

# GUIDE SPECIFICATION

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## SECTION 10430 EXTERIOR ALUMINUM SIGNS - ASI SOLAR FEATURE

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Welcome to ASI Guide Specification System! ASI has prepared this guide specification in printed and electronic media, as an aid to specifiers in preparing written construction documents for ASI's new solar sign series.

Edit entire master to suit project requirements. Modify or add items as necessary. Delete items which are not applicable. Words and sentences within brackets [\_\_\_\_\_] reflect a choice to be made regarding inclusion or exclusion of a particular item or statement. This section may include performance, proprietary and descriptive type specifications. Edit to avoid conflicting requirements. Editor notes to guide the specifier are included between lines of asterisks to assist in choices to be made. They should be removed before the section is printed for use.

This guide specification is based on the Construction Specifications Institute (CSI), Section Format standards. References to section names and numbers are based on MasterFormat 95. For specification assistance with specific product applications, please contact the offices above. Detailed technical information, including available sizes, may be obtained from ASI corporate website at [www.asisignage.com](http://www.asisignage.com)

ASI reserves the right to modify these guide specifications at any time. Updates to this guide specification will be posted as they occur. ASI makes no expressed or implied warranties regarding content, errors, or omissions in the information presented. Specifications modified or rewritten in excess of supplier's standard processes, products, and procedures may void warranties and related remedies.

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### 1. GENERAL

#### 1.1 SUMMARY

- A. Related Documents: Provisions established within the General and Supplementary Conditions of the Contract, Division 1 - General Requirements, and the Drawings are collectively applicable to this Section.
- B. Section Includes:
  - 1. Exterior sign, of aluminum construction, illuminated by LED's powered by solar panels and reserve battery backup, a completely off-grid solution.

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ASI has a complete line of signage products for the entire facility, including interior and exterior signs, dimensional letters, and directories. Many interior signs are updateable by the facility manager. Edit the Related Sections paragraph below to suit project requirements; delete sections that will not be used.

