SaskPower Electric Service Requirements Bulletin 2017-01

2017 Electric Service Requirements (ESR) Update

The ESR has been under review and an updated document will be released for use January 1, 2018. Enforcement will coincide with quote acceptance. Any service quote accepted after January 1, 2018 will be required to comply with the new requirements. An updated version of the document will be available on the SaskPower website November 24th at the following link:

http://www.saskpower.com/accounts-and-services/service-requests/electrical-permits-and-inspections/electric-service-requirements/

The structure of the document has changed significantly in an attempt to be more definitive and add clarity to the requirements. All users of the document are encouraged to read the updated version to ensure all new installations are compliant.

There are four significant requirement changes that impact both SaskPower and external electrical contractor personnel. Significant requirement changes are as follows:

1. Use of 400 A Self-Contained Meter Sockets – the use of 400 A self-contained meter sockets will no longer be allowed. The 400 A self-contained meter socket limits the ability of SaskPower operating personnel to isolate metering equipment for individual customers when multiple customers are served, and the current meter socket configuration does not align with industry practice in other jurisdictions. Several options are available for 400 A services, and SaskPower has expanded the requirements for customer supplied termination enclosures to include 400 A services (refer to Appendix I for updated drawings pertaining to this change).

2. 5 Jaw 3S Form Meter Socket Requirement – all new single phase services exceeding 200 A will now require a 5 jaw 3S form meter socket with provision for a test switch, and *no* circuit closer. Changes pertaining to this new requirement are outlined in Figure 2-27.

3. Meter Marking for Multiple Meters – all new meter installations where multiple meters are grouped together will now require dedicated marking. Each meter socket will be required to be marked to indicate the address or unit number to ensure customer billing information is accurate, and connections/disconnections can be done safely. Marking will be required to be on the cover of and on the interior of the meter socket enclosure. It shall be permanent, weather and ultraviolet resistant, with a minimum height of 50 mm (2”). Details pertaining to this change are described in Section 2.5.2.

4. Loop Box – a 'loop box' will now be required on all installations utilizing a 200 A self-contained meter socket that *do not* require a splitter. The loop box will allow for a cable loop to provide slack when ground settling occurs in an attempt to minimize meter socket, meter socket assembly, and cable damage. Further details on the loop box requirements are contained in the section below.

Changes to ESR to Accommodate a Loop Box

An above grade loop box will be required on all new installations utilizing a 200 A self-contained meter socket that *do not* require a splitter. New installation requirements affect Figure 2-1, Figure 2-2, and Figure 2-7 of the ESR. Updated figures are attached in Appendix I.

The new installation requirements detailed in Figure 2-1 will affect servicing options in the following sections of the ESR:

1. (Residential) Section 2.1.2.1 Single Family Detached Dwelling – Urban Single Phase Service up to 300 V
2. (Residential) Section 2.1.2.3 Single Family Detached Dwelling – Mobile Home (Park)
3. (Residential) Section 2.1.2.4 Multiple Single Family Dwellings
4. (General Service) Section 2.3.2.1 Single Phase General Service up to 300 V

The new installation requirements detailed in Figure 2-2 will affect servicing options in the following sections of the ESR:

1. (Farm) Section 2.2.2.3 Farm Polyphase Service up to 300 V
2. (General Service) Section 2.3.2.3 Polyphase General Service up to 300 V

The new installation requirements detailed in Figure 2-7 will affect servicing options in the following sections of the ESR:

1. (Residential) Section 2.1.2.4 Multiple Single Family Dwellings
2. (General Service) Section 2.3.2.1 Single Phase General Service up to 300 V

