



SCALE = 1:8

SIGN COLOURS

-  SIGN BOARD BACKGROUND RED
PANTONE COLOUR MATCHING SYSTEM NO. 485 SOLID COATED
PANTONE PMS 485 C
CMYK 0/96/100/0
RGB 213/43/30
HEXIDECIMAL #D52B1E
-  SIGN BOARD TEXT AND BACKGROUND WHITE
CMYK 0/0/0/0
RGB 255/255/255
HEXIDECIMAL #FFFFFF
-  SIGN BOARD TEXT BLACK
CMYK 0/0/0/100
RGB 0/0/0
HEXIDECIMAL #000000
-  LOGO FLAG RED
PANTONE COLOUR MATCHING SYSTEM NO. 032 SOLID COATED
PANTONE PMS 032 C
CMYK 0/100/100/0
RGB 213/43/30
HEXIDECIMAL #338BEE
-  LOGO TEXT BLACK
CMYK 0/0/0/100
RGB 0/0/0
HEXIDECIMAL #000000

SIGN FONTS AND TEXT HEIGHTS

- SIGN HEADER - HELVETICA NEUE 55 ROMAN (BOLD), MAX TEXT HEIGHT 300 mm, MIN. 225mm UPPERCASE
- ILLUSTRATED ON THIS DRAWING AS THE WORD 'DANGER'
- SIGN MESSAGE - HELVETICA NEUE 55 ROMAN (BOLD), MAX TEXT HEIGHT 200 mm, MIN. TEXT HEIGHT 150mm, FIRST LETTER CAPITALIZED EVERY WORD
- INCLUDES 2 LINES OF TEXT AS ILLUSTRATED ON THIS DRAWING AS THE WORDS 'DAM AHEAD' AND 'KEEP OUT'
- *NAME OF DAM - HELVETICA NEUE 55 ROMAN (BOLD), TEXT HEIGHT 60 mm, NAME CASE UPPERCASE (ADHESIVE DECAL BY OTHERS)
- *EMERGENCY CONTACT - HELVETICA NEUE 55 ROMAN (BOLD), TEXT HEIGHT 40 mm, UPPERCASE (ADHESIVE DECAL BY OTHERS)
- PARKS CANADA LOGO - DIGITAL LOGO FILE TO BE PROVIDED TO FABRICATOR BY PARKS CANADA

TOLERANCES FOR MODIFYING TEXT SIZES - TEXT HEIGHTS MAY BE MODIFIED AS REQUIRED TO FIT ON SIGN PANEL. ALL TEXT IS TO BE AS LARGE AS POSSIBLE, NOT TO EXCEED THE MAXIMUM TEXT HEIGHTS INDICATED BELOW AND AT MINIMUM EQUAL TO THE MINIMUM TEXT HEIGHTS INDICATED BELOW. BOTH LINES OF SIGN MESSAGE TEXT MUST BE A SINGLE HEIGHT. WHERE MODIFYING TEXT HEIGHTS, MAINTAIN SPACING AND HEIGHT TO WIDTH PROPORTIONS OF LETTER FONT TYPES SPECIFIED. CONDENSED FONTS WILL NOT BE ACCEPTED. ALL TEXT MUST BE BOTTOM LEFT JUSTIFIED. MAINTAIN MINIMUM EDGE DISTANCES SPECIFIED ON DRAWING, AS A GENERAL RULE HEADER LINE TEXT MUST BE AT MINIMUM 1.5 TIMES LARGER THAN MESSAGE LINE TEXT.

+/- 3MM MUST BE THE ALLOWABLE FABRICATION TOLERANCE FOR ALL LETTERS AND SYMBOLS

NOTE: WORDING ON THE SIGN SHOWN ON THIS DRAWING IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. REFER TO THIS DRAWING FOR DIMENSIONAL AND COLOUR INFORMATION ONLY. REFER TO INDIVIDUAL SIGN DRAWINGS FOR REQUIRED WORDING IN ENGLISH OR FRENCH AS APPLICABLE.

SIGNS MATERIALS AND FABRICATION SPECIFICATIONS

1.0 MATERIALS SPECIFICATIONS

- 1.1 ALL MATERIALS MUST BE OF NEW STOCK AND FREE FROM DEFECTS.
- 1.2 SIGNS MUST CONSIST OF ALUMINIUM FLAT SHEETS, EXTRUDED PANELS OR ALUMINIUM COMPOSITE PANELS RETRO-REFLECTORIZED ON THE FACE SIDE WITH ALL LETTERS, NUMERALS, SYMBOLS, BORDERS AND CORNERS AS SHOWN ON THE PLANS.
- 1.3 SIGNS EQUAL TO OR GREATER IN WIDTH THAN SIX FEET ARE CONSIDERED STRUCTURAL (ST) AND MUST BE FABRICATED ON EXTRUDED PANELS OR ALUMINIUM COMPOSITE PANELS. SIGNS LESS THAN SIX FEET IN WIDTH WILL BE CONSIDERED NON-STRUCTURAL (NS) SIGNS TO BE FABRICATED WITH ALUMINIUM FLAT SHEET OR FOAM CORE COMPOSITE. ANY EXCEPTIONS TO THESE FABRICATION STANDARDS WILL BE INDICATED BY THE DEPARTMENTAL REPRESENTATIVE AT TIME OF PURCHASE ORDER.

1.4 NON-STRUCTURAL - FLAT SHEET ALUMINIUM SIGNS

SHEET ALUMINIUM SIGNS MUST BE FLAT-SHEET TENSION-LEVELLED, SIGN GRADE ALUMINIUM, ALLOY 5052-H32, CONFORMING TO THE REQUIREMENTS OF ASTM B209M, SPECIFICATION FOR ALUMINIUM AND ALUMINIUM-ALLOY SHEET AND PLATE. NOMINAL THICKNESS FOR SHEET-FACED SIGNS IS 3.0 mm (0.125"). TO ENSURE MAXIMUM TOLERANCING AND BEST APPEARANCE, SHEET ALUMINIUM SIGN PANELS MUST BE CUT USING A NUMERICALLY CONTROLLED DEVICE SUCH AS WATER JET OR LASER CUTTING SYSTEM. ALTERNATIVELY, SHEET ALUMINIUM SUBSTRATES MAY BE SHEARED TO SIZE, CORNER-PUNCHED AND DETAILED, PROVIDED THAT THE DIMENSIONS AND CORNER RADII EXACTLY MATCH THE SUPPLIED SIGN ARTWORK. ALL EDGES MUST BE BROKEN, DE-BURRED AND MADE SMOOTH.

1.5 STRUCTURAL - EXTRUDED ALUMINIUM SIGNS

STRUCTURAL EXTRUSION BASED SIGN FACES (FIGURE 5.3) MUST BE CONSTRUCTED USING 305 MM (12") STANDARD HIGHWAY EXTRUDED BLADES (SHAPE # 73247) USING ALUMINIUM ALLOY 6061-T6 OR 6063-T5. EXTRUDED BLADES ARE TO BE MILL FINISHED WITH NO EXPOSURE TO ANY SILICONE-BORNE PRODUCTS.

FOR MORE INFORMATION AND TYPICAL DETAIL, PLEASE REFER TO THE FOLLOWING SOURCES:

ALBERTA T&U DRAWING TEB 1.95 ([HTTP://WWW.TU.GOV.AB.CA/CONTENT/DOCTYPE233/PRODUCTION/SIGNAGE.PDF](http://www.tu.gov.ab.ca/content/doctype233/production/signage.pdf))

BRITISH COLUMBIA STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION, 2004 ([HTTP://WWW.TH.GOV.BC.CA/PUBLICATIONS/CONST MAINT/CONTRACT SERV/STANDARDSPECS.HTM](http://www.th.gov.bc.ca/publications/const_maint/contract_serv/standardspecs.htm))

MINISTÈRE DES TRANSPORTS DU QUÉBEC ([HTTP://WWW.PUBLICATIONSDUQUEBEC.GOUV.QC.CA/PRODUITS/OUVRAGE ROUTIER.FR.HTML](http://www.publicationsduquebec.gouv.qc.ca/produits/ouvrage_routier.fr.html))



1.6 NON-STRUCTURAL AND STRUCTURAL - ALUMINIUM COMPOSITE SIGNS

NON-STRUCTURAL ALUMINIUM COMPOSITE PANELS ARE TO CONSIST OF DOUBLE SIDED 0.3 mm (0.012") TO 0.4mm (0.015") THICK ALUMINIUM FRONT AND BACK FACE BONDED TO 3 mm POLYETHYLENE FOAM CORE.

STRUCTURAL ALUMINIUM COMPOSITE PANELS ARE TO CONSIST OF DOUBLE SIDED 0.3mm (0.012") TO 0.4mm (0.015") THICK ALUMINIUM FRONT AND BACK FACE BONDED TO 10 mm CORRUGATED OR SINGLE PROFILE (FLUTED) POLYALLOMER CORE. SOLID POLYETHYLENE OR FOAM CORE COMPOSITE PRODUCTS WILL NOT BE ACCEPTED FOR STRUCTURAL PANELS DUE TO EXCESSIVE WEIGHT.

ALUMINIUM FACE SHEETS FOR COMPOSITE PANELS TO BE SIGN GRADE ALLOY 5052-H32, CONFORMING TO THE REQUIREMENTS OF ASTM B209M, SPECIFICATION FOR ALUMINIUM AND ALUMINIUM-ALLOY SHEET AND PLATE.

SINGLE FACE TO BE FINISHED WITH 20 MICRONS FACTORY BAKED ACRYLIC WHITE PAINT MEETING REQUIREMENTS OF ASTM D-4214, D-2244. FACTORY COATED FACE WILL ACT AS BACK FACE OF FINISHED SIGN. NO-FACTORY COATED FACE MAY BE SUPPLIED AS MILL FINISH PROVIDED IT WILL ACCEPT LAMINATED RETRO-REFLECTIVE SHEETING, SCREEN PRINT AND DIGITAL PRINT TYPE INKS ASSOCIATED WITH SIGN GRAPHICS DESIGN.

STRUCTURAL PANEL WEIGHT NOT TO EXCEED 13.6 kg (30lbs) AND NON-STRUCTURAL PANEL WEIGHT NOT TO EXCEED 9.1 kg (20lbs) WHEN CUT TO SPECIFIED DIMENSIONS.

STRUCTURAL PANELS TO BE TESTED IN ACCORDANCE WITH ASTM E72 AND DESIGNED TO WITHSTAND A MINIMUM WIND FORCE OF +/- 0.96kPa (20psf).

PANELS SHALL BE PERFORMANCE BOND TESTED TO PASS ASTM C481-C.

ACCEPTABLE PRODUCTS FOR STRUCTURAL PANELS ARE 'PROLITE' OR 'ALUMALITE' BY LAMINATORS INC. OR 'ALUMACORR' BY NUDDO OR APPROVED EQUAL.

ACCEPTABLE PRODUCT FOR NON-STRUCTURAL PANELS IS 'ALUPANEL' BY MULTIPANEL

2.0 FABRICATION SPECIFICATIONS

2.1 THE MAXIMUM ALLOWABLE DEVIATION FROM FLATNESS MUST NOT EXCEED 0.1MM PER 1CM (0.010 INCH PER INCH) WIDTH OF THE SIGN PANEL.

2.2 NO HOLES MUST BE MADE IN SIGNS FACES UNLESS REQUESTED BY DEPARTMENTAL REPRESENTATIVE. HOLES SIZES AND LAYOUT WILL BE PROVIDED TO FABRICATOR PRIOR TO FABRICATION. MOUNTING DETAILS MAY VARY FROM SIGN TO SIGN. ALL HOLES REQUESTED TO BE MADE MUST BE DRILLED AND NOT PUNCHED. TRANSPARENT PLASTIC GROMMETS OF HIGH DENSITY UV TREATED POLYCARBONATE MATERIAL SUCH AS 'LEXAN' MUST BE PROVIDED FOR EACH HOLE TO ACT AS AN INSULATOR AGAINST GALVANIC REACTION WITH SIGN PANEL FASTENERS. 'SNAP-IN' TYPE GROMMETS WILL BE ACCEPTED.

2.3 ALL ALUMINIUM SUBSTRATE MUST BE GIVEN A CHROMATE CONVERSION COATING IN ACCORDANCE WITH ASTM B 449, CLASS 2, AND MUST BE PREPARED BY ONE OF THE TREATMENT SEQUENCE OPTIONS DESCRIBED IN ASTM B 449, APPENDIX X2. THE CHEMICALS AND SOLVENTS MUST BE APPLIED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SUFFICIENT LABORATORY FACILITIES TO TEST AND CONTROL THE CONCENTRATION OF THE SOLUTIONS USED MUST BE MAINTAINED AT THE TREATING PLANT. A LOG OF THE CONCENTRATION OF TREATING SOLUTIONS MUST BE MAINTAINED. TREATED PANELS MUST BE HANDLED IN SUCH A MANNER AS TO PREVENT CONTAMINATION. PANELS MUST BE STORED IN A DRY, CLEAN AREA FREE FROM DUST, ACID FUMES OR VAPOURS. WHEN ALUMINIUM IS SHIPPED TO A SECONDARY LOCATION FOR RETRO-REFLECTORIZING, ADEQUATE PRECAUTIONS MUST BE TAKEN TO ENSURE THAT THE MATERIAL ARRIVES AT THE DESTINATION UNCONTAMINATED.

2.4 BACKGROUND COLOURING (RED AND WHITE) MUST BE APPLIED AS A LAMINATED RETRO-REFLECTIVE SHEETING, COLOURED AS INDICATED ON DRAWINGS. SHEETING TO BE ASTM STANDARD D4956-11A, TYPE IV, CLASS I. USE ASTM D 4956 TYPE IX, XI OR AASHTO M 268 TYPE C OR D PRISMATIC RED FOR RED BACKGROUND PORTIONS OF SIGNS. RETROREFLECTIVE SHEETING MUST BE HIGH INTENSITY THAT IS AN UNMETALLIZED MICRO PRISMATIC REFLECTIVE MATERIAL.

2.5 ALL SIGNS MUST BE OF THE HIGHEST QUALITY WITH CONSISTENT DAYTIME AND NIGHTTIME COLOR AND RETRO-REFLECTIVITY

2.6 A MAXIMUM OF ONE VERTICAL OVERLAP SPLICE APPROXIMATELY 6MM WIDE WILL BE ALLOWED ON SIGN DIMENSION GREATER THAN 1220. APPLY CLEAR COATING OR EDGE SEALER AFTER APPLICATION OF THE RETRO-REFLECTIVE SHEETING AS RECOMMENDED BY THE SHEETING MANUFACTURER. WHERE CLEAR FINISH IS USED, THE FINISH MUST BE APPLIED AFTER SCREENING OF MESSAGES AND BORDERS. WHERE EDGE SEALER IS USED, THE SEALER MUST BE APPLIED TO ALL SPLICES AND EDGES. THE COMPLETED SIGN FACE MUST BE FREE FROM AIR BUBBLES, WRINKLES OR OTHER BLEMISHES.

2.7 LETTERS AND SYMBOLS MUST BE APPLIED TO THE BACKGROUND OF THE SIGN BY THE DIRECT OR REVERSE SCREEN PROCESS. MESSAGES AND BORDERS OF A COLOR DARKER THAN THE SIGN FIELD MUST BE APPLIED TO THE RETROREFLECTIVE SHEETING BY THE DIRECT PROCESS. MESSAGES AND BORDERS OF A COLOR LIGHTER THAN THE SIGN FIELD MUST BE PRODUCED BY THE REVERSE SCREEN PROCESS. INKS USED IN THE SILKSCREEN PROCESS MUST BE OF THE TYPE TO PRODUCE THE DESIRED COLOR AND DURABILITY WHEN APPLIED ON RETROREFLECTIVE SHEETING. SILKSCREEN INKS MUST BE USED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE INK MUST PRODUCE THE DESIRED COLOUR WHEN APPLIED ON RETROREFLECTIVE SHEETING BACKGROUND AND MUST DRY TO A GOOD FILM WITHOUT RUNNING, STREAKING OR SAGGING. THE SCREENING MUST BE DONE IN A MANNER THAT RESULTS IN A UNIFORM COLOUR AND TONE, WITH SHARPLY DEFINED EDGES OF LEGEND AND BORDER WITHOUT BLEMISHES ON THE SIGN FIELD THAT WILL AFFECT THE



Office of the Executive Director, Waterways
Parks Canada Agency
Government of Canada

Graphics Designs and Materials and
Fabrication Specifications for
Public Safety Signs around Dams

TYPICAL 4x6 (1220x1830) SIGN DIMENSIONS AND MATERIALS AND FABRICATION SPECIFICATIONS

Revised: November 3, 2014
Checked: November 3, 2014
Approved: November 3, 2014

Drawn by: S.Gauthier
Checked by: S.Gauthier
Approved by: S.Gauthier





SIGN COLOURS

- SIGN BOARD BACKGROUND RED**
PANTONE COLOUR MATCHING SYSTEM NO.485 SOLID COATED
PANTONE PMS 485 C
CMYK 0/96/100/0
RGB 213/43/30
HEXIDECIMAL #D52B1E
- SIGN BOARD TEXT AND BACKGROUND WHITE**
CMYK 0/0/0/0
RGB 255/255/255
HEXIDECIMAL #FFFFFF
- SIGN BOARD TEXT BLACK**
CMYK 0/0/0/100
RGB 0/0/0
HEXIDECIMAL #000000
- LOGO FLAG RED**
PANTONE COLOUR MATCHING SYSTEM NO.032 SOLID COATED
PANTONE PMS 032 C
CMYK 0/100/100/0
RGB 213/43/30
HEXIDECIMAL #33BBEE
- LOGO TEXT BLACK**
CMYK 0/0/0/100
RGB 0/0/0
HEXIDECIMAL #000000

