

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:

1. Dimensional characters.
2. Panel signs.

- B. Related Sections include the following:

1. Division 01 Section "Temporary Facilities and Controls" for temporary Project identification signs and for temporary information and directional signs.
2. Division 04 "Stone Masonry" for stone foundation to which sign is mounted.
3. Division 10 Section "Post and Panel Signs" for site free-standing directional signage.

1.3 ACTION SUBMITTALS

- A. CTHPB Documentation Submittals: Comply with Division 01 Section "Sustainable Design Requirements" and provide the following in addition to other action submittals:

1. Product Data for Credit 5d: For adhesives and sealants, documentation including printed statement of VOC content.
2. Product Data for Credit 5d: For paints and coatings, including printed statement of VOC content.
3. Product Data for Credit d8: For products having recycled content, documentation indicating percentages by weight of postconsumer and preconsumer recycled content. Include statement indicating cost for each product having recycled content.
4. Product Certificates for Credit d10: For products and materials required to comply with requirements for regional materials indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include statement indicating cost for each regional material and the fraction by weight that is considered regional.
5. Certificates for Credit d13: Chain-of-custody certificates indicating that products specified to be made from certified wood comply with forest certification requirements. Include documentation that manufacturer is certified for chain of custody by an FSC-accredited certification body. Include statement indicating cost for each certified wood product.

- 6. Laboratory Test Reports for Credit b4: For composite wood and agrifiber products, documentation indicating that products comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

- B. Product Data: For each type of product indicated.

- C. Shop Drawings: Show fabrication and installation details for signs.
 - 1. Show sign mounting heights and accessories.
 - 2. Provide message list, typestyles, graphic elements and layout for each sign.

- D. Samples for Initial Selection: Manufacturer's color charts consisting of actual units or sections of units showing the full range of colors available for the following:
 - 1. Stainless steel.
 - 2. Acrylic sheet.

- E. Samples for Verification: For each of the following products and for the full range of color, texture, and sign material indicated, of sizes indicated:
 - 1. Dimensional Characters: Full-size Samples of each type of dimensional character (letter, number, and graphic element).
 - 2. Stainless Steel: For each form, finish, and color, on 6-inch- (150-mm-) long sections of extrusions and squares of sheet at least 4 by 4 inches (100 by 100 mm).
 - 3. Acrylic Sheet: 8 by 10 inches (200 by 250 mm) for each color required.
 - 4. Panel Signs: Not less than 12 inches (305 mm) square.
 - 5. Trim: 6-inch- (152-mm-) long sections of each profile.
 - 6. Accessories: Manufacturer's full-size unit.

- 1.4 INFORMATIONAL SUBMITTALS
 - A. Qualification Data: For Installer and fabricator.
 - B. Warranty: Special warranty specified in this Section.

- 1.5 CLOSEOUT SUBMITTALS
 - A. Maintenance Data: For signs to include in maintenance manuals.

- 1.6 QUALITY ASSURANCE
 - A. Installer Qualifications: Fabricator of products.
 - B. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.
 - C. Source Limitations for Signs: Obtain each sign type indicated from one source from a single manufacturer.

1.7 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit installation of signs in exterior locations to be performed according to manufacturers' written instructions and warranty requirements.
- B. Field Measurements: Verify recess openings by field measurements before fabrication and indicate measurements on Shop Drawings.

1.8 COORDINATION

- A. Coordinate placement of anchorage devices with templates for installing signs.

1.9 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of signs that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Deterioration of metal and polymer finishes beyond normal weathering.
 - 2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Acrylic Sheet: ASTM D 4802, Category A-1 (cell-cast sheet), Type UVA (UV absorbing).
- B. Stainless Steel Tubing: ASTM A 554, Grade MT 316.
- C. Steel Pipe: ASTM A 53, black schedule 40, unless indicated otherwise. Type and grade as required for design loading.
- D. Stainless-Steel Plate: ASTM A 240/A 240M or ASTM A 666, Type 316, stretcher-leveled standard of flatness.

2.2 DIMENSIONAL CHARACTERS

- A. Laser Cutout Characters: Provide characters with square-cut, smooth edges. Comply with the following requirements:
 - 1. Acrylic: Thickness as indicated on Drawings.