Loop Box Installation Details

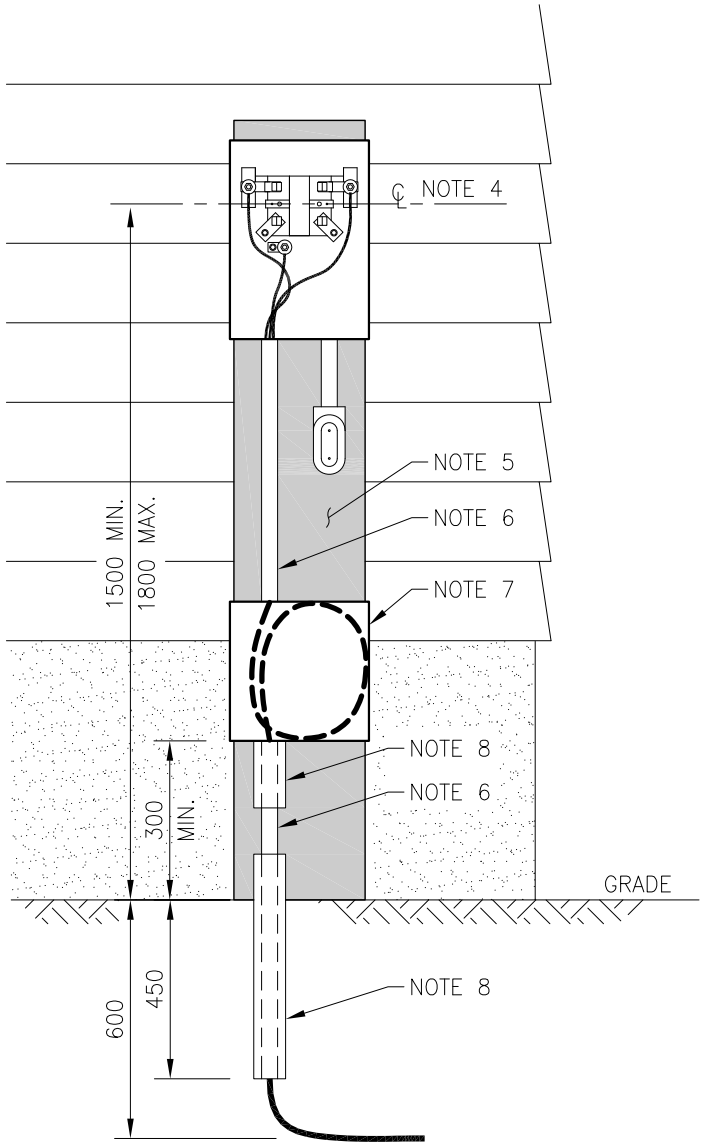
Material procurement and installation of the loop box is the responsibility of the Customer's electrical contractor. Requirements for the loop box are as follows:

1. The minimum dimensions for the loop box are 300 mm (horizontal dimension) x 350 mm (vertical dimension) x 150 mm (depth). For installations with a multi-position meter trough (ESR Figure 2-7), the minimum dimensions for the loop box are 510 mm (horizontal dimension) x 510 mm (vertical dimension) x 205 mm (depth).
2. The box is to be mounted (bottom of box) a minimum of 300 mm above grade.

3. The box is to be metal and properly bonded as per CSA.
4. The box will require a tab for SaskPower to apply a lock/seal.
5. The box may be hinged or unhinged.
6. The box is not required to be weather tight as the cables and/or splices will be weather proof.

Example installation photos for a 200 A self-contained meter socket with loop box are contained in Appendix II.

Appendix I: Updated ESR Figure 2-1, Figure 2-2, Figure 2-5, Figure 2-6, and Figure 2-7