SIGN FONTS AND TEXT HEIGHTS

- SIGN HEADER - HELVETICA NEUE 55 ROMAN (BOLD), MAX TEXT HEIGHT 70 mm, MIN TEXT HEIGHT 60 mm, UPPERCASE
 - ILLUSTRATED ON THIS DRAWING AS THE WORD 'DANGER'
- SIGN MESSAGE - HELVETICA NEUE 55 ROMAN (BOLD), MAX TEXT HEIGHT 50 mm, MIN. TEXT HEIGHT 40mm, FIRST LETTER CAPITALIZED EVERY WORD
 - INCLUDES 5 LINES OF TEXT AS ILLUSTRATED ON THIS DRAWING AS THE WORDS 'KEEP OUT' AND 'ACCESS BEYOND THIS POINT MAY RESULT IN DROWNING'
- PARKS CANADA LOGO - DIGITAL LOGO FILE TO BE PROVIDED TO FABRICATOR BY PARKS CANADA
- TOLERANCES FOR MODIFYING TEXT SIZES - TEXT HEIGHTS MAY BE MODIFIED AS REQUIRED TO FIT ON SIGN PANEL. ALL TEXT IS TO BE AS LARGE AS POSSIBLE, NOT TO EXCEED THE MAXIMUM TEXT HEIGHTS INDICATED BELOW AND AT MINIMUM EQUAL TO THE MINIMUM TEXT HEIGHTS INDICATED BELOW. BOTH LINES OF SIGN MESSAGE TEXT MUST BE A SINGLE HEIGHT. WHERE MODIFYING TEXT HEIGHTS, MAINTAIN SPACING AND HEIGHT TO WIDTH PROPORTIONS OF LETTER FONT TYPES SPECIFIED. CONDENSED FONTS WILL NOT BE ACCEPTED. ALL TEXT MUST BE BOTTOM LEFT JUSTIFIED. MAINTAIN MINIMUM EDGE DISTANCES SPECIFIED ON DRAWING. AS A GENERAL RULE HEADER LINE TEXT MUST BE AT MINIMUM 1.5 TIMES LARGER THAN MESSAGE LINE TEXT.
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SCALE = 1:8

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1.5 STRUCTURAL - EXTRUDED ALUMINIUM SIGNS

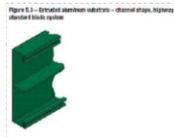
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BRITISH COLUMBIA STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION, 2004 ([HTTP://WWW.TH.GOV.BC.CA/PUBLICATIONS/CDNST_MAINT/CONTRACT_SERV/STANDARDSPECS.HTM](http://www.th.gov.bc.ca/publications/cdnst_maint/contract_serv/standardspecs.htm))

MINISTÈRE DES TRANSPORTS DU QUÉBEC ([HTTP://WWW.PUBLICATIONSDUQUEBEC.GOUV.QC.CA/PRODUITS/OUVRAGE_ROUTIER.FR.HTML](http://www.publicationsduquebec.gouv.qc.ca/produits/ouvrage_routier.fr.html))



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STRUCTURAL PANEL WEIGHT NOT TO EXCEED 13.6 kg (30lbs) AND NON-STRUCTURAL PANEL WEIGHT NOT TO EXCEED 9.1 kg (20lbs) WHEN CUT TO SPECIFIED DIMENSIONS.

STRUCTURAL PANELS TO BE TESTED IN ACCORDANCE WITH ASTM E72 AND DESIGNED TO WITHSTAND A MINIMUM WIND FORCE OF +/- 0.96kPa (20psf).

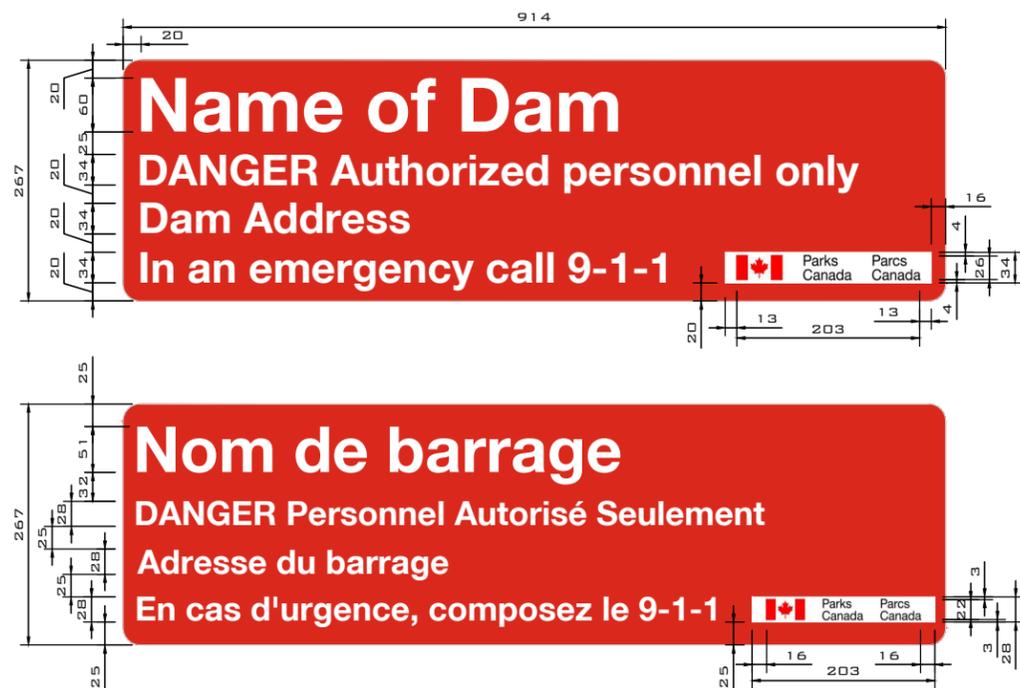
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2.0 FABRICATION SPECIFICATIONS

- 2.1 THE MAXIMUM ALLOWABLE DEVIATION FROM FLATNESS MUST NOT EXCEED 0.1 MM PER 1CM (0.010 INCH PER INCH) WIDTH OF THE SIGN PANEL.
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- 2.3 ALL ALUMINIUM SUBSTRATE MUST BE GIVEN A CHROMATE CONVERSION COATING IN ACCORDANCE WITH ASTM B 449, CLASS 2, AND MUST BE PREPARED BY ONE OF THE TREATMENT SEQUENCE OPTIONS DESCRIBED IN ASTM B 449, APPENDIX X2. THE CHEMICALS AND SOLVENTS MUST BE APPLIED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SUFFICIENT LABORATORY FACILITIES TO TEST AND CONTROL THE CONCENTRATION OF THE SOLUTIONS USED MUST BE MAINTAINED AT THE TREATING PLANT. A LOG OF THE CONCENTRATION OF TREATING SOLUTIONS MUST BE MAINTAINED. TREATED PANELS MUST BE HANDLED IN SUCH A MANNER AS TO PREVENT CONTAMINATION. PANELS MUST BE STORED IN A DRY, CLEAN AREA FREE FROM DUST, ACID FUMES OR VAPORS. WHEN ALUMINIUM IS SHIPPED TO A SECONDARY LOCATION FOR RETRO-REFLECTORIZING, ADEQUATE PRECAUTIONS MUST BE TAKEN TO ENSURE THAT THE MATERIAL ARRIVES AT THE DESTINATION UNCONTAMINATED.
- 2.4 BACKGROUND COLOURING (RED AND WHITE) MUST BE APPLIED AS A LAMINATED RETRO-REFLECTIVE SHEETING, COLOURED AS INDICATED ON DRAWINGS. SHEETING TO BE ASTM STANDARD D4956-11A, TYPE IV, CLASS I. USE ASTM D 4956 TYPE IX, XI OR AASHTO M 268 TYPE C OR D PRISMATIC RED FOR RED BACKGROUND PORTIONS OF SIGNS. RETROREFLECTIVE SHEETING MUST BE HIGH INTENSITY THAT IS AN UNMETALLIZED MICRO PRISMATIC REFLECTIVE MATERIAL.
- 2.5 ALL SIGNS MUST BE OF THE HIGHEST QUALITY WITH CONSISTENT DAYTIME AND NIGHTTIME COLOR AND RETRO-REFLECTIVITY
- 2.6 A MAXIMUM OF ONE VERTICAL OVERLAP SPLICE APPROXIMATELY 6mm WIDE WILL BE ALLOWED ON SIGN DIMENSION GREATER THAN 1220. APPLY CLEAR COATING OR EDGE SEALER AFTER APPLICATION OF THE RETRO-REFLECTIVE SHEETING AS RECOMMENDED BY THE SHEETING MANUFACTURER. WHERE CLEAR FINISH IS USED, THE FINISH MUST BE APPLIED AFTER SCREENING OF MESSAGES AND BORDERS. WHERE EDGE SEALER IS USED, THE SEALER MUST BE APPLIED TO ALL SPLICES AND EDGES. THE COMPLETED SIGN FACE MUST BE FREE FROM AIR BUBBLES, WRINKLES OR OTHER BLEMISHES.
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SIGN COLOURS

-  SIGN BOARD BACKGROUND RED
PANTONE COLOUR MATCHING SYSTEM NO.485 SOLID COATED
PANTONE PMS 485 C
CMYK 0/96/100/0
RGB 213/43/30
HEXDECIMAL #D52B1E
-  SIGN BOARD TEXT AND BACKGROUND WHITE
CMYK 0/0/0/0
RGB 255/255/255
HEXDECIMAL #FFFFFF
-  SIGN BOARD TEXT BLACK
CMYK 0/0/0/100
RGB 0/0/0
HEXDECIMAL #000000
-  LOGO FLAG RED
PANTONE COLOUR MATCHING SYSTEM NO.032 SOLID COATED
PANTONE PMS 032 C
CMYK 0/100/100/0
RGB 213/43/30
HEXDECIMAL #338BEE
-  LOGO TEXT BLACK
CMYK 0/0/0/100
RGB 0/0/0
HEXDECIMAL #000000

SIGN FONTS AND TEXT HEIGHTS

- SIGN HEADER - HELVETICA NEUE 55 ROMAN (BOLD), MAX TEXT HEIGHT 60 mm, MIN TEXT HEIGHT 51 mm, UPPERCASE
- ILLUSTRATED ON THIS DRAWING AS THE WORDS NAME OF DAM
- SIGN MESSAGE - HELVETICA NEUE 55 ROMAN (BOLD), MAX TEXT HEIGHT 34 mm, MIN. TEXT HEIGHT 28mm, FIRST LETTER CAPITALIZED EVERY WORD
- INCLUDES 3 LINES OF TEXT AS ILLUSTRATED ON THIS DRAWING AS THE WORDS 'DANGER AUTHORIZED PERSONNEL ONLY...IN AN EMERGENCY CALL 9-1-1'
- PARKS CANADA LOGO - DIGITAL LOGO FILE TO BE PROVIDED TO FABRICATOR BY PARKS CANADA
- TOLERANCES FOR MODIFYING TEXT SIZES - TEXT HEIGHTS MAY BE MODIFIED AS REQUIRED TO FIT ON SIGN PANEL. ALL TEXT IS TO BE AS LARGE AS POSSIBLE, NOT TO EXCEED THE MAXIMUM TEXT HEIGHTS INDICATED BELOW AND AT MINIMUM EQUAL TO THE MINIMUM TEXT HEIGHTS INDICATED BELOW. BOTH LINES OF SIGN MESSAGE TEXT MUST BE A SINGLE HEIGHT. WHERE MODIFYING TEXT HEIGHTS, MAINTAIN SPACING AND HEIGHT TO WIDTH PROPORTIONS OF LETTER FONT TYPES SPECIFIED. CONDENSED FONTS WILL NOT BE ACCEPTED. ALL TEXT MUST BE BOTTOM LEFT JUSTIFIED. MAINTAIN MINIMUM EDGE DISTANCES SPECIFIED ON DRAWING. AS A GENERAL RULE HEADER LINE TEXT MUST BE AT MINIMUM 1.75 TIMES LARGER THAN MESSAGE LINE TEXT.
- +/-3MM MUST BE THE ALLOWABLE FABRICATION TOLERANCE FOR ALL LETTERS AND SYMBOLS

NOTE: WORDING ON THE SIGN SHOWN ON THIS DRAWING IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. REFER TO THIS DRAWING FOR DIMENSIONAL AND COLOUR INFORMATION ONLY. REFER TO INDIVIDUAL SIGN DRAWINGS FOR REQUIRED WORDING IN ENGLISH OR FRENCH AS APPLICABLE.

SCALE = 1:8

SIGNS MATERIALS AND FABRICATION SPECIFICATIONS

1.0 MATERIALS SPECIFICATIONS

- 1.1 ALL MATERIALS MUST BE OF NEW STOCK AND FREE FROM DEFECTS.
- 1.2 SIGNS MUST CONSIST OF ALUMINIUM FLAT SHEETS, EXTRUDED PANELS OR ALUMINIUM COMPOSITE PANELS RETRO-REFLECTORIZED ON THE FACE SIDE WITH ALL LETTERS, NUMERALS, SYMBOLS, BORDERS AND CORNERS AS SHOWN ON THE PLANS.
- 1.3 SIGNS EQUAL TO OR GREATER IN WIDTH THAN SIX FEET ARE CONSIDERED STRUCTURAL (ST) AND MUST BE FABRICATED ON EXTRUDED PANELS OR ALUMINIUM COMPOSITE PANELS. SIGNS LESS THAN SIX FEET IN WIDTH WILL BE CONSIDERED NON-STRUCTURAL (NS) SIGNS TO BE FABRICATED WITH ALUMINIUM FLAT SHEET OR FOAM CORE COMPOSITE. ANY EXCEPTIONS TO THESE FABRICATION STANDARDS WILL BE INDICATED BY THE DEPARTMENTAL REPRESENTATIVE AT TIME OF PURCHASE ORDER.

1.4 NON-STRUCTURAL - FLAT SHEET ALUMINIUM SIGNS

SHEET ALUMINIUM SIGNS MUST BE FLAT-SHEET TENSION-LEVELLED, SIGN GRADE ALUMINIUM, ALLOY 5052-H32, CONFORMING TO THE REQUIREMENTS OF ASTM B209M, SPECIFICATION FOR ALUMINIUM AND ALUMINIUM-ALLOY SHEET AND PLATE. NOMINAL THICKNESS FOR SHEET-FACED SIGNS IS 3.0 mm (0.125"). TO ENSURE MAXIMUM TOLERANCING AND BEST APPEARANCE, SHEET ALUMINIUM SIGN PANELS MUST BE CUT USING A NUMERICALLY CONTROLLED DEVICE SUCH AS WATER JET OR LASER CUTTING SYSTEM. ALTERNATIVELY, SHEET ALUMINIUM SUBSTRATES MAY BE SHEARED TO SIZE, CORNER-PUNCHED AND DETAILED, PROVIDED THAT THE DIMENSIONS AND CORNER RADII EXACTLY MATCH THE SUPPLIED SIGN ARTWORK. ALL EDGES MUST BE BROKEN, DE-BURRED AND MADE SMOOTH.

1.5 STRUCTURAL - EXTRUDED ALUMINIUM SIGNS

STRUCTURAL EXTRUSION BASED SIGN FACES (FIGURE 5.3) MUST BE CONSTRUCTED USING 305 MM (12") STANDARD HIGHWAY EXTRUDED BLADES (SHAPE # 73247) USING ALUMINIUM ALLOY 6061-T6 OR 6063-T5. EXTRUDED BLADES ARE TO BE MILL FINISHED WITH NO EXPOSURE TO ANY SILICONE-BORNE PRODUCTS.

FOR MORE INFORMATION AND TYPICAL DETAIL, PLEASE REFER TO THE FOLLOWING SOURCES:

ALBERTA T&U DRAWING TEB 1.95 ([HTTP://WWW.TU.GOV.AB.CA/CONTENT/DOCTYPE233/PRODUCTION/SIGNAGE.PDF](http://www.tu.gov.ab.ca/content/doctype233/production/signage.pdf))

BRITISH COLUMBIA STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION, 2004 ([HTTP://WWW.TH.GOV.BC.CA/PUBLICATIONS/CONST_MAINT/CONTRACT_SERV/STANDARDSPECCS.HTM](http://www.th.gov.bc.ca/publications/const_maint/contract_serv/standardspeccs.htm))

MINISTÈRE DES TRANSPORTS DU QUÉBEC ([HTTP://WWW.PUBLICATIONSDUQUEBEC.GOUV.QC.CA/PRODUITS/OUVRAGE ROUTIER.FR.HTML](http://www.publicationsduquebec.gouv.qc.ca/produits/ouvrage routier.fr.html))

1.6 NON-STRUCTURAL AND STRUCTURAL - ALUMINIUM COMPOSITE SIGNS

NON-STRUCTURAL ALUMINIUM COMPOSITE PANELS ARE TO CONSIST OF DOUBLE SIDED 0.3 mm (0.012") TO 0.4mm (0.015") THICK ALUMINIUM FRONT AND BACK FACE BONDED TO 3 mm POLYETHYLENE FOAM CORE.

STRUCTURAL ALUMINIUM COMPOSITE PANELS ARE TO CONSIST OF DOUBLE SIDED 0.3mm (0.012") TO 0.4mm (0.015") THICK ALUMINIUM FRONT AND BACK FACE BONDED TO 10 mm CORRUGATED OR SINGLE PROFILE (FLUTED) POLYALLOMER CORE. SOLID POLYETHYLENE OR FOAM CORE COMPOSITE PRODUCTS WILL NOT BE ACCEPTED FOR STRUCTURAL PANELS DUE TO EXCESSIVE WEIGHT.

ALUMINIUM FACE SHEETS FOR COMPOSITE PANELS TO BE SIGN GRADE ALLOY 5052-H32, CONFORMING TO THE REQUIREMENTS OF ASTM B209M, SPECIFICATION FOR ALUMINIUM AND ALUMINIUM-ALLOY SHEET AND PLATE.