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C. Related Sections:		
Section 10410	Non-Illuminated Interior Directories	Series 440
Section 10410	Non-Illuminated Interior Directories	Series 470
Section 10410	Non-Illuminated Interior Directories	Series 490
Section 10410	Illuminated Interior Directories	Series 530
Section 10410	Illuminated Interior Directories	Series 560
Section 10410	Illuminated Interior Directories	Series 570
Section 10420	Cast Plaques	Cast Plaques
Section 10440	Interior Signage - Photochemically-Etched ADA Signs	SignEtch I
Section 10440	Interior Signage - Photochemically-Etched Plaque Signs	SignEtch II
Section 10430	Dimensional Letters - Fabricated Metal	LF Series
Section 10430	Dimensional Letters - Cut Metal	LPS Series
Section 10430	Dimensional Letters - Cast Metal	LC Series
Section 10430	Dimensional Letters - Metal-Laminate Acrylic	LPL Series
Section 10430	Dimensional Letters - Molded Plastic	LM Series
Section 10430	Dimensional Letters - Precision Cut Acrylic	LPP Series
Section 10440	Dimensional Letters - Cut Vinyl	LTV Series
Section 10430	Specialty Signs – Simulated stone materials	Simulated Materials
Section 10430	Specialty Signs –hardened enamel or porcelain materials	Porcelande™
Section 10430	Exterior Fiberglass Signs - 4 Sided Non Illuminated Monolith	Series 940S
Section 10430	Exterior Fiberglass Signs - 4 Sided Non Illuminated Pylon	Series 840R
Section 10430	Exterior Fiberglass Signs - 3 Sided Non Illuminated Monolith	Series 930S
Section 10430	Exterior Fiberglass Signs - 3 Sided Non Illuminated Pylon	Series 830R
Section 10430	Exterior Fiberglass Signs - 2 Sided Non-Illuminated Monolith	Series 920
Section 10430	Exterior Fiberglass Signs - 2 Sided Non Illuminated Pylon	Series 820
Section 10430	Exterior Fiberglass Signs - 2 Sided Non Illuminated Monolith	Series 920CF
Section 10430	Exterior Fiberglass Signs - 2 Sided Non Illuminated Pylon - Curved Face	Series 820CF
Section 10430	Exterior Fiberglass Signs - 4 Sided Illuminated Monolith	Series 1140S
Section 10430	Exterior Fiberglass Signs - 4 Sided Illuminated Pylon -	Series 1040R
Section 10430	Exterior Fiberglass Signs - 3 Sided Illuminated Monolith -	Series 1130S
Section 10430	Exterior Fiberglass Signs - 3 Sided Illuminated Pylon -	Series 1030R
Section 10430	Exterior Fiberglass Signs - 2 Sided Illuminated Monolith -	Series 1120
Section 10430	Exterior Fiberglass Signs - 2 Sided Illuminated Pylon -	Series 1020
Section 10430	Exterior Fiberglass Signs - 2 Sided Illuminated Pylon - Curved Face	Series 1020CF
Section 10430	Exterior Fiberglass Signs - Non-Illuminated Post and Panel	Series 820
Section 10430	Exterior Fiberglass Signs - Illuminated Post and Panel	Series 1020
Section 10430	Exterior Fiberglass Signs - Illuminated Wall Mounted	Series 1014
Section 10430	Exterior Fiberglass Signs - Non-Illuminated Wall Mounted	Series 814/825
Section 10430	Exterior Aluminum Signs - Post and Panel	2100 Series
Section 10430	Exterior Aluminum Signs - Post and Panel	2300 Series
Section 10430	Exterior Aluminum Signs - Post and Panel	2400 Series
Section 10430	Exterior Aluminum Signs - Post and Panel	2500 Series
Section 10430	Exterior Aluminum Signs - Curved Face	Pacific Exterior
Section 10430	Exterior Aluminum Signs - Interchangeable Components	Compass
Section 10430	Exterior Aluminum Signs - Flat Face	Messenger Exterior
Section 10440	Interior Unframed Signs	Series SP
Section 10440	Interior 4 Sided Framed Signs -	Series 320/390
Section 10440	Interior Unframed Signs - Plastic Laminate or Acrylic with Raster Braille	InTac
Section 10440	Interior Unframed Sign – Photopolymer Bonded to Acrylic	InTouch
Section 10440	Interior Unframed Signs - Photopolymer Bonded to Plastic Laminate/PETG	Intouch 2
Section 10440	Interior Door Signage - Thermoformed Resin - InForm	InForm
Section 10440	Interior Unframed Signs - Embossed (EmBoss)	EmBoss
Section 10420	Interior Updateable Signs	WS Series
Section 10440	Interior Updateable Signs -	Panorama
Section 10440	Interior Updateable Signs -	Inhouse™ Classic Series 380
Section 10440	Interior Updateable Signs -	Sail
Section 10440	Interior Room Control Signs -	SL Series
Section 10440	Interior Directional Signs -	PMA Series
Section 10440	Interior Overhead Signs -	PAP Series
Section 14440	Interior Desk Signs -	200 Series
Section 10440	Interior Modular Interchangeable Signs - Interior 20	Interior 20
Section 10440	Interior Modular Interchangeable Signs - Infinity	Infinity
Section 10440	Interior Modular Component Signs - Flat Face	Messenger Interior
Section 10440	Interior Modular Interchangeable Signs - Curved Face	Pacific Interior
Section 10440	Interior Signs – Digital Signage Systems	Helix
Section 10440	Interior Modular Interchangeable Signs - Radiance	Radiance
Section 10440	Interior Unframed Signs - ECR Photopolymer-Based ADA Signage	Terra

Section 10440	Interior Aluminum Extrusion Sign with Changeable Insert	Horizon
Section 10440	Interior Aluminum Extrusion Sign with Changeable Insert	Venus
Section 10440	Interior Signs - Applied Tactile Lettering and Raster™ Braille on Eco Friendly Substrates	InTac™ Eco

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 If specific sign quantities, sizes, layouts, and graphic processes are not scheduled, an allowance may be utilized to set aside a monetary amount sufficient for purchase, delivery, and installation of signage.  
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- D. [Allowances: Work of this section is affected by allowances. Refer to Division 1 for allowance amounts and requirements.]

1.2 QUALITY ASSURANCE

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 Include quality assurance requirements below which are consistent with the size and scope of the project and extent of work of this section. Only request qualification statements you intend to review, and which are necessary to establish qualifications of the product, manufacturer, or installer.  
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- A. Supplier: Obtain all products in this section from a single supplier.
- B. Regulatory Requirements: Products shall meet requirements of the Americans With Disabilities Act Accessibility Guidelines (ADAAG) and local amendments and modifications.
- C. Installer: Installation shall be performed by installer specialized and experienced in work similar to that required for this project.

