



Customer Requirements Residential Underground Service Boxes

C-SV-1200

Application

This standard describes the requirements for underground residential services.

Terms

Term	Definition
Electrical Inspector	Tacoma Power electrical inspection staff that inspect for compliance to the Tacoma Power standards, Tacoma Electrical Code, NEC, WAC and Electric Service Handbook requirements.
Electrical Secondary	Conduit and cables (less than 600 volts) that connect from the transformer to the SSB .
Electrical Service	Conduit and cables from the SSB to the customer meter base.
New Services Engineer	Tacoma Power engineering staff that provide design, cost estimates, and coordination of the residential underground secondary service project.
Secondary Service Box (SSB)	A plastic vault designed to contain the point of connection for the electrical service which connects the electrical secondary cables to the electrical service cables.

Responsibilities & Inspections

Construction Area	Responsibility	Inspection by
Location of SSB	The <i>New Services Engineering Office</i> will work with the <i>customer or their electrical contractor</i> to determine the location of the SSB on the customer's property.	New Services Engineering Office
Installation of SSB	The <i>New Services Engineering Office</i> will work with the <i>customer or their electrical contractor</i> to determine the installation of the SSB on the customer's property.	New Services Engineering Office
Electrical Service	The <i>customer or their electrical contractor</i> will install the electrical service.	Electrical Inspector
Electrical Secondary	<i>Tacoma Power T&D Construction Staff</i>	Not needed

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Underground Service to SSB

Step	Procedure
1	<p>Establish location and final grade for the SSB.</p> <ul style="list-style-type: none"> • The SSB is usually found or placed at the property lot corner. If not, contact the New Services Engineer. • SSBs shall not be located in driveways or other areas subject to vehicular loading. • SSBs shall not be placed in a depression or in low areas that would tend to fill with water or silt. • SSBs shall not be placed in front of any padmount transformer. • Ensure there are no rocks between SSB base and cover to avoid damage to the cover. • The top of the SSB cover shall be 2 inches above final grade.
2	<p>Dig trench from the meter base to the nearest side or end of the SSB.</p> <ul style="list-style-type: none"> • The trench shall be deep enough: <ul style="list-style-type: none"> ○ at the SSB so the conduit elbow can be terminated <u>vertically</u> within the SSB. ○ to maintain a minimum of 24 inches of cover over the conduit. • The trench should be dug as straight as possible and the trench bed leveled and free of rocks larger than 2 inches in diameter. <p>Note: Permanent structures are never to be constructed or moved on top of buried Tacoma Power conduit or cable.</p>
3	<p>Install conduit for electrical service.</p> <ul style="list-style-type: none"> • Install 1 or 2 conduits sized per the NFPA 70 National Electric Code (4 in. conduit max. for Large SSB). • Excavate beneath the SSB and insert the 90° conduit elbows. • All conduit must be at the same end of the SSB and grouped closely together (property side of the SSB preferred). • Conduit ends shall extend vertically 2 inches above the bottom of the SSB. • Identify conduit ends with customer house address. • Place (Do Not Glue) bell ends on the conduit ends inside SSB. • If the elevation of the SSB requires adjustment, contact New Services Engineer for assistance.
4	<p>The electrical service conduit in the trench must be inspected and approved by the Electrical Inspector (BEFORE Backfill).</p>
5	<p>Backfill the trench.</p> <ul style="list-style-type: none"> • Use available clean material. • Pieces of scrap cable and other construction items must not be buried in the trench. • Large rocks must be removed and if native soil is rock, sand bedding may be required. • Tamp the soil, leaving a slight mound to allow for settling.
6	<p>Pull in electrical service cables from the meter base to the SSB (350 kcmil max. for Large SSB).</p> <ul style="list-style-type: none"> • Leave 4 feet minimum of cable, measured from the top of the SSB, left inside the SSB. • Ensure any parallel cables have matching phase tapes. • Identify cables with customer house address.
7	<p>Ensure the following has been done:</p> <ul style="list-style-type: none"> • All applicable fees are paid. • All inspections have been passed.
8	<p>Tacoma Power T&D Construction Staff will:</p> <ul style="list-style-type: none"> • Install the SSB as necessary. • Pull in electrical secondary cables from the transformer to the SSB. • Energize the service.