SINGLE FACE TO BE FINISHED WITH 20 MICRONS FACTORY BAKED ACRYLIC WHITE PAINT MEETING REQUIREMENTS OF ASTM D-4214, D-2244. FACTORY COATED FACE WILL ACT AS BACK FACE OF FINISHED SIGN. NO-FACTORY COATED FACE MAY BE SUPPLIED AS MILL FINISH PROVIDED IT WILL ACCEPT LAMINATED RETRO-REFLECTIVE SHEETING, SCREEN PRINT AND DIGITAL PRINT TYPE INKS ASSOCIATED WITH SIGN GRAPHICS DESIGN.

STRUCTURAL PANELS TO BE TESTED IN ACCORDANCE WITH ASTM E72 AND DESIGNED TO WITHSTAND A MINIMUM WIND FORCE OF +/- 0.96kPa (20psf).

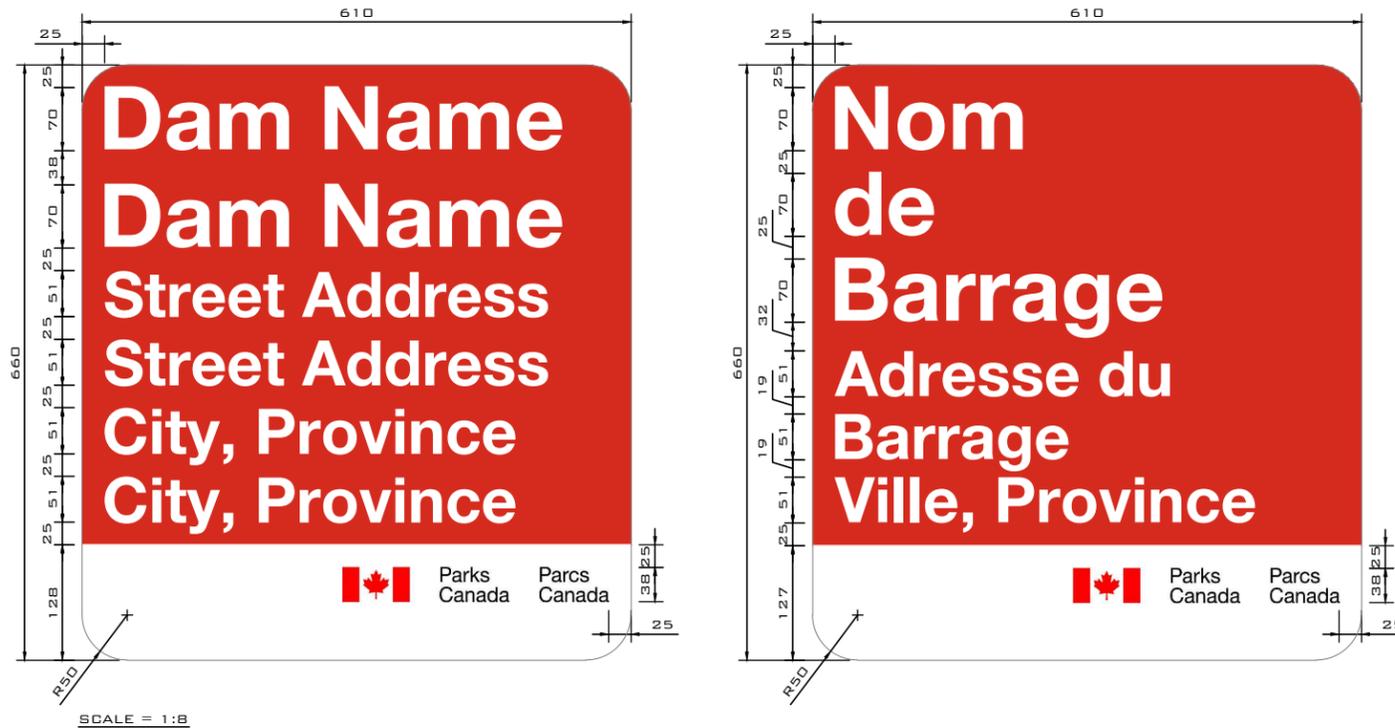
PANELS SHALL BE PERFORMANCE BOND TESTED TO PASS ASTM C481-C.

ACCEPTABLE PRODUCTS FOR STRUCTURAL PANELS ARE 'PROLITE' OR 'ALUMALITE' BY LAMINATORS INC. OR 'ALUMACORR' BY NUDDO OR APPROVED EQUAL.

ACCEPTABLE PRODUCT FOR NON-STRUCTURAL PANELS IS 'ALUPANEL' BY MULTIPANEL

2.0 FABRICATION SPECIFICATIONS

- 2.1 THE MAXIMUM ALLOWABLE DEVIATION FROM FLATNESS MUST NOT EXCEED 0.1MM PER 1CM (0.010 INCH PER INCH) WIDTH OF THE SIGN PANEL.
- 2.2 NO HOLES MUST BE MADE IN SIGNS FACES UNLESS REQUESTED BY DEPARTMENT. MOUNTING DETAILS VARY FROM SIGN TO SIGN. WHERE HOLES ARE REQUESTED, THEY MUST BE DRILLED AND EDGE SEALED SIMILAR TO OTHER CUT EDGES.
- 2.3 ALL ALUMINIUM SUBSTRATE MUST BE GIVEN A CHROMATE CONVERSION COATING IN ACCORDANCE WITH ASTM B 449, CLASS 2, AND MUST BE PREPARED BY ONE OF THE TREATMENT SEQUENCE OPTIONS DESCRIBED IN ASTM B 449, APPENDIX X2. THE CHEMICALS AND SOLVENTS MUST BE APPLIED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SUFFICIENT LABORATORY FACILITIES TO TEST AND CONTROL THE CONCENTRATION OF THE SOLUTIONS USED MUST BE MAINTAINED AT THE TREATING PLANT. A LOG OF THE CONCENTRATION OF TREATING SOLUTIONS MUST BE MAINTAINED. TREATED PANELS MUST BE HANDLED IN SUCH A MANNER AS TO PREVENT CONTAMINATION. PANELS MUST BE STORED IN A DRY, CLEAN AREA FREE FROM DUST, ACID FUMES OR VAPORS. WHEN ALUMINIUM IS SHIPPED TO A SECONDARY LOCATION FOR RETRO-REFLECTORIZING, ADEQUATE PRECAUTIONS MUST BE TAKEN TO ENSURE THAT THE MATERIAL ARRIVES AT THE DESTINATION UNCONTAMINATED.
- 2.4 BACKGROUND COLOURING (RED AND WHITE) MUST BE APPLIED AS A LAMINATED RETRO-REFLECTIVE SHEETING, COLOURED AS INDICATED ON DRAWINGS. SHEETING TO BE ASTM STANDARD D4956-11A, TYPE IV, CLASS 1. USE ASTM D 4956 TYPE IX, XI OR AASHTO M 268 TYPE C OR D PRISMATIC RED FOR RED BACKGROUND PORTIONS OF SIGNS. RETROREFLECTIVE SHEETING MUST BE HIGH INTENSITY THAT IS AN UNMETALLIZED MICRO PRISMATIC REFLECTIVE MATERIAL.
- 2.5 ALL SIGNS MUST BE OF THE HIGHEST QUALITY WITH CONSISTENT DAYTIME AND NIGHTTIME COLOR AND RETRO-REFLECTIVITY
- 2.6 APPLY CLEAR COATING OR EDGE SEALER AFTER APPLICATION OF THE RETRO-REFLECTIVE SHEETING AS RECOMMENDED BY THE SHEETING MANUFACTURER. WHERE CLEAR FINISH IS USED, THE FINISH MUST BE APPLIED AFTER SCREENING OF MESSAGES AND BORDERS AND DRILLING OF ALL HOLES. WHERE EDGE SEALER IS USED, THE SEALER MUST BE APPLIED TO ALL HOLES AND EDGES. THE COMPLETED SIGN FACE MUST BE FREE FROM AIR BUBBLES, WRINKLES OR OTHER BLEMISHES.
- 2.7 LETTERS AND SYMBOLS MUST BE APPLIED TO THE BACKGROUND OF THE SIGN BY THE DIRECT OR REVERSE SCREEN PROCESS. MESSAGES AND BORDERS OF A COLOR DARKER THAN THE SIGN FIELD MUST BE APPLIED TO THE RETROREFLECTIVE SHEETING BY THE DIRECT PROCESS. MESSAGES AND BORDERS OF A COLOR LIGHTER THAN THE SIGN FIELD MUST BE APPLIED BY THE REVERSE SCREEN PROCESS. INKS USED IN THE SILKSCREEN PROCESS MUST BE OF THE TYPE TO PRODUCE THE DESIRED COLOR AND DURABILITY WHEN APPLIED ON RETROREFLECTIVE SHEETING. SILKSCREEN INKS MUST BE USED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE INK MUST PRODUCE THE DESIRED COLOR WHEN APPLIED ON RETROREFLECTIVE SHEETING BACKGROUND AND MUST DRY TO A GOOD FILM WITHOUT RUNNING, STREAKING OR SAGGING. THE SCREENING MUST BE DONE IN A MANNER THAT RESULTS IN A UNIFORM COLOR AND TONE, WITH SHARPLY DEFINED EDGES OF LEGEND AND BORDER WITHOUT BLEMISHES ON THE SIGN FIELD THAT WILL AFFECT THE INTENDED USE. SIGNS AFTER SCREENING MUST BE DRIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS TO PROVIDE A SMOOTH HARD FINISH. ANY SIGNS ON WHICH BLISTERS APPEAR DURING THE DRYING PROCESS WILL BE REJECTED.



SIGN COLOURS

| | |
|--|--|
| | SIGN BOARD BACKGROUND RED PANTONE COLOUR MATCHING SYSTEM NO.485 SOLID COATED PANTONE PMS 485 C CMYK 0/96/100/0 RGB 213/43/30 HEXIDECIMAL #D52B1E |
| | SIGN BOARD TEXT AND BACKGROUND WHITE CMYK 0/0/0/0 RGB 255/255/255 HEXIDECIMAL #FFFFFF |
| | SIGN BOARD TEXT BLACK CMYK 0/0/0/100 RGB 0/0/0 HEXIDECIMAL #000000 |
| | LOGO FLAG RED PANTONE COLOUR MATCHING SYSTEM NO.032 SOLID COATED PANTONE PMS 032 C CMYK 0/100/100/0 RGB 213/43/30 HEXIDECIMAL #33BBEE |
| | LOGO TEXT BLACK CMYK 0/0/0/100 RGB 0/0/0 HEXIDECIMAL #000000 |

SIGN FONTS AND TEXT HEIGHTS

- SIGN HEADER** - HELVETICA NEUE 55 ROMAN (BOLD), MAX TEXT HEIGHT 70 mm, MIN TEXT HEIGHT 60mm, UPPERCASE
- ILLUSTRATED ON THIS DRAWING AS THE WORDS 'DAM NAME'
- SIGN MESSAGE** - HELVETICA NEUE 55 ROMAN (BOLD), MAX TEXT HEIGHT 51 mm, MIN. TEXT HEIGHT 41mm, FIRST LETTER CAPITALIZED EVERY WORD
- INCLUDES 3 LINES OF TEXT AS ILLUSTRATED ON THIS DRAWING AS THE WORDS 'STREET ADDRESS' AND 'CITY, PROVINCE'
- PARKS CANADA LOGO** - DIGITAL LOGO FILE TO BE PROVIDED TO FABRICATOR BY PARKS CANADA
- TOLERANCES FOR MODIFYING TEXT SIZES** - TEXT HEIGHTS MAY BE MODIFIED AS REQUIRED TO FIT ON SIGN PANEL. ALL TEXT IS TO BE AS LARGE AS POSSIBLE, NOT TO EXCEED THE MAXIMUM TEXT HEIGHTS INDICATED BELOW AND AT MINIMUM EQUAL TO THE MINIMUM TEXT HEIGHTS INDICATED BELOW. BOTH LINES OF SIGN MESSAGE TEXT MUST BE A SINGLE HEIGHT. WHERE MODIFYING TEXT HEIGHTS, MAINTAIN SPACING AND HEIGHT TO WIDTH PROPORTIONS OF LETTER FONT TYPES SPECIFIED. CONDENSED FONTS WILL NOT BE ACCEPTED. ALL TEXT MUST BE BOTTOM LEFT JUSTIFIED. MAINTAIN MINIMUM EDGE DISTANCES SPECIFIED ON DRAWING. AS A GENERAL RULE HEADER LINE TEXT MUST BE AT MINIMUM 1.75 TIMES LARGER THAN MESSAGE LINE TEXT.
- +/-3MM MUST BE THE ALLOWABLE FABRICATION TOLERANCE FOR ALL LETTERS AND SYMBOLS

NOTE: WORDING ON THE SIGN SHOWN ON THIS DRAWING IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. REFER TO THIS DRAWING FOR DIMENSIONAL AND COLOUR INFORMATION ONLY. REFER TO INDIVIDUAL SIGN DRAWINGS FOR REQUIRED WORDING IN ENGLISH OR FRENCH AS APPLICABLE.

SIGNS MATERIALS AND FABRICATION SPECIFICATIONS

1.0 MATERIALS SPECIFICATIONS

- ALL MATERIALS MUST BE OF NEW STOCK AND FREE FROM DEFECTS.
- SIGNS MUST CONSIST OF ALUMINIUM FLAT SHEETS, EXTRUDED PANELS OR ALUMINIUM COMPOSITE PANELS RETRO-REFLECTORIZED ON THE FACE SIDE WITH ALL LETTERS, NUMERALS, SYMBOLS, BORDERS AND CORNERS AS SHOWN ON THE PLANS.
- SIGNS EQUAL TO OR GREATER IN WIDTH THAN SIX FEET ARE CONSIDERED STRUCTURAL (ST) AND MUST BE FABRICATED ON EXTRUDED PANELS OR ALUMINIUM COMPOSITE PANELS. SIGNS LESS THAN SIX FEET IN WIDTH WILL BE CONSIDERED NON-STRUCTURAL (NS) SIGNS TO BE FABRICATED WITH ALUMINIUM FLAT SHEET OR FOAM CORE COMPOSITE. ANY EXCEPTIONS TO THESE FABRICATION STANDARDS WILL BE INDICATED BY THE DEPARTMENTAL REPRESENTATIVE AT TIME OF PURCHASE ORDER.

1.4 NON-STRUCTURAL - FLAT SHEET ALUMINIUM SIGNS

SHEET ALUMINIUM SIGNS MUST BE FLAT-SHEET TENSION-LEVELLED, SIGN GRADE ALUMINIUM, ALLOY 5052-H32, CONFORMING TO THE REQUIREMENTS OF ASTM B209M, SPECIFICATION FOR ALUMINIUM AND ALUMINIUM-ALLOY SHEET AND PLATE. NOMINAL THICKNESS FOR SHEET-FACED SIGNS IS 3.0 MM (0.125"). TO ENSURE MAXIMUM TOLERANCING AND BEST APPEARANCE, SHEET ALUMINIUM SIGN PANELS MUST BE CUT USING A NUMERICALLY CONTROLLED DEVICE SUCH AS WATER JET OR LASER CUTTING SYSTEM. ALTERNATIVELY, SHEET ALUMINIUM SUBSTRATES MAY BE SHEARED TO SIZE, CORNER-PUNCHED AND DETAILED, PROVIDED THAT THE DIMENSIONS AND CORNER RADII EXACTLY MATCH THE SUPPLIED SIGN ARTWORK. ALL EDGES MUST BE BROKEN, DE-BURRED AND MADE SMOOTH.

1.5 STRUCTURAL - EXTRUDED ALUMINIUM SIGNS

STRUCTURAL EXTRUSION BASED SIGN FACES (FIGURE 5.3) MUST BE CONSTRUCTED USING 305 MM (12") STANDARD HIGHWAY EXTRUDED BLADES (SHAPE # 73247) USING ALUMINIUM ALLOY 6061-T6 OR 6063-T5. EXTRUDED BLADES ARE TO BE MILL FINISHED WITH NO EXPOSURE TO ANY SILICONE-BORNE PRODUCTS.

FOR MORE INFORMATION AND TYPICAL DETAIL, PLEASE REFER TO THE FOLLOWING SOURCES:

ALBERTA T&U DRAWING TEB 1.95 ([HTTP://WWW.TU.GOV.AB.CA/CONTENT/DOCTYPE233/PRODUCTION/SIGNAGE.PDF](http://www.tu.gov.ab.ca/content/doctype233/production/signage.pdf))

BRITISH COLUMBIA STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION, 2004 ([HTTP://WWW.TH.GOV.BC.CA/PUBLICATIONS/CONST_MAINT/CONTRADT_SERV/STANDARDSPECS.HTM](http://www.th.gov.bc.ca/publications/const_maint/contradt_serv/standardspecs.htm))

MINISTÈRE DES TRANSPORTS DU QUÉBEC ([HTTP://WWW.PUBLICATIONSDUQUEBEC.GOUV.QC.CA/PRODUITS/OUVRAGE_ROUTIER.FR.HTML](http://www.publicationsduquebec.gouv.qc.ca/produits/ouvrage_routier.fr.html))

1.6 NON-STRUCTURAL AND STRUCTURAL - ALUMINIUM COMPOSITE SIGNS

NON-STRUCTURAL ALUMINIUM COMPOSITE PANELS ARE TO CONSIST OF DOUBLE SIDED 0.3 mm (0.012") TO 0.4mm (0.015") THICK ALUMINIUM FRONT AND BACK FACE BONDED TO 3mm POLYETHYLENE FOAM CORE.

STRUCTURAL ALUMINIUM COMPOSITE PANELS ARE TO CONSIST OF DOUBLE SIDED 0.3mm (0.012") TO 0.4mm (0.015") THICK ALUMINIUM FRONT AND BACK FACE BONDED TO 10 mm CORRUGATED OR SINGLE PROFILE (FLUTED) POLYALLOMER CORE. SOLID POLYETHYLENE OR FOAM CORE COMPOSITE PRODUCTS WILL NOT BE ACCEPTED FOR STRUCTURAL PANELS DUE TO EXCESSIVE WEIGHT.

ALUMINIUM FACE SHEETS FOR COMPOSITE PANELS TO BE SIGN GRADE ALLOY 5052-H32, CONFORMING TO THE REQUIREMENTS OF ASTM B209M, SPECIFICATION FOR ALUMINIUM AND ALUMINIUM-ALLOY SHEET AND PLATE.

SINGLE FACE TO BE FINISHED WITH 20 MICRONS FACTORY BAKED ACRYLIC WHITE PAINT MEETING REQUIREMENTS OF ASTM D-4214, D-2244. FACTORY COATED FACE WILL ACT AS BACK FACE OF FINISHED SIGN. NO FACTORY COATED FACE MAY BE SUPPLIED AS MILL FINISH PROVIDED IT WILL ACCEPT LAMINATED RETRO-REFLECTIVE SHEETING, SCREEN PRINT AND DIGITAL PRINT TYPE INKS ASSOCIATED WITH SIGN GRAPHICS DESIGN.

STRUCTURAL PANELS TO BE TESTED IN ACCORDANCE WITH ASTM E72 AND DESIGNED TO WITHSTAND A MINIMUM WIND FORCE OF +/- 0.96kPa (20psf).

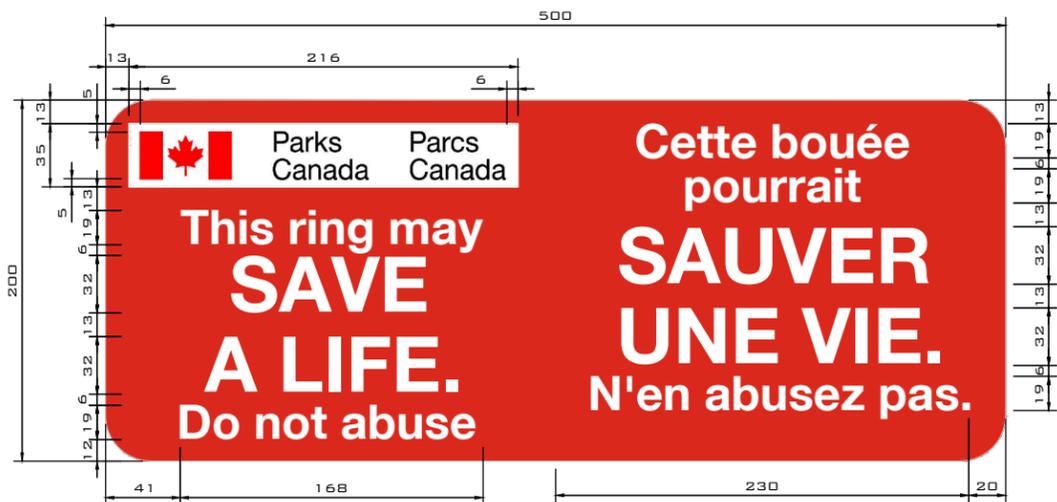
PANELS SHALL BE PERFORMANCE BOND TESTED TO PASS ASTM C481-C.

ACCEPTABLE PRODUCTS FOR STRUCTURAL PANELS ARE 'PROLITE' OR 'ALUMALITE' BY LAMINATORS INC. OR 'ALUMACORR' BY NUDD OR APPROVED EQUAL.

ACCEPTABLE PRODUCT FOR NON-STRUCTURAL PANELS IS 'ALUPANEL' BY MULTIPANEL

2.0 FABRICATION SPECIFICATIONS

- THE MAXIMUM ALLOWABLE DEVIATION FROM FLATNESS MUST NOT EXCEED 0.1MM PER 1CM (0.010 INCH PER INCH) WIDTH OF THE SIGN PANEL.
- NO HOLES MUST BE MADE IN SIGNS FACES UNLESS REQUESTED BY DEPARTMENT. MOUNTING DETAILS VARY FROM SIGN TO SIGN. WHERE HOLES ARE REQUESTED, THEY MUST BE DRILLED AND EDGE SEALED SIMILAR TO OTHER CUT EDGES.
- ALL ALUMINIUM SUBSTRATE MUST BE GIVEN A CHROMATE CONVERSION COATING IN ACCORDANCE WITH ASTM B 449, CLASS 2, AND MUST BE PREPARED BY ONE OF THE TREATMENT SEQUENCE OPTIONS DESCRIBED IN ASTM B 449, APPENDIX X2. THE CHEMICALS AND SOLVENTS MUST BE APPLIED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SUFFICIENT LABORATORY FACILITIES TO TEST AND CONTROL THE CONCENTRATION OF THE SOLUTIONS USED MUST BE MAINTAINED AT THE TREATING PLANT. A LOG OF THE CONCENTRATION OF TREATING SOLUTIONS MUST BE MAINTAINED. TREATED PANELS MUST BE HANDLED IN SUCH A MANNER AS TO PREVENT CONTAMINATION. PANELS MUST BE STORED IN A DRY, CLEAN AREA FREE FROM DUST, ACID FUMES OR VAPORS. WHEN ALUMINIUM IS SHIPPED TO A SECONDARY LOCATION FOR RETRO-REFLECTORIZING, ADEQUATE PRECAUTIONS MUST BE TAKEN TO ENSURE THAT THE MATERIAL ARRIVES AT THE DESTINATION UNCONTAMINATED.
- BACKGROUND COLOURING (RED AND WHITE) MUST BE APPLIED AS A LAMINATED RETRO-REFLECTIVE SHEETING, COLOURED AS INDICATED ON DRAWINGS. SHEETING TO BE ASTM STANDARD D4956-11A, TYPE IV, CLASS I. USE ASTM D 4956 TYPE IX, XI OR AASHTO M 268 TYPE C OR D PRISMATIC RED FOR RED BACKGROUND PORTIONS OF SIGNS. RETROREFLECTIVE SHEETING MUST BE HIGH INTENSITY THAT IS AN UNMETALLIZED MICRO PRISMATIC REFLECTIVE MATERIAL.
- ALL SIGNS MUST BE OF THE HIGHEST QUALITY WITH CONSISTENT DAYTIME AND NIGHTTIME COLOR AND RETRO-REFLECTIVITY
- APPLY CLEAR COATING OR EDGE SEALER AFTER APPLICATION OF THE RETRO-REFLECTIVE SHEETING AS RECOMMENDED BY THE SHEETING MANUFACTURER. WHERE CLEAR FINISH IS USED, THE FINISH MUST BE APPLIED AFTER SCREENING OF MESSAGES AND BORDERS AND DRILLING OF ALL HOLES. WHERE EDGE SEALER IS USED, THE SEALER MUST BE APPLIED TO ALL HOLES AND EDGES. THE COMPLETED SIGN FACE MUST BE FREE FROM AIR BUBBLES, WRINKLES OR OTHER BLEMISHES.
- LETTERS AND SYMBOLS MUST BE APPLIED TO THE BACKGROUND OF THE SIGN BY THE DIRECT OR REVERSE SCREEN PROCESS. MESSAGES AND BORDERS OF A COLOR DARKER THAN THE SIGN FIELD MUST BE APPLIED TO THE RETROREFLECTIVE SHEETING BY THE DIRECT PROCESS. MESSAGES AND BORDERS OF A COLOR LIGHTER THAN THE SIGN FIELD MUST BE PRODUCED BY THE REVERSE SCREEN PROCESS. INKS USED IN THE SILKSCREEN PROCESS MUST BE OF THE TYPE TO PRODUCE THE DESIRED COLOR AND DURABILITY WHEN APPLIED ON RETROREFLECTIVE SHEETING. SILKSCREEN INKS MUST BE USED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE INK MUST PRODUCE THE DESIRED COLOR WHEN APPLIED ON RETROREFLECTIVE SHEETING BACKGROUND AND MUST DRY TO A GOOD FILM WITHOUT RUNNING, STREAKING OR SAGGING. THE SCREENING MUST BE DONE IN A MANNER THAT RESULTS IN A UNIFORM COLOR AND TONE, WITH SHARPLY DEFINED EDGES OF LEGEND AND BORDER WITHOUT BLEMISHES ON THE SIGN FIELD THAT WILL AFFECT THE INTENDED USE. SIGNS AFTER SCREENING MUST BE DRIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS TO PROVIDE A SMOOTH HARD FINISH. ANY SIGNS ON WHICH BLISTERS APPEAR DURING THE DRYING PROCESS WILL BE REJECTED.



SIGN COLOURS

- SIGN BOARD BACKGROUND RED**
PANTONE COLOUR MATCHING SYSTEM NO.485 SOLID COATED
PANTONE PMS 485 C
CMYK 0/96/100/0
RGB 213/43/30
HEXDECIMAL #D52B1E
- SIGN BOARD TEXT AND BACKGROUND WHITE**
CMYK 0/0/0/0
RGB 255/255/255
HEXDECIMAL #FFFFFF
- SIGN BOARD TEXT BLACK**
CMYK 0/0/0/100
RGB 0/0/0
HEXDECIMAL #000000
- LOGO FLAG RED**
PANTONE COLOUR MATCHING SYSTEM NO.032 SOLID COATED
PANTONE PMS 032 C
CMYK 0/100/100/0
RGB 213/43/30
HEXDECIMAL #33BBEE
- LOGO TEXT BLACK**
CMYK 0/0/0/100
RGB 0/0/0
HEXDECIMAL #000000

SIGN FONTS AND TEXT HEIGHTS

SIGN MESSAGE - HELVETICA NEUE 55 ROMAN (BOLD)
- TEXT HEIGHTS AND POSITION AS SHOWN AND CENTRE JUSTIFIED.

PARKS CANADA LOGO - DIGITAL LOGO FILE TO BE PROVIDED TO FABRICATOR BY PARKS CANADA

TOLERANCES FOR MODIFYING TEXT SIZES - TEXT HEIGHTS MAY BE MODIFIED AS REQUIRED TO FIT ON SIGN PANEL. ALL TEXT IS TO BE AS LARGE AS POSSIBLE, NOT TO EXCEED THE MAXIMUM TEXT HEIGHTS INDICATED BELOW AND AT MINIMUM EQUAL TO THE MINIMUM TEXT HEIGHTS INDICATED BELOW. BOTH LINES OF SIGN MESSAGE TEXT MUST BE A SINGLE HEIGHT. WHERE MODIFYING TEXT HEIGHTS, MAINTAIN SPACING AND HEIGHT TO WIDTH PROPORTIONS OF LETTER FONT TYPES SPECIFIED. CONDENSED FONTS WILL NOT BE ACCEPTED. ALL TEXT MUST BE BOTTOM LEFT JUSTIFIED. MAINTAIN MINIMUM EDGE DISTANCES SPECIFIED ON DRAWING. AS A GENERAL RULE HEADER LINE TEXT MUST BE AT MINIMUM 1.75 TIMES LARGER THAN MESSAGE LINE TEXT.

+/-3MM MUST BE THE ALLOWABLE FABRICATION TOLERANCE FOR ALL LETTERS AND SYMBOLS

NOTE: WORDING ON THE SIGN SHOWN ON THIS DRAWING IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. REFER TO THIS DRAWING FOR DIMENSIONAL AND COLOUR INFORMATION ONLY. REFER TO INDIVIDUAL SIGNS DRAWINGS FOR REQUIRED WORDING IN ENGLISH OR FRENCH AS APPLICABLE.

SCALE = 1:4

SIGNS MATERIALS AND FABRICATION SPECIFICATIONS

1.0 MATERIALS SPECIFICATIONS

- 1.1 ALL MATERIALS MUST BE OF NEW STOCK AND FREE FROM DEFECTS.
- 1.2 SIGNS MUST CONSIST OF ALUMINIUM FLAT SHEETS, EXTRUDED PANELS OR ALUMINIUM COMPOSITE PANELS RETRO-REFLECTORIZED ON THE FACE SIDE WITH ALL LETTERS, NUMERALS, SYMBOLS, BORDERS AND CORNERS AS SHOWN ON THE PLANS.
- 1.3 SIGNS EQUAL TO OR GREATER IN WIDTH THAN SIX FEET ARE CONSIDERED STRUCTURAL (ST) AND MUST BE FABRICATED ON EXTRUDED PANELS OR ALUMINIUM COMPOSITE PANELS. SIGNS LESS THAN SIX FEET IN WIDTH WILL BE CONSIDERED NON-STRUCTURAL (NS) SIGNS TO BE FABRICATED WITH ALUMINIUM FLAT SHEET OR FOAM CORE COMPOSITE. ANY EXCEPTIONS TO THESE FABRICATION STANDARDS WILL BE INDICATED BY THE DEPARTMENTAL REPRESENTATIVE AT TIME OF PURCHASE ORDER.

1.4 NON-STRUCTURAL - FLAT SHEET ALUMINIUM SIGNS

SHEET ALUMINIUM SIGNS MUST BE FLAT-SHEET TENSION-LEVELLED, SIGN GRADE ALUMINIUM, ALLOY 5052-H32, CONFORMING TO THE REQUIREMENTS OF ASTM B209M, SPECIFICATION FOR ALUMINIUM AND ALUMINIUM-ALLOY SHEET AND PLATE. NOMINAL THICKNESS FOR SHEET-FACED SIGNS IS 3.0 MM (0.125"). TO ENSURE MAXIMUM TOLERANCING AND BEST APPEARANCE, SHEET ALUMINIUM SIGN PANELS MUST BE CUT USING A NUMERICALLY CONTROLLED DEVICE SUCH AS WATER JET OR LASER CUTTING SYSTEM. ALTERNATIVELY, SHEET ALUMINIUM SUBSTRATES MAY BE SHEARED TO SIZE, CORNER-PUNCHED AND DETAILED, PROVIDED THAT THE DIMENSIONS AND CORNER RADII EXACTLY MATCH THE SUPPLIED SIGN ARTWORK. ALL EDGES MUST BE BROKEN, DE-BURRED AND MADE SMOOTH.

1.5 STRUCTURAL - EXTRUDED ALUMINIUM SIGNS

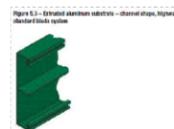
STRUCTURAL EXTRUSION BASED SIGN FACES (FIGURE 5.3) MUST BE CONSTRUCTED USING 305 MM (12") STANDARD HIGHWAY EXTRUDED BLADES (SHAPE # 73247) USING ALUMINIUM ALLOY 6061-T6 OR 6063-T5. EXTRUDED BLADES ARE TO BE MILL FINISHED WITH NO EXPOSURE TO ANY SILICONE-BORNE PRODUCTS.

FOR MORE INFORMATION AND TYPICAL DETAIL, PLEASE REFER TO THE FOLLOWING SOURCES:

ALBERTA T&U DRAWING TEB 1.95 ([HTTP://WWW.TU.GOV.AB.CA/CONTENT/DOCTYPE233/PRODUCTION/SIGNAGE.PDF](http://www.tu.gov.ab.ca/content/doctype233/production/signage.pdf))

BRITISH COLUMBIA STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION, 2004 ([HTTP://WWW.TH.GOV.BC.CA/PUBLICATIONS/CONST_MAINT/CONTRACT_SERV/STANDARDSPECS.HTM](http://www.th.gov.bc.ca/publications/const_maint/contract_serv/standardspecs.htm))

MINISTÈRE DES TRANSPORTS DU QUÉBEC ([HTTP://WWW.PUBLICATIONSDUQUEBEC.GOUV.QC.CA/PRODUITS/OUVRAGE_ROUTIER.FR.HTML](http://www.publicationsduquebec.gouv.qc.ca/produits/ouvrage_routier.fr.html))



1.6 NON-STRUCTURAL AND STRUCTURAL - ALUMINIUM COMPOSITE SIGNS

NON-STRUCTURAL ALUMINIUM COMPOSITE PANELS ARE TO CONSIST OF DOUBLE SIDED 0.3 mm (0.012") TO 0.4mm (0.015") THICK ALUMINIUM FRONT AND BACK FACE BONDED TO 3mm POLYETHYLENE FOAM CORE.

STRUCTURAL ALUMINIUM COMPOSITE PANELS ARE TO CONSIST OF DOUBLE SIDED 0.3mm (0.012") TO 0.4mm (0.015") THICK ALUMINIUM FRONT AND BACK FACE BONDED TO 10mm CORRUGATED OR SINGLE PROFILE (FLUTED) POLYALLOMER CORE. SOLID POLYETHYLENE OR FOAM CORE COMPOSITE PRODUCTS WILL NOT BE ACCEPTED FOR STRUCTURAL PANELS DUE TO EXCESSIVE WEIGHT.

ALUMINIUM FACE SHEETS FOR COMPOSITE PANELS TO BE SIGN GRADE ALLOY 5052-H32, CONFORMING TO THE REQUIREMENTS OF ASTM B209M, SPECIFICATION FOR ALUMINIUM AND ALUMINIUM-ALLOY SHEET AND PLATE.

SINGLE FACE TO BE FINISHED WITH 20 MICRONS FACTORY BAKED ACRYLIC WHITE PAINT MEETING REQUIREMENTS OF ASTM D-4214, D-2244. FACTORY COATED FACE WILL ACT AS BACK FACE OF FINISHED SIGN. NO-FACTORY COATED FACE MAY BE SUPPLIED AS MILL FINISH PROVIDED IT WILL ACCEPT LAMINATED RETRO-REFLECTIVE SHEETING, SCREEN PRINT AND DIGITAL PRINT TYPE INKS ASSOCIATED WITH SIGN GRAPHICS DESIGN.

