1. Markerboards, chalkboards, glass markerboards, tackboards, and display cabinets.
This section includes boards fixed to vertical wall surfaces as well as sliding and operating units. Other types, such as movable units, can be edited into the section.
Section 101100 (10100) - VISUAL DISPLAY BOARDS - ASI, Copyright 2023, ASI Visual Display Products.
2. Section 101100
Visual Display Boards - ASI
	1. PART 1 GENERAL
3. This article is informational only to help the Contractor identify contents of each section. Limit to brief descriptions of significant product categories, work results, or requirements. Do not include accessories or attempt to define the Contractor's scope of work here.

For consistency, descriptions should match or be very similar to terms used in PART 2.

Utilize linking from PART 2 product categories, work results, or requirements to automatically edit this list instead of manually selecting paragraphs under SECTION INCLUDES.
	* 1. Section Includes
			1. Porcelain enamel markerboards.
			2. Porcelain enamel chalkboards.
			3. Tackboards.
4. This article is informational only to help the Contractor locate related items specified in other sections.
• List sections that are referenced directly in this section. Indicate specific items where applicable. It is only necessary to reference the section number in the section text since the full title is shown in this article.
• List sections that include items one might expect to find in this section.
• List sections that include items important for completing work in this section and are not obvious from the section title.
• Generally, do not include references to Division 01 sections, which refer to the entire project manual. However, where standard Division 01 cross-references are shown in the section, reference the section number and title.
	* 1. Related Requirements
			1. Section **061000 - Rough Carpentry**:  Wood blocking and nailers.
			2. Section **092216 - Non-Structural Metal Framing**:  Concealed supports in metal stud walls.
5. List of the complete titles and dates for reference standards cited within the section.

Do not include reference standards that are not cited within the section.

Click on the link in the text for free information or to purchase a copy of this document. For reference standards used in choices, click on the corresponding link in the text under the REFERENCE STANDARDS article in PART 1 to find free information or to purchase a copy of this document.
	* 1. Reference Standards
			1. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; Current Edition.
			2. ANSI A208.1 - American National Standard for Particleboard; 2022.
			3. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test; 2015 (Reaffirmed 2020).
			4. ASTM A424/A424M - Standard Specification for Steel, Sheet, for Porcelain Enameling; 2018.
			5. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2021.
			6. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023c.
6. Do not request submittals if drawings sufficiently describe the products of this section or if proprietary specifying techniques are used. The review of submittals increases the possibility of unintended variations from contract documents, thereby increasing the design professional's liability.
See Section 01 3000 - Administrative Requirements for definitions of the types of submittals for review, information, and project record.
	* 1. Submittals
			1. See Section **013000 - Administrative Requirements** for submittal procedures.
			2. Product Data:  Manufacturer's published data on chalkboard, porcelain enamel steel markerboard, tackboard, tackboard surface covering, trim, and accessories.
			3. Shop Drawings:  Indicate wall elevations, dimensions, joint locations**, special anchor details**.
7. Include this paragraph for submission of physical samples to verify selected finish, color, texture, etc.
	* + 1. Samples:  Color charts for selection of color and texture of chalkboard, porcelain enamel steel markerboard, glass markerboard, tackboard surface covering, and trim.
8. Include this paragraph for submission of physical samples to verify selected finish, color, texture, etc.
	* + 1. Samples:  Two, 2 by 2 inches (50 by 50 mm) in size illustrating materials and finish, color, and texture of porcelain enamel chalkboard, porcelain enamel markerboard, tackboard, tackboard surface covering, trim, and tackstrip.
			2. Test Reports:  Show compliance with specified surface burning characteristics requirements.
9. The paragraph below is optional text
	* + 1. Manufacturer's printed installation instructions.
10. The paragraph below is optional text
	* + 1. Manufacturer's qualification statement.
11. The paragraph below is optional text
	* + 1. Maintenance Data:  Include data on regular cleaning, stain removal**[, and[\_\_\_\_\_\_\_]]**.
12. The paragraph below is optional text
	* + 1. Executed warranty.
		1. Quality Assurance
			1. Manufacturer Qualifications:  Company specializing in manufacturing products specified in this section with minimum **[three] [\_\_\_\_\_\_\_]** years **documented** experience.
		2. Delivery, Storage, and Handling
			1. See Section **017419 - Construction Waste Management and Disposal** for packaging waste requirements.
13. Improper specifying of warranty and correction period extensions may limit the Owner's statutory rights and the ability to enforce claims under the Contractor's contractual warranty. Be careful about establishing warranty requirements that few, if any, manufacturers will honor.
	* 1. Warranty
			1. See Section **017800 - Closeout Submittals** for additional warranty requirements.
14. This paragraph requests a manufacturer warranty; the request may not be effective as the manufacturer is outside the jurisdiction of the Owner/Contractor contract. Coordinate this paragraph with the SUBMITTALS article.
	* + 1. Manufacturer's Standard Limited Lifetime Warranty:  On porcelain writing surface, for life of building, under normal usage and maintenance, and when installed in accordance with manufacturer's instructions and recommendations. Warranty covers replacement of defective material but does not include cost of removal or reinstallation.
			2. When installed in accordance with manufacturer's instructions and recommendations, tackboards are guaranteed for one year against defects in materials and workmanship. Guarantee does not cover improper handling, misuse, or defects caused by vandalism or subsequent abuse. Guarantee covers replacement of defective material but does not include cost of removal or reinstallation.
	1. PART 2 PRODUCTS
15. Use this article only if you intend to list manufacturers with the capability of providing all products specified in this section. If the section includes several different products produced by different manufacturers, include a separate manufacturer subparagraph under each product article. The list can include specific model numbers or product names if desired.