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Figure 1 Typical Installation of SSB

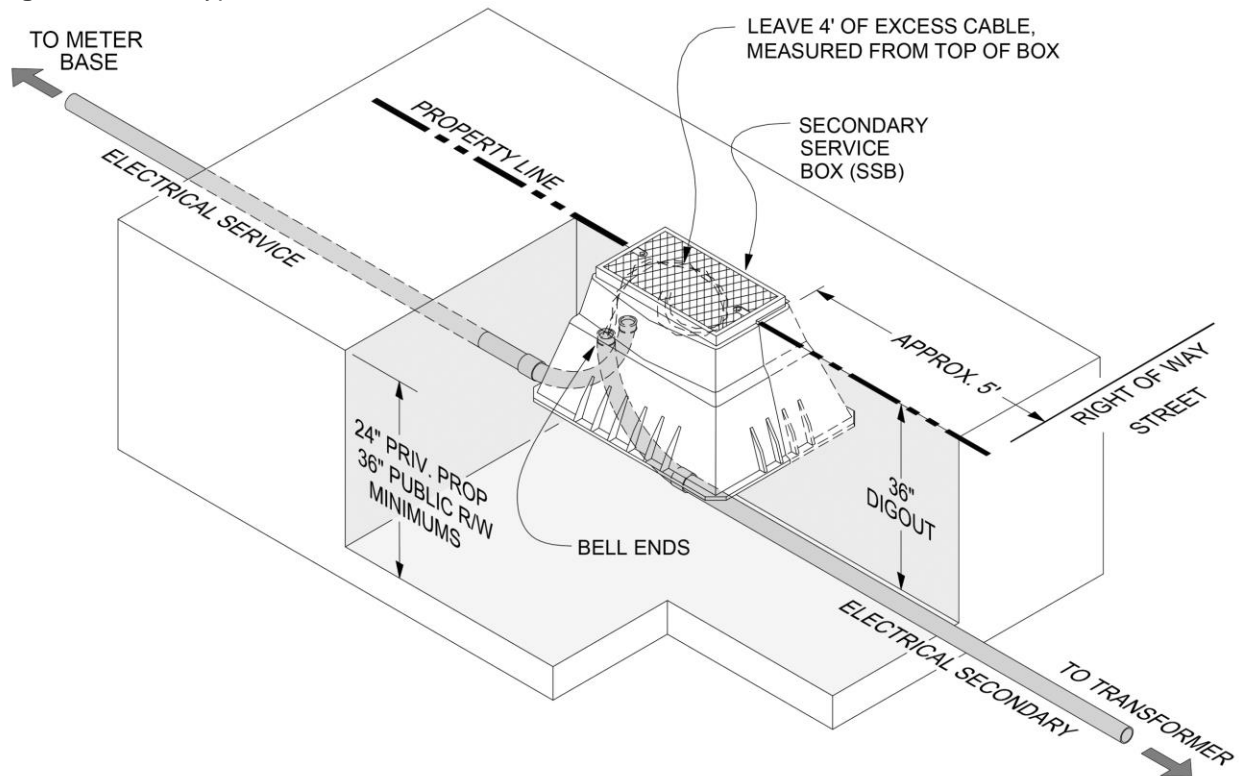
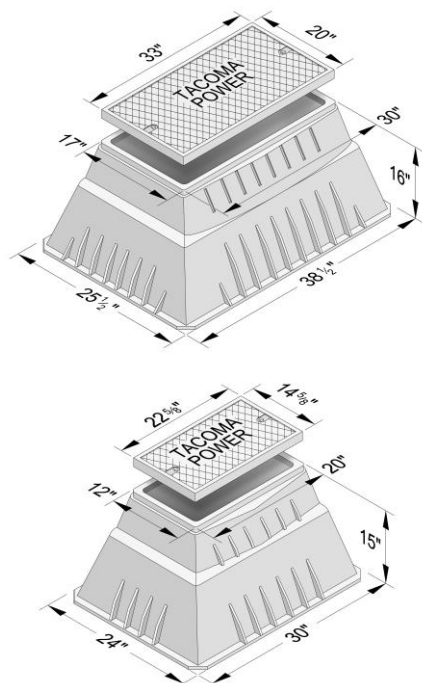


Figure 2 Residential SSB Dimensions and Part #'s



Large SSB (17" x 30" Top Opening)

- Base
 - PenCell Part# PE30GSI01
 - Tacoma Power MID# 37920
- Cover
 - PenCell Part# PE30PL505BK3
 - Tacoma Power MID# 37921

Small SSB (12" x 20" Top Opening)

A small SSB is available ONLY when maximum 2 conduits of 2.5" size enter the SSB.

- Base
 - PenCell Part# PE20GS500
 - Tacoma Power MID# 19118
- Cover
 - PenCell Part# PE20PL517BK3
 - Tacoma Power MID# 19437