than 200 A, instrument-rated metering will be required. See Section 7, Metering, on page 28 for more information.

SL&P will provide only one supply service per building.

Underground services are typically provided for all upgrades, new builds, and infills. However, SL&P may allow an overhead service to remain or be provided. Overhead services are limited to a supply service of 600 A for 120/240 V or 120/208 V, or 200 A for 347/600 V.

6.6.1 Underground Services

General service options include:

- If the supply service is less than or equal to 200 A:
  - Loop box and meter socket.
    - See Figure 3 on page 40 for more information on this service option.
- If the supply service is less than or equal to 400 A:
  - Loop box and multiple-position meter socket with a blank lockable compartment.
    - See Figure 3 on page 40 and Figure 16 on page 52 for more information on this service option.
- If the supply service is less than or equal to 800 A:
  - External splitter and multiple-position meter sockets.
    - See Figure 9 on page 45, Figure 12 on page 48, and Figure 16 on page 52 for more information on this service option.
- For any supply service amperage:
  - External splitter and distribution centre.
    - See Figure 9 on page 45 and Figure 12 on page 48 for more information on this service option.
- For any customer service greater than 200 A, instrument-rated metering is required.

The below requirements apply to general underground services. The demarcation point is the termination point of SL&P service conductors.

The Customer must inform SL&P of any proposed changes to non-SL&P underground facilities.

- The Customer is responsible to ensure the clearances listed in Table 2 are maintained.
  - **SL&P may refuse service if the required clearances are not provided.**

Conduit and Trench Route

- The Customer is responsible for trenching on property.
- The Customer is responsible to supply and install rigid PVC conduit from the demarcation point to the property line towards SL&P facilities, of the size and quantity specified in Table 3. See Figure 2 on page 38 for more info on typical trench routes.
- The Customer is responsible to supply and install SaskTel-provided conduit and Rogers-provided conduit from an appropriate location to the property line towards SL&P facilities.
  - Any conduits occupied by communication cables must not terminate or have any openings in facilities specified for power/electrical distribution use.
  - For information on obtaining SaskTel conduit, see https://www.sasktel.com/business/industries/cat-5e-wire-at-no-charge-for-developers
  - For information on obtaining Rogers conduit, email warehousesas@sjrb.ca and MbxProjectManagerSaskatchewan@sjrb.ca.
- Conduit at property line must be clean and capped.
- The routing of the conduit will be agreed upon during the design stage. See Figure 2 on page 38 for more information on typical conduit routing.
  - Excluding the bend necessary for exiting the ground at the loop box or external splitter, a maximum of 90-degrees of bending is allowed in the conduit route on customer property.
- The Customer is responsible to obtain approval from SL&P before backfilling. Failing to obtain approval before backfilling may result in additional costs and delays.

Metering

- Any meter socket, box, cabinet, or fitting designed to accommodate the supply service must be fastened securely in place.
  - A typical approach to satisfying this rule involves fastening the equipment to a 19 mm thick wood backing that is rigidly secured to structural members, such as wooden studs. See Figure 3 on page 40 for more information on a typical residential underground meter socket installation.
- If a loop box is installed:
  - The loop box must satisfy the size requirements of Table 3.
  - The loop box be bonded per CEC requirements.
  - If a single-position meter socket is installed:
    - The meter socket must have line-side connections compatible with copper conductors ranging in size from #6 to 4/0 AWG.
  - If a multiple-position meter socket is installed:
    - The multiple-position meter socket must have a blank lockable compartment with line side connections compatible with copper conductors ranging in size from #2 to 4/0 AWG.
  - A frost sleeve must be installed.
  - An expansion joint must be installed.

- If an external splitter is installed:
  - The splitter must satisfy the size requirements of Table 3.
  - The customer must supply line-side lugs.
  - The neutral buss/lugs must be the first point of contact, followed by the phase buss/lugs arrangement.
  - The secondary lugs must be positioned away from the door latching mechanism to prevent accidental contact.
  - Frost sleeves must be installed.
  - Expansion joints must be installed.
- Any frost sleeve must:
  - Measure 600 mm in length.
  - Have a diameter of 25 mm larger than the conduit it surrounds.
  - Not be fixed to ground or structure preventing vertical expansion.
- Any expansion joint must have 100 mm of travel in both directions.

6.6.2 Overhead Services

General overhead service options include:

- If the supply service is less than or equal to 200 A:
  - Single span of neutral-supported cables to a meter socket.
- If the supply service is less than or equal to 400 A:
  - Single span of neutral-supported cables to a multiple-position meter socket.
- If the supply service is less than or equal to 600 A:
  - Multiple spans of cable to a multiple-position meter socket.
  - Multiple spans of cable to a meter centre.
- For any customer service greater than 200 A, instrument-rated metering is required.

Note: Overhead service options are limited to a supply service of 600 A for 120/240 V or 120/208 V, or 200 A for 347/600 V.

Mid-span tap off is typically not a service option.

Please call SL&P Customer Connections at 306-975-2414 option 3 and our Engineering staff will be able to assist you.

To ensure the safety of Powerline Technicians

New service masts must be installed in a way that allows access to the mast from a ladder.

See Section 6.7, Overhead Service Refusals, on page 23.

The below requirements apply to general overhead services. The demarcation point is the connection between customer conductors and SL&P conductors at the service mast.

- The Customer is responsible to ensure the clearances listed in Table 2 are maintained.
  - **SL&P may refuse service if the required clearances are not provided.**
- The Customer is responsible to supply and install a service mast and attachment point(s) at a location agreed upon between the Customer and SL&P. See Figure 6 on page 43 and Figure 10 on page 46 for more information on overhead services.
  - For a supply service of 120/240 V or 120/208 V and 400 A or less, one (1) attachment point must be installed.
  - For a supply service of 120/240 V or 120/208 V and 600 A, four (4) attachment points must be installed.
  - For a supply service of 347/600 V and 200 A, four (4) attachment points must be installed.
- Any meter socket must be fastened securely in place.
  - A typical approach to satisfying this rule involves fastening the equipment to a 19 mm thick wood backing that is rigidly secured to structural members, such as wooden studs.
- Service conductors must:
  - Not be located directly above a swimming pool.
  - Maintain drip loops immediately before entering the service head.
- Service masts must:
  - Be supported with guy wire attached to a structural member of the roof if the attachment point exceeds 1.5 m above the roof.
  - Be made of metal and assembled with components suitable for service mast use.
- Points of attachment must:
  - Be solidly anchored to the structure or service mast.
  - Be on the same side of the building as the service head.
  - Include an insulating spool.
  - Not have open-loop eyebolts.
  - Be accessible via a ladder at a slope of 4:1 (vertical to horizontal).

6.7 Overhead Service Refusals

SL&P will refuse overhead service if required requirements and/or clearances are not met. See Figure 8 on page 44 and Table 2 on page 57 for more information. The following conditions would cause a refusal:

- There is no clear line of sight between the attachment point on the house to the power pole.
- The length of the service wire exceeds 30 m.
- The attachment point on the side has any or all the following issues:
  - Side installation causes the service wire to rub against the side of the house causing wear on the insulation.
  - Height of the attachment point is greater than 5.5 m.
  - Ladder slope ratio of 4:1 cannot be achieved.
  - Meter base is too close to the property line (less than 1.2 m).
  - Secure footing is not provided or maintained around electrical equipment.

6.8 Temporary Construction Service

Customers may request temporary construction service from SL&P. This will require a separate electrical service request and a temporary service meter account from the City's Revenue Department prior to energization.

Temporary construction services may be subject to inspection and/or approval by SL&P Engineering.

See Figure 13, on page 49, for details on the construction of a temporary overhead service mast.

6.9 Downtown 347/600 Volt Network Service Area

Downtown Saskatoon has been designated as an underground Network Service Area. This is an area roughly within the boundaries of 25th Street, Idylwyld Drive, and the riverbank.

Services within this area have the following special requirements for new developments and existing electrical services that are being changed or upgraded:

- The electrical service will be 347/600 V 3-Phase 4-Wire. Service request for any different voltage levels will be provided at SL&P's discretion.
- Installation of a splitter is required. See Figure 12 on page 48 for more information. Final splitter requirements for network installations will be determined on a case-by-case basis.
- Depending on circumstances, the demarcation point between SL&P and the customer will be an external splitter or an interior cable entry cell which is part of the switchgear. See Figure 14, on page 50, for more information.
- SL&P does not approve the installation of an internal splitter as the demarcation point. Customer installed splitters must be external.
- SL&P installs special protective fuses at the demarcation point in certain cases that would require the depth of an external splitter to be more than a regular splitter. Please contact SL&P for details on the dimensions of the external splitter or an interior cable entry cell.
- The customer will provide shop drawings of the switchgear prior to servicing for SL&P comments and approval.
- SL&P will not energize a network service unless there is a TSASK energization sticker on the service installed by the electrical contractor.

6.9.1 Network Interior Entry Requirement

Pull boxes are required when the path, including the conduit and raceways, between the source and the demarcation point involves any bends, deflections, or profile changes that are lesser or equal to 360° when summed together. **Pull boxes may also be required at the discretion of SL&P.**

Pull boxes have the following requirements:

- In the room containing the pull box, the customer must provide sufficient physical space for SL&P to bring in a cable tugger, as well as sufficient floor space for pulling in lengths of slack cable to be trained into the raceway.
- At the discretion of SL&P, anchor points may need to be installed in the room containing the pull box in order to anchor the cable tugger and to install pulleys that are used to pull in cables from either raceway through the pull box.
- The pull box requirements are defined in the *CEC*.
- The customer must provide drawings for the conduit entry into the building, the pull box design, and raceway to SL&P for comments and approval.

6.9.2 Customer Duct Formations

The customer is responsible for supplying and installing 125 mm PVC pipes that are encased in minimum 20 MPa concrete. The formation is to run from the property line to the splitter or the property line to the entrance into their building if the demarcation point is inside the building. The customer must supply a quantity of 125 mm straight DB2 PVC couplers equal to the number of pipes in the formation. If the demarcation point is in an above ground splitter, the customer is to use expansion joints for all pipes that are turned upward towards the splitter. The expansion joint will couple the DB2 PVC pipes to Schedule 40 pipes, if Schedule 40 pipes are used.

All open or exposed conduits/ducts are required to be capped/sealed to prevent the entry of water.

The typical network demarcation point is a customer owned splitter; however, in the case that SL&P will be directly connecting conduit and/or duct to customer owned conduit and/or duct, the customer will need to provide duct formation drawing(s) showing the duct arrangement and materials used in construction of the duct formation that SL&P will be connecting to. These duct formation drawings are subject to approval by SL&P prior to connection to the network.

The customer is responsible for contacting SL&P in order to join their formation to SL&P's formation at the property line. At least five (5) business days' notice must be given.

6.10 Cut and Reconnect Request

SL&P provides a cut and reconnect service for residential homes. Customers can request this by contacting the SL&P Meter Shop at 306-975-2414 option 4. For a typical residential home, electrical contractors can request a cut and reconnect to do the following:

- Replace the panel, meter socket, and mast.
- Request a meter pull (removal) to perform service work or an inspection.
- Perform other work that is more safety accomplished by disconnecting the electrical service such as replacing siding.
- Any non-electrical work that affects the electrical system.

All work performed must comply with the current *Canadian Electrical Code* and Saskatoon Light & Power requirements. A paid and valid electrical permit must be provided upon request.

Failure to comply with these requirements may result in refusal to energize or disconnection from Saskatoon Light & Power's system.

For residential service upgrades or service relocations, or for all commercial property service changes, please contact SL&P Customer Connections at 306-975-2414 option 3.

Please note SL&P requires a minimum of 72 hours notice for a cut and reconnect. Unforeseen circumstances, such as severe weather, may delay scheduled cut and reconnects.

6.11 Service Drop Requests

Customers can request a service drop to perform non-electrical work around service line. During a service drop the overhead powerline to the customer is temporarily disconnected at the pole. For example, this allows for safe tree trimming or removal of trees in the path of the powerline.

Customers can request this by contacting SL&P at 306-975-2414 option 0. Service drops are by appointment only and must be booked a minimum of 72 hours in advance.

Any attempt to modify the service without a paid and valid electrical permit may result in the service not being reconnected.

6.12 Service Upgrades

SL&P requires any service upgrade to follow the new connection process. Customers can contact SL&P Customer Connection at 306-975-2414 option 3 for more information. Alternatively, visit us at saskatoon.ca/slpelectricalservice to download the Electrical Service Request Form. **Customer electrical systems are subject to upgrades in order to meet current Canadian Electrical Code standards in addition to customer work related to service upgrades** prior to energization.

6.13 Easements

An easement or utility right of way is used for the protection, safety, and service of the utility's infrastructure in the designated area. The Certificate of Title for the property will list the easement and the name of the company holding the easement if there is any utility infrastructure on the property.

In the event of a power outage, access to the cables may be required to restore electricity. For this reason, customers are not to change the grade of an easement, build garages or sheds, or plant trees in an easement. Customers may plant a lawn, flowerbeds, vegetable gardens, and low shrubs in an easement.

A minimum of 1.0 m of clearance is required around all sides of SL&P infrastructure. For more information call SL&P Customer Connections at 306-975-2414 option 3.

6.14 Customer Charges

When a customer requests new or upgraded electrical services, SL&P will provide a quotation for costs associated with providing electrical power to that site. Refer to Section 6.2, Service Request Process, on page 9 for information on how to apply for electrical service.

Note that some services, such as Cut and Reconnect, are applicable to fees. See Bylaw 2685 – Electric Light and Power Bylaw, 1940 for more information.

Saskatoon Light & Power has the right to refuse energizing the service if there are concerns regarding safety and may require an inspection to be completed. The customer may or may not be notified of the deficiencies. It is the duty of the customer to call Saskatoon Light & Power to gather all the information.

7 Metering

7.1 General Metering Requirements

7.1.1 Mandatory Energization Sticker

For new services or reconnections, a TSASK approved Energization Sticker must be affixed to the meter socket prior to energization or installation of meter. Each meter in a multiple-position meter socket (trough) must be affixed with an energization sticker. Affixing this sticker implies that:

- A paid electrical permit has been obtained for the service.
- Wiring on the service (from the demarcation point to the main disconnect) is free from short circuits, grounds, or any other defects that might pose a hazard to life or property.
- The main disconnect is in the open position.
- The service is free of any other source of energization (back feed).
- A pre-energization inspection has been performed and approved by TSASK (where required). Services requiring inspection are outlined in the latest Saskatchewan Interpretations of the Canadian Electrical Code (CEC).
- The service meets the grounding and clearance requirements of the CEC.

7.1.2 Meter Clearance

Any obstructions found around the meter socket and conduit may require removal at the customer's expense.

A minimum of 1.2 m on the front side, 0.25 m from the center line of meter to both sides, and 2.1 m for height clearance is required. See Figure 15, on page 51, and Table 2, on page 57, for more information.

7.1.3 Access to Metering Equipment

Where access to metering equipment is restricted due to locked doors or other obstructions, the customer may be requested to provide a key, access, or pathway clearance upon request. **Failure to resolve restrictions in a timely manner may result in disconnection of service or delays to construction.**

The customer can contact the SL&P Meter Shop at 306-975-2414 option 4 to arrange for access to locked metering equipment.

7.1.4 Socket Energization Safety

For public safety, services with **cold metering** (meter after the main disconnect) must be energized with the disconnect locked off and have the meter socket glassed off and sealed with a tie wrap prior to installation of the meter.

Similarly, services with **hot metering** (meter before the main disconnect) must have the meter socket glassed off and sealed with a tie wrap prior to installation of the meter.

7.1.5 Instrument Rated Metering Cabinet, Conduit Sizing, and Distance

For instrument rated meters, a suitable instrument enclosure requires **3-point latching** on the doors and a **padlock** handle.

The minimum size of conduit from instrument transformer cabinet to base of plywood backboard for meter and test block is 31.75 mm. If any access points are used, they must be sealable and clearly visible. The maximum length of conduit is limited to 7.5 m.

For instrument transformer cabinets or switchgear with buss bars, a minimum physical separation of 50 mm must be maintained between instrument transformers and between instrument transformer and the surrounding enclosure.

7.1.6 Meter Location

In situations where the meter is installed inside a building, it is preferred that metering equipment is installed on an exterior wall. For concrete or metal clad buildings SL&P may require a separate 31.75 mm conduit for the exclusive use of aiding meter communication. This conduit must extend to the exterior of the building and terminate into an outdoor rated lockable junction box with minimum dimensions of 150 mm x 150 mm x 100 mm. The junction box must be installed at a height of 1.6 m to 1.8 m above grade.

Saskatoon Light & Power reserves the right to determine the meter location.

7.1.7 Care of Metering Equipment

The customer is required to exercise reasonable care for the protection of SL&P metering equipment installed on the customer's premises. Should any damage occur or if the meter is lost or stolen after installation, the customer will be liable for the cost of repair or replacement.

7.1.8 Service Inspection

Services that are presently inactive (vacant or without an account holder) for a period of greater than one (1) year shall require a service inspection performed by a licensed electrical contractor. The contractor will be required to provide an electrical permit number and have an Energization Sticker prior to reconnection.

7.1.9 Clarifications

Please contact the SL&P Meter Shop at 306-975-2414 option 4 for more information.

7.1.10 Multiple Meters

When multiple meters are installed, all meters must be grouped together. Where the supply service exceeds 800 A, the metering equipment must be in an electrical room or outdoor electrical closet and cold metered. A separate house meter may be required for common loads.

All meter sockets must have the associated unit number clearly identified via a lamacoid style or equivalent weather and UV resistant tag and are to be arranged in sequential order either vertically or horizontally. The contractor/owner bear all responsibility to ensure the correct labelling is applied. SL&P may require proof of connectivity to ensure correct labels are applied before installing meters.

Electrical contractors are not permitted to remove a meter and/or perform a service disconnect under any circumstances. Any unsafe conditions must be reported to the SL&P Meter Shop at 306-975-2414 option 4.

7.2 Self-Contained Metering

A self-contained meter is rated to carry the current and voltage of the circuit to be metered. The maximum load for a self-contained meter is 200 A per phase. The maximum voltage limit for a self-contained meter is 600 V phase to phase.

7.2.1 Single-Phase Self-Contained Metering

Service Voltages

- 120/240 V 3-wire self-contained
  - Services rated up to 200 A.
  - Meter must be outside and be hot metered unless permission is granted from the SL&P Meter Shop.

7.2.2 Three-Phase Self-Contained Metering

Service Voltages

- Network 120/208 V 3-wire self-contained
  - Services rated up to 200 A.
  - Meter must be installed inside and cold metered unless permission is granted from the SL&P Meter Shop.
- 120/208 V 4-wire self-contained
  - Services rated up to 200 A.
  - Meter must be outside and be hot metered unless permission is granted from the SL&P Meter Shop.
- 347/600 V 4-wire self-contained
  - Services rated up to 200 A.

  - Meter must be inside and cold metered unless permission is granted from the SL&P Meter Shop.
- 240 V 3-wire self-contained
  - Services rated up to 200 A.
  - Meter must be outside and be hot metered unless permission is granted from the SL&P Meter Shop.

7.2.3 Demand Meters

All demand meters must be inside a building or in a suitable outdoor rated meter enclosure. Meters must be cold metered for all voltages. If the meter is in an outdoor enclosure the splitter must be located outside this enclosure.

7.2.4 Self-Contained Meter Enclosure

Meter enclosure specifications are shown in Table 4 on page 60.

7.2.5 Supply of Self-Contained Metering Responsibilities

The following responsibilities apply to the customer:

- Supply and install an approved meter socket complete with a screw type sealing ring.
- Make load side connections within the meter socket.

The following responsibilities apply to SL&P:

- Supply and install the meter in the socket.
- Make line side connections.

7.3 Instrument Transformer Metering

Instrument transformer type metering is required on all services exceeding 200 A per phase.

7.3.1 Single-Phase Instrument Transformer Metering

Service Voltages

- 120/240 V 3-wire transformer rated
  - Services rated over 200 A.
  - Meter must be inside and cold metered.

7.3.2 Three-Phase Instrument Transformer Metering

Service Voltages

- 120/208 V 4-wire transformer rated
  - Services rated over 200 A.
  - Meter must be inside and cold metered.
- 347/600 V 4-wire transformer rated
  - Services rated over 200 A.
  - Meter must be inside and cold metered.

- 240 V 3-wire transformer rated
  - Services rated over 200 A.
  - Meter must be inside and cold metered.

7.3.3 Demand Meters

All demand meters must be inside a building or in a suitable outdoor rated meter enclosure. Meter must be cold metered for all voltages. If the meter is in an outdoor enclosure the splitter must be located outside this enclosure.

7.3.4 Instrument Transformer Meter Enclosure

Separate meter and transformer enclosures are required for each instrument transformer service. The meter enclosure must have a 13-jaw meter socket (for 3-phase services) or 5-jaw meter socket (for single phase services), have space for a test switch, and wiring from the test switch to the socket. Meter enclosure specifications are shown in Table 5 on page 60. See Table 3 on page 59 for instrument transformer enclosure dimensions. See Figure 20 on page 55 for general arrangement of equipment.

7.3.5 Instrument Transformer Metering Equipment Location

For SL&P owned distribution transformer installations, meter and metering equipment installation shall be connected on the load side of the distribution transformer.

For customer owned distribution transformer installations, meter and metering equipment shall be connected on the line side of the distribution transformer.

Customer equipment is not allowed within the instrument transformer enclosure. The instrument transformer cabinet cannot be used as a splitter box.

In certain situations, the metering equipment and wiring arrangements can be made in the customer switchgear instead of the customer supplied instrument transformer cabinet. Please contact the SL&P Meter Shop at 306-975-2414 option 4 for more information and approval.

7.3.6 Supply of Instrument Transformer Metering Responsibilities

The following responsibilities apply to the customer:

- Supply and install a meter enclosure according to the specifications shown in Table 5 on page 60.
- Install instrument transformers.
- Supply and install a 31.75 mm conduit (for three-phase installations) or 25.4 mm conduit (for single-phase installations) between the instrument transformer enclosure and the meter enclosure.
- Supply and install all hardware, buswork, terminations, and/or cable required for primary connects to the current transformers.
- Supply and install a 19 mm plywood sheet behind all enclosures.

The following responsibilities apply to SL&P:

- Supply instrument transformers.
- Supply and install the meter and test switch.
- Supply and install the secondary wiring.

Instrument transformers are available to the customer for installation upon request by calling the SL&P Meter Shop at 306-975-2414 option 4. All instruments will need to be signed for and the contractor will be responsible for lost or stolen equipment. The customer must provide the service address and electrical permit number when placing a request for instrument transformers.

7.4 Primary Metering

Primary metering at distribution system voltage will be instrument rated and must be inside a building or suitable padlock enclosure. **A minimum of four (4) months notice is required to provide primary metering services.**

8 Power Quality

Power quality is defined as the quality of the voltage which is delivered to the customer. SL&P is committed to delivering the best quality of power to its customers. However, there are factors which are beyond the Utility's control and contribute to poor power quality. Some of the common disturbances seen are:

- Flickering lights: This can be caused by periodic fluctuations of voltage. This is mainly due to fluctuating loads on the system such as hoists, arc furnaces, etc.
- Voltage unbalance: This issue occurs for three-phase customers where the voltage measurements of the individual line voltages are not the same.
- Low voltage: This occurs when voltage levels at customer equipment are lower than the standard voltage levels. See
- Table 6 on page 60 for information on acceptable voltage levels.
- Voltage dip: This is seen mainly by customers in industrial areas. Typically, a motor start further down the line, causing a momentary reduction of the voltage levels.

In all the cases listed in Table 6

Table 6, please call SL&P at 306-975-2414 option 1. Based on the type of power quality issue observed by the customer, SL&P will work to rectify the problem.

9 Customer Owned Generation

Customers may generate electricity at their home or business to offset their electricity purchases.

Customers interested in generating and selling excess energy to the SL&P electrical grid can participate in the Net Metering, Small Power Producer, or Behind-The-Meter programs as per the City's Power Producer's Policy A07-022.

Customers interested in behind-the-meter generation must ensure there is no back feed of excess energy to the SL&P electrical grid.

Customers are required to apply for the available programs and contact SL&P prior to installing any equipment.

Customers will require a bi-directional meter to keep track of the electricity to and from the grid for billing or monitoring purposes. Customers are required to sign an interconnection agreement prior to energization of their system.

There are some program restrictions in the downtown area. There may be technology and system size restrictions in certain applications. Please visit saskatoon.ca/slpselfgeneration for more information, rules, requirements, and to download the application form.

10 Locked Equipment and Facilities

10.1 Access to Customer Facilities

Customers are required to provide access to any facility where SL&P equipment is installed. The customer is also responsible to provide keys where necessary to gain access.

10.2 Access to SL&P Equipment

Removal or tampering of the SL&P seal or lock on equipment is strictly forbidden. Where there is evidence of tampering, the person(s) responsible shall be liable for prosecution and immediate disconnection of service. Customers may contact the SL&P Meter Shop at 306-975-2414 option 4 to arrange for access.

11 Deviations

The customer is required to obtain written approval from SL&P for any deviation from requirements contained in this manual. Failure to do so may result in refusal and/or delays in providing service.

Any approval of customer deviation is only applicable to the service being considered and does not imply acceptance of deviation at other locations.