Edit the subsequent descriptive specifications to identify project requirements and eliminate conflict with specified manufacturer's products.

The manufacturers listed are representative of those offering the products of this section. Verify each manufacturer's ability to provide products specified for each project.
	* 1. Manufacturers
16. The paragraph below is optional text
	* + 1. ASI Visual Display Products, located at 2210 Dunwin Drive, Mississauga, Ontario L5L 1C7. Tel:  833-632-0878. Web:  www.asi-visualdisplayproducts.com.
17. The paragraph below is optional text
	* + 1. ASI Visual Display Products, located at 1102 Ave T, Grand Prairie, TX 75050. Tel:  833-632-0878. Web:  www.asi-visualdisplayproducts.com.
		1. Porcelain Enamel Markerboards
			1. **[<drawing designation>] [\_\_\_\_\_]**:  Markerboard Panel:
				1. Porcelain Enameled Steel Sheet:  ASTM A424/A424M, Type I, Commercial Steel, manufactured in accordance with Porcelain Enamel Institute's PEI-1002 specification consisting of sandwich-type construction of face panel with fired-on vitreous finish, core, and balancing rear sheet.
				2. Face Sheet Writing Surface:

Polyvision e3 CeramicSteel, ultra-smooth writing surface; scratch, stain, bacteria, and fire resistant. Continuous coil-coating process, consisting of steel core of light gauge covered on both sides with thin enamel coatings for thickness of **0.014 inch (0.356 mm)**.

Color:  **[White High Gloss] [White Low Gloss]**.

* + - * 1. Core Material:

Particleboard:  ANSI A208.1; wood set with waterproof resin binder, sanded faces.

Thickness:  **7/16-inch (11 mm)** particleboard, laminated under heat and pressure to face panel and rear sheet, utilizing adhesives that ensure rupturing of component materials before failure of joint contact surfaces.

* + - * 1. Writing Surface Backing:

Polyvinyl backer moisture barrier; no adhesive required or recommended.

Polyvinyl backer moisture barrier standard on all panels with exception to butt-joint (splined-edge markerboards) or horizontal sliders where galvanized back steel is used at minimum 28 gauge.

* + - * 1. Panel Size:

Overall Thickness:  **1/2 inch (13 mm)**.