STRUCTURAL PANELS TO BE TESTED IN ACCORDANCE WITH ASTM E72 AND DESIGNED TO WITHSTAND A MINIMUM WIND FORCE OF +/- 0.96kPa (20psf).

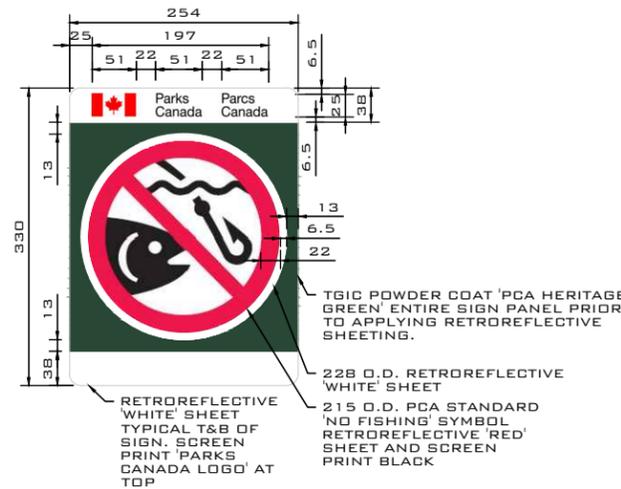
PANELS SHALL BE PERFORMANCE BOND TESTED TO PASS ASTM C481-C.

ACCEPTABLE PRODUCTS FOR STRUCTURAL PANELS ARE 'PROLITE' OR 'ALUMALITE' BY LAMINATORS INC. OR 'ALUMACORR' BY NUDDO OR APPROVED EQUAL.

ACCEPTABLE PRODUCT FOR NON-STRUCTURAL PANELS IS 'ALUPANEL' BY MULTIPANEL

2.0 FABRICATION SPECIFICATIONS

- 2.1 THE MAXIMUM ALLOWABLE DEVIATION FROM FLATNESS MUST NOT EXCEED 0.1MM PER 1CM (0.010 INCH PER INCH) WIDTH OF THE SIGN PANEL.
- 2.2 NO HOLES MUST BE MADE IN SIGNS FACES UNLESS REQUESTED BY DEPARTMENT. MOUNTING DETAILS VARY FROM SIGN TO SIGN. WHERE HOLES ARE REQUESTED, THEY MUST BE DRILLED AND EDGE SEALED SIMILAR TO OTHER CUT EDGES.
- 2.3 ALL ALUMINIUM SUBSTRATE MUST BE GIVEN A CHROMATE CONVERSION COATING IN ACCORDANCE WITH ASTM B 449, CLASS 2, AND MUST BE PREPARED BY ONE OF THE TREATMENT SEQUENCE OPTIONS DESCRIBED IN ASTM B 449, APPENDIX X2. THE CHEMICALS AND SOLVENTS MUST BE APPLIED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SUFFICIENT LABORATORY FACILITIES TO TEST AND CONTROL THE CONCENTRATION OF THE SOLUTIONS USED MUST BE MAINTAINED AT THE TREATING PLANT. A LOG OF THE CONCENTRATION OF TREATING SOLUTIONS MUST BE MAINTAINED. TREATED PANELS MUST BE HANDLED IN SUCH A MANNER AS TO PREVENT CONTAMINATION. PANELS MUST BE STORED IN A DRY, CLEAN AREA FREE FROM DUST, ACID FUMES OR VAPORS. WHEN ALUMINIUM IS SHIPPED TO A SECONDARY LOCATION FOR RETRO-REFLECTORIZING, ADEQUATE PRECAUTIONS MUST BE TAKEN TO ENSURE THAT THE MATERIAL ARRIVES AT THE DESTINATION UNCONTAMINATED.
- 2.4 BACKGROUND COLOURING (RED AND WHITE) MUST BE APPLIED AS A LAMINATED RETRO-REFLECTIVE SHEETING, COLOURED AS INDICATED ON DRAWINGS. SHEETING TO BE ASTM STANDARD D4956-11A, TYPE IV, CLASS I. USE ASTM D 4956 TYPE IX, XI OR AASHTO M 268 TYPE C OR D PRISMATIC RED FOR RED BACKGROUND PORTIONS OF SIGNS. RETROREFLECTIVE SHEETING MUST BE HIGH INTENSITY THAT IS AN UNMETALLIZED MICRO PRISMATIC REFLECTIVE MATERIAL.
- 2.5 ALL SIGNS MUST BE OF THE HIGHEST QUALITY WITH CONSISTENT DAYTIME AND NIGHTTIME COLOR AND RETRO-REFLECTIVITY
- 2.6 APPLY CLEAR COATING OR EDGE SEALER AFTER APPLICATION OF THE RETRO-REFLECTIVE SHEETING AS RECOMMENDED BY THE SHEETING MANUFACTURER. WHERE CLEAR FINISH IS USED, THE FINISH MUST BE APPLIED AFTER SCREENING OF MESSAGES AND BORDERS AND DRILLING OF ALL HOLES. WHERE EDGE SEALER IS USED, THE SEALER MUST BE APPLIED TO ALL HOLES AND EDGES. THE COMPLETED SIGN FACE MUST BE FREE FROM AIR BUBBLES, WRINKLES OR OTHER BLEMISHES.
- 2.7 LETTERS AND SYMBOLS MUST BE APPLIED TO THE BACKGROUND OF THE SIGN BY THE DIRECT OR REVERSE SCREEN PROCESS. MESSAGES AND BORDERS OF A COLOR DARKER THAN THE SIGN FIELD MUST BE APPLIED TO THE RETROREFLECTIVE SHEETING BY THE DIRECT PROCESS. MESSAGES AND BORDERS OF A COLOR LIGHTER THAN THE SIGN FIELD MUST BE PRODUCED BY THE REVERSE SCREEN PROCESS. INKS USED IN THE SILKSCREEN PROCESS MUST BE OF THE TYPE TO PRODUCE THE DESIRED COLOR AND DURABILITY WHEN APPLIED ON RETROREFLECTIVE SHEETING. SILKSCREEN INKS MUST BE USED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE INK MUST PRODUCE THE DESIRED COLOR WHEN APPLIED ON RETROREFLECTIVE SHEETING BACKGROUND AND MUST DRY TO A GOOD FILM WITHOUT RUNNING, STREAKING OR SAGGING. THE SCREENING MUST BE DONE IN A MANNER THAT RESULTS IN A UNIFORM COLOR AND TONE, WITH SHARPLY DEFINED EDGES OF LEGEND AND BORDER WITHOUT BLEMISHES ON THE SIGN FIELD THAT WILL AFFECT THE INTENDED USE. SIGNS AFTER SCREENING MUST BE DRIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS TO PROVIDE A SMOOTH HARD FINISH. ANY SIGNS ON WHICH BLISTERS APPEAR DURING THE DRYING PROCESS WILL BE REJECTED.



ALL DIMENSIONS AND DETAILS ARE SIMILAR TO 'NO FISHING' SIGN AT LEFT

STANDARD 'NO FISHING'

STANDARD 'NO SWIMMING'

SCALE = 1:8

SIGNS MATERIALS AND FABRICATION SPECIFICATIONS

1.0 MATERIALS SPECIFICATIONS

- 1.1 ALL MATERIALS MUST BE OF NEW STOCK AND FREE FROM DEFECTS.
- 1.2 SIGNS MUST CONSIST OF ALUMINIUM FLAT SHEETS, EXTRUDED PANELS OR ALUMINIUM COMPOSITE PANELS RETRO-REFLECTORIZED ON THE FACE SIDE WITH ALL LETTERS, NUMERALS, SYMBOLS, BORDERS AND CORNERS AS SHOWN ON THE PLANS.
- 1.3 SIGNS EQUAL TO OR GREATER IN WIDTH THAN SIX FEET ARE CONSIDERED STRUCTURAL (ST) AND MUST BE FABRICATED ON EXTRUDED PANELS OR ALUMINIUM COMPOSITE PANELS. SIGNS LESS THAN SIX FEET IN WIDTH WILL BE CONSIDERED NON-STRUCTURAL (NS) SIGNS TO BE FABRICATED WITH ALUMINIUM FLAT SHEET OR FOAM CORE COMPOSITE. ANY EXCEPTIONS TO THESE FABRICATION STANDARDS WILL BE INDICATED BY THE DEPARTMENTAL REPRESENTATIVE AT TIME OF PURCHASE ORDER.

1.4 NON-STRUCTURAL - FLAT SHEET ALUMINIUM SIGNS

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1.5 NON-STRUCTURAL ALUMINIUM COMPOSITE SIGNS

NON-STRUCTURAL ALUMINIUM COMPOSITE PANELS ARE TO CONSIST OF DOUBLE SIDED 0.3 mm (0.012") TO 0.4mm (0.015") THICK ALUMINIUM FRONT AND BACK FACE BONDED TO 3 mm POLYETHYLENE FOAM CORE.

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PANELS SHALL BE PERFORMANCE BOND TESTED TO PASS ASTM C481-C.

ACCEPTABLE PRODUCT FOR NON-STRUCTURAL PANELS IS 'ALUPANEL' BY MULTIPANEL

SIGN COLOURS

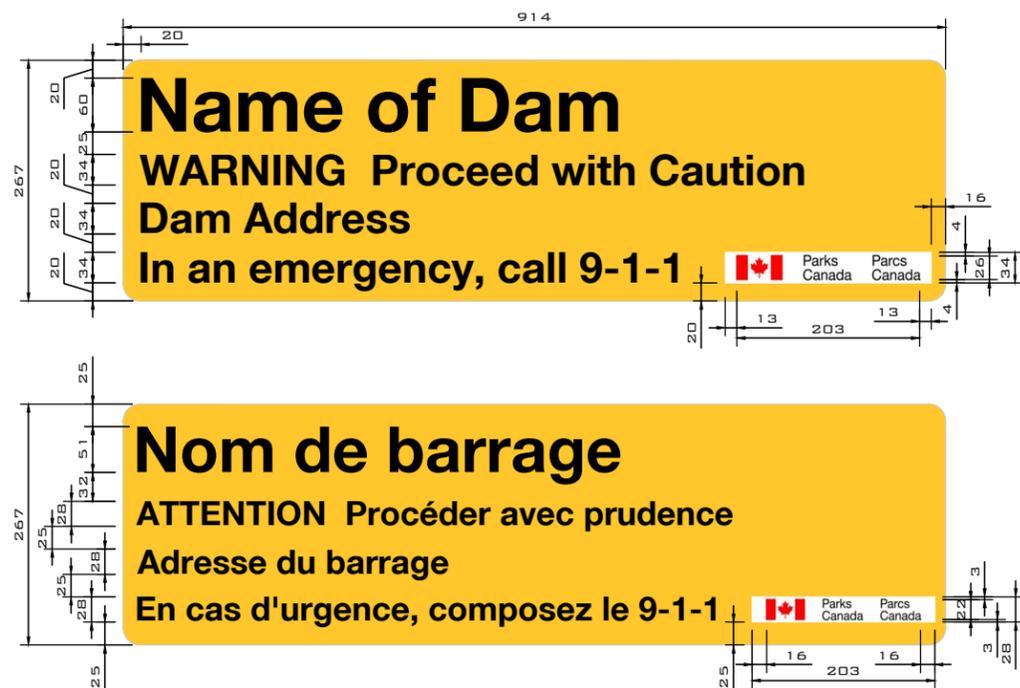
| | |
|--|---|
| | SIGN BOARD BACKGROUND PARKS CANADA HERITAGE GREEN PANTONE COLOUR MATCHING SYSTEM NO.553 SOLID COATED PANTONE PMS 553 C CMYK 60/0/55/80 RGB 33/67/50 HEXIDECIMAL #214332 |
| | SIGN BOARD TEXT AND BACKGROUND WHITE CMYK 0/0/0/0 RGB 255/255/255 HEXIDECIMAL #FFFFFF |
| | SIGN BOARD SYMBOL BLACK CMYK 0/0/0/100 RGB 0/0/0 HEXIDECIMAL #000000 |
| | LOGO FLAG RED PANTONE COLOUR MATCHING SYSTEM NO.032 SOLID COATED PANTONE PMS 032 C CMYK 0/100/100/0 RGB 213/43/30 HEXIDECIMAL #338BEE |
| | LOGO TEXT BLACK CMYK 0/0/0/100 RGB 0/0/0 HEXIDECIMAL #000000 |

SIGN FONTS AND TEXT HEIGHTS

PARKS CANADA LOGO - DIGITAL LOGO FILE TO BE PROVIDED TO FABRICATOR BY PARKS CANADA
+/-3MM MUST BE THE ALLOWABLE FABRICATION TOLERANCE FOR ALL LETTERS AND SYMBOLS

2.0 FABRICATION SPECIFICATIONS

- 2.1 THE MAXIMUM ALLOWABLE DEVIATION FROM FLATNESS MUST NOT EXCEED 0.1MM PER 1CM (0.010 INCH PER INCH) WIDTH OF THE SIGN PANEL.
- 2.2 NO HOLES MUST BE MADE IN SIGNS FACES UNLESS REQUESTED BY DEPARTMENT. MOUNTING DETAILS VARY FROM SIGN TO SIGN. WHERE HOLES ARE REQUESTED, THEY MUST BE DRILLED AND EDGE SEALED SIMILAR TO OTHER CUT EDGES.
- 2.3 ALL ALUMINIUM SUBSTRATE MUST BE GIVEN A CHROMATE CONVERSION COATING IN ACCORDANCE WITH ASTM B 449, CLASS 2, AND MUST BE PREPARED BY ONE OF THE TREATMENT SEQUENCE OPTIONS DESCRIBED IN ASTM B 449, APPENDIX X2. THE CHEMICALS AND SOLVENTS MUST BE APPLIED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SUFFICIENT LABORATORY FACILITIES TO TEST AND CONTROL THE CONCENTRATION OF THE SOLUTIONS USED MUST BE MAINTAINED AT THE TREATING PLANT. A LOG OF THE CONCENTRATION OF TREATING SOLUTIONS MUST BE MAINTAINED. TREATED PANELS MUST BE HANDLED IN SUCH A MANNER AS TO PREVENT CONTAMINATION. PANELS MUST BE STORED IN A DRY, CLEAN AREA FREE FROM DUST, ACID FUMES OR VAPORS; WHEN ALUMINIUM IS SHIPPED TO A SECONDARY LOCATION FOR RETRO-REFLECTORIZING, ADEQUATE PRECAUTIONS MUST BE TAKEN TO ENSURE THAT THE MATERIAL ARRIVES AT THE DESTINATION UNCONTAMINATED.
- 2.4 BACKGROUND COLOURING (RED AND WHITE) MUST BE APPLIED AS A LAMINATED RETRO-REFLECTIVE SHEETING, COLOURED AS INDICATED ON DRAWINGS. SHEETING TO BE ASTM STANDARD D4956-11A, TYPE IV, CLASS I. USE ASTM D 4956 TYPE IX, XI OR AASHTO M 268 TYPE C OR D PRISMATIC RED FOR RED BACKGROUND PORTIONS OF SIGNS. RETROREFLECTIVE SHEETING MUST BE HIGH INTENSITY THAT IS AN UNMETALLIZED MICRO PRISMATIC REFLECTIVE MATERIAL.
- 2.5 BACKGROUND COLOURING (GREEN) MUST BE APPLIED USING POWDER COAT PROCESS. THE ENTIRE SIGN PANEL MUST BE POWDER COATED PRIOR TO APPLYING RETROREFLECTIVE SHEETING.
 - .1 BASE COAT: THERMOSETTING EPOXY POWDER COATING, WHITE OR GRAY IN COLOUR. APPLY ONE (1) COAT OF MINIMUM THICKNESS OF 2 MILS (0.0508 MM).
 - .2 TOP COAT: TRIGLYCIDYL ISOCYANURATE (TGIC) POLYESTER POWDER COAT FINISH, HIGH GLOSS, 'PCA HERITAGE GREEN' IN COLOUR. APPLY ONE (1) COAT OF MINIMUM THICKNESS OF 2 MILS (0.0508 MM).
 - .3 USE "POWDURA POLYESTER TGIC POWDER COATING" BY SHERWIN-WILLIAMS OR APPROVED EQUAL. PRODUCT SUBSTITUTIONS MUST BE APPROVED BY MASTER PAINTER'S INSTITUTE (MPI) AND SHALL MEET ASTM D3451 - 06(2012) STANDARD GUIDE FOR TESTING COATING POWDERS AND POWDER COATINGS AS A MINIMUM STANDARD.
- 2.6 ALL SIGNS MUST BE OF THE HIGHEST QUALITY WITH CONSISTENT DAYTIME AND NIGHTTIME COLOR AND RETRO-REFLECTIVITY
- 2.7 APPLY CLEAR COATING OR EDGE SEALER AFTER APPLICATION OF THE RETRO-REFLECTIVE SHEETING AS RECOMMENDED BY THE SHEETING MANUFACTURER. WHERE CLEAR FINISH IS USED, THE FINISH MUST BE APPLIED AFTER SCREENING OF MESSAGES AND BORDERS AND DRILLING OF ALL HOLES. WHERE EDGE SEALER IS USED, THE SEALER MUST BE APPLIED TO ALL HOLES AND EDGES. THE COMPLETED SIGN FACE MUST BE FREE FROM AIR BUBBLES, WRINKLES OR OTHER BLEMISHES.
- 2.8 LETTERS AND SYMBOLS MUST BE APPLIED TO THE BACKGROUND OF THE SIGN BY THE DIRECT OR REVERSE SCREEN PROCESS. MESSAGES AND BORDERS OF A COLOR DARKER THAN THE SIGN FIELD MUST BE APPLIED TO THE RETROREFLECTIVE SHEETING BY THE DIRECT PROCESS. MESSAGES AND BORDERS OF A COLOR LIGHTER THAN THE SIGN FIELD MUST BE PRODUCED BY THE REVERSE SCREEN PROCESS. INKS USED IN THE SILKSCREEN PROCESS MUST BE OF THE TYPE TO PRODUCE THE DESIRED COLOR AND DURABILITY WHEN APPLIED ON RETROREFLECTIVE SHEETING. SILKSCREEN INKS MUST BE USED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE INK MUST PRODUCE THE DESIRED COLOR WHEN APPLIED ON RETROREFLECTIVE SHEETING BACKGROUND AND MUST DRY TO A GOOD FILM WITHOUT RUNNING, STREAKING OR SAGGING. THE SCREENING MUST BE DONE IN A MANNER THAT RESULTS IN A UNIFORM COLOR AND TONE, WITH SHARPLY DEFINED EDGES OF LEGEND AND BORDER WITHOUT BLEMISHES ON THE SIGN FIELD THAT WILL AFFECT THE INTENDED USE. SIGNS AFTER SCREENING MUST BE DRIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS TO PROVIDE A SMOOTH HARD FINISH. ANY SIGNS ON WHICH BLISTERS APPEAR DURING THE DRYING PROCESS WILL BE REJECTED.