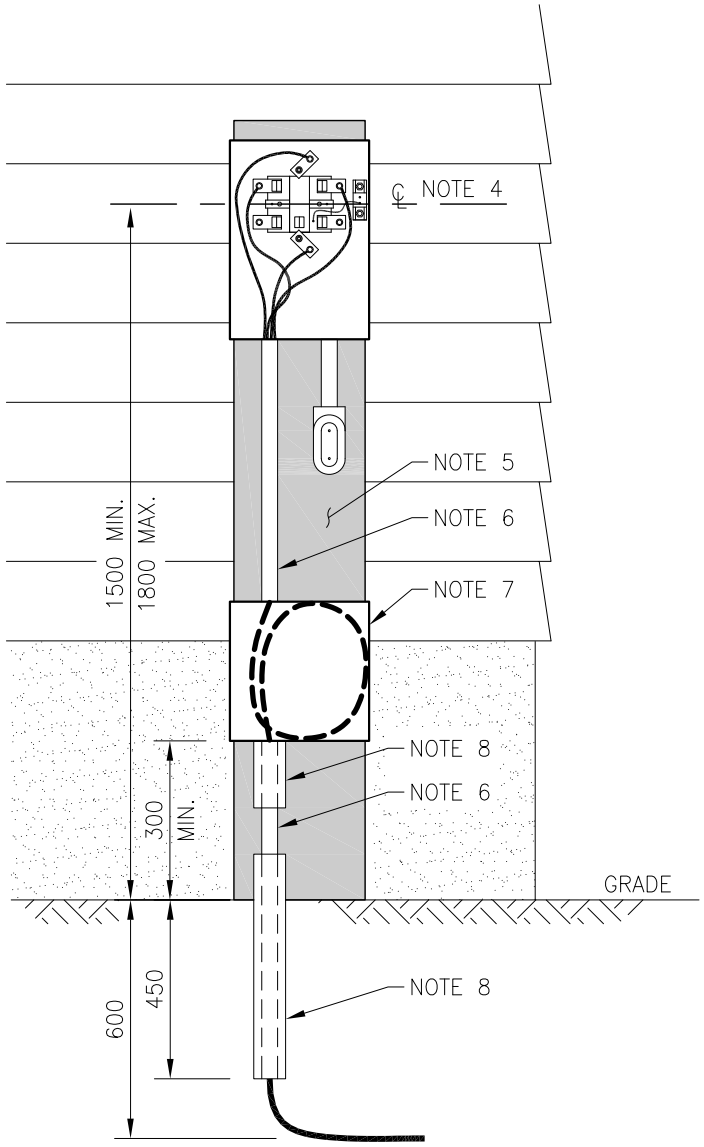
INSTALLATION NOTES:

1. POINT OF DELIVERY – SASKPOWER TERMINATION IN THE CUSTOMER SUPPLIED METER SOCKET.
2. METER SOCKET REQUIREMENTS AS PER SECTION 2.5.2.1.
3. WHEN A PERMANENT STRUCTURE IS INSTALLED BELOW THE METER, THE PERMANENT STRUCTURE SHALL BE CONSIDERED GRADE.
4. CENTERLINE OF METER TO BE A MINIMUM OF 1500mm, OR MAXIMUM OF 1800mm ABOVE GRADE.
5. SERVICE TO HAVE A FIXED WOOD BACKING (MINIMUM 19mm THICKNESS), AT LEAST THE SAME WIDTH AS THE METER SOCKET, EXTENDING TO 300mm ABOVE FINISHED GRADE, AND ADEQUATELY SECURED. 2" x 12" NOMINAL LUMBER (1–1/2" x 11–1/4" ACTUAL) IS ALSO ACCEPTABLE. THE BACKING SHALL ACCOMMODATE THE LOOP BOX REGARDLESS OF WHETHER IT IS OFFSET OR INLINE WITH THE METER SOCKET.
6. 53mm ø (2") SUPPLY SERVICE CONDUIT TO BE INSTALLED BY CUSTOMER.
7. METAL LOOP BOX TO BE INSTALLED BY CUSTOMER A MINIMUM OF 300mm ABOVE GRADE. LOOP BOX MAY BE INSTALLED INLINE (AS SHOWN), OR OFFSET IF NECESSARY. LOOP BOX TO BE A MINIMUM OF 305mm WIDE x 350mm HIGH x 150mm DEEP. IT SHALL CONTAIN PROVISION FOR A SASKPOWER SEAL, AND BE PROPERLY BONDED AS PER CODE.
8. PVC SLIP SLEEVES (DIRECTLY BELOW LOOP BOX AND AT GRADE) TO BE INSTALLED BY THE CUSTOMER. SLIP SLEEVES SHALL BE 25mm LARGER THAN THE SUPPLY CONDUIT (53mm). SLIP SLEEVE AT GRADE TO BE 600mm IN LENGTH AND EXTEND 450mm BELOW GRADE.

DIMENSIONS ARE IN MILLIMETERS, UNLESS OTHERWISE NOTED.

FIGURE 2-1
SINGLE PHASE 120/240V 3W 200A
METER INSTALLATION

SaskPower



INSTALLATION NOTES:

