



Rural Opportunities, Tenures and Engineering Division

Engineering Branch

Guidance for Ordering Road Closure Gates

(Ministry Standard Drawings: STD-G-010-01 to 13)

1 General

Structural details for fabrication of surface mounted road closure gates and buried footing road closure gates are provided on a ministry standard drawing set: STD-G-010-01 to 13, available at:

<https://www2.gov.bc.ca/gov/content/industry/natural-resource-use/resource-roads/engineering-publications-permits>.

These drawings provide some options for gate installations on Forest Service Roads (FSRs). Other gate types may also be considered, as appropriate, by ministry staff.

The standard drawings do not provide site specific specifications for gate design, roadway design, installation, signage, or road user safety. These issues must be addressed by a qualified person that takes responsibility for gate installation at a specific site based on an assessment of the site specific characteristics including: road width, road alignment, site visibility, foundation materials, vehicle traffic configurations and expected vehicle operating speeds on the road. For some gate sites, alternate steel gate component designs may be required.

The ministry contact who is initiating an order for gate materials should ensure that all gate specifications are determined prior to ordering materials for any specific gate site. A materials template has been prepared to facilitate the ordering of gates and is available at:

<https://www2.gov.bc.ca/gov/content/industry/natural-resource-use/resource-roads/engineering-publications-permits>.

2 Considerations When Ordering Gates

2.1 Abutment Types

Surface Mounted Abutments

- The surface mounted abutments have been developed for temporary installations, or for installations where ground conditions are expected to be bedrock or otherwise difficult to excavate. The surface mounted abutments require a firm and level surface for abutment foundation. Installation may require an excavator and compaction equipment to prepare such a foundation.

Buried Footing Abutments

- Buried footing abutments will be (compared to surface mounted abutments) less expensive to fabricate and transport.

- Installation requires earthwork with an excavator, and backfill compaction using commonly available compaction equipment.
- There should be confidence that excavations to a depth of 1.4 m below ground surface at abutment locations can be accomplished at the gate installation site, and that the native soil conditions at that depth will provide a firm foundation.

2.2 Gate Arm Types

- A telescoping gate arm or a fixed length gate arm can be ordered with either surface mounted or buried footing abutments. If a gate is planned to be moved frequently from site to site, with varying gate opening widths required, a telescoping gate arm is recommended. If a gate is intended to be left at one location long term, and the required and practically attainable opening width is well known in advance, a fixed length gate arm would be most suitable.
- A telescoping gate arm will be more expensive than a similar fixed length gate arm, and may have some problems with vandals removing the bolts at mid-arm length. To overcome these problems, in some situations the ministry may want to consider tack welding the nuts onto the bolts, or otherwise making the nuts difficult to remove, in order to discourage vandals from removing the bolts. The main purpose of the bolts is to keep the two sections of gate together at a temporarily fixed length so that when opening and closing the gate the gate arm length remains constant, thereby simplifying latching and locking.
- Both the telescoping and the fixed length gate arms have a single rail and a double rail version. The single rail versions are relatively less expensive, and weigh less which may make installation and operation easier. The double rail versions provide a fence-like gate which is more visible and will deter low height vehicles such as some small ATVs, etc., as well as regular vehicles.

2.3 Gate Reflective Materials and Signage

- The standard drawings do not specify connection details (e.g., welded tabs, specific holes, etc.), or connectors (e.g., bolts, nuts, etc.) for attachment of reflective material and signs to the gate.
- Reflective material and attached signage must be considered to ensure gate visibility to road users.
- The person taking responsibility for gate installation at a specific site must determine the requirements for reflective materials and signage attached to the gate as well as approach roadway signage.
- “Gate-ahead” signage must be installed to be clearly visible and provide adequate warning for vehicles approaching the gate from both directions.

3 Reporting Gate Fabrication or Installation Issues

The qualified individual taking responsibility for a gate installation should report to Engineering and Resource Roads Branch staff in Victoria any fabrication or installation issues and/or any problems achieving the gate installation requirements shown on ministry standard drawings STD-G-010-01 to 13.