

Application

This standard describes requirements for customer-owned medium-voltage (primary) services for live-front outdoor kiosks.

Revision Notes

Updated Figure 2 to remove service neutral bus. Changes are marked by green vertical revision lines in the left margin. This revision released concurrently with Standards and Equipment Advisory Information Bulletin 2025-055
Revised ES54 S3 Primary Services Private Property Installation Standards.

References

BC Hydro Distribution Standards

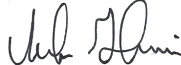
ES54 S0-02	Services General Notes
ES54 S0-03	Services General Notes Medium-Voltage (Primary) Services
ES54 S0-05	Services General Notes Service Ducts and Trenches

Other BC Hydro Documents

Requirements for Customer-Owned Primary Services Supplied at 4 kV to 35 kV – Primary Guide

Notes

1. Supply service cables installed with each phase in a separate service duct shall be designed to prevent eddy current heating in ferrous components, including but not limited to ducts, attachments, and routing.
2. See ES54 S0-03 for more information on pull box requirements.
3. Three-phase services using #1 AWG 25 kV or 4/0 AWG 25 kV supply service cables (with concentric neutral conductors) shall have a minimum of three service ducts, one for each supply service cable. Three-phase services using 500 kcmil 25 kV or 750 kcmil 25 kV supply service cables (tape shielded) shall have a minimum of four service ducts, one for each supply service cable and one for the supply service neutral.
4. Each service duct shall be aligned directly underneath the corresponding service phase bus. A service duct designated for the supply service neutral need not comply with this requirement. See ES54 S0-03 for minimum service duct clearance to edge of service duct well.
5. The cable support channel shall be configurable by the installer in either of the two options shown in detail 2 (Figure 3) and shall be reconfigurable to either of the options during future cable replacement or other work. The assembly shall be adjustable inward and outward by a minimum of +15 mm and -75 mm when the front edge of the channel is aligned with the plane of the service bus bars connection surfaces.
6. The minimum clearance between adjacent high voltage bus bars (service phase buses) shall be 300 mm. The minimum clearance between a high voltage bus and any adjacent grounded surface, including the compartment door when open or closed, shall be 225 mm. The grounding stud shall be considered part of the service phase bus it is attached to for the purpose of establishing minimum clearances. It shall be possible to close and secure the compartment door with ground set(s) installed on the service phase bus.

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Approved: M. Stevens, P. Eng				
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7. See Primary Guide section 9.1 for physical security requirements for mid-run pull boxes, supply service cable compartments and switch compartments (where applicable).
8. See the Primary Guide for acceptable grounding ball studs.
9. Supply service cable type and size for three-phase service shall be determined by the BC Hydro designer.
10. See ES54 S0-02 and S0-03 for general notes related to medium-voltage (primary) services.
11. See ES54 S0-05 for trenching and supply service duct requirements.
12. All illustrations not to scale.

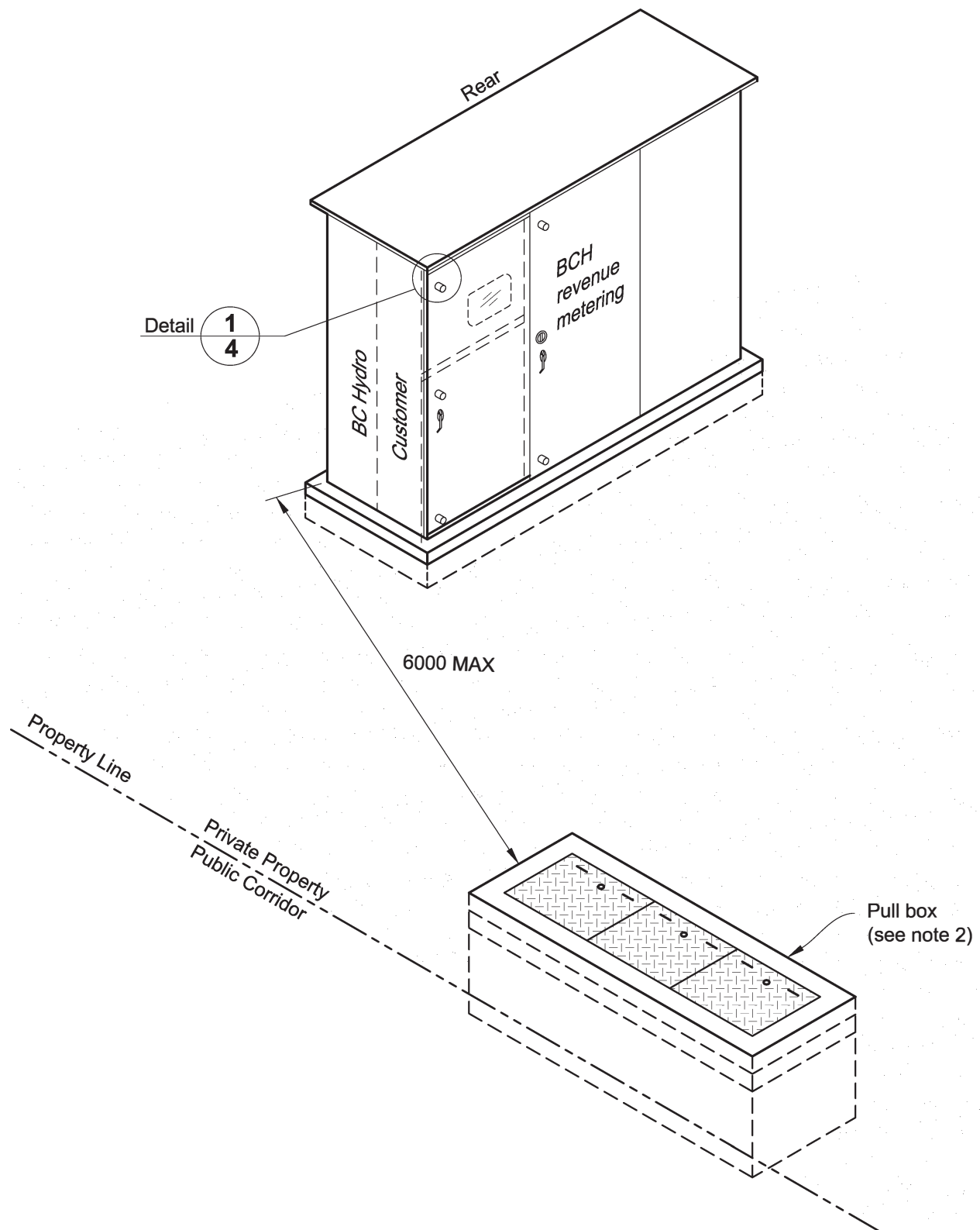


Figure 1 – Typical site layout

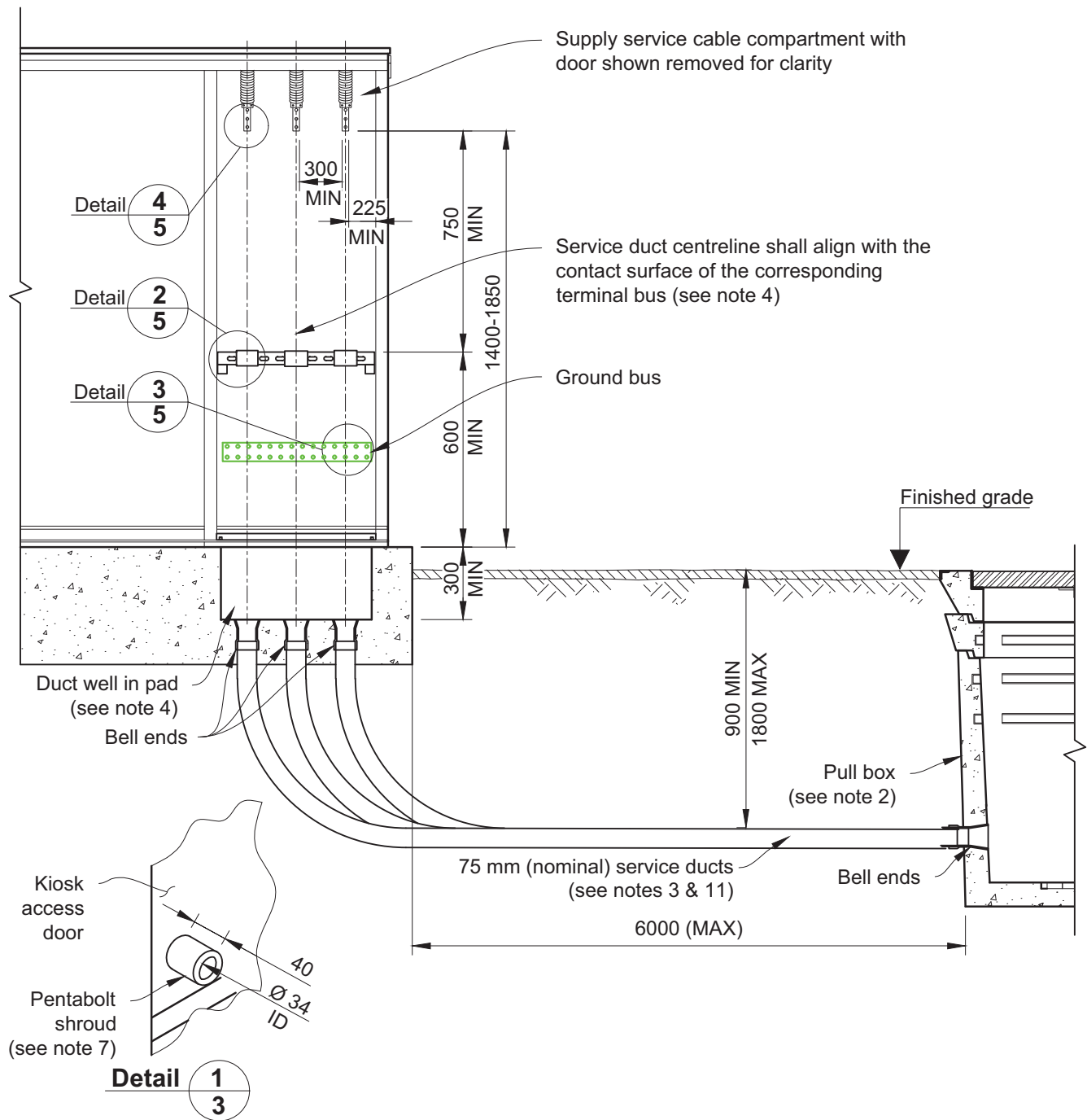


Figure 2 – Typical live-front outdoor kiosk, rear elevation

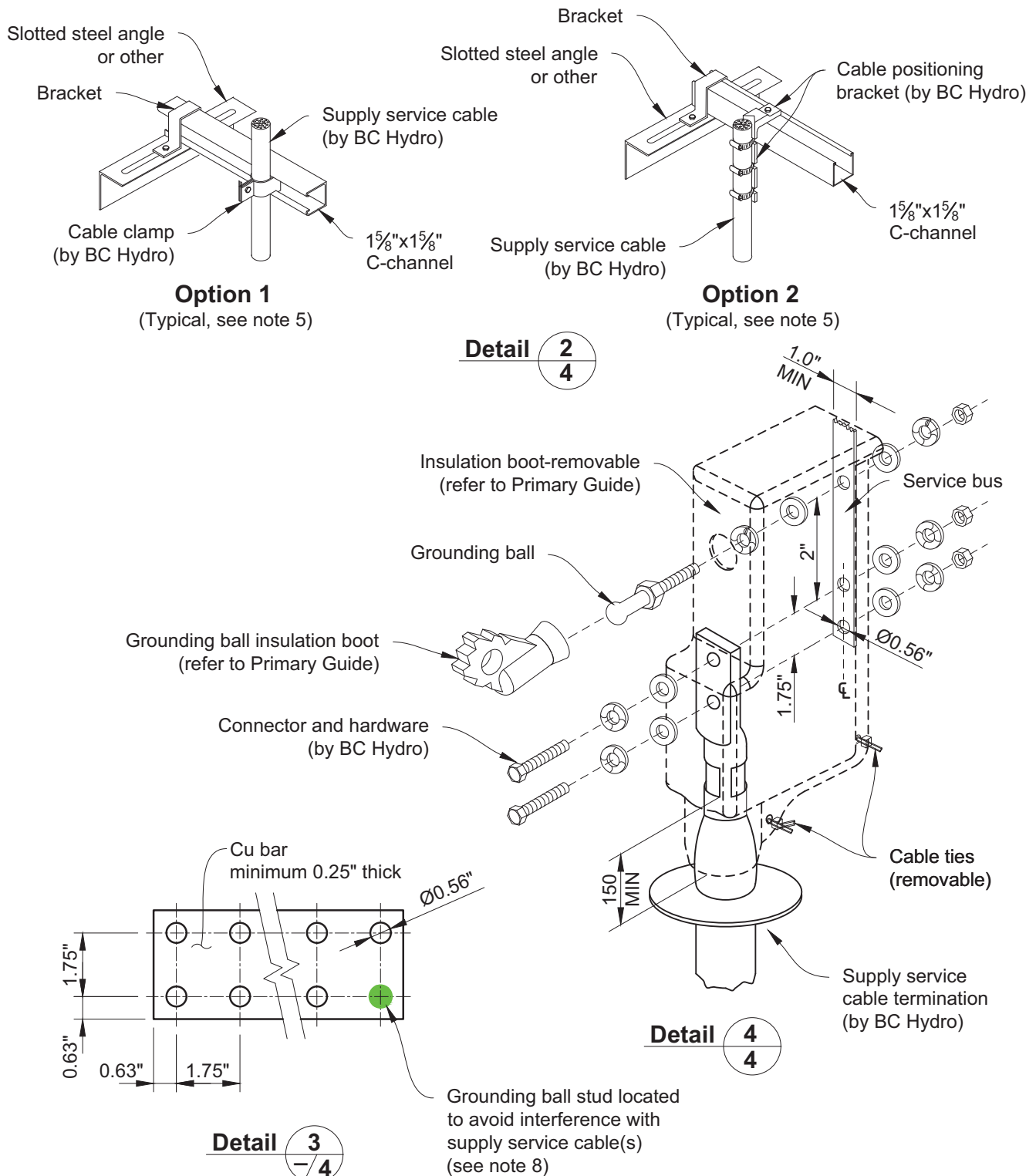


Figure 3 – Details 2, 3, and 4