SIGN COLOURS

SIGN BOARD BACKGROUND YELLOW
 PANTONE COLOUR MATCHING SYSTEM NO.123 SOLID COATED
 PANTONE PMS 123 C
 CMYK 0/22/83/0
 RGB 255/199/44
 HEXDECIMAL #FFC72C

SIGN BOARD TEXT BLACK
 CMYK 0/0/0/100
 RGB 0/0/0
 HEXDECIMAL #000000

LOGO FLAG RED
 PANTONE COLOUR MATCHING SYSTEM NO.032 SOLID COATED
 PANTONE PMS 032 C
 CMYK 0/100/100/0
 RGB 213/43/30
 HEXDECIMAL #338BEE

LOGO TEXT BLACK
 CMYK 0/0/0/100
 RGB 0/0/0
 HEXDECIMAL #000000

SIGN FONTS AND TEXT HEIGHTS

SIGN HEADER - HELVETICA NEUE 55 ROMAN (BOLD), MAX TEXT HEIGHT 60 mm, MIN TEXT HEIGHT 51 mm, UPPERCASE

- ILLUSTRATED ON THIS DRAWING AS THE WORDS 'NAME OF DAM'

SIGN MESSAGE - HELVETICA NEUE 55 ROMAN (BOLD), MAX TEXT HEIGHT 34 mm, MIN. TEXT HEIGHT 28mm, FIRST LETTER CAPITALIZED EVERY WORD

- INCLUDES 3 LINES OF TEXT AS ILLUSTRATED ON THIS DRAWING AS THE WORDS 'WARNING. PROCEED WITH CAUTION', 'DAM NAME' AND 'IN AN EMERGENCY, CALL 911'

PARKS CANADA LOGO - DIGITAL LOGO FILE TO BE PROVIDED TO FABRICATOR BY PARKS CANADA

TOLERANCES FOR MODIFYING TEXT SIZES - TEXT HEIGHTS MAY BE MODIFIED AS REQUIRED TO FIT ON SIGN PANEL. ALL TEXT IS TO BE AS LARGE AS POSSIBLE, NOT TO EXCEED THE MAXIMUM TEXT HEIGHTS INDICATED BELOW AND AT MINIMUM EQUAL TO THE MINIMUM TEXT HEIGHTS INDICATED BELOW. BOTH LINES OF SIGN MESSAGE TEXT MUST BE A SINGLE HEIGHT. WHERE MODIFYING TEXT HEIGHTS, MAINTAIN SPACING AND HEIGHT TO WIDTH PROPORTIONS OF LETTER FONT TYPES SPECIFIED. CONDENSED FONTS WILL NOT BE ACCEPTED. ALL TEXT MUST BE BOTTOM LEFT JUSTIFIED. MAINTAIN MINIMUM EDGE DISTANCES SPECIFIED ON DRAWING. AS A GENERAL RULE HEADER LINE TEXT MUST BE AT MINIMUM 1.75 TIMES LARGER THAN MESSAGE LINE TEXT.

+/-3MM MUST BE THE ALLOWABLE FABRICATION TOLERANCE FOR ALL LETTERS AND SYMBOLS

NOTE: WORDING ON THE SIGN SHOWN ON THIS DRAWING IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. REFER TO THIS DRAWING FOR DIMENSIONAL AND COLOUR INFORMATION ONLY. REFER TO INDIVIDUAL SIGN DRAWINGS FOR REQUIRED WORDING IN ENGLISH OR FRENCH AS APPLICABLE.

SCALE = 1:8

SIGNS MATERIALS AND FABRICATION SPECIFICATIONS

1.0 MATERIALS SPECIFICATIONS

- 1.1 ALL MATERIALS MUST BE OF NEW STOCK AND FREE FROM DEFECTS.
- 1.2 SIGNS MUST CONSIST OF ALUMINIUM FLAT SHEETS, EXTRUDED PANELS OR ALUMINIUM COMPOSITE PANELS RETRO-REFLECTORIZED ON THE FACE SIDE WITH ALL LETTERS, NUMERALS, SYMBOLS, BORDERS AND CORNERS AS SHOWN ON THE PLANS.
- 1.3 SIGNS EQUAL TO OR GREATER IN WIDTH THAN SIX FEET ARE CONSIDERED STRUCTURAL (ST) AND MUST BE FABRICATED ON EXTRUDED PANELS OR ALUMINIUM COMPOSITE PANELS. SIGNS LESS THAN SIX FEET IN WIDTH WILL BE CONSIDERED NON-STRUCTURAL (NS) SIGNS TO BE FABRICATED WITH ALUMINIUM FLAT SHEET OR FOAM CORE COMPOSITE. ANY EXCEPTIONS TO THESE FABRICATION STANDARDS WILL BE INDICATED BY THE DEPARTMENTAL REPRESENTATIVE AT TIME OF PURCHASE ORDER.

1.4 NON-STRUCTURAL - FLAT SHEET ALUMINIUM SIGNS

SHEET ALUMINIUM SIGNS MUST BE FLAT-SHEET TENSION-LEVELLED, SIGN GRADE ALUMINIUM, ALLOY 5052-H32, CONFORMING TO THE REQUIREMENTS OF ASTM B209M, SPECIFICATION FOR ALUMINIUM AND ALUMINIUM-ALLOY SHEET AND PLATE. NOMINAL THICKNESS FOR SHEET-FACED SIGNS IS 3.0 mm (0.125"). TO ENSURE MAXIMUM TOLERANCING AND BEST APPEARANCE, SHEET ALUMINIUM SIGN PANELS MUST BE CUT USING A NUMERICALLY CONTROLLED DEVICE SUCH AS WATER JET OR LASER CUTTING SYSTEM. ALTERNATIVELY, SHEET ALUMINIUM SUBSTRATES MAY BE SHEARED TO SIZE, CORNER-PUNCHED AND DETAILED, PROVIDED THAT THE DIMENSIONS AND CORNER RADII EXACTLY MATCH THE SUPPLIED SIGN ARTWORK. ALL EDGES MUST BE BROKEN, DE-BURRED AND MADE SMOOTH.

1.5 NON-STRUCTURAL ALUMINIUM COMPOSITE SIGNS

NON-STRUCTURAL ALUMINIUM COMPOSITE PANELS ARE TO CONSIST OF DOUBLE SIDED 0.3 mm (0.012") TO 0.4mm (0.015") THICK ALUMINIUM FRONT AND BACK FACE BONDED TO 3 mm POLYETHYLENE FOAM CORE.

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PANELS SHALL BE PERFORMANCE BOND TESTED TO PASS ASTM C481-C.

ACCEPTABLE PRODUCT FOR NON-STRUCTURAL PANELS IS 'ALUPANEL' BY MULTIPANEL

2.0 FABRICATION SPECIFICATIONS

- 2.1 THE MAXIMUM ALLOWABLE DEVIATION FROM FLATNESS MUST NOT EXCEED 0.1MM PER 1CM (0.010 INCH PER INCH) WIDTH OF THE SIGN PANEL.
- 2.2 NO HOLES MUST BE MADE IN SIGNS FACES UNLESS REQUESTED BY DEPARTMENT. MOUNTING DETAILS VARY FROM SIGN TO SIGN. WHERE HOLES ARE REQUESTED, THEY MUST BE DRILLED AND EDGE SEALED SIMILAR TO OTHER CUT EDGES.
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- 2.4 BACKGROUND COLOURING (YELLOW AND WHITE) MUST BE APPLIED AS A LAMINATED RETRO-REFLECTIVE SHEETING, COLOURED AS INDICATED ON DRAWINGS. SHEETING TO BE ASTM STANDARD D4956-11A, TYPE IV, CLASS I. USE ASTM D 4956 TYPE IX, XI OR AASHTO M 268 TYPE C OR D PRISMATIC RED FOR RED BACKGROUND PORTIONS OF SIGNS. RETROREFLECTIVE SHEETING MUST BE HIGH INTENSITY THAT IS AN UNMETALLIZED MICRO PRISMATIC REFLECTIVE MATERIAL.
- 2.5 ALL SIGNS MUST BE OF THE HIGHEST QUALITY WITH CONSISTENT DAYTIME AND NIGHTTIME COLOR AND RETRO-REFLECTIVITY
- 2.6 APPLY CLEAR COATING OR EDGE SEALER AFTER APPLICATION OF THE RETRO-REFLECTIVE SHEETING AS RECOMMENDED BY THE SHEETING MANUFACTURER. WHERE CLEAR FINISH IS USED, THE FINISH MUST BE APPLIED AFTER SCREENING OF MESSAGES AND BORDERS AND DRILLING OF ALL HOLES. WHERE EDGE SEALER IS USED, THE SEALER MUST BE APPLIED TO ALL HOLES AND EDGES. THE COMPLETED SIGN FACE MUST BE FREE FROM AIR BUBBLES, WRINKLES OR OTHER BLEMISHES.
- 2.7 LETTERS AND SYMBOLS MUST BE APPLIED TO THE BACKGROUND OF THE SIGN BY THE DIRECT OR REVERSE SCREEN PROCESS. MESSAGES AND BORDERS OF A COLOR DARKER THAN THE SIGN FIELD MUST BE APPLIED TO THE RETROREFLECTIVE SHEETING BY THE DIRECT PROCESS. MESSAGES AND BORDERS OF A COLOR LIGHTER THAN THE SIGN FIELD MUST BE PRODUCED BY THE REVERSE SCREEN PROCESS. INKS USED IN THE SILKSCREEN PROCESS MUST BE OF THE TYPE TO PRODUCE THE DESIRED COLOR AND DURABILITY WHEN APPLIED ON RETROREFLECTIVE SHEETING. SILKSCREEN INKS MUST BE USED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE INK MUST PRODUCE THE DESIRED COLOR WHEN APPLIED ON RETROREFLECTIVE SHEETING BACKGROUND AND MUST DRY TO A GOOD FILM WITHOUT RUNNING, STREAKING OR SAGGING. THE SCREENING MUST BE DONE IN A MANNER THAT RESULTS IN A UNIFORM COLOR AND TONE, WITH SHARPLY DEFINED EDGES OF LEGEND AND BORDER WITHOUT BLEMISHES ON THE SIGN FIELD THAT WILL AFFECT THE INTENDED USE. SIGNS AFTER SCREENING MUST BE DRIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS TO PROVIDE A SMOOTH HARD FINISH. ANY SIGNS ON WHICH BLISTERS APPEAR DURING THE DRYING PROCESS WILL BE REJECTED.

190
32
DANGER
32
190

Dam Outflow

Keep Out

32
Ø16 TYP.
HOLE
FOR M12
BOLT.
OVER
SIZE FOR
PLASTIC
GROMMET
AS REQ'D

32
217

Name of Dam



In An Emergency Call (XXX) XXX-XXXX

SCALE=1:5



Office of the Executive Director, Waterways
Parks Canada Agency
Government of Canada

Graphics Designs and Materials and
Fabrication Specifications for
Public Safety Signs around Dams

TYPICAL HOLE LAYOUT FOR A1 AND A8 SIZE DAM
SAFETY SIGNS (See mounting details drawing also)

Drawn: November 3, 2014
Checked: November 3, 2014
Approved: November 3, 2014

Drawn by: S.Gauthier
Checked by: M.McLay
Approved by: M.McLay

H1
REV.0

DANGER

Dam Ahead

Keep Out

Name of Dam



Parks
Canada

Parcs
Canada

In An Emergency, Call 9-1-1

SCALE= 1:5

DANGER

Barrage devant

Accès interdit

Nom du barrage



Parcs
Canada

Parks
Canada

En cas d'urgence, composez le 9-1-1

SCALE= 1:5

DANGER

Dam Upstream

Keep Out

Name of Dam



Parks
Canada

Parcs
Canada

In An Emergency, Call 9-1-1

SCALE=1:5

DANGER

Barrage en amont

Accès interdit

Nom du barrage



Parcs
Canada

Parks
Canada

En cas d'urgence, composez le 9-1-1

SCALE= 1:5

DANGER

Dam Outflow

Keep Out

Name of Dam



Parks
Canada

Parcs
Canada

In An Emergency Call (XXX) XXX-XXXX

SCALE=1:5

DANGER

Zone de décharge
du barrage
Accès interdit

Nom du barrage



Parcs
Canada

Parks
Canada

En cas d'urgence, composez le (XXX) XXX-XXXX

SCALE= 1:5

DANGER

Keep Out

Access Beyond This Point May Result in Drowning



Parks
Canada

Parcs
Canada

SCALE = 1 : 3



DANGER

Accès interdit

Risque de noyade au-delà de cette zone



Parcs
Canada

Parcs
Canada

SCALE = 1 : 3



DANGER

Open Barrage

Dam Ouvert

Name of Dam
Name of Dam

Nom du Barrage
Nom du Barrage

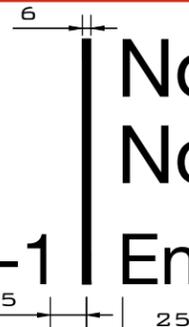
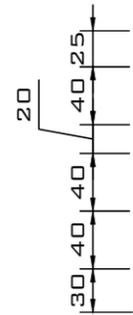


Parks
Canada

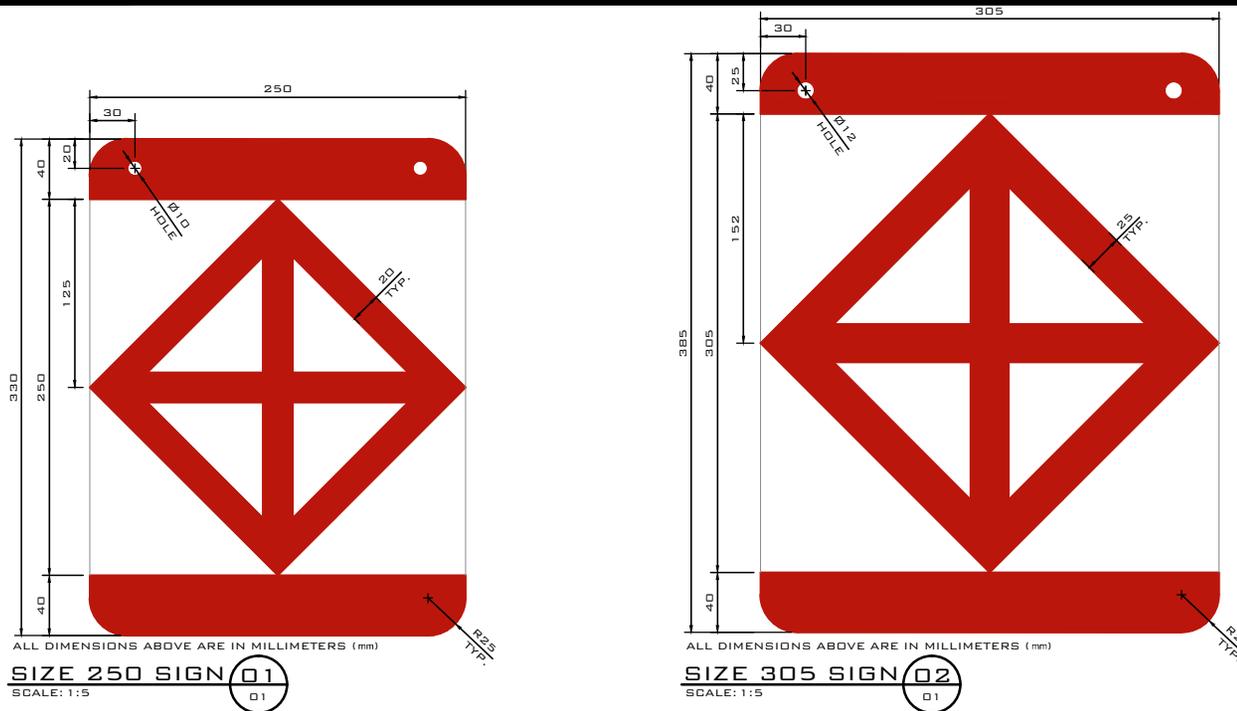
Parcs
Canada

In An Emergency, Call 9-1-1

En cas d'urgence, composez le 9-1-1



SCALE = 1:5



| SIGN COLOURS | |
|---|--|
|  | INTERNATIONAL ORANGE(ENGINEERING) CMYK 0/88/94/27 RGB 186/22/12 HSL 3.88,39 HEXIDECIMAL #BA160C US FED STD 595 - COLOUR 12197 |
|  | BACKGROUND WHITE CMYK 0/0/0/0 RGB 255/255/255 HEXIDECIMAL #FFFFFF |

SIGN MATERIALS AND FABRICATION SPECIFICATIONS

1.0 MATERIALS SPECIFICATIONS

- 1.1 ALL MATERIALS MUST BE OF NEW STOCK AND FREE FROM DEFECTS.
- 1.2 SIGNS MUST CONSIST OF ALUMINIUM FLAT SHEETS RETRO-REFLECTORIZED ON THE FACE SIDE WITH ALL SYMBOLS, BORDERS AND CORNERS AS SHOWN ON THE PLANS. PLAIN MILL FINISH WILL BE ACCEPTED FOR BACK SIDE.
- 1.3 SHEET ALUMINIUM SIGNS MUST BE FLAT-SHEET TENSION-LEVELLED, SIGN GRADE ALUMINIUM, ALLOY 5052-H32, CONFORMING TO THE REQUIREMENTS OF ASTM B 209M, SPECIFICATION FOR ALUMINIUM AND ALUMINIUM-ALLOY SHEET AND PLATE. NOMINAL THICKNESS FOR SHEET-FACED SIGNS IS 1.3 MM (16 GAUGE, 0.051"). TO ENSURE MAXIMUM TOLERANCING AND BEST APPEARANCE, SHEET ALUMINIUM SIGN PANELS MUST BE CUT USING A NUMERICALLY CONTROLLED DEVICE SUCH AS WATER JET OR LASER CUTTING SYSTEM. ALTERNATIVELY, SHEET ALUMINIUM SUBSTRATES MAY BE SHEARED TO SIZE, CORNER-PUNCHED AND DETAILED, PROVIDED THAT THE DIMENSIONS AND CORNER RADII EXACTLY MATCH THE SUPPLIED SIGN ARTWORK. ALL EDGES MUST BE BROKEN, DE-BURRED AND MADE SMOOTH.
- 1.4 EXTERIOR GRADE PLASTIC GROMMETS ARE TO BE PROVIDED AND SIZED ACCORDINGLY FOR ALL MOUNTING HOLES SHOWN ON PLAN. GROMMETS ARE INTENDED TO ACT AS AN INSULATOR AND PREVENT DISSIMILAR METALS (GALVANIC CORROSION) REACTION BETWEEN ALUMINIUM SIGN PANEL AND STEEL MOUNTING HARDWARE. GROMMETS MUST BE NON-CONDUCTIVE AND TRANSPARENT (CLEAR) OR COLOURED TO MATCH SURROUNDING SIGN FACE.