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2. METER SOCKET REQUIREMENTS AS PER SECTION 2.5.2.1.
3. WHEN A PERMANENT STRUCTURE IS INSTALLED BELOW THE METER, THE PERMANENT STRUCTURE SHALL BE CONSIDERED GRADE.
4. CENTERLINE OF METER TO BE A MINIMUM OF 1500mm, OR MAXIMUM OF 1800mm ABOVE GRADE.
5. SERVICE TO HAVE A FIXED WOOD BACKING (MINIMUM 19mm THICKNESS), AT LEAST THE SAME WIDTH AS THE METER SOCKET, EXTENDING TO 300mm ABOVE FINISHED GRADE, AND ADEQUATELY SECURED. 2" x 12" NOMINAL LUMBER (1–1/2" x 11–1/4" ACTUAL) IS ALSO ACCEPTABLE. THE BACKING SHALL ACCOMMODATE THE 'LOOP BOX' REGARDLESS OF WHETHER IT IS OFFSET OR INLINE WITH THE METER SOCKET.
6. 78mm ø (3") SUPPLY SERVICE CONDUIT TO BE INSTALLED BY CUSTOMER.
7. METAL LOOP BOX TO BE INSTALLED BY CUSTOMER A MINIMUM OF 300mm ABOVE GRADE. LOOP BOX MAY BE INSTALLED INLINE (AS SHOWN), OR OFFSET IF NECESSARY. LOOP BOX TO BE A MINIMUM OF 305mm WIDE x 350mm HIGH x 150mm DEEP. IT SHALL CONTAIN PROVISION FOR A SASKPOWER SEAL, AND BE PROPERLY BONDED AS PER CODE.
8. PVC SLIP SLEEVES (DIRECTLY BELOW LOOP BOX AND AT GRADE) TO BE INSTALLED BY THE CUSTOMER. SLIP SLEEVES SHALL BE 25mm LARGER THAN THE SUPPLY CONDUIT (78mm). SLIP SLEEVE AT GRADE TO BE 600mm IN LENGTH AND EXTEND 450mm BELOW GRADE.

DIMENSIONS ARE IN MILLIMETERS, UNLESS OTHERWISE NOTED.

FIGURE 2-2
THREE PHASE 120/208V 4W 200A
METER INSTALLATION

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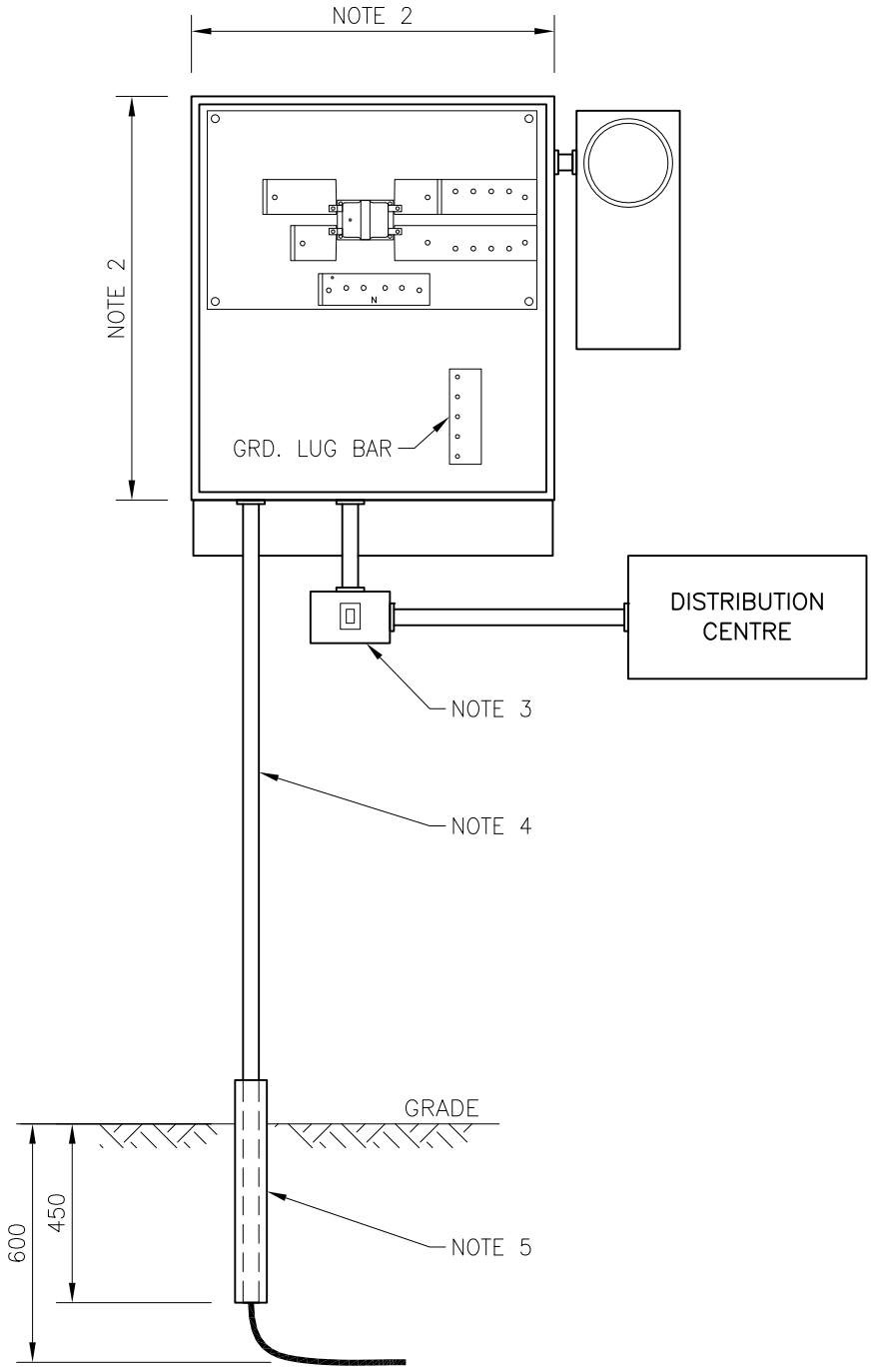


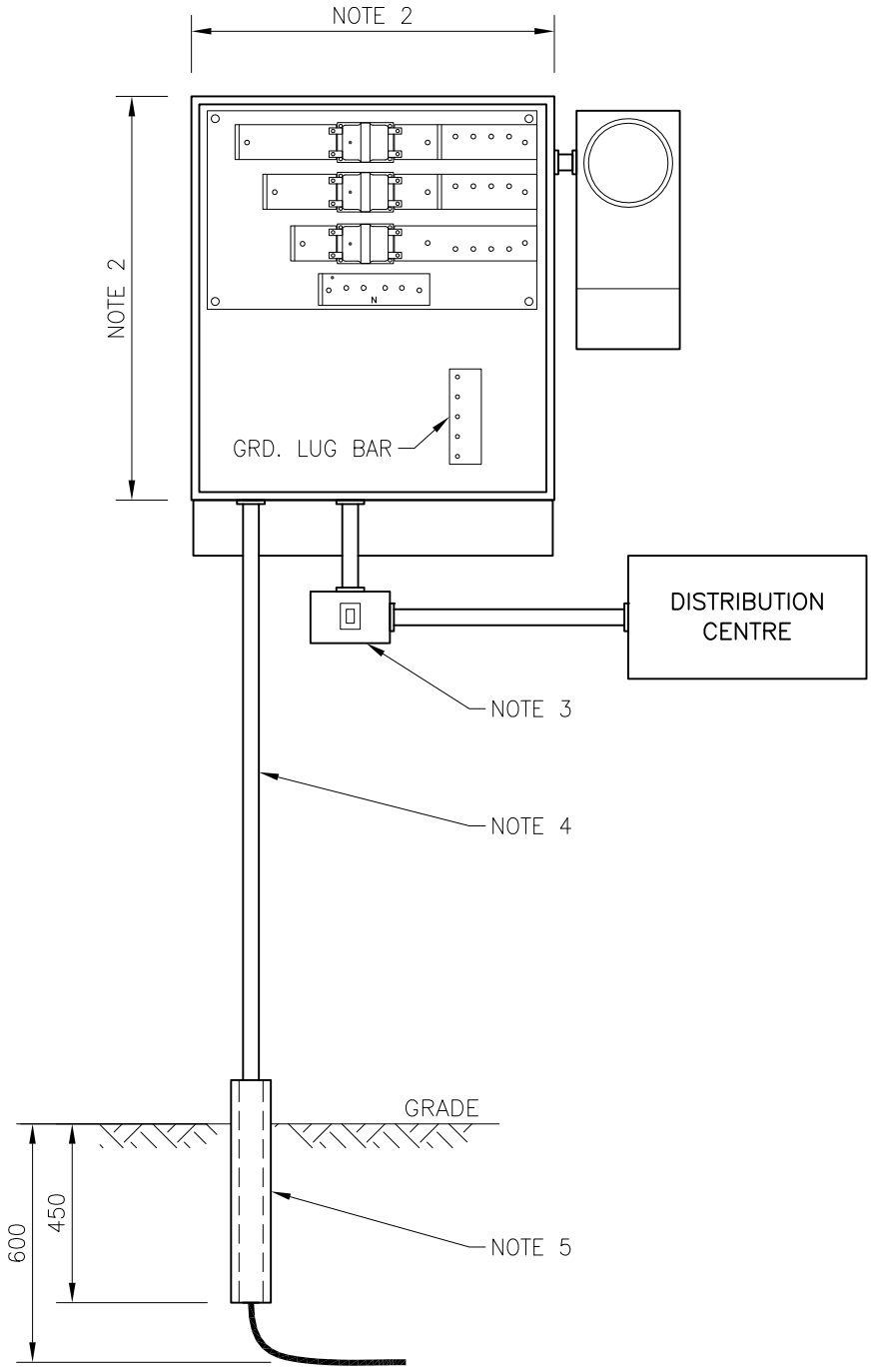
INSTALLATION NOTES:

1. POINT OF DELIVERY – SASKPOWER TERMINATION IN THE CUSTOMER SUPPLIED CT ENCLOSURE.
2. SERVICE TERMINATION/CT ENCLOSURE SIZE SHALL HAVE THE MINIMUM DIMENSIONS:
   a) 400A – 760mm WIDE x 760mm TALL x 255mm DEEP
   b) 600A – 915mm WIDE x 1015mm TALL x 305mm DEEP
3. A FUSED DISCONNECT IS REQUIRED IMMEDIATELY AFTER THE CT ENCLOSURE.
4. FOR CONDUIT SIZES, REFER TO TABLE 2–1.
5. PVC SLIP SLEEVE AT GROUND LINE SHALL BE 600mm LONG, AND 25mm LARGER THAN THE SUPPLY CONDUIT.

DIMENSIONS ARE IN MILLIMETERS, UNLESS OTHERWISE NOTED.

FIGURE 2-5
SINGLE PHASE 120/240V 3W 400A OR 600A
SERVICE TERMINATION/CT ENCLOSURE

SaskPower



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2. SERVICE TERMINATION/CT ENCLOSURE SIZE SHALL HAVE THE MINIMUM DIMENSIONS:
   a) 400A – 760mm WIDE x 760mm TALL x 255mm DEEP
   b) 600A – 915mm WIDE x 1015mm TALL x 305mm DEEP
3. A FUSED DISCONNECT IS REQUIRED IMMEDIATELY AFTER THE CT ENCLOSURE.
4. FOR CONDUIT SIZES, REFER TO TABLE 2–1.
5. PVC SLIP SLEEVE AT GROUND LINE SHALL BE 600mm LONG, AND 25mm LARGER THAN THE SUPPLY CONDUIT.

DIMENSIONS ARE IN MILLIMETERS, UNLESS OTHERWISE NOTED.