- a. Color: Integrally colored as selected by Architect from manufacturer's full range.
- b. Mounting: Concealed studs, non-corroding for substrates encountered.

2.3 PANEL SIGNS

- A. Exterior Panel Signs: Provide smooth sign panel surfaces constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch (1.5 mm) measured diagonally from corner to corner, complying with the following requirements:
 1. Stainless Steel Plate: 0.1875 inch (4.76 mm) thick.
 2. Edge Condition: Square cut.
 3. Corner Condition: Square.
 4. Finish: Directional Satin Finish: No. 4.
 5. Mounting: Unframed.
 - a. ~~Wall Post~~ mounted.
 - b. Manufacturer's standard non-corroding anchors for substrates encountered.
- B. Exterior Panel Posts: Provide stainless steel support posts constructed from stainless steel tube welded support plate constructed from stainless steel sheet.
 1. Finish: Directional Satin Finish: No. 4.

2.4 ACCESSORIES

- A. Anchors and Inserts: Provide nonferrous-metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere as required for corrosion resistance. Use toothed steel or lead expansion-bolt devices for drilled-in-place anchors. Furnish inserts, as required, to be set into concrete or masonry work.

2.5 FABRICATION

- A. General: Provide manufacturer's standard signs of configurations indicated.
 1. Welded Connections: Comply with AWS standards for recommended practices in shop welding. Provide welds behind finished surfaces without distortion or discoloration of exposed side. Clean exposed welded surfaces of welding flux and dress exposed and contact surfaces.
 2. Mill joints to tight, hairline fit. Form joints exposed to weather to exclude water penetration.
 3. Preassemble signs in the shop to greatest extent possible. Disassemble signs only as necessary for shipping and handling limitations. Clearly mark units for reassembly and installation, in location not exposed to view after final assembly.
 4. Conceal fasteners if possible; otherwise, locate fasteners where they will be inconspicuous.
 5. Dimensional Characters: Mount characters using standard fastening methods to comply with type of mounting, sign construction, and condition of exposure indicated. Provide heavy paper template to establish character spacing and to locate holes for fasteners.
 - a. Flush Mounting: Mount characters with backs in contact with ~~wall~~ sign surface.

- B. Galvanizing: Hot-dip galvanize all exterior miscellaneous metalwork, all items located in exterior wall and roof assemblies, and all items indicated to be galvanized in strict compliance with ASTM A123, A143, A153, A385. Any item that is cut, welded, or is otherwise damaged must be repainted with an acceptable zinc-rich coating product.
1. Nickel Zinc: Comply with ASTM B6
 2. Coverage: Provide at least 2.0 oz./sq. ft. nickel zinc coverage, but not less than the coverage required by referenced standards.
 3. Fabrication: To the greatest extent possible, galvanize after fabrication is completed.
 4. Touch Up: Touch-up damaged or abraded galvanized surfaces with ZRC Cold Galvanizing Compound, Duncan ZiRP or Architect approved equal in compliance with ASTM A780.

2.6 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.7 STAINLESS-STEEL FINISHES

- A. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.
- B. Polished Finishes: Grind and polish surfaces to produce uniform finish, free of cross scratches.
1. Run grain of directional finishes with long dimension of each piece.
- ~~C. Directional Satin Finish: No. 4.~~
- ~~D. Mirrorlike Reflective, Nondirectional Polish: No. 8.~~
- E. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.
- F. Clear, Organic Coating: Lacquer specified for stainless steels, applied by air spray in two coats per manufacturer's written instructions, with interim drying, to a total thickness of 1 mil (0.025 mm).

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
- B. Verify that items, including anchor inserts are sized and located to accommodate signs.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Mount fabricated signs and accessories to stone masonry foundation, using mounting methods of types described.
 - 1. Install signs level, plumb, and at heights indicated, with sign surfaces free of distortion and other defects in appearance.
 - 2. Mechanical Fasteners: Use non-removable mechanical fasteners placed through predrilled holes. Attach signs with fasteners and anchors suitable for secure attachment to substrate as recommended in writing by sign manufacturer.

3.3 CLEANING AND PROTECTION

- A. After installation, clean soiled sign surfaces according to manufacturer's written instructions. Protect signs from damage until acceptance by Owner.

END OF SECTION