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 Include submittal requirements below which are consistent with the scope of the project and extent of work of this section. Only request submittals that are necessary for review of design intent.  
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1.3 SUBMITTALS

- A. Submit in accordance with requirements of Division 1.
- B. Product Data: Submit product data for specified products. Include material details for each sign specified.
- C. Shop Drawings: Submit shop drawings showing layout, profiles, and product components, including dimensions, anchorage, and accessories.
- D. Samples: Submit supplier's standard color chart for selection purposes and selected colors for verification purposes.
- E. Installation: Submit supplier's installation instructions.
- F. Closeout Submittals:
  - 1. Submit operation and maintenance data for installed products, including precautions against harmful cleaning materials and methods.
  - 2. Submit warranty documents specified herein.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Comply with requirements of Division 1.
  - 1. Comply with manufacturer's ordering instructions and lead-time requirements to avoid construction delays.
  - 2. Deliver products in manufacturer's original, unopened, undamaged containers with identification labels intact.
  - 3. Store products protected from weather, temperature, and other harmful conditions as recommended by supplier.
  - 4. Handle products in accordance with manufacturer's instructions.

1.5 WARRANTY

- A. Project Warranty: Comply with requirements of Division 1.
- B. Manufacturer's Warranty: Submit manufacturer's standard warranty document executed by authorized company official.
  - 1. Warranty Period: One (1) year from product installation for enclosures. Five (5) years from product installation for all solar components (solar panels, batteries, LED's and power management system).

2 PRODUCTS

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 In 2.1A1 below, modify to reflect name, address, and phone/fax of local ASI Affiliate who is supplying to product or system to the project.  
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2.1 SIGNAGE SYSTEMS

- A. Acceptable Manufacturers:
  - 1. ASI, 3860 W. Northwest Highway, Suite 350, Dallas, TX 75220; (214) 352- 9140 telephone; (214) 352-9741 facsimile; (800) ASI-SPEC [274-7732]
  - 2. No Substitutions.
- B. Acceptable Product: ASI Solar Feature
- C. ASI Solar Feature - Exterior Ground Mounts

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 Note: Exterior aluminum signs are available in four standard sizes. [Regulatory - 26" L x 12" W x 72" H] [Secondary Entrance - 38" L x 16" W x 48" H] [Directional - 50" L x 16" W x 107" H] [Main Entrance - 74" L x 16" W x 92" H]  
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- 1. Exterior aluminum sign size(s), [\_\_\_\_ x \_\_\_\_]
- 2. Panel color[s]: [Specify from manufacturer's standard color chart.]
- 3. Letter style[s] and letter size[s]: [Specify from manufacturer's standard letter styles chart.]
- 4. Graphic technique:
  - a) [Computer cut panels with push through white acrylic lettering]
- 5. Text or graphic color[s]: [Specify from manufacturer's standard color chart.]
- 6. Text schedule: [Verify correct capitalization.]
- 7. Mounting: [Direct burial into concrete foundation]

D. ASI Solar Feature - Directory

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 Note: Exterior aluminum directory available in one standard size. [48" L x 14" W x 96" H]  
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- 1. Exterior aluminum directory [single-sided] [double-sided] : 4' 2" wide x 8' high
- 2. Panel color[s]: [Specify from manufacturer's standard color chart.]
- 3. Letter style[s] and letter size[s]: [Specify from manufacturer's standard letter styles chart.]
- 4. Graphic technique:
  - a) [3/16" white translucent acrylic with applied digitally printed translucent map]

5. Text or graphic color[s]: [Specify from manufacturer's standard color chart.]
6. Text schedule: [Verify correct capitalization.]
7. Mounting: [Direct burial into concrete foundation].

E. ASI Solar Series - Exterior Wall Mount Sign

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Note: Exterior aluminum wall mounted sign available in one standard size. [117" L x 6" W x 24 1/2" H]

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1. Exterior aluminum wall mounted size: [117" L x 6" W x 24 1/2" H]
2. Panel color: [Specify from manufacturer's standard color chart.]
3. Text or graphic color[s]: [Specify from manufacturer's standard color chart.]
4. Letter style[s] and letter size[s]: [Specify from manufacturer's standard letter styles chart.]
5. Graphic technique:
  - a) [Computer cut panels with push through white acrylic lettering]
6. Text schedule: [Verify correct capitalization.]
7. Wall Attachment: [Chemically mounted HILTI anchor bolts]. Field verify conditions.