2.0 FABRICATION REQUIREMENTS

- 2.1 THE MAXIMUM ALLOWABLE DEVIATION FROM FLATNESS MUST NOT EXCEED 0.1MM PER 1CM (0.010 INCH PER INCH) WIDTH OF THE SIGN PANEL.
- 2.2 HOLES MUST BE DRILLED IN SIGNS FACES AS SHOWN ON DRAWINGS. ALL HOLES ARE TO BE DRILLED OVERSIZED AS REQUIRED FOR INSTALLATION OF PLASTIC GROMMETS.
- 2.3 EXCEPTING GROMMETS, ALL MOUNTING HARDWARE IS TO BE BY OTHERS AND NOT PART OF SIGNS FABRICATOR SCOPE OF WORK.
- 2.4 ALL ALUMINIUM SUBSTRATE MUST BE GIVEN A CHROMATE CONVERSION COATING IN ACCORDANCE WITH ASTM B 449, CLASS 2, AND MUST BE PREPARED BY ONE OF THE TREATMENT SEQUENCE OPTIONS DESCRIBED IN ASTM B 449, APPENDIX X2. THE CHEMICALS AND SOLVENTS MUST BE APPLIED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SUFFICIENT LABORATORY FACILITIES TO TEST AND CONTROL THE CONCENTRATION OF THE SOLUTIONS USED MUST BE MAINTAINED AT THE TREATING PLANT. A LOG OF THE CONCENTRATION OF TREATING SOLUTIONS MUST BE MAINTAINED. TREATED PANELS MUST BE HANDLED IN SUCH A MANNER AS TO PREVENT CONTAMINATION. PANELS MUST BE STORED IN A DRY, CLEAN AREA FREE FROM DUST, ACID FUMES OR VAPORS. WHEN ALUMINIUM IS SHIPPED TO A SECONDARY LOCATION FOR RETRO-REFLECTORIZING, ADEQUATE PRECAUTIONS MUST BE TAKEN TO ENSURE THAT THE MATERIAL ARRIVES AT THE DESTINATION UNCONTAMINATED.
- 2.5 BACKGROUND COLOURING, BORDERS AND SYMBOLS MUST BE APPLIED AS A LAMINATED RETRO-REFLECTIVE SHEETING, COLOURED AS INDICATED ON DRAWINGS. SHEETING TO BE ASTM STANDARD D4956-11A, TYPE IV, CLASS I. USE ASTM D 4956 TYPE IX, XI OR AASHTO M 268 TYPE C OR D PRISMATIC RED FOR RED BACKGROUND PORTIONS OF SIGNS. RETROREFLECTIVE SHEETING MUST BE HIGH INTENSITY THAT IS AN UNMETALLIZED MICRO PRISMATIC REFLECTIVE MATERIAL.
- 2.6 ALL SIGNS MUST BE OF THE HIGHEST QUALITY WITH CONSISTENT DAYTIME AND NIGHTTIME COLOUR AND RETRO-REFLECTIVITY
- 2.7 SIGN BACKGROUND (WHITE) MUST BE CUT OUT AND APPLIED AS A SINGLE PIECE. SPLICES AND OVERLAPS WILL NOT BE ACCEPTED. APPLY CLEAR COATING AND EDGE SEALER AFTER APPLICATION OF THE RETRO-REFLECTIVE SHEETING AS RECOMMENDED BY THE SHEETING MANUFACTURER. THE SEALER MUST BE APPLIED TO ALL EDGES. THE COMPLETED SIGN FACE MUST BE FREE FROM AIR BUBBLES, WRINKLES OR OTHER BLEMISHES AS THEY WILL BE REJECTED.
- 2.8 SYMBOLS AND BORDERS (RED) MUST BE APPLIED TO THE BACKGROUND/FIELD OF THE SIGN BY THE DIRECT SILKSCREEN PROCESS. INKS USED IN THE SILKSCREEN PROCESS MUST BE OF THE TYPE TO PRODUCE THE DESIRED COLOR AND DURABILITY WHEN APPLIED ON RETROREFLECTIVE SHEETING. SILKSCREEN INKS MUST BE USED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE INK MUST PRODUCE THE DESIRED COLOR WHEN APPLIED ON RETROREFLECTIVE SHEETING BACKGROUND AND MUST DRY TO A GOOD FILM WITHOUT RUNNING, STREAKING OR SAGGING. THE SCREENING MUST BE DONE IN A MANNER THAT RESULTS IN A UNIFORM COLOR AND TONE, WITH SHARPLY DEFINED EDGES WITHOUT BLEMISHES ON THE SIGN FIELD. SIGNS AFTER SCREENING MUST BE DRIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS TO PROVIDE A SMOOTH HARD FINISH. ANY SIGNS ON WHICH BLISTERS APPEAR DURING THE DRYING PROCESS WILL BE REJECTED.

| | | | |
|---|---|---|--------------------------|
|  Canada <small>PARCS CANADA EXECUTIVE DIRECTOR'S OFFICE, WATERWAYS</small> | Project title / Titre du projet WATERWAYS DAMS AERIAL CABLES SIGNS | Drawn by/ Dessine par S.A.G. | Date FEB.17,14 |
| | Drawing title / Titre du dessin SIZES 250 AND 350 ALUMINIUM 'KEEP OUT' SIGNS GRAPHICS AND MATERIALS AND FABRICATION SPECS | Checked by/ Verifie par M.J.M. Asset No. | Dwg.no. 01 |

SIGN BOARD FRAMING.
41X41 ALUMINIUM STRUT
C/W 10X76 SLOTTED
HOLES AT 102 O/C
UNI-STRUT TYPE P1000SL
OR APPROVED EQUAL

CLEAR UV TREATED
POLYPROPYLENE
GROMMET
INSULATOR TYP. ALL
4 SIGN HOLES

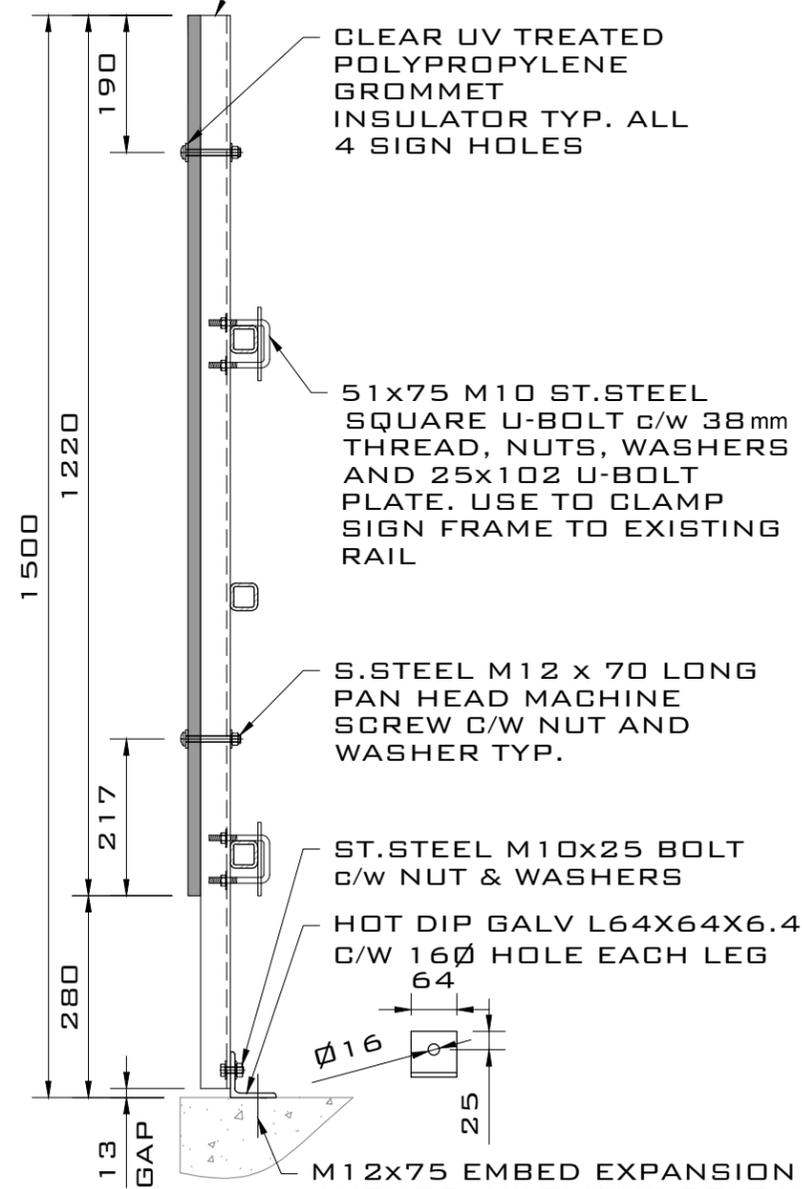
51x75 M10 ST. STEEL
SQUARE U-BOLT c/w 38mm
THREAD, NUTS, WASHERS
AND 25x102 U-BOLT
PLATE. USE TO CLAMP
SIGN FRAME TO EXISTING
RAIL

S. STEEL M12 x 70 LONG
PAN HEAD MACHINE
SCREW C/W NUT AND
WASHER TYP.

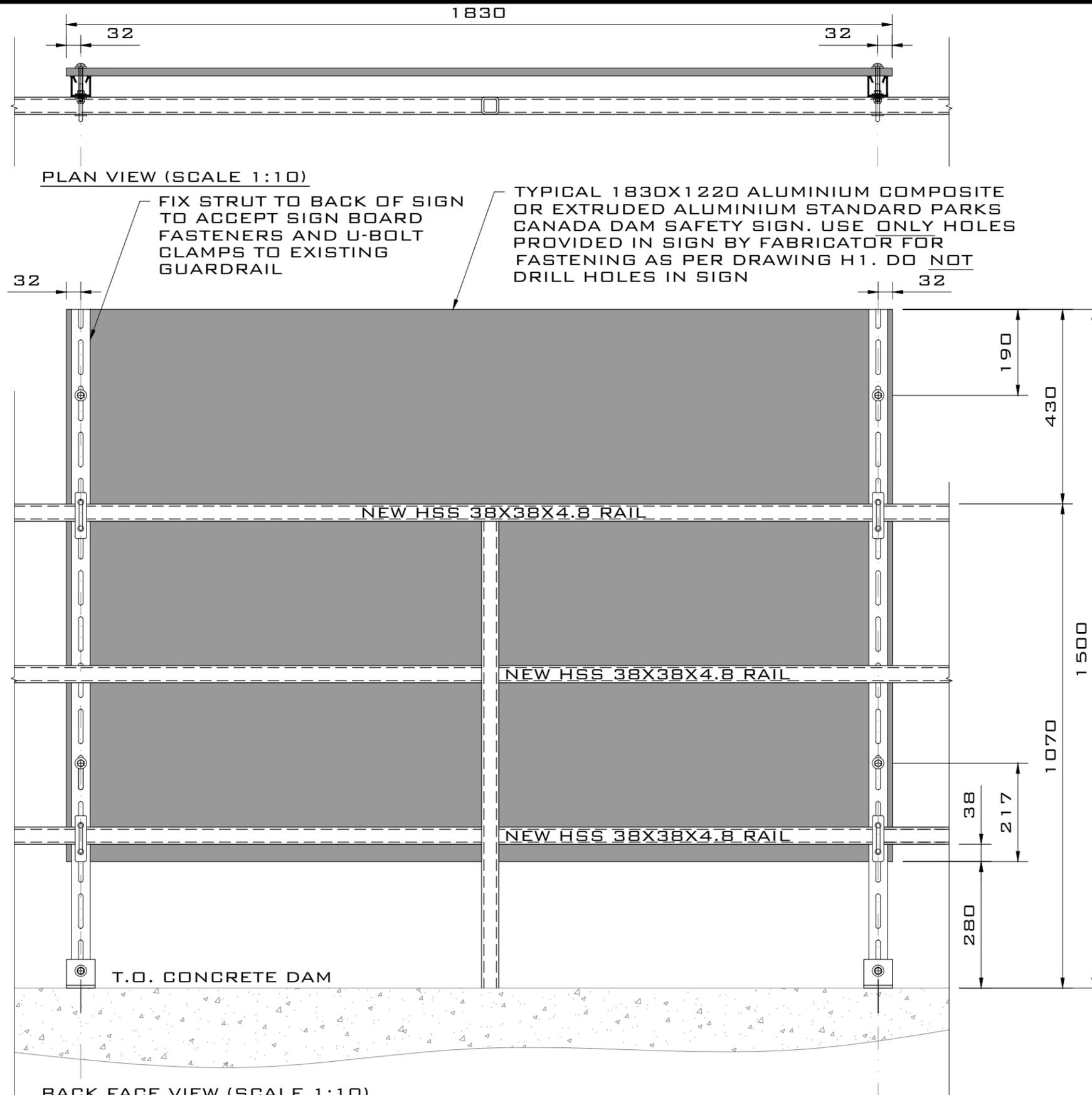
ST. STEEL M10x25 BOLT
C/W NUT & WASHERS

HOT DIP GALV L64X64X6.4
C/W 16Ø HOLE EACH LEG

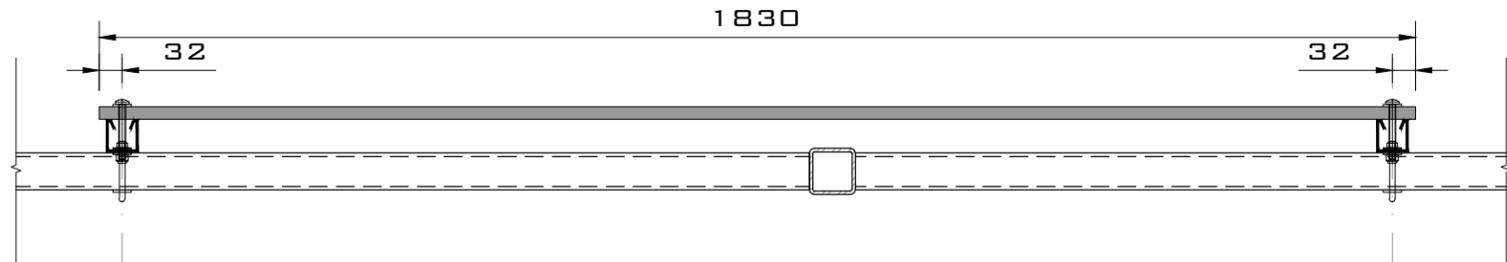
M12x75 EMBED EXPANSION
ANCHOR. HILTI KWIK BOLT II
OR APPR EQUAL



SIDE FACE VIEW (SCALE 1:10)



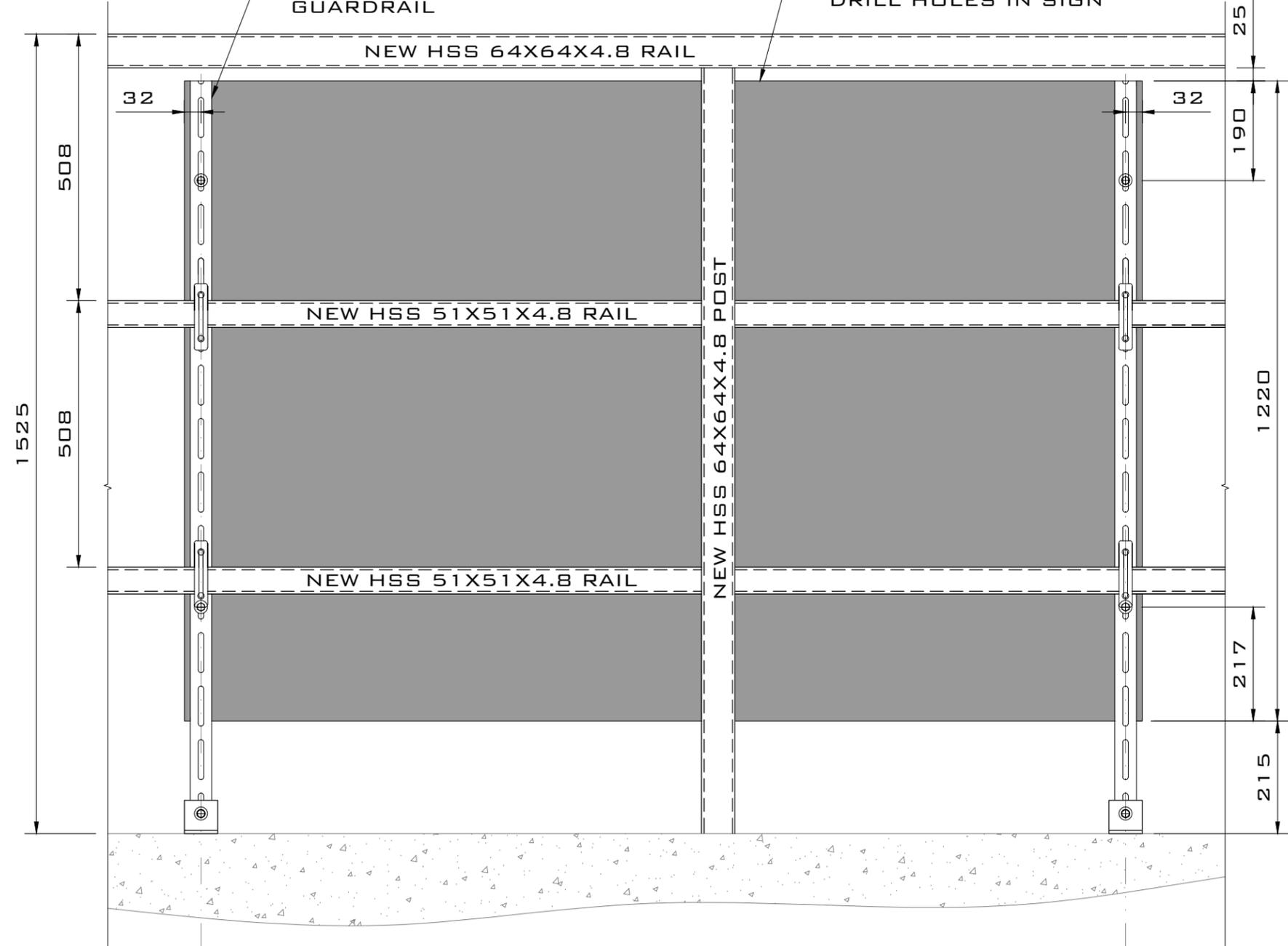
BACK FACE VIEW (SCALE 1:10)



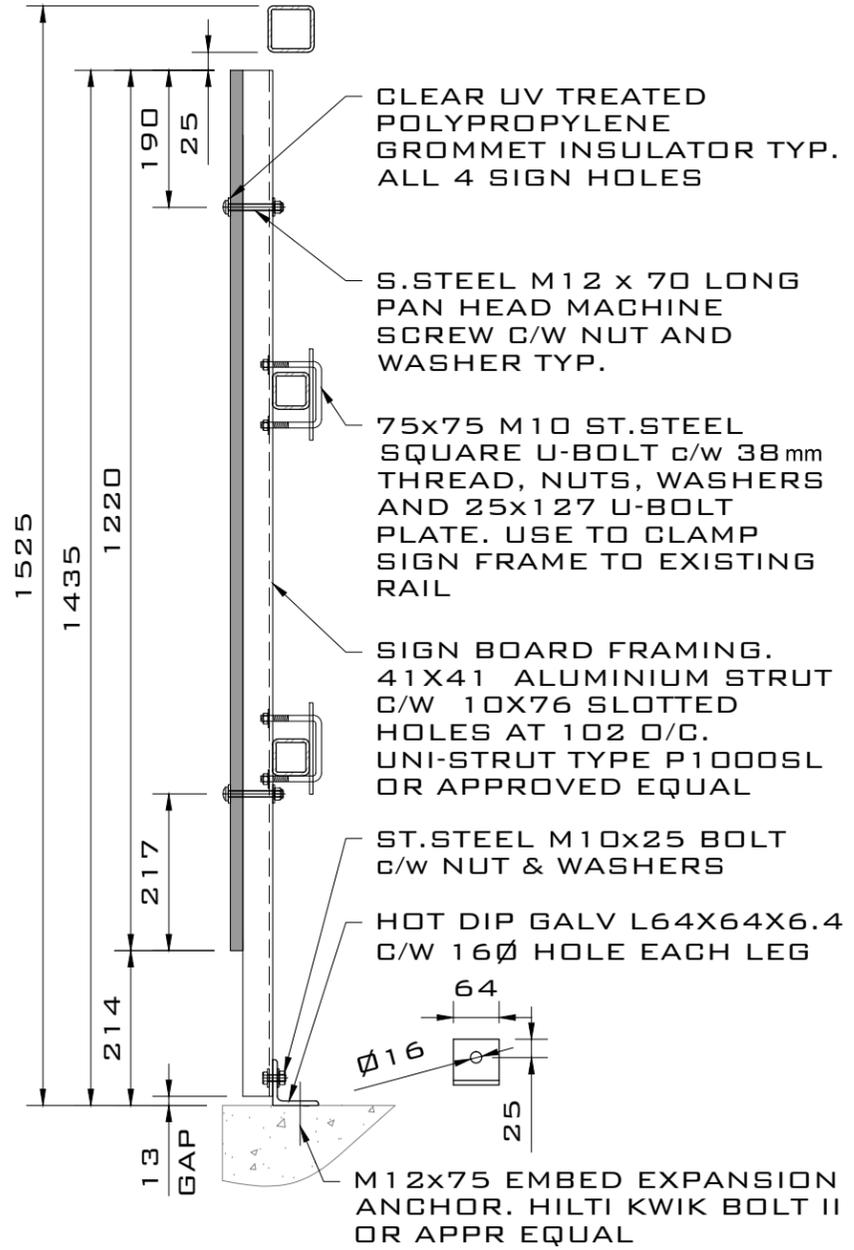
PLAN VIEW (SCALE 1:10)

TYPICAL 1830X1220 ALUMINIUM COMPOSITE OR EXTRUDED ALUMINIUM STANDARD PARKS CANADA DAM SAFETY SIGN. USE ONLY HOLES PROVIDED IN SIGN BY FABRICATOR FOR FASTENING AS PER DRAWING H1. DO NOT DRILL HOLES IN SIGN

FIX STRUT TO BACK OF SIGN TO ACCEPT SIGN BOARD FASTENERS AND U-BOLT CLAMPS TO EXISTING GUARDRAIL



BACK FACE VIEW (SCALE 1:10)



SIDE FACE VIEW (SCALE 1:10)

CLEAR UV TREATED POLYPROPYLENE GROMMET INSULATOR TYP. ALL 4 SIGN HOLES

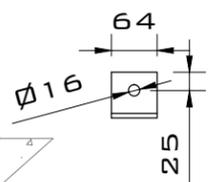
S.STEEL M12 x 70 LONG PAN HEAD MACHINE SCREW C/W NUT AND WASHER TYP.

75x75 M10 ST. STEEL SQUARE U-BOLT C/W 38mm THREAD, NUTS, WASHERS AND 25x127 U-BOLT PLATE. USE TO CLAMP SIGN FRAME TO EXISTING RAIL

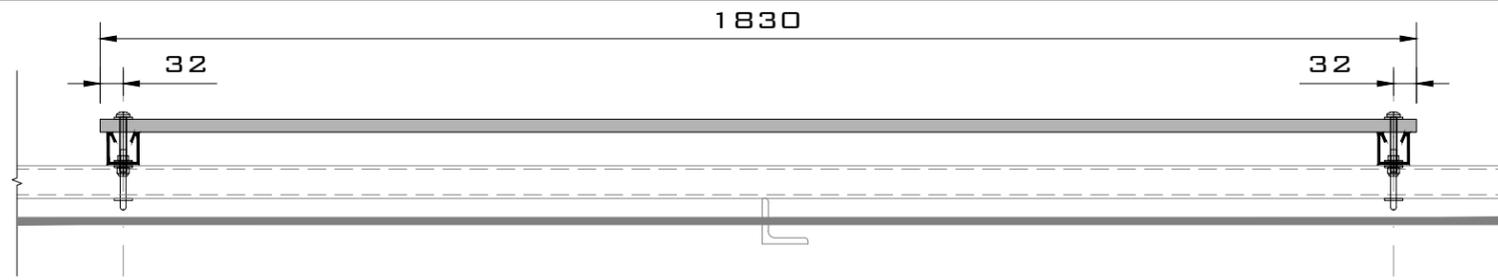
SIGN BOARD FRAMING. 41X41 ALUMINIUM STRUT C/W 10X76 SLOTTED HOLES AT 102 O/C. UNI-STRUT TYPE P1000SL OR APPROVED EQUAL

ST. STEEL M10x25 BOLT C/W NUT & WASHERS

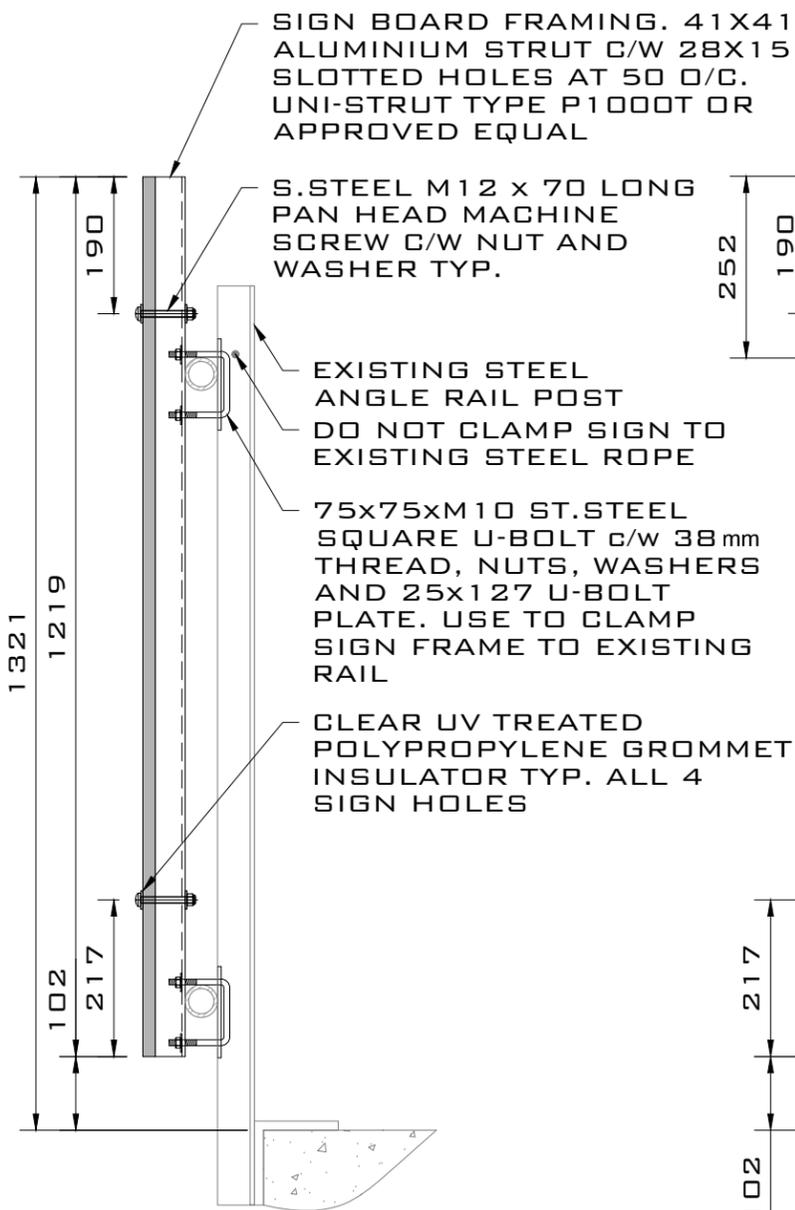
HOT DIP GALV L64X64X6.4 C/W 16Ø HOLE EACH LEG



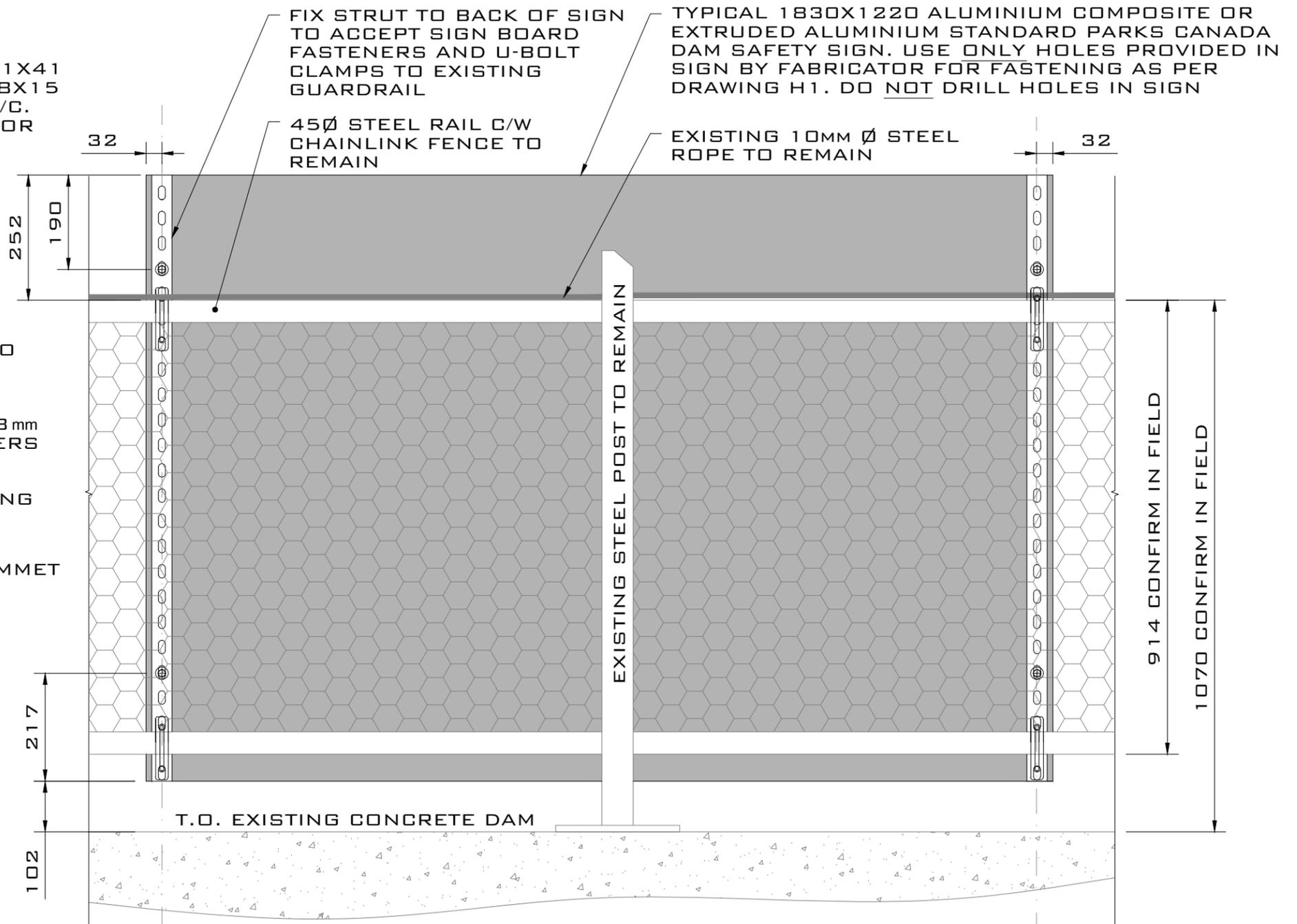
M12x75 EMBED EXPANSION ANCHOR. HILTI KWIK BOLT II OR APPR EQUAL



PLAN VIEW (SCALE 1:10)



SIDE FACE VIEW (SCALE 1:10)



BACK FACE VIEW (SCALE 1:10)

SIGN BOARD FRAMING. 41X41 ALUMINIUM STRUT C/W 28X15 SLOTTED HOLES AT 50 O/C. UNI-STRUT TYPE P1000T OR APPROVED EQUAL

S. STEEL M12 x 70 LONG PAN HEAD MACHINE SCREW C/W NUT AND WASHER TYP.

EXISTING STEEL ANGLE RAIL POST
DO NOT CLAMP SIGN TO EXISTING STEEL ROPE

75x75xM10 ST. STEEL SQUARE U-BOLT c/w 38mm THREAD, NUTS, WASHERS AND 25x127 U-BOLT PLATE. USE TO CLAMP SIGN FRAME TO EXISTING RAIL

CLEAR UV TREATED POLYPROPYLENE GROMMET INSULATOR TYP. ALL 4 SIGN HOLES

FIX STRUT TO BACK OF SIGN TO ACCEPT SIGN BOARD FASTENERS AND U-BOLT CLAMPS TO EXISTING GUARDRAIL

45Ø STEEL RAIL C/W CHAINLINK FENCE TO REMAIN

TYPICAL 1830X1220 ALUMINIUM COMPOSITE OR EXTRUDED ALUMINIUM STANDARD PARKS CANADA DAM SAFETY SIGN. USE ONLY HOLES PROVIDED IN SIGN BY FABRICATOR FOR FASTENING AS PER DRAWING H1. DO NOT DRILL HOLES IN SIGN

EXISTING 10MM Ø STEEL ROPE TO REMAIN

EXISTING STEEL POST TO REMAIN

T.O. EXISTING CONCRETE DAM

914 CONFIRM IN FIELD

1070 CONFIRM IN FIELD

