

SECTION 10 1400
SIGNAGE

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Interior and exterior accessibility, identification, directional and informational signs.

B. Related Requirements:

1. Division 01: General Requirements.
2. Section 08 1113: Hollow Metal Doors, Windows and Frames.
3. Division 09: Finishes.

1.02 REFERENCES

A. ASTM International:

1. ASTM A500 - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
2. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
3. ASTM D4802 - Standard Specification for Poly (Methyl Methacrylate) Acrylic Plastic Sheet.

1.03 SUBMITTALS

- A. Product Data: Submit material descriptions, finishes and color charts for each type of sign.
- B. Shop Drawings: Submit Shop Drawings indicating sign style, lettering, overall dimensions and quantities. Submit floor plans showing locations for each sign.
- C. Material Samples: Submit three samples illustrating full size sample sign, of type, style and color specified.
- D. Manufacturer's installation instructions.

1.04 QUALITY ASSURANCE

- A. Pre-Installation Conference: Notify OAR when signs are ready for installation. Arrange for conference at site. Do not proceed with installation until ARCHITECT'S approval of specific locations and methods of attachment has been obtained.
- B. Provide signs from one manufacturer.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Deliver products to site and protect from damage. Store until immediately prior to installation.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Products of following manufacturers are acceptable and are the basis for intended design and quality.
 - 1. H. Toji and Company.
 - 2. Karman Ltd., Architectural Signs.
 - 3. Vomar Products Inc.
 - 4. ASI-Modulex, Inc.
 - 5. Mohawk Sign Systems, Inc.
 - 6. Accent Signage Systems.
 - 7. The Gruenke Company.
 - 8. Ada Sign Products.
 - 9. Equal.

2.02 MATERIALS AND FABRICATION

- A. Interior Sign Materials:
 - 1. Substrate Panel: 1/8 inch minimum thick, integrally colored or clear acrylic plastic, or laminated acrylic. Conforming to ASTM D4802; non-glare (matte), UV stable, suitable for interior and exterior use.
 - a. Corners shall be 1/2" radius.
 - b. Edges shall be square and eased.
 - c. Colors as selected by ARCHITECT from manufacturer's custom color range.

2. Fasteners:
 - a. Stainless steel tamper-proof screws and plastic anchors.
 - b. Signs mounted on fire-rated doors shall be secured with adhesive.
 - c. Adhesives and sealants shall comply with the limits for VOC content.

B. Exterior Sign Materials:

1. Sign: ASTM B209 aluminum sheet, 0.080 inch thick with rounded corners of at least 1/8 inch radius and eased edges. White figure on a blue background; non-glare, high contrast signs. The blue shall be equal to color number 15090 in Federal Standard 595B.
2. Post: 2 by 2 inch galvanized steel tubing, weighing minimum of 4.31 pounds per foot and conforming to ASTM A500, Grade B, 3/16 inch thick wall thickness.
3. Concrete Post Footings: Refer to Section 32 1313, Site Concrete Work.
4. Fasteners: Stainless steel carriage bolts with tamper resistant nuts.

C. Characters and Symbols: Shall be fabricated by one of the processes described below:

1. Computer cut raised characters and graphics shall be cut from 1/16 inch integrally colored acrylic. Raised characters and graphics shall be inlaid 1/32 inch minimum into first surface of sign background, secured with adhesive so it cannot be removed without the use of tools. Raised characters and graphics shall have beveled, eased or rounded edges. Non-tactile text and graphics shall be applied to the second surface, and background color shall be applied to the second surface and protected with film or an additional backplate. Pictograms and other symbols including the International Symbol of Accessibility, which are included on signs with raised characters and Braille, are not required to be raised.
2. Raised characters and graphics including braille shall be integral to sign face and shall be formed into sign face by high pressure thermoforming using a negative mold. No applied, glued, welded tactile elements are acceptable. Raised characters and graphics shall have beveled, eased or rounded edges. No sharp, square edges are acceptable. Non-tactile text and graphics shall be applied to the second surface, and background color shall be applied to the second surface and protected with vinyl film. Pictograms and other symbols including the International Symbol of Accessibility, which are included on signs with raised characters and Braille, or other signs are not required to be raised.

2.03 COMMUNICATION ELEMENTS AND FEATURES

A. Raised Characters Raised characters shall comply with CBC 11B-703.2.

1. Character Type: Characters on signs shall be raised 1/32 inch minimum above their background and shall be sans serif uppercase characters duplicated in Braille. Characters and Braille shall be in a horizontal format.

2. Character Height: Character height measured vertically from the baseline of the character shall be 5/8 inch minimum and 2 inch maximum based on the height of the uppercase letter “I”.
 3. Character Proportions: Characters shall be selected from fonts where the width of the uppercase letter “O” is 60 percent minimum and 110 percent maximum of the height of the letter “I”.
 4. Stroke Thickness: Stroke thickness of the uppercase letter “I” shall be 15 percent maximum of the height of the character.
 5. Character and Line Spacing shall be in conformance to CBC 11B-703.2.7 and 11B-703.2.8.
 6. Character Placement: Shall be placed in accordance with Paragraph 2.03, C below.
- B. Visual Characters: Visual characters shall comply with CBC Section 11B-703.5. Characters shall be conventional in form and shall be uppercase or lowercase or a combination of both, as indicated on the drawings. Characters shall not be italic, oblique, highly decorative, or of other unusual forms.
1. Finish and Contrast: Characters and their backgrounds shall have a non-glare finish. Characters shall contrast with their background with either light characters on a dark background or dark characters on a light background.
 2. Character Proportions: Characters shall be selected from fonts where the width of the uppercase letter “O” is 60 percent minimum and 110 percent maximum of the height of the uppercase of the letter “I”.
 3. Character Height: Minimum character height shall comply with CBC Table 11B-703.5.5.
 4. Height from Finish Floor or Ground: Visual characters shall be 40 inches minimum above the finish floor or ground
 5. Stroke Thickness: Uppercase letter “I” shall be 10 percent minimum and 20 percent maximum of the height of the character.
 6. Character and Line Spacing: Shall be in accordance with CBC 11B-703.5.8 and 11B-703.5.9.
- C. Braille: Contracted Grade 2 Braille, conforming to CBC 11B-703.3. Braille characters shall be inlaid optically correct acrylic Raster beads into computer drilled holes in the panel surface.
1. Dimensions and Capitalization: Braille dots shall have a domed or rounded shape and shall comply with CBC Table 11B-703.3.1. The indication of an uppercase letter or letters shall only be used before the first word of sentences, proper nouns and names, individual letters of the alphabet, initials, and acronyms.

2. Position: Braille shall be positioned below the corresponding text in a horizontal format, flush left or centered. If text is multi-lined, Braille shall be placed below the entire line of text. Braille shall be separated 3/8 inch minimum and 1/2 maximum from any other tactile characters and 3/8 inch minimum from raised borders and decorative elements.
- D. Pictograms: In conformance to CBC 11B-703.6. Pictograms shall have a field height of 6 inches minimum. Characters and Braille shall not be located in the pictogram field.
1. Finish and Contrast: Pictograms and their field shall have a non-glare finish. Pictograms shall contrast with their field with either a light pictogram on a dark field or a dark pictogram on a light field.
 2. Text Descriptors: Pictograms shall have text descriptors located directly below the pictogram field, and shall comply with CBC 11B-703.2, 11B-703.3 and 11B-703.4.
- E. International Symbol of Accessibility (ISA): Shall comply with CBC 11B-703.7 and CBC Figure 11B-703.7.2.1. The ISA shall consist of a white figure on a blue background. The blue color shall be approximate to FS. 15090 in Federal Standard 595C.
- F. Mounting Locations and Height: Signs with tactile characters shall be as indicated on the drawings and in conformance to CBC 11B-703.4.
1. Mounting Locations:
 - a. Identification signs for rooms and spaces shall be located on the wall adjacent to the latch side of the door, as one enters the room or space.
 - b. Signs that identify exits shall be located at the exit door when approached in the direction of egress travel.
 - c. Signs containing tactile characters shall be located so that a clear floor space 18 inches minimum by 18 inches minimum, centered on the tactile characters, is provided beyond the arc of any door swing between the closed position and 45 degrees open position.
 - d. Where a tactile sign is provided at a door, the sign shall be located alongside the door at the latch side.
 - e. Where a tactile sign is provided at double doors with one active leaf, the sign shall be located at the inactive leaf.
 - f. Where a tactile sign is provided at double doors with two active leaves, the sign shall be located to the right of the righthand door.
 - g. Where there is no wall space at the latch side of a single door or at the right side of double doors, signs shall be located on the nearest adjacent wall.

2. Mounting height above finish floor or ground: Tactile characters on signs shall be located 48 inches minimum above the finish floor or ground surface, measured from the baseline of the lowest Braille cells and 60 inches maximum above the finish floor or ground surface, measured from the baseline of the highest line of raised characters.

2.04 ROOM IDENTIFICATION SIGNS

A. Room Identification Sign Types:

1. Room Identification Sign with Room Name and Room Number: 4 inches high by 6 inches wide, minimum. Room name shall be raised characters 3/4 inches high minimum, and room number 1 inch minimum; and shall be accompanied with Braille indicators.

B. Room Identification Sign Requirements:

1. Finish and Contrast: Refer to paragraph 2.03.B.
2. Raised Characters and Proportions: Refer to paragraph 2.03.A.
3. Braille: Refer to paragraph 2.03.C.
4. Mounting Location and Height: Refer to paragraph 2.03.F.

2.05 RAISED CHARACTER AND BRAILLE EXIT SIGNS

A. Tactile Exit Sign Types:

1. "EXIT".

B. Sign Requirements:

1. Finish and Contrast: Refer to paragraph 2.03.B.
2. Raised Characters and Proportions: Refer to paragraph 2.03.A.
3. Braille: Refer to paragraph 2.03.C.
4. Mounting Location and Height: Refer to paragraph 2.03.F.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces are ready to receive work.
- B. Beginning of installation means installer accepts condition of existing surfaces.

3.02 METHODS OF INSTALLATION

- A. Interior Identification Signs and Interior Directional Signs:
 - 1. Fasten to wall with four tamper-proof round-head screws, one at each corner of sign. Furnish plastic anchors.
 - 2. When concealed installation is specified, install backplate to wall as above. Fasten sign to backplate with very high-bond double-faced tape.
 - 3. For installation on glass, fasten sign to glass with very high bond double faced tape. On opposite side of glass, anchor matching backplate to glass with very high-bond double-faced tape.

- B. Exterior Wall Mounted Identification Signs and Directional Signs:
 - 1. Aluminum signs: Fasten to wall with 4 tamper-proof round-head screws, one at each corner of sign. Furnish plastic anchors.
 - a. Cement Plaster, Brick, or Masonry: Provide plastic anchors. For signs greater than 640 square inches use Leadwood Screw Anchors, concrete fasteners IWSA 10112, or equal.
 - 2. Acrylic signs: Install backplate to wall as indicated above. Fasten sign to backplate with high-bond double-faced tape and silicone.

3.03 CLEANUP

- A. Remove rubbish, debris, and waste materials and legally dispose of off Project site.

3.04 PROTECTION

- A. Protect Work of this section until Substantial Completion.

END OF SECTION