2.2 SIGNAGE MATERIALS / COMPONENTS

A. Materials and Components:

1. Aluminum: Extruded aluminum, alloys 6061, 6063, sheet aluminum, alloy 5052, 3003
2. Photovoltaic (PV) Solar Panels: Crystalline silicon solar cells; framed in an extruded all-aluminum structure; sealed behind UV stabilized tempered glass; minimum 20 year 80% peak power warranty; meets or exceeds UL1703 standard.
3. Light Emitting Diodes (LED): LED illumination source shall meet the standards as outlined in LM-79 & LM-80; UL listed and IP 65 minimum rating; high brightness LEDs; 5,000 K minimum color temperature; 75 CRI minimum; 50,000 hour minimum rated life.
4. Electronic Controls: Power management system to be comprised of the following components; microprocessor-based charge controller / LED driver; fully programmable algorithmic load optimization utilizing Pulse-Width-Modulation (PWM); constant voltage control; dual-balanced independent PV panel inputs; multisource power inputs including both AC and DC supply; on-board temperature compensated voltage-controlled battery charging at automated full/slow/trickle charge rates; battery 20% depth of battery discharge and over/under charging voltage cutoff; real-time clock; logic can differentiate between daylight and environmental ambient light; on/off setpoint control for fixed time operation and/or seasonal dusk/dawn activation; look-ahead battery-load correlation routines for maximum off-grid survival operation; start-up self-test and status indication; terminal connector wire termination.

Batteries: Sealed non-spillable combined AGM/Gel Cell; maintenance free; 100% recyclable materials; no transportation restrictions (classified non-hazardous material for surface, maritime or air transport); deep cycle classified; 2,000 cycle minimum life; maintains 80% minimum charge after 2 months if left disconnected.

B. Painted Surface Treatment Finish: Manufacturer's standard two-phase finishing process. Colors as selected from manufacturer's standard colors.

1. Phase One: Priming with 2u depth layer for optimum surface coat adhesion and weatherability.
2. Phase Two: Painting process employing two component, acrylic polyurethane coating of 20-30u depth.

## 2.3 FABRICATION - GENERAL

- A. General: Comply with requirements indicated for materials, thicknesses, finishes, colors, designs, shapes, sizes, and details of construction.
- B. Allow for thermal movement resulting from a maximum ambient temperature change (range) of 100 deg F (38 deg C). Design, fabricate, and install sign assemblies to prevent buckling, opening up of joints, and over-stressing of welds and fasteners.
- C. Mill joints to a tight, hairline fit. Form joints exposed to the weather to exclude water penetration.
- D. No light leaks.
- E. Preassemble signs in the shop to the greatest extent possible to minimize field assembly. Disassemble signs only as necessary for shipping and handling limitations. Clearly mark units for reassembly and installation, in a location not exposed to view after final assembly.
- F. Conceal fasteners if possible; otherwise, locate countersunk fasteners to appear inconspicuous.
- G. Form panels to required size and shape. Comply with requirements indicated for design, dimensions, finish, color, and details of construction.
- H. Coordinate dimensions and attachment methods to produce message panels with closely fitting joints. Align edges and surfaces with one another in the relationship indicated.
- I. Increase material thickness or reinforce with concealed stiffeners or backing materials as required to produce surfaces without distortion, buckles, warp, or other surface deformations.

## 3 EXECUTION

### 3.1 EXAMINATION

- A. Site Verification of Conditions: Verify installation conditions previously established under other sections are acceptable for product installation in accordance with manufacturer's instructions.
- B. Scheduling of installation by Owner or it's representative implies that substrate and conditions are prepared and ready for product installation. Proceeding with installation implies installer's acceptance of substrate and conditions.

### 3.2 INSTALLATION

- A. Install product in accordance with supplier's instructions.
- B. Install product in locations indicated using mounting methods recommended by sign manufacturer and free from distortion, warp, or defect adversely affecting appearance.
- C. Install product level, plumb, and at heights indicated.
- D. Install product at locations to conform with applicable local ordinances, amendments and regulations.
- E. Install signs within the following tolerances and in accordance with manufacturer's recommendations:
  - 1. Within 1 inch vertically and horizontally of intended location.

### 3.3 CLEANING, PROTECTION, AND REPAIR

- A. Repair scratches and other damage which might have occurred during installation. Replace components where repairs were made but are still visible to the unaided eye from a distance of 10 feet.
- B. Remove temporary coverings and protection to adjacent work areas. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove construction debris from project in accordance with provisions in Division 1.

3.4 SIGN SCHEDULE

- A. Schedule: Refer to signage schedule and Drawings for sizes, locations, and layout of signage types, sign text copy, and graphics.

END OF SECTION