FIGURE 2-6:
THREE PHASE 120/208V 4W 400A OR 600A
SERVICE TERMINATION / CT ENCLOSURE

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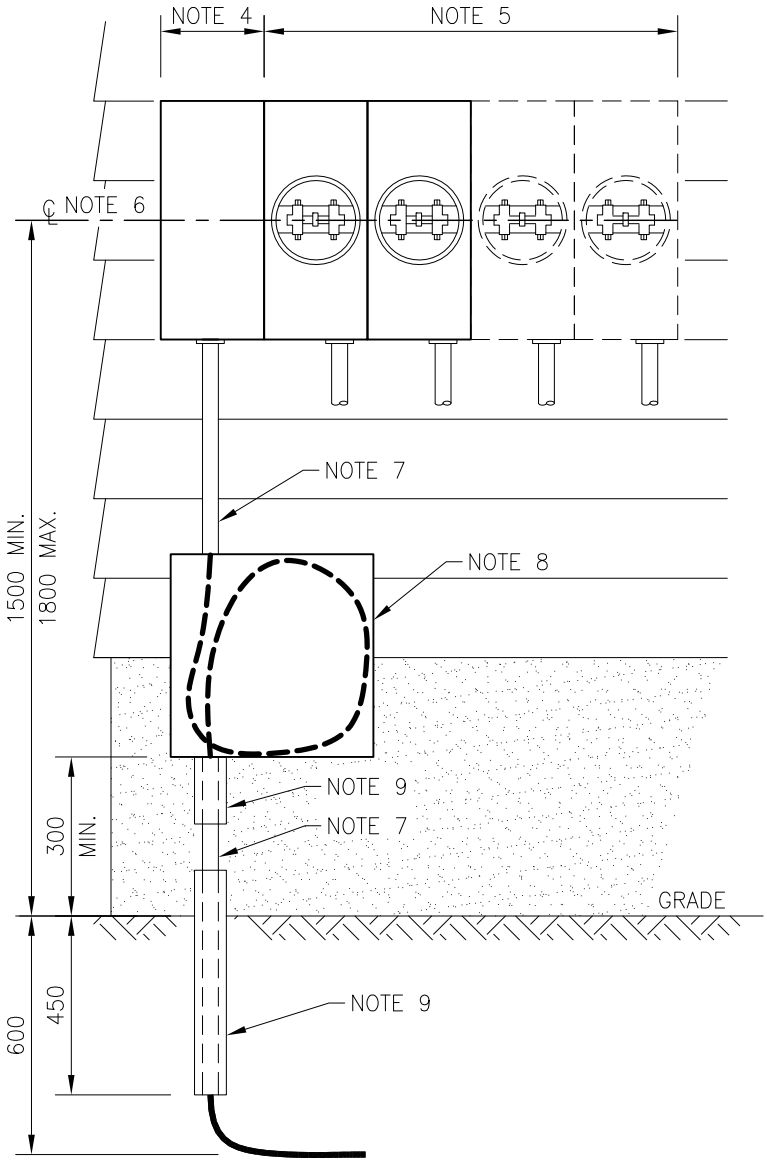

INSTALLATION NOTES:

1. POINT OF DELIVERY – SASKPOWER TERMINATION IN THE CUSTOMER SUPPLIED BLANK COMPARTMENT.
2. METER SOCKET REQUIREMENTS AS PER SECTION 2.5.2.1.
3. EACH METER SOCKET AND COVER MUST BE IDENTIFIED AS PER SECTION 2.5.2.
4. BLANK COMPARTMENT TO BE A MINIMUM OF 305mm (12") WIDE AS PER TABLE 2–1.
5. UP TO A MAXIMUM OF 4 METER POSITIONS WILL BE ALLOWED.
6. CENTERLINE OF METERS TO BE A MINIMUM OF 1500mm, OR MAXIMUM OF 1800mm ABOVE GRADE.
7. FOR CONDUIT SIZES, REFER TO TABLE 2–1.
8. METAL LOOP BOX TO BE INSTALLED BY CUSTOMER A MINIMUM OF 300mm ABOVE GRADE. LOOP BOX MAY BE INSTALLED INLINE (AS SHOWN), OR OFFSET IF NECESSARY. LOOP BOX TO BE A MINIMUM OF 510mm WIDE x 510mm HIGH x 205mm DEEP; IT SHALL CONTAIN PROVISION FOR A SASKPOWER SEAL, AND BE PROPERLY BONDED AS PER CODE.
9. PVC SLIP SLEEVES (DIRECTLY BELOW LOOP BOX AND AT GRADE) TO BE INSTALLED BY THE CUSTOMER. SLIP SLEEVES SHALL BE 25mm LARGER THAN THE SUPPLY CONDUIT. SLIP SLEEVE AT GRADE TO BE 600mm IN LENGTH AND EXTEND 450mm BELOW GRADE.

DIMENSIONS ARE IN MILLIMETERS, UNLESS OTHERWISE NOTED.

FIGURE 2-7
SINGLE PHASE 120/240V 3W
MUILTI-POSITION METER TROUGH WITH BLANK COMPARTMENT

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Appendix II: Loop Box Installation Photos

ESR Bulletin 2017-1 Figure 1: 200 A Self-contained Meter Socket Installation – Detail 1

ESR Bulletin 2017-1 Figure 2: 200 A Self-contained Meter Socket Installation – Detail 2

ESR Bulletin 2017-1 Figure 3: 200 A Self-contained Meter Socket Installation – Detail 3

ESR Bulletin 2017-1 Figure 4: 200 A Self-contained Meter Socket Installation – Detail 4

ESR Bulletin 2017-1 Figure 5: 200 A Self-contained Meter Socket Installation – Detail 5