



**CONSTRUCTION SPECIFICATION FOR
PERMANENT SMALL SIGNS AND SUPPORT SYSTEMS**

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703.01 SCOPE

This specification covers the requirements for the installation and removal of permanent small signs and support systems, and the relocation of small signs.

703.02 REFERENCES

This specification refers to the following standards, specifications, or publications:

Ontario Provincial Standard Specifications, Construction

OPSS 501 Compacting

Ontario Provincial Standard Specifications, Material

OPSS 2001 Signs

Ontario Ministry of Transportation Publications

Ontario Traffic Manual (OTM):
Book 1B - Sign Design Principles

CSA Standards

O80 Series-15 Wood Preservation
O141-05 (R2014) Softwood Lumber

ASTM International

A 123/A 123M-17 Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
A 153/A153M-16 Zinc Coating (Hot-Dip) on Iron and Steel Hardware
A 780/A 780M-09 (2005) Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings

Others

National Lumber Grade Authority (NLGA)
Canadian Wood Preservation Certification Authority (CWPCA)

703.03 DEFINITIONS

For the purpose of this specification, the following definitions apply:

Metal Components means components including slide assembly, collar assembly, and pipe post.

Relocation means to move an existing permanent sign to a new chainage or offset or both.

Removal means to remove and dispose of an existing permanent sign or support system or both.

Sign and Sign Board means a traffic control device mounted on a fixed support that conveys a specific message by means of symbols and or words, and is officially installed for the purpose of regulating, warning, informing, and guiding traffic.

Sign Support System means a wooden or steel post of specified dimensions, hardware, and material installed vertically into the ground or on top of concrete median barrier for mounting signs at a specified height above the roadway.

Sign Hardware means metal hardware including, but not limited to, nuts, bolts, washers, spacers, and lock washers for attaching signs to sign support systems.

Small Sign Assembly means one or more signs mounted on a sign support system with specified sign hardware having a total sign or sign board area not greater than 3.6 m² for ground mounted signs and 1.35 m² for signs mounted on concrete median barrier.

703.05 MATERIALS

703.05.01 General

The Contractor shall select a sign support system for each small sign assembly installation as specified in the Contract Documents.

All supplied components shall be according to the manufacturer's specifications and as specified in the Contract Documents. All sign hardware shall be hot dip galvanized according to ASTM A 153. New sign boards shall be supplied as specified in the Contract Documents.

703.05.02 Wooden Posts

703.05.02.01 General

All wooden posts shall be in dressed sizes and pressure treated with wood preservative.

The tolerance on the cross-sectional dimensions of all wooden posts shall be ± 2 mm.

703.05.02.02 Wood Preservative

Wood preservative shall be according to CAN/CSA O80 Series, Use Category UC 4.1.

703.05.02.03 Marking of Wood for Identification of Grade and Species

All wooden posts shall be stamped for species and grading according to CSA O141 by an approved agency authorized by the National Lumber Grade Authority (NLGA). The stamp shall be visible after installation and located at least 1.5 m above the finished grade.

703.05.02.04 Marking of Wood for Identification of Preservative Treatment

All wooden posts shall be stamped for wood preservative treatment from a treatment plant certified under the Canadian Wood Preservation Certification Authority (CWPCA). The wood preservative stamp shall be visible after installation and located at least 1.5 m above the finished grade.

703.05.03 Metal Posts

703.05.03.01 Metal Components and Hardware

All metal components and hardware shall be as specified in the Contract Documents.

All metal components after fabrication shall be filed smooth and surface free of foreign materials before being hot dip galvanized according to ASTM A 123.

All sign hardware except setscrews shall be hot dip galvanized according to ASTM A 153. All setscrews shall be stainless steel.

703.05.04 Signs

Signs shall be according to OPSS 2001.

703.07 CONSTRUCTION

703.07.01 General

All breakaway and non-breakaway sign support systems shall be installed according to the manufacturer's specifications and as specified in the Contract Documents at locations specified in the Contract Documents.

All sign boards shall be installed according to OTM Book 1B and as specified in the Contract Documents.

All signs shall be installed, relocated, or removed at locations specified in the Contract Documents. Signs shall be installed so that they do not obstruct and are not obstructed by existing permanent signs or other objects. The Contract Administrator shall be notified prior to installation of sign supports if it is not possible to install a new or relocated sign as specified in the Contract Documents due to this requirement.

Signs shall be covered temporarily for traffic operational reasons when directed by the Contract Administrator. Signs shall be covered so they are not visible to approaching motorists. The cover shall remain securely in place until the signs are appropriate for display as directed by the Contract Administrator. The covering material shall not damage or make any marks on the signs.

Acceptable material from post hole excavation shall be used as backfill around posts and compacted according to OPSS 501.

Posts shall be plumbed within a tolerance of ± 20 mm. The sign shall be levelled on a multiple post system within a tolerance of ± 10 mm.

Back-to-back signs may be installed on single or multiple posts. The sign support system shall be selected based on the largest sign area on one side of the post.

Cut ends and field drilled holes shall receive two applications of 2% copper naphthenate wood preservative. Field applied wood preservative that comes in contact with any metal components shall be removed immediately.

Damaged and cut areas of hot dip galvanized coatings on any galvanized components shall be repaired according to ASTM A 780.

703.07.02 Sign Supply

Signs shall be supplied by the Owner or by the Contractor as specified in the Contract Documents.

703.07.02.01 Owner Supplied Signs

703.07.02.01.01 Sign Ordering

The Contractor shall submit a list of signs required for this Contract to the Contract Administrator. The list of signs shall contain the quantity and details of the signs and the date for pick up by the Contractor. The list of signs shall be submitted a minimum of 12 weeks prior to the pickup date.

703.07.02.01.02 Sign Pickup

The Contractor shall pickup all the ordered signs on the list of required signs at a location provided in the Contract Documents to be supplied by the Owner within 10 Business Days of receiving notice from the Contract Administrator that the signs are ready for pickup. The Contractor shall ensure that all signs are safely secured and packaged prior to transporting the signs.

703.07.02.01.03 Sign Confirmation and Inspection

The Contractor shall within 5 Business Days confirm in writing with the Contract Administrator that all the ordered signs were received in accordance with the list of required signs. The Owner shall be notified of any incorrect signs identified by the Contractor. The Contractor shall be responsible for the cost of replacing all damaged, missing, and incorrect signs subsequent to the Contractor's order confirmation.

703.07.02.02 Contractor Supplied Signs

The Contractor shall supply all signs as specified in the Contract Documents.

703.07.03 New Signs

New sign boards shall be attached to new sign support systems with sign hardware as specified in the Contract Documents.

703.07.04 Installation on Concrete Median Barrier

All sign support systems on top of concrete median barrier shall be installed as specified in the Contract Documents.

The top of all concrete barriers shall be ground smooth to provide a uniform flat surface over the length of the slide assembly and steel base prior to installation of anchors.

703.07.05 Relocation of Signs

Relocated sign boards shall be attached to new support systems with sign hardware as specified in the Contract Documents. No portion of the existing sign, support system, and sign hardware shall be left at the original sign location and any excess material including support system and sign hardware shall be managed as specified in the Contract Documents or as directed by the Contract Administrator.

703.07.06 Removal of Signs

Upon removal, sign boards shall be defaced with commercially available paint in a manner that makes them unusable to guide traffic.

No portion of the removed sign, support system, and sign hardware shall be left at the original sign location and any excess materials shall be managed as specified in the Contract Documents.

703.07.07 Management of Excess Material

Management of excess material shall be according to the Contract Documents.

703.09 MEASUREMENT FOR PAYMENT

703.09.01 Actual Measurement

**703.09.01.01 Small Signs, Ground Mounted, New
Small Signs, Concrete Median Barrier Mounted with Wooden Post, New
Small Signs, Concrete Median Barrier Mounted with Metal Post, New**

For measurement purposes, a count shall be made of the number of new small sign assemblies installed.

703.09.01.02 Small Signs, Relocation

For measurement purposes, a count shall be made of the number of small sign assemblies relocated.

703.09.01.03 Small Signs, Removal

For measurement purposes, a count shall be made of the number of small sign assemblies removed.

703.09.02 Plan Quantity Measurement

When measurement is by Plan Quantity, such measurement shall be based on the units shown in the clause under Actual Measurement.

703.10

BASIS OF PAYMENT

703.10.01

Small Signs, Ground Mounted, New - Item
Small Signs, Concrete Median Barrier Mounted with Wooden Post, New - Item
Small Signs, Concrete Median Barrier Mounted with Metal Post, New - Item
Small Signs, Relocation - Item
Small Signs, Removal - Item

Payment at the Contract price for the above tender items shall be full compensation for all labour, Equipment, and Material to do the work.