Part 1 General

1.1 RELATED SECTIONS

.1 Section 01.35 00.06 Special Procedures for Traffic Control

1.2 REFERENCES

.1 Transportation Association of Canada

.1 Manual of Uniform Traffic Control Devices for Canada, Fourth Edition

.2 Ministry of Transportation, Ontario (MTO)

.1 Ontario Traffic Manual, Book 7: Temporary Conditions

.2 Ontario Traffic Manual Book 2: Sign Design, Fabrication & Patterns

.3 Ministère des Transports du Québec

.1 Tome VII, Matériaux, Normes et ouvrages routiers du ministère des Transports du Québec;

.2 Tome V, Signalisation Routière Normes et ouvrages routiers du ministère des Transports du Québec;

.4 Cahier des charges et devis generaux, Infrastructures routieres-construction et reparation, Edition 2013, Québec, MTQ

.5 Canadian General Standards Board (CGSB)

.1 CGSB 62-GP-11M, Marking Material, Retroreflective, Enclosed Lens, Adhesive Backing and Amendment.

.6 CSA International

.1 CSA O121-08, Douglas Fir Plywood.

.2 CSA -S6-06, Canadian Highway Bridge Design Code.

.3 CSA-S1236, Design of Cold-formed Steel Structural Members.

.4 CAN/CSA-G40.21, Structural Quality Steel..

.5 CAN/CSA G164-M92 (R2003), Hot Dip Galvanizing of Irregularly Shaped Articles.

.7 ASTM International

.1 ASTM B209M-10, Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate Metric.

.2 ASTM B210M-12, Standard Specification for Aluminum-Alloy Drawn Seamless Tubes Metric.

.8 The Master Painters Institute (MPI)

.1 Architectural Painting Specification Manual - current edition.

Part 2 Products

2.1 DESIGN CRITERIA

.1 Sign supports to be capable of withstanding loads in accordance with references in article 1.2.

2.2 MATERIALS

.1 Sign supports:

.1 Steel posts: to CSA G40.21, 4 m long, flanged "U" shaped in cross section, measuring 65 mm wide x 30 mm deep. Metal thickness: 4.5 mm. Hot dipped galvanized: to CAN/CSA-G164, minimum zinc coating 560 g/m ^{2}.

.2 Standard tubular supports for small signs: to ASTM B210M.

.3 Timber posts:

.1 Sawn timber posts:

.1 Type: pressure treated.

.2 Dimensions: In accordance to loads calculation completed by the Contractor.

.2 Signboards:

.1 Complementary signboards: plywood to CSA O121, 19 mm thick. Overlaid Douglas Fir, Medium Density, overlaid one side only with fibre or plastic sheet surfacing material.

.2 Road Work Signs: Aluminum sheet: to ASTM B209M, precut to required dimensions.

.1 Thickness for signboards up to 750 mm wide: 1.6 mm minimum.

.2 Thickness for signboards 750-1200 mm wide: 2.1 mm minimum.

.3 Thickness for refurbishing existing sign panels: 1.0 mm minimum.

2.3 FABRICATION

.1 Signboards:

.1 Plywood blanks:

.1 Cut plywood blanks to required shapes and dimensions. Fill edges with wood filler suitable for outdoor use and sand smooth.

.2 Lightly sand surfaces, wipe clean with xylene thinner and allow to dry for 8 hours.

.3 Spray signboard back and edges with one prime coat.

.2 Aluminum blanks:

.1 Degrease, etch and bonderize with chemical conversion coating.

.2 Clean surfaces with xylene thinner. Dry.

.3 For aluminum signboards that are to be painted before installation, spray and bake face of signboards with two coats of enamel in accordance with MPI-EXT 5.4A.

.3 Reflective background sheeting and lettering:

.1 Cut and apply in accordance with manufacturer's instructions.

.2 Apply adhesive coated material with heat lamp vacuum applicator or by squeeze roll application method. Apply pressure sensitive material with roller or squeegee.

.3 Edge wrap sheeting on each extrusion prior to bolting extrusions. Match pieces of sheeting from different rolls for each signboard to ensure uniform appearance and brilliance by day and night.

.4 Reflective signboard faces may be prepared using silk screen transparent ink.

.4 All signs to be in French and English.

.5 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 Clean signboards completely and apply transparent tape over top edge and extending 25 mm minimum down back and front of signboard.

Part 3 Execution

3.1 REMOVAL, SALVAGE, AND RE-USE OF EXISTING SIGNS

.1 Re-use existing signs where appropriate.

3.2 INSTALLATION

.1 Supply, install and maintain temporary signs and sign supports to references in article 1.2.

.2 Temporary signs supplied and installed to remain on site until completion of the contract.

.3 Sign support:

.1 Erect supports as accepted by Departmental Representative.

.2 Erect posts plumb and square to details as indicated.

.3 Wooden post installation:

.1 Drive to required depth without damage to posts after obtaining utility locates or provide “weighted” bases having sufficient weight to provide adequate stability for the temporary sign.

.4 Signboard:

.1 Fasten signboards to supporting posts and brackets as indicated.

.2 Fasten lane markers to signboard.

3.3 REPAIR/ RESTORATION

.1 Prepare new message on 1.0 mm minimum aluminum sheet.

.2 Install new message on existing signboard.

.3 Rivet new message to existing using 3 mm blind rivets at 300 mm centre to centre maximum around each portion of sheeting and with four, 6 mm diameter stainless steel bolts at corners.

3.4 CORRECTING DEFECTS

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

3.5 PROTECTION

.1 Protect installed products and components from damage.

.2 Repair damage to adjacent materials caused by traffic signage installation.

END OF SECTION