Part 1 GENERAL

1.1 REFERENCES

.1 Transportation Association of Canada:

.1 Manual of Uniform Traffic Control Devices for Canada.

.2 American Association of State Highway and Transportation Officials (AASHTO)

.1 Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, (5th Edition).

.3 Nova Scotia Motor Vehicle Act:

.1 Traffic Signs Regulations, Section 88

1.2 SUBMITTALS

.1 Submit in accordance with Section 01 33 00 – Submittal Procedures

1.3 DELIVERY, STORAGE AND HANDLING

.1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and manufacturer's written instructions.

.2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.

.3 Storage and Handling Requirements:

.4 Store materials in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.

.5 Replace defective or damaged materials with new.

1.4 DESIGN REQUIREMENTS

.1 Sign supports to be capable of withstanding the summation of the following loads:

.1 Wind load in any direction of 0.60 kPa on signboards and 0.60 kPa on sign supports and appurtenances.

.2 Dead load of signboards, sign supports and appurtenances.

.3 Ice load of 0.25 kPa on one face of signboards and around surface of all structural members and appurtenances.

.2 Structural deflections and vibration in accordance with American Association of State Highway and Transportation Officials (AASHTO), "Specifications for the Design and Construction of Structural Supports for Highway Signs".

Part 2 PRODUCTS

2.1 TRAFFIC SIGN POSTS

.1 Wood:

.1 Wood posts must be dry no. 1 grade Douglas fir, Eastern Hemlock, or Red pine, conforming to AASHTO M 168.

.2 Posts shall be sound and rot-free and shall conform with the requirements for No. 1 Structural Posts and Timbers, graded in accordance with the National Lumber Grading authority (NLGA) Standard Grading Rules for Canadian lumber.

.3 Prior to pressure-treating, posts and blocks shall be incised on all four sides and dried to their fibre saturation point of 25 to 30% at 25 mm depth.

.4 For pressure treating, preservative treatment of posts and blocks shall be chromated copper arsenate (CCA). For field cut surfaces, preservative shall be 2% copper napthenate wood preservative, applied in two coats.

.5 Treatment shall be completed in accordance with requirements of CSA-080. The penetration and retention of preservatives shall conform to the requirements of CSA Standard O80.14, Table 1, Minimum Retention of Preservatives in Pressure Treated Wood for Highway Construction, under the headings “Post-Guardrail, Guide, Sign and Sight” for posts, and “Bridge Hand Rails, Guard Rails and Posts” (not in contact with ground or water). The Engineer may verify the penetration and retention of the preservative by the assay method.

.2 Fasteners:

.1 Bolts, nuts, washers and other hardware for roadside signs to be cast aluminum alloy, or galvanized steel.

.2 All steel bolts, nuts and washers shall conform to ASTM A 307 and shall be hot dip galvanized conforming to CSA-G164-M.

.3 Flat Aluminum Sign Panels:

.1 Aluminum sign panels must conform to ASTM B209M ASTM B209, alloy-temper 6061-T6 or 5052-H38. The blanks must be free from laminations, blisters, open seams, pits, holes, other defects that may affect their appearance or use. The thickness must be uniform and the blank commercially flat.

.4 Traffic Sign Retroreflective Sheeting and Lettering:

.1 All background sheeting applied to flat sheet and extruded panel signs must be in accordance with ASTM D4956, Type III, IV, VII, VIII, IX or XI retroreflective sheeting and must have Class 1, 3, or 4 adhesive backing. Retroreflective sheeting must be high intensity that is an unmetallized micro prismatic reflective material.

.2 Retroreflective sheeting must have sufficient adhesion, strength and flexibility such that the sheeting can be handled, processed and applied according to the manufacturer's recommendations without appreciable stretching, tearing, cracking or other damage.

.5 Non-reflective Lettering and Symbols:

.1 Non-reflective lettering and symbols: cut from vinyl film as specified in CGSB 62-GP-9M, or paint using required colour of finish paint or silk screen transparent ink.

.6 Sign identification:

.1 Apply sign number and date of installation with 25mm high stencil painted black letters on lower left back face of each signboard.

Part 3 EXECUTION

3.1 SIGN POSTS

.1 Wood:

.1 Erect supports as indicated. Permissible tolerance: 50 mm maximum departure from vertical for direct buried supports. Where separate concrete footings have been placed, erect posts with base plates resting on levelling nuts and restrained with nuts and washers. Permissible tolerance: 12 mm maximum departure from vertical.

.2 Drill holes in the post as indicated.

3.2 LOCATION AND POSITION OF SIGNS

.1 Locate and erect all signs in accordance with the drawings and MUTCD.

.2 Signs should be vertically mounted at right angles to the direction of, and facing, the traffic that they are intended to serve.

.3 Where mirror reflection from the sign face is encountered to such a degree as to reduce legibility, turn the sign slightly away from the road.

.4 Turn signs that are placed 9 m or more from the pavement edge toward the road.

.5 On curved alignments, determine the angle of placement by the direction of approaching traffic rather than by the roadway edge at the point where the sign is located.

.6 Mounted signs must present a smooth flat surface varying no more than 10 mm from a 1.2 m straightedge placed in any position on the face of the sign after erection.

.7 Mount signs on traffic signal posts with strap or clamp type sign supports.

.8 Each installed sign will be inspected by the Departmental Representative prior to acceptance.

.9 Correct defects, identified by Departmental Representative, in sign message, consistency of reflectivity, colour or illumination. Correct angle of signboard and adjust luminaire aiming angle for optimum performance during night conditions to approval of Departmental Representative.

3.3 PROTECTION

.1 Place temporary covering on signboards where indicated. Covering to be capable of withstanding rain, snow and wind and be non-injurious to signboard. Replace deteriorated covering and remove covers as directed by Owner’s Representative.

3.4 CLEANING

.1 Proceed in accordance with Section 01 74 11 - Cleaning.

.2 On completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

END OF SECTION