12 Figures

Figure 1: Franchise Area Map

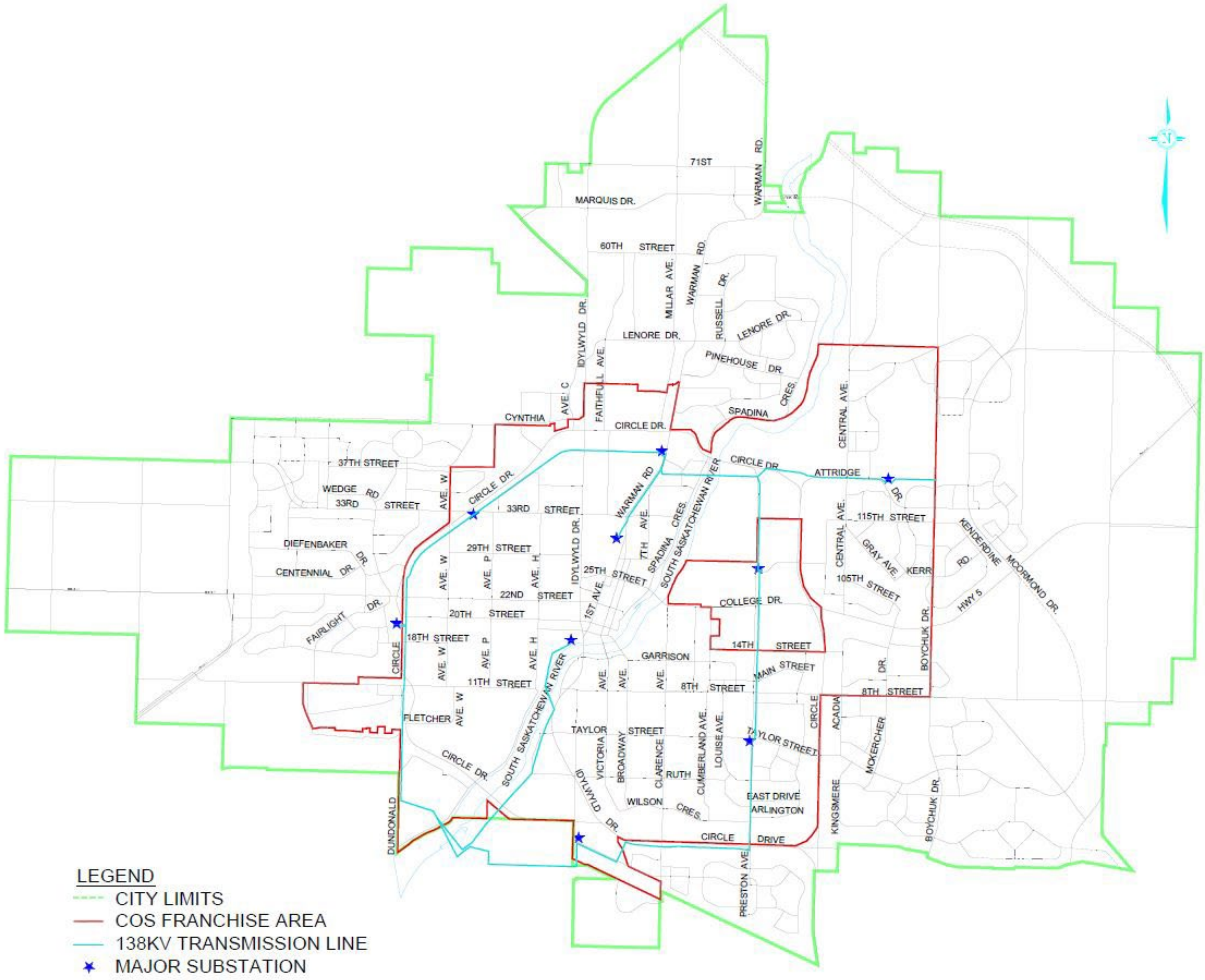


Figure 2: Typical Trench Route for Residential Services

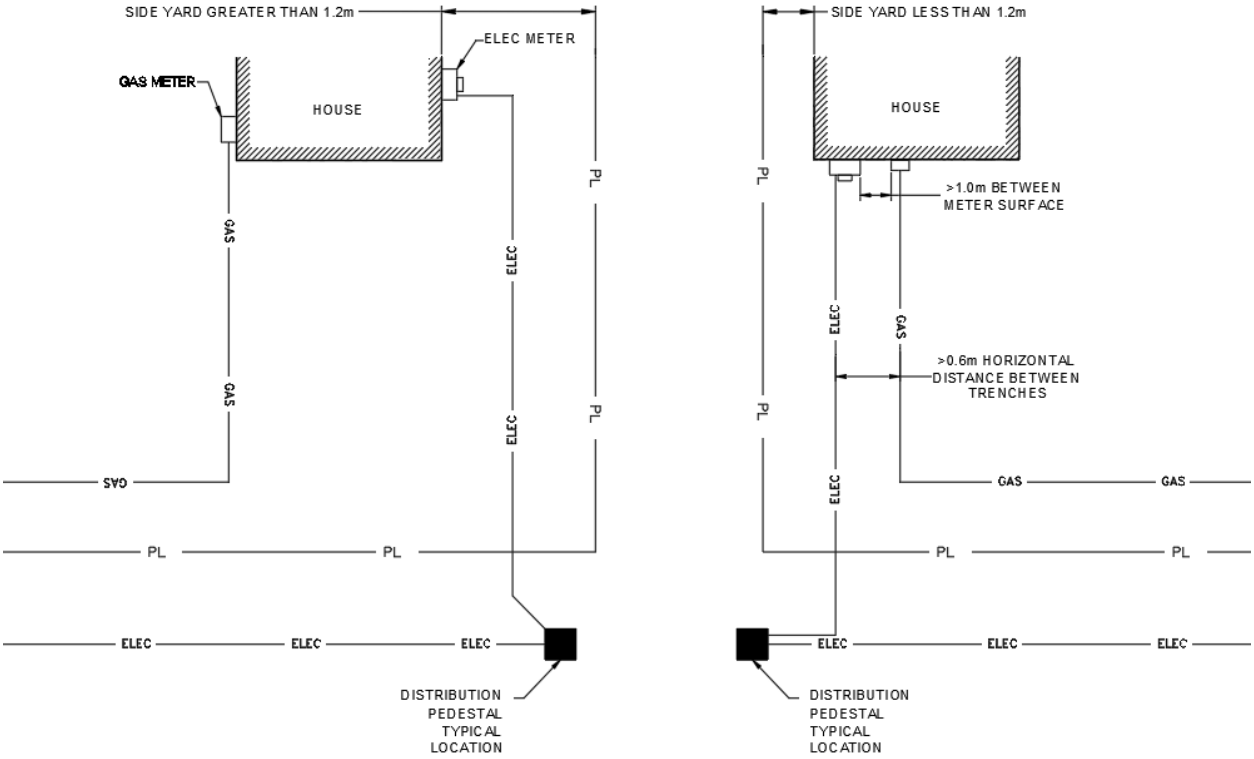
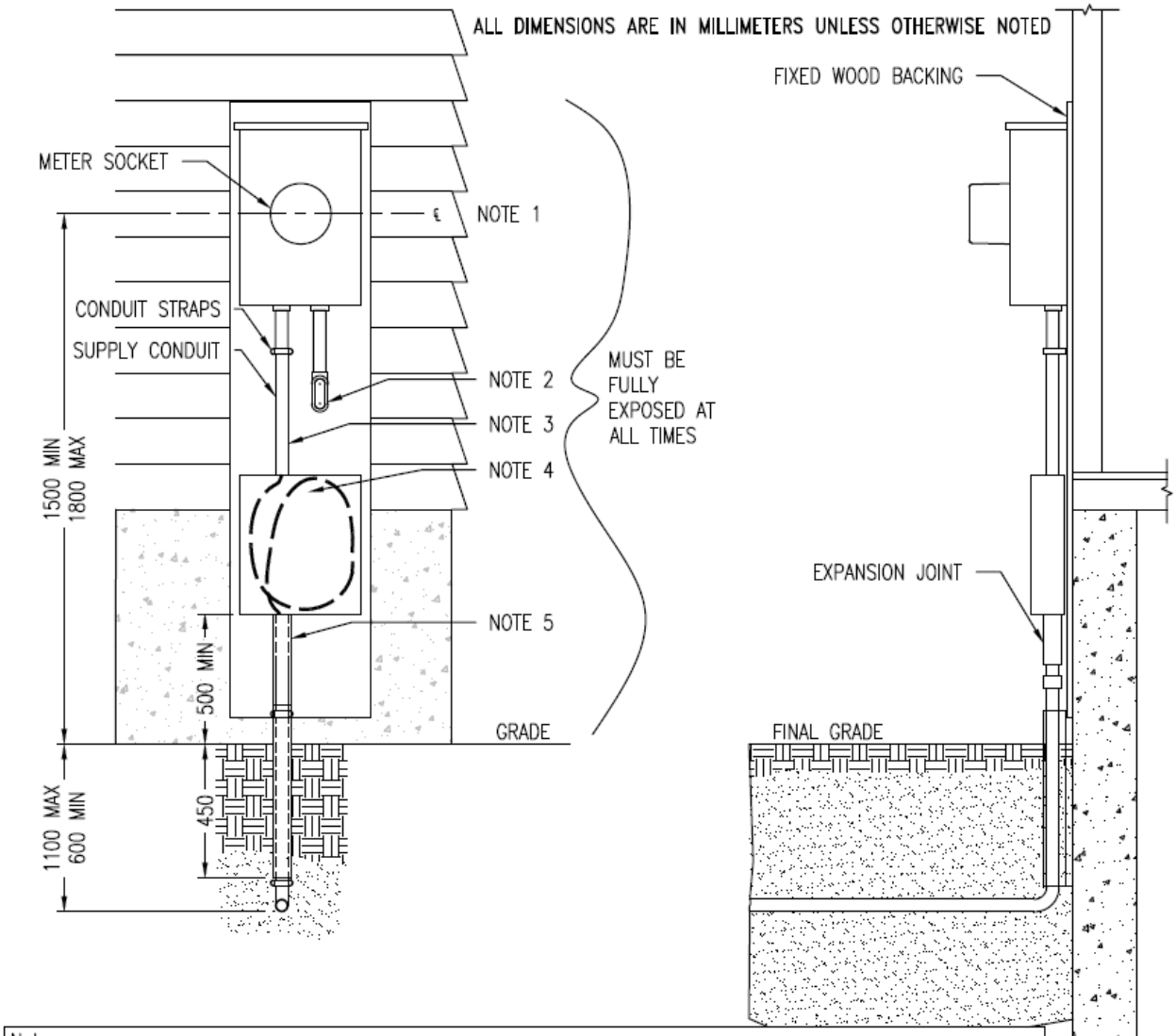


Figure 3: Typical Residential Underground Service



Note:

1. Centerline of the meter to be a minimum of 1500 mm and a maximum of 1800 mm from final grade on property.
2. Any meter socket, box, cabinet, or fitting designed to accommodate the supply service must be fastened securely in place. SL&P recommends fastening the equipment to a 19 mm thick wood backing that is rigidly secured to structural members, such as wooden studs.
3. The supply conduit shall be sized per Table 3.
4. The loop box shall be sixed per Table 3.
5. The loop box must have frost heaving mitigation methods (both PVC expansion joint and frost sleeve) to allow for ground movement due to frost. Do not fix frost sleeve to ground or structure to allow vertical expansion.
6. The Installation must follow the Canadian Electrical Code.

Figure 4: Typical Layout for Garages/Concrete Pads Over Underground Services

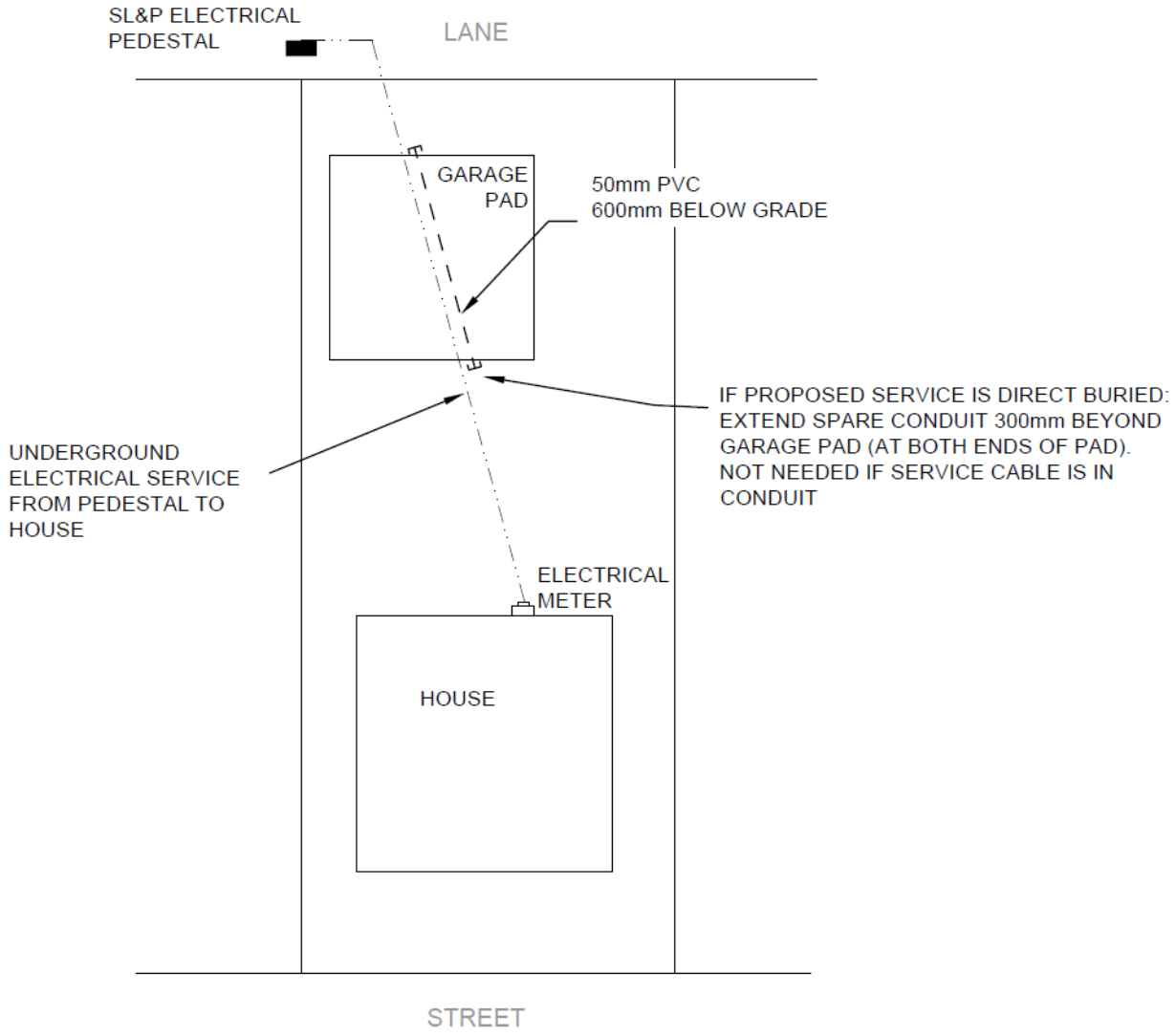


Figure 5: Preferred Meter Socket Locations

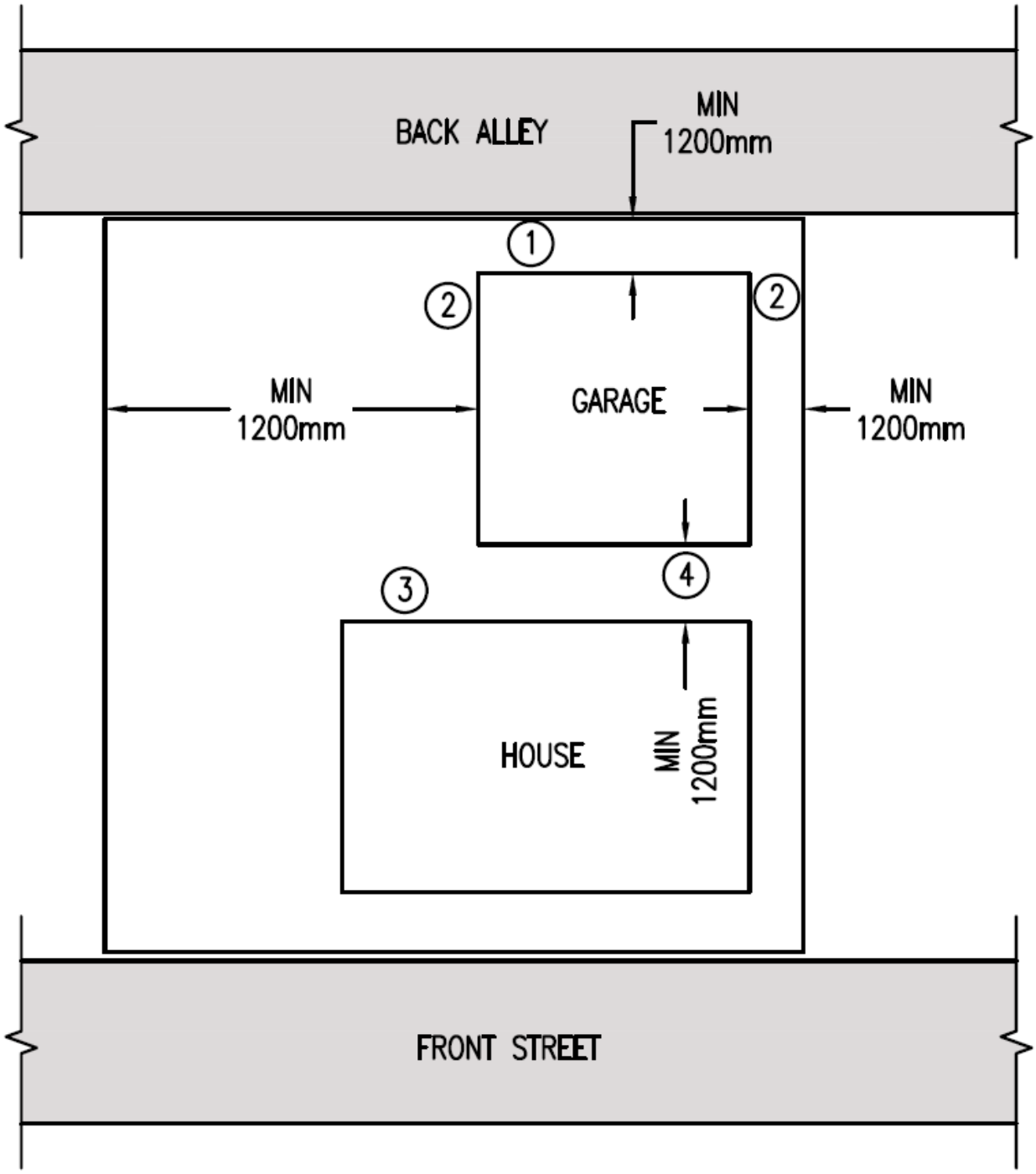


Figure 6: Typical Residential Overhead Service

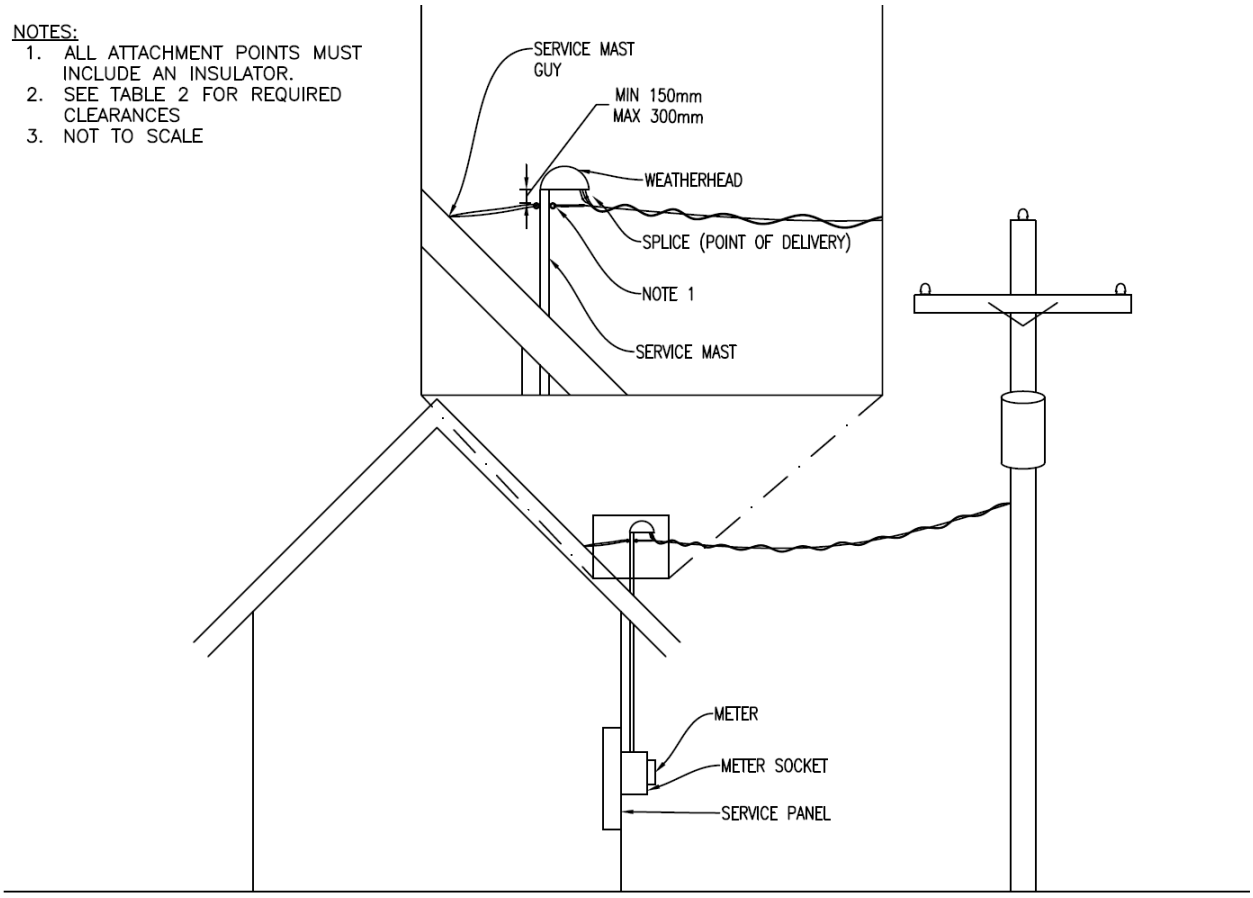


Figure 7: Pool Clearances

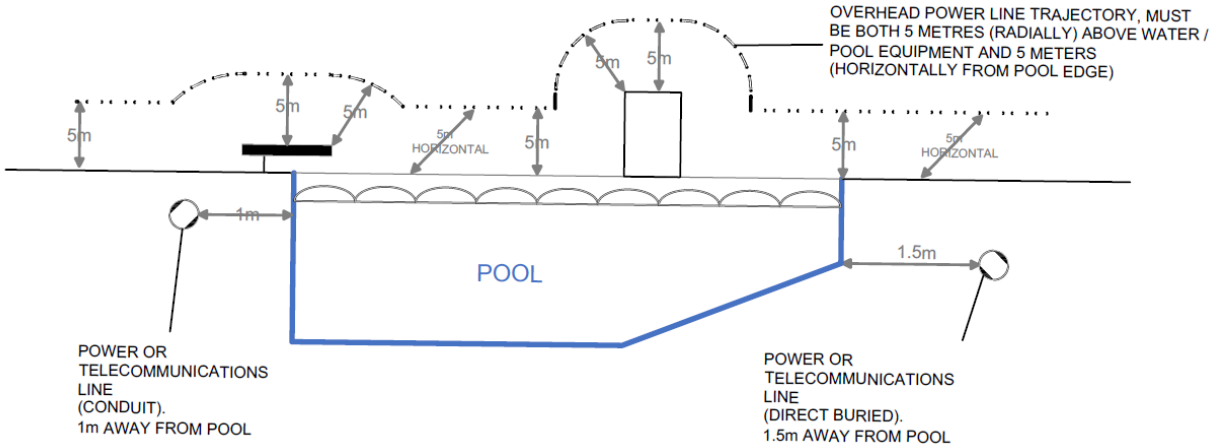
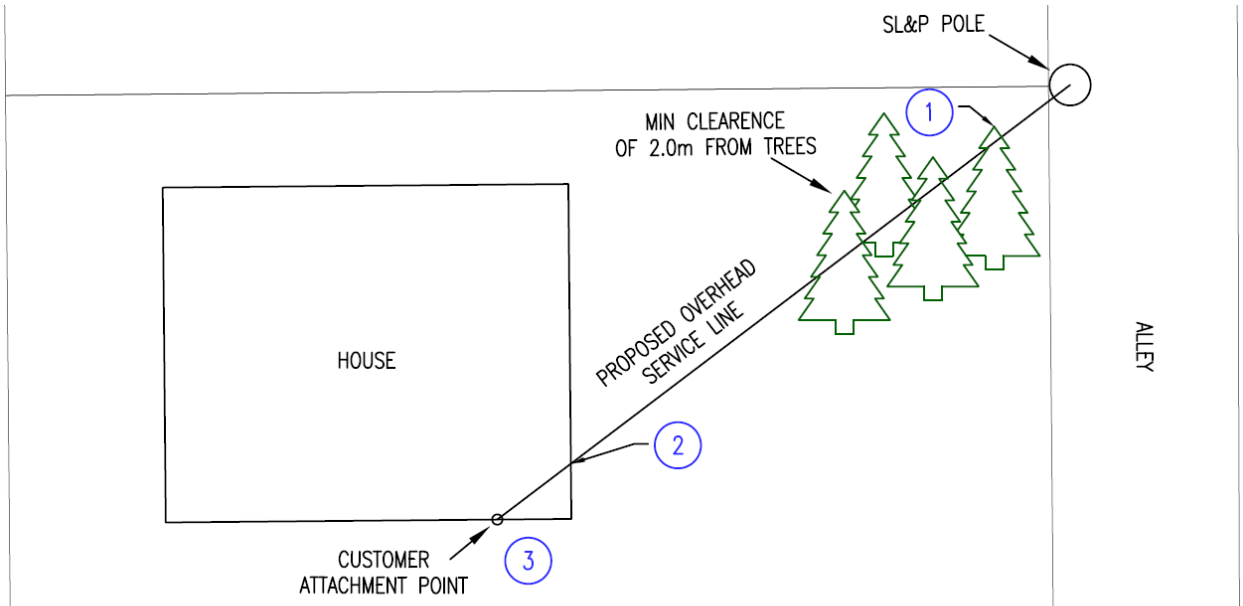


Figure 8: Overhead Service Refusals



NOTES:

1. TREES OBSTRUCTING PROPOSED OVERHEAD LINE ROUTE
2. SIDE INSTALLATION CAUSING SERVICE WIRE TO CONTACT THE SIDE OF THE HOUSE, COMPROMISING INSTALLATION
3. ATTACHMENT POINT
   - 3.1. HEIGHT OF ATTACHMENT POINT IS GREATER THAN 5.5m
   - 3.2. LADDER SLOPE RATION OF 4:1 CANNOT BE ACHIEVED
   - 3.3. METER BASE TOO CLOSE TO PROPERTY LINES (LESS THAN 1.2m)
   - 3.4. SECURE FOOTING IS NOT PROVIDED OR MAINTAINED AROUND ELECTRICAL EQUIPMENT

Figure 9: Underground Commercial and Industrial Connections (Greater than 200A)

NOTES:

1. FOR SPLITTERS UP TO 1200mm x 1200mm THE MAXIMUM ENCLOSURE HEIGHT IS 2100mm. 2400mm SHALL ONLY BE USED FOR 1500mm x 1500mm SPLITTERS.
2. STACKED CONDUIT INSIDE THE SPLITTER ENCLOSURE ARE ALLOWABLE BUT NOT PREFERRED
3. THE MINIMUM HEIGHT FOR ENCLOSURE BOTTOMS SHALL BE 850mm FOR ALL INSTALLATIONS.
4. ANY EXPANSION JOINT MUST HAVE 100mm OF TRAVEL IN BOTH DIRECTIONS.
5. ANY FROST SLEEVE MUST MEASURE 600mm IN LENGTH, HAVE A DIAMETER OF 25mm LARGER THAN THE CONDUIT IT SURROUNDS, AND NOT BE FIXED TO GROUND OR STRUCTURE PREVENTING VERTICAL EXPANSION.

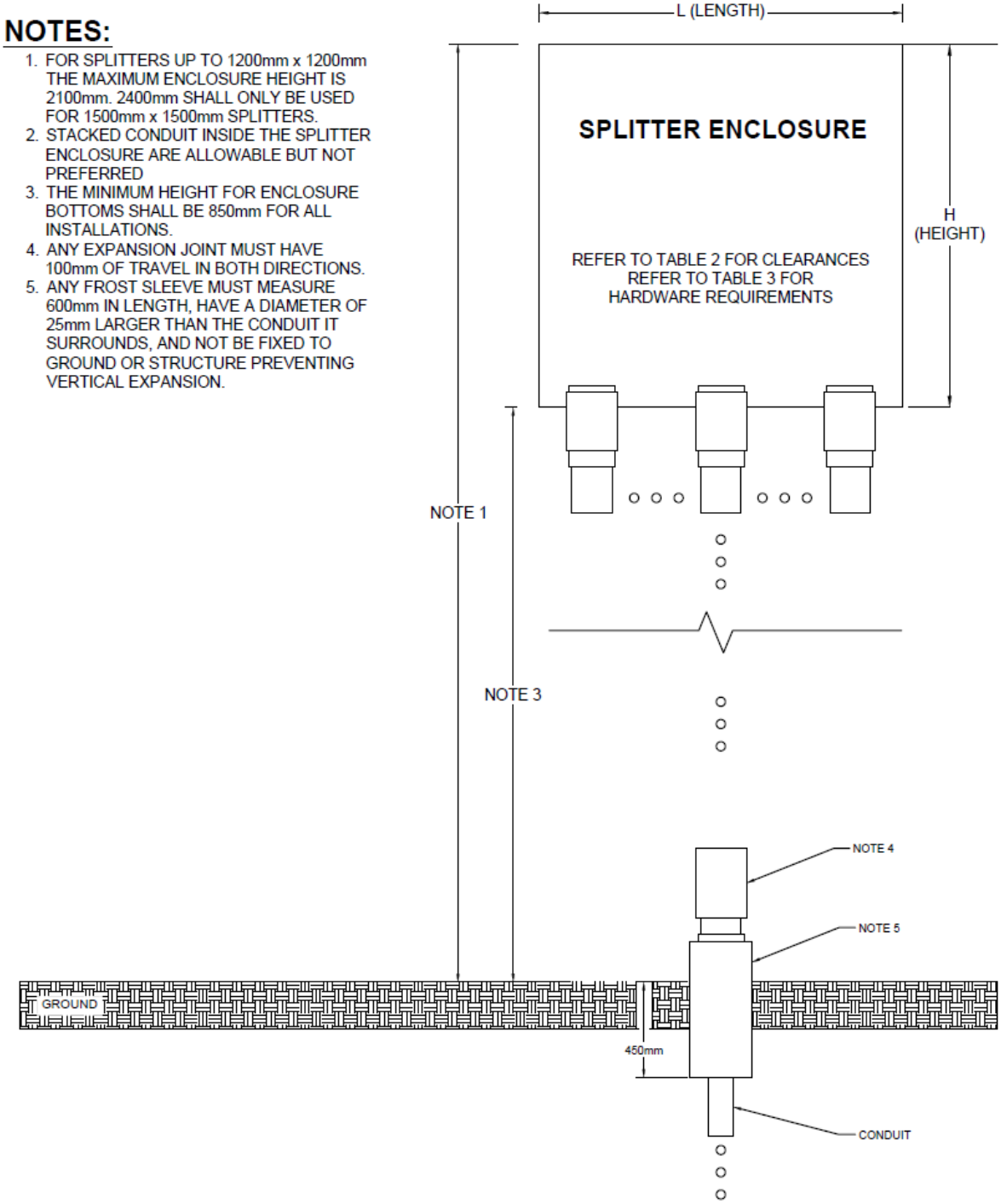


Figure 10: Multiple Attachment Points

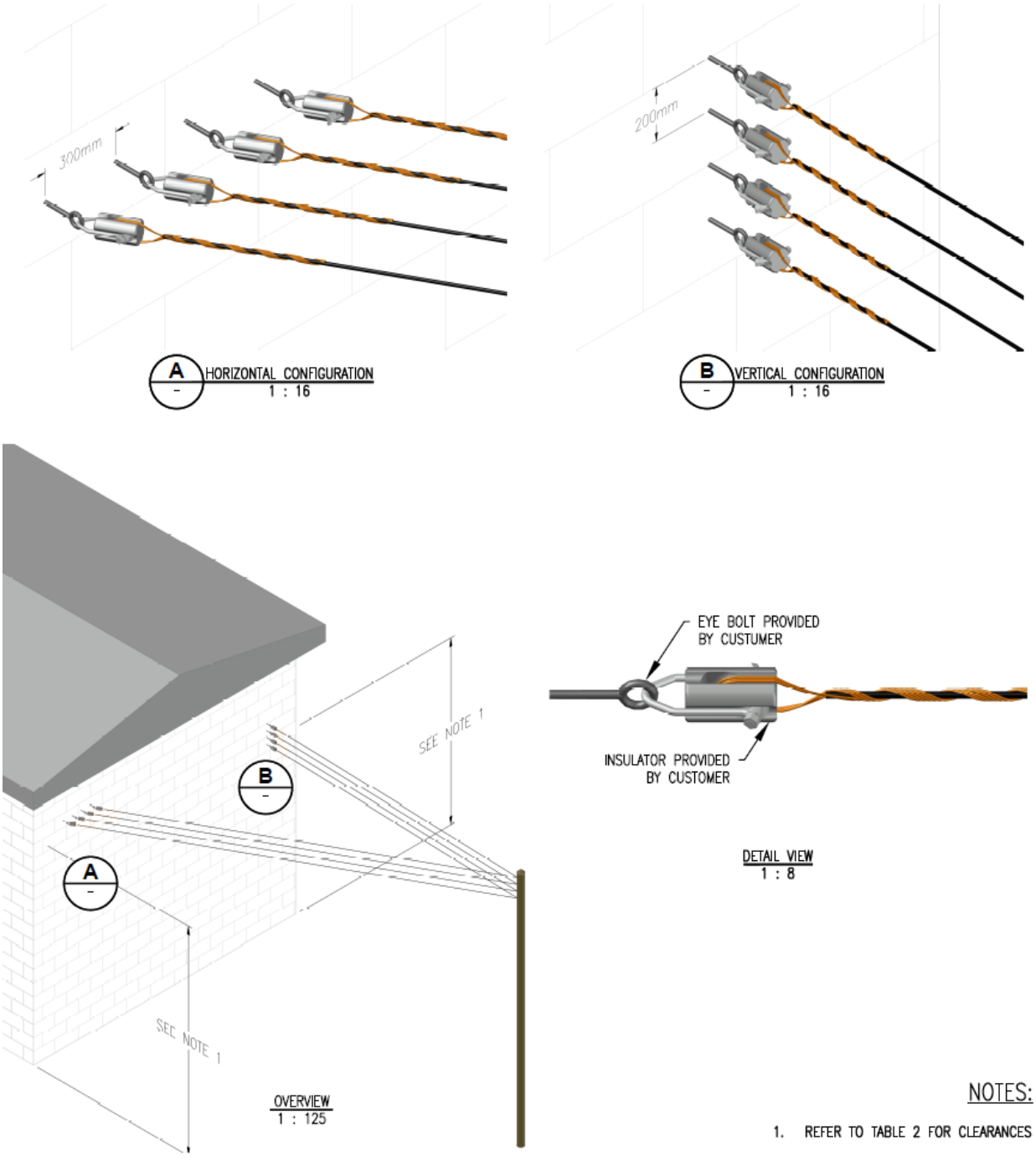


Figure 11: Typical Transformer Installation

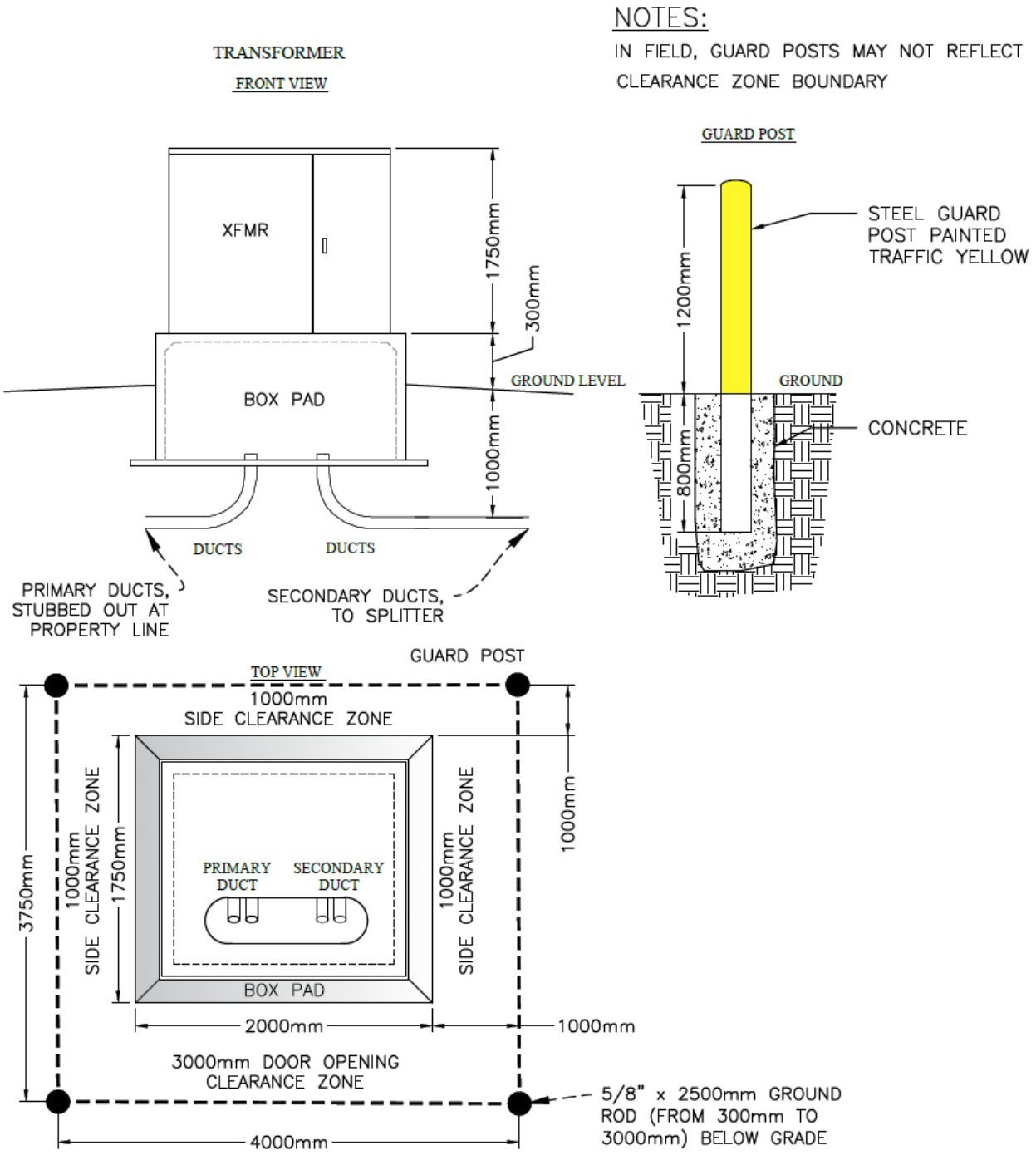
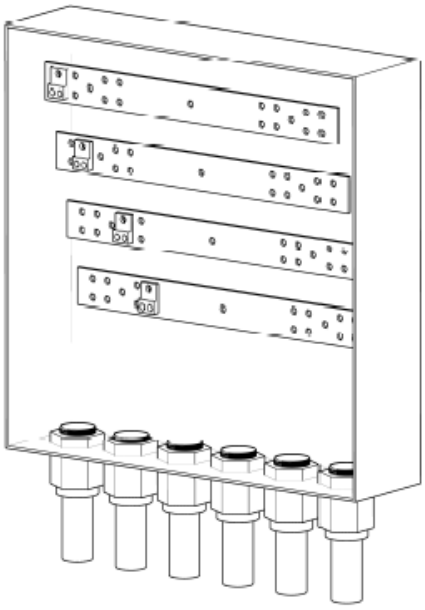


Figure 12: Typical Splitter Layout



NOTES:

- REFER TO TABLE 3 FOR SPLITTER DIMENSIONS IN GIVEN SERVICE SIZE
- ENCLOSURE TYPE NEMA 3R
- ALL 120/240V, 120/208V & 347/600V SERVICE GREATER THAN 200A
- TYPICAL FAULT CURRENT RATING IS 50,000A CONTACT SL&P FOR AVAILABLE FAULT LEVELS AT A GIVEN LOCATION
- MOUNTED 600mm ABOVE FINISHED GRADE
- DUAL DOORS: PADLOCKABLE WITH 3-POINT LATCH
- POWDER COATED, ANSI 61 GREY
- TO SAVE SPACE INSIDE THE SPLITTER, STACKING CONDUITS IS ACCEPTABLE BUT NOT PREFERRED

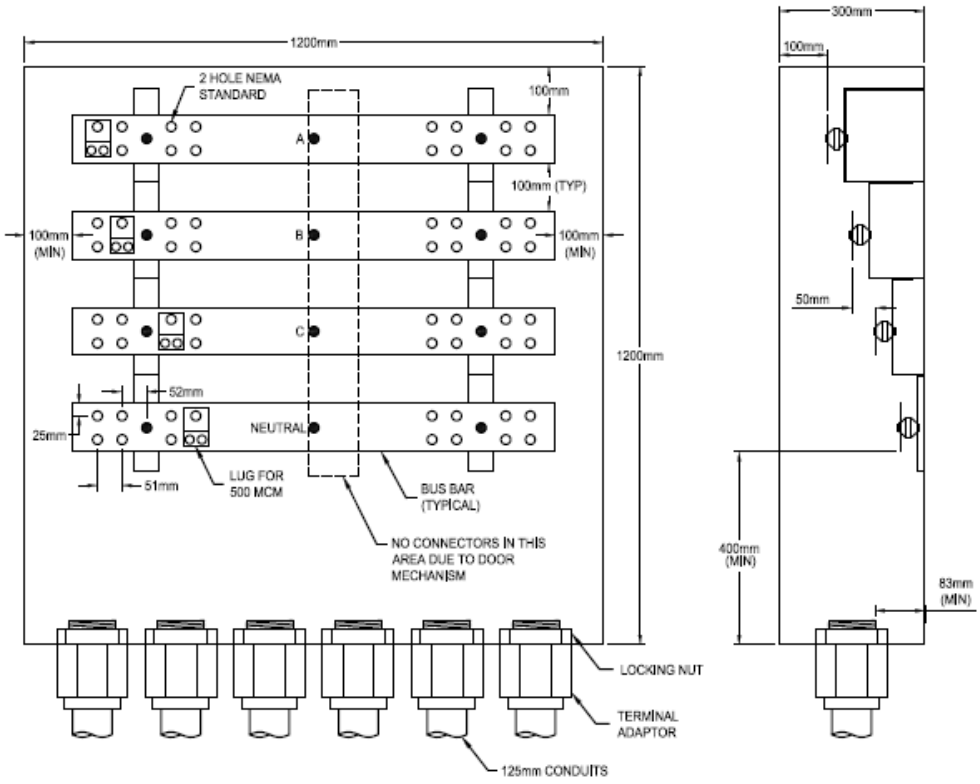


Figure 13: Overhead Temporary Construction Service

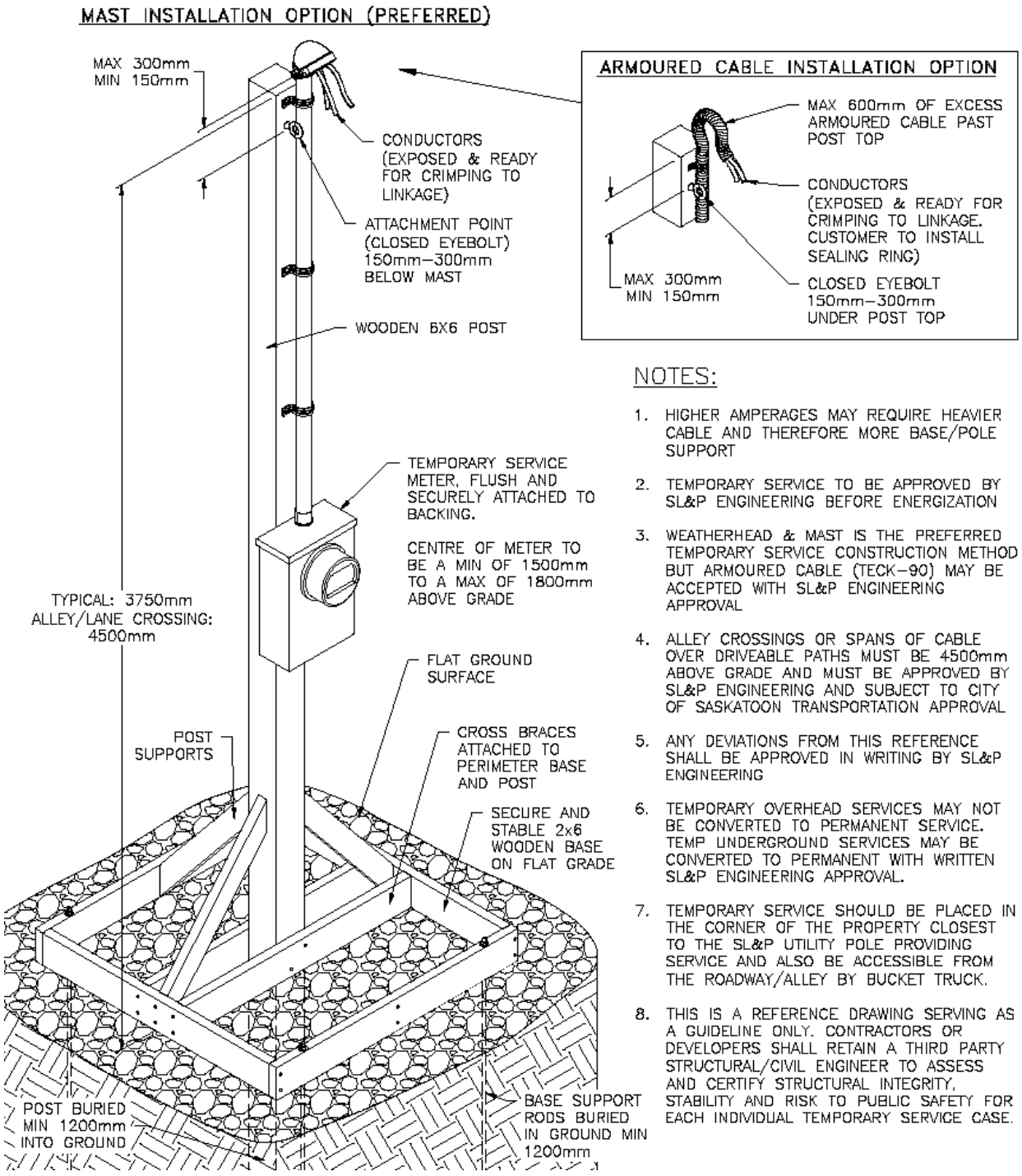


Figure 14: Cable Entry Cabinet

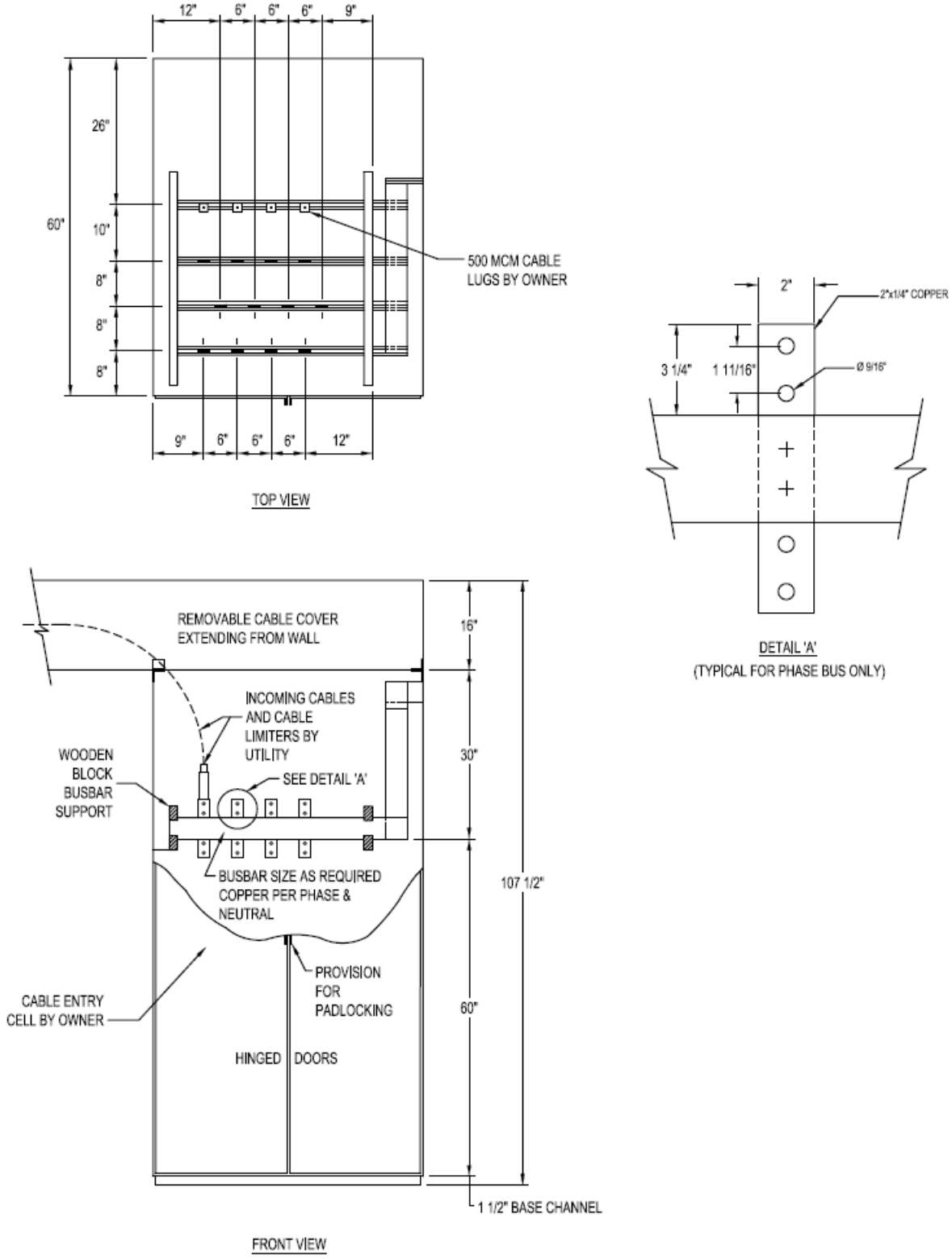
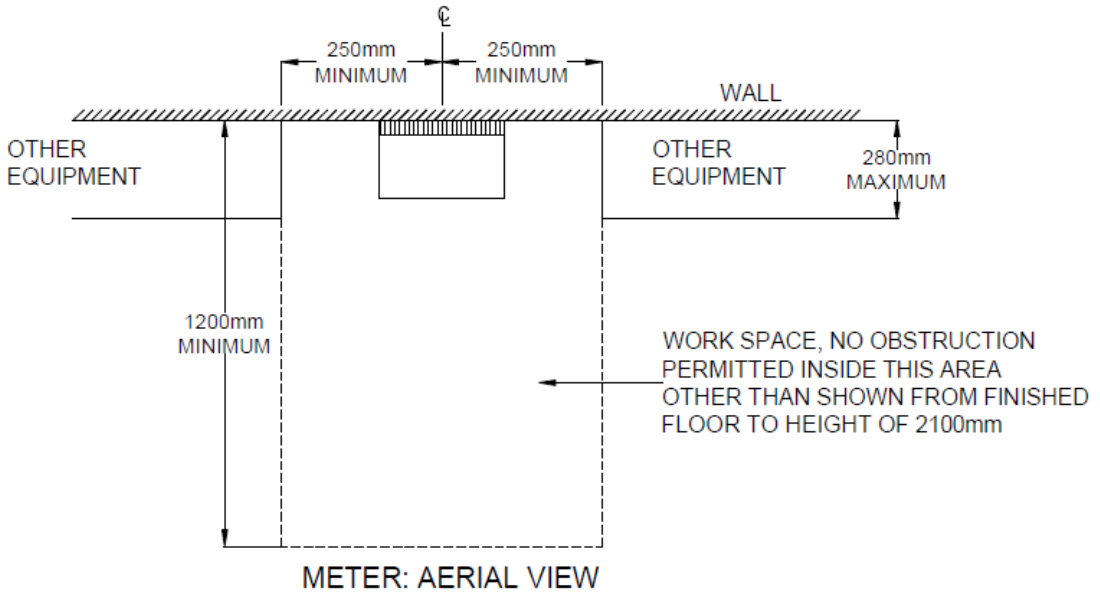


Figure 15: Revenue Meter Clearance Instrument Rated Meters



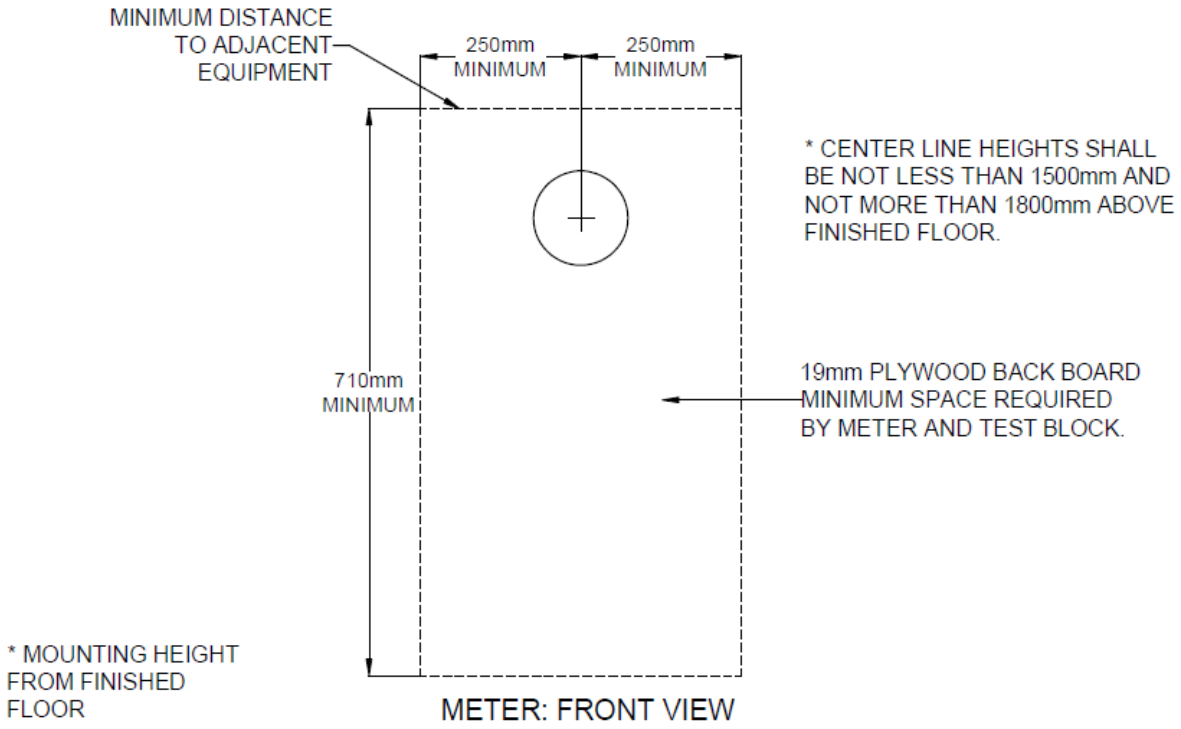


Figure 16: Residential Multiple Dwelling

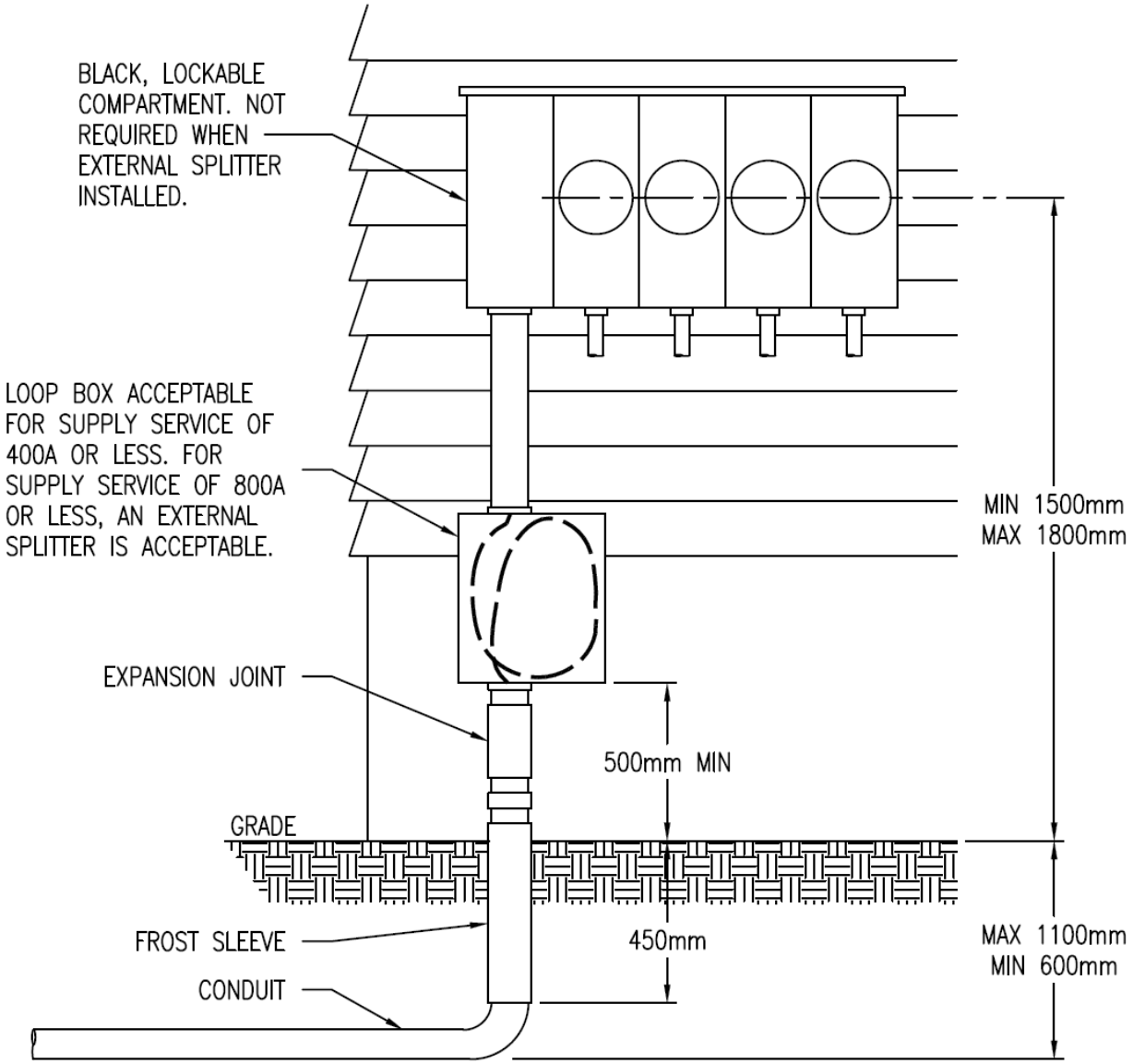
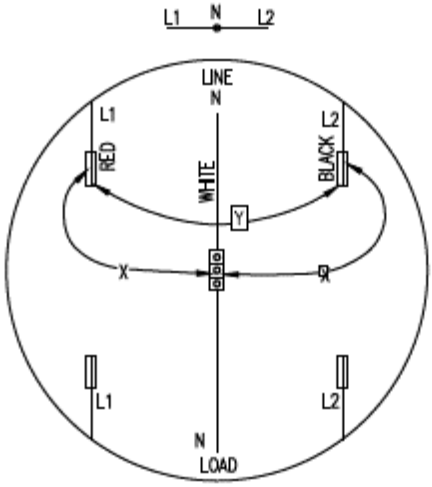
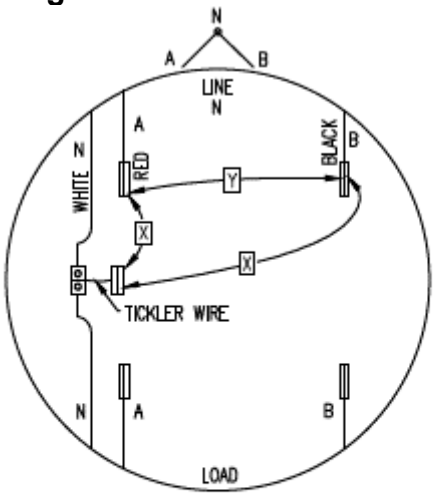


Figure 17: 4-Jaw Meter Socket



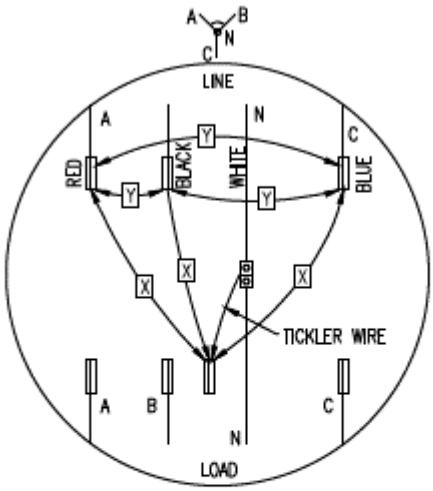
LINE VOLTAGE	MEASURED VOLTAGE	
	X	Y
120/240	120	240

Figure 18: 5-Jaw Meter Socket



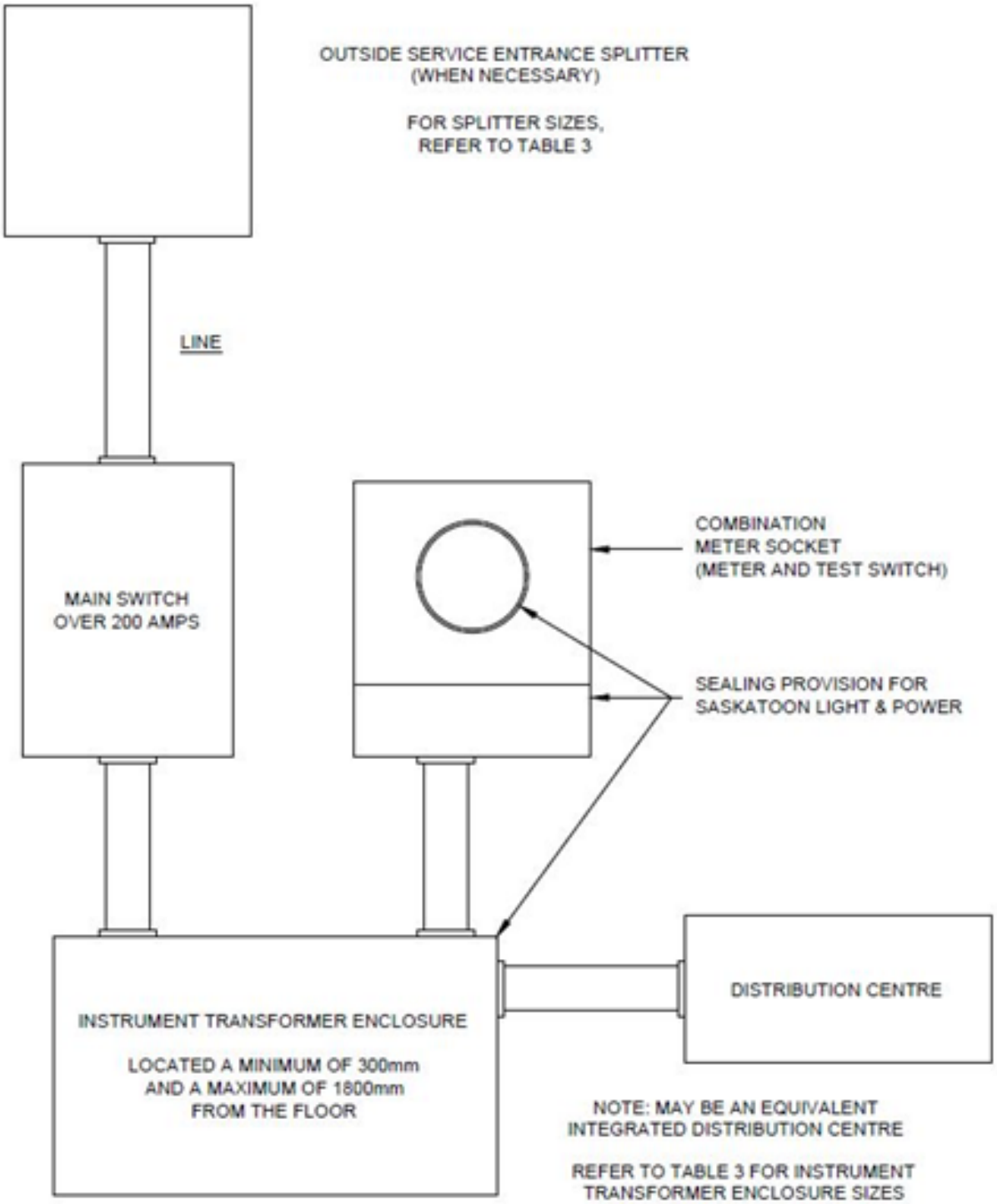
LINE VOLTAGE	MEASURED VOLTAGE	
	X	Y
120/208	120	208

Figure 19: 7-Jaw Meter Socket



LINE VOLTAGE	MEASURED VOLTAGE	
	X	Y
120/208	120	208
347/600	347	600

Figure 20: Instrument Transformer Meter Enclosure Layout



13 Tables

Table 1: Safe Limits of Approach

Phase to Phase Voltage of Overhead Power Lines, kV	Safe Limit of Approach Distance, m	
	For Persons and Equipment	Permanent Structures
0.75 and below	3.0	1.0
4.16	3.0	2.0
15	3.0	2.0
25	3.0	2.0
138	4.6	6.1

Table 2: Clearances of Electrical Equipment

Equipment	Description	Vertical Separation, m (min/max)	Horizontal Separation, m (min/max)
Overhead Conductor	To Public Roadway or Lane	5.5 (min)	N/A
	To Residential Driveway	4.0 (min)	N/A
	To Ground Normally Accessible Only by Pedestrians	3.5 (min)	N/A
	To Flat Roof	2.5 (min)	N/A
	To Peaked Roof	1.0 (min)	N/A
	To Windows, Doors, or Porches*	1.0 (min) (radially)	
	To Pool Equipment**	5.0 (min) (radially)	
	To Trees	2.0 (min) (radially)	
Point of Attachment of Overhead Conductor	To Final Grade	5.5 (max)	N/A
	To Point of Emergence of Conductors from Weatherhead**	0.15-0.3	0.6 (max)
	Between Multiple Points of Attachment Arranged Horizontally	N/A	0.3 (min)
	Between Multiple Points of Attachment Arranged Vertically	0.2 (min)	N/A
	To Surface of Roof (if attached above roof)	0.9 (min)	N/A
Underground Conductor	To Final Grade	0.6-1.1	N/A
	To Gas Line	N/A	0.6 (min)†
	To Gas Line Crossing	0.3 (min)†	N/A
	To In-Ground Pool††	1.5 (min) (radially)	
Meter Socket	Exterior Surface to Gas Meter	1.0 (min) (radially)	
	Centreline of Meter to Floor (Interior Installations) or Final Grade (Exterior Installations)	1.5-1.8	N/A
	Front Surface to Nearest Obstacle (Working Space Length)	N/A	1.2 (min)
	Centreline of Meter to Nearest Obstacle at Side (Working Space Width)	N/A	0.25 (min)
	Floor (Interior Installations) or Final Grade (Exterior Installations) to Nearest Obstacle Above (Working Space Height)	2.1 (min)	N/A
Loop Box	Bottom Surface to Final Grade	0.5 (min)	N/A
Frost Sleeve	Bottom Surface to Final Grade	0.45	N/A
Transformer	To Gas Meter	1.0 (min) (radially)	
	Front Surface to Nearest Obstacle	N/A	3.0 (min)
	Side or Rear Surface to Nearest Obstacle	N/A	1.0 (min)
External Splitter	To Gas Meter	1.0 (min) (radially)	
	Front Surface to Nearest Obstacle	N/A	3.0 (min)
	Bottom Surface to Final Grade	0.85 (min)	N/A

Equipment	Description	Vertical Separation, m (min/max)	Horizontal Separation, m (min/max)
	(For Splitters Sized 1200 mm x 1200 mm or less) Top Surface to Final Grade	2.1 (max)	N/A
	(For Splitters Larger than 1200 mm x 1200 mm) Top Surface to Final Grade	2.4 (max)	N/A
Instrument Transformer	Instrument Transformers to Other Instrument Transformer or Enclosure	0.005 (min) (radially)	
Junction Box for Metering Comms‡	To Final Grade	1.6-1.8	N/A

* Only applicable when service conductors are not higher than windows, doors, or porches.

** See Figure 7 on page 43.

† Contact SL&P for advice when these limits may be approached. Electrical conduit and gas lines may be buried in the same trench if separated by no less than 0.3 m of well-tamped backfill.

†† When conductors are buried in conduit, the minimum separation is reduced to 1.0 m. See Figure 7 on page 43.

‡ See Section 7.1.6, Meter Location, on page 29.

Table 3: Hardware Requirements for Underground Services

Supply Service Voltage	Supply Service Amperage	Conduit Quantity and Size, mm	Minimum Loop Box Size, Height x Width x Depth, mm	Minimum Splitter Size, Height x Width x Depth, mm	Minimum Instrument Transformer Cabinet Size, Height x Width x Depth, mm
120/240	200	1 – 50	300 x 300 x 150	N/A	N/A
	300	1 – 100	400 x 400 x 200	N/A	N/A
	400	1 – 100	450 x 450 x 250*	750 x 750 x 250**	750 x 750 x 250**
	600	1 – 125	N/A	900 x 900 x 300	900 x 900 x 300
	800	2 – 125	N/A	1200 x 1200 x 300	900 x 900 x 300
120/208	200	2 – 100†	550 x 450 x 300	N/A	N/A
	400-600	2 – 125†	N/A	900 x 900 x 300	900 x 900 x 300
	800-1000	3 – 125†	N/A	1200 x 1200 x 300	900 x 900 x 300
	1200-1400	4 – 125†	N/A	1200 x 1200 x 300	900 x 900 x 300
	1600-1800	5 – 125†	N/A	1500 x 1500 x 400	900 x 900 x 300
	2000	6 – 125†	N/A	1500 x 1500 x 400	900 x 900 x 300
347/600	200	2 – 100†	550 x 450 x 300	N/A	N/A
	400-600	2 – 125†	N/A	900 x 900 x 300	900 x 900 x 300
	800-1000	3 – 125†	N/A	1200 x 1200 x 300	900 x 900 x 300
	1200-1400	4 – 125†	N/A	1200 x 1200 x 300	900 x 900 x 300
	1600-1800	5 – 125†	N/A	1500 x 1500 x 400	900 x 900 x 300
	2000	6 – 125†	N/A	1500 x 1500 x 400	900 x 900 x 300

* Applicable for multi-unit residential installs where all meters are 200A rated.

** Applicable for installs with only one customer service.

† Includes a spare conduit.

Note: Splitters must be CEC type 3R rated or better.

Note: Downtown network splitter dimension requirements may differ; see Section 6.9, on page 24, for more information on network services.

Table 4: Self-Contained Meters

Voltage	Phase	Wire	Connection	Socket	Figure
120/240	1	3		4 Jaw	Figure 17
120/208	2	3	Network	5 Jaw	Figure 18
120/208	3	4	Star (Y)	7 Jaw	Figure 19
347/600	3	4	Star (Y)	7 Jaw	Figure 19

Table 5: Instrument Transformer Meters

Voltage	Phase	Wire	Connection	Socket	Figure
120/240	1	3		5 Jaw	Figure 18
120/208	3	4	Star (Y)	13 Jaw	

Table 6: Voltage Variation Limits (For Supply Services ≤ 1000V)

Nominal System Voltages, V	Service Entrance Voltage Variation Limits, V			
	Low-Low	Low	High	High-High
Single-Phase				
120	106	110	125	127
240	212	220	250	254
Three-Phase 4-Conductor				
120	110	112	125	127
208	190	194	216	220
347	306	318	360	367
600	530	550	625	635
Three-Phase 3-Conductor				
240	212	220	250	254

14 Revisions

Date	Version	Description
May 2015	4	Major revision – Renamed Customer Information Guide and revised format.
June 2015	5	Swimming Pools – Minimum separation of overhead and underground lines by a swimming pool.
January 2016	6	Note – Customers are not permitted to perform their own service disconnects. Commercial Connections – Customer must provide SL&P with shop drawings of the switchgear (if applicable) prior to servicing. Typical Service Installation Chart
March 2017	7	
January 2019	8	Major Revision – Format, clarification around service requirements, and special section for Infill Developments.
October 2019	9	Mast installation revisions.
February 2023	10	Major Revision – Format and clarifications throughout.
March 2024	11	Major Revision – Format and clarifications throughout. • Revised numerous clearances • Revised numerous administrative and/or operational procedures and descriptions • Revised Typical Underground Service Diagram • Added Pool Clearance Diagram in Overhead Residential Services • Added Underground Commercial & Industrial Connections > 200A (Splitter General) Diagram • Revised Transformer Diagram and added SL&P pad mount equipment grounding rings/grid standard with related operational clearances • Added Temporary Service Diagram for Temporary Overhead Construction Service • Added Construction Standard Drawing for Residential Meter – Multiple Single Family Dwelling as Figure 14.
April 2025	12	Major Revisions • Added Table of Figures and Table of Tables.

		• Added Section 2 Definitions. • Rewrote service requirements to improve consistency, flexibility, and provide distinction between requirements of single-dwelling residential services, multiple-dwelling residential services, and non-residential services. • Moved all clearance requirements to Table 2. • Created Table 3, listing all hardware requirements (conduit size and quantity, minimum sizes of loop box/splitter/instrument transformer cabinet) for different services. • Moved all figures and tables to end of document. • Rules regarding multiple-position meter sockets (AKA meter troughs) were revised and clarified.