Height:  **[48 inches (1219 mm)] [60 inches (1524 mm)] [As indicated on drawings]**.

1. The paragraph below is optional text

Width:  **[[\_\_\_\_\_\_\_\_\_\_]]**.

* + - * 1. Trim:  **[As indicated below under Trim and Accessories] [\_\_\_\_\_\_\_]**.
				2. Accessories:  **[As indicated below under Trim and Accessories] [\_\_\_\_\_\_\_]**.
		1. Porcelain Enamel Chalkboards
			1. **[<drawing designation>] [\_\_\_\_\_]**:  Chalkboard Panel:
				1. Porcelain Enameled Steel Sheet:  ASTM A424/A424M, Type I, Commercial Steel, manufactured in accordance with Porcelain Enamel Institute's PEI-1002 specification consisting of sandwich-type construction of face panel with fired-on vitreous finish, core, and balancing rear sheet.
				2. Face Sheet Writing Surface:

Polyvision e3 CeramicSteel, ultra-smooth writing surface; scratch, stain, bacteria, and fire resistant. Continuous coil-coating process, consisting of steel core of light gauge covered on both sides with thin enamel coatings for a thickness of **0.014 inch (0.356 mm)**.

Color:  **[Selected from manufacturer's standard colors] [Black Matte] [Green Matte]**.

* + - * 1. Core Material:

Particleboard:  ANSI A208.1; wood set with waterproof resin binder, sanded faces.

Thickness:  **7/16-inch (11 mm)** particleboard, laminated under heat and pressure to face panel and rear sheet, utilizing adhesives that ensure rupturing of component materials before failure of joint contact surfaces.

* + - * 1. Writing Surface Backing:

Polyvinyl backer moisture barrier (no adhesive required or recommended).

Polyvinyl backer moisture barrier standard on all panels with exception to butt-joint (splined-edge markerboards) or horizontal sliders where galvanized back steel is used at 28 gauge.

* + - * 1. Panel Size:

Overall Thickness:  **1/2 inch (13 mm)**.

Height:  **[48 inches (1219 mm)] [60 inches (1524 mm)] [As indicated on drawings]**.

1. Max panel sizes: 60 inches x 144 inches (1524 mm x 3657 mm) and 48 inches x 144 inches (1219 mm x 3657 mm).

Width:  and \_\_\_\_\_\_\_.

* + - * 1. Trim:  **[As indicated below under Trim and Accessories] [\_\_\_\_\_\_\_]**.
				2. Accessories:  **[As indicated below under Trim and Accessories] [\_\_\_\_\_\_\_]**.
		1. Tackboards
			1. **[<drawing designation>] [\_\_\_\_\_]**:  Tackboard Panel:
				1. Surface Material:

Fabric:

**1/2-inch (13 mm)** factory pre-laminated panel, consisting of **7/16-inch (11 mm)** impregnated sound absorbing fiberboard laminated to polyester crepe wallcovering under mechanical pressure.

Fabric Color:  **[Selected from manufacturer's standard colors] [White] [Black] [Bluestone] [Camel] [Red] [Olive] [Pumpkin] [Silver] [Stone] [Willow] [Wolf] [Apple] [Burgundy] [Charcoal] [Fossil] [Goose] [Graphite] [Navy]**.

Forbo Linoleum:

**1/2-inch (13 mm)** factory pre-laminated panel, consisting of **1/4-inch (6 mm)** Forbo bulletin board laminated to **1/4-inch (6 mm)** particleboard or Masonite substrate under mechanical pressure.

1. Forbo Standard Color Selection:
Duck Egg 2162
Potato Skin 2182
Poppy Seed 2204
Oyster Shell 2206
Black Olive 2209

Forbo Optional Color Selection (available with an upgrade):
Nutmeg Spice 2166
Blanched Almond 2186
Brown Rice 2187
Cinnamon Bark 2207
Mushroom Medley 2208
Hot Salsa 2210
Tangerine Zest 2211
Fresh Pineapple 2212
Baby Lettuce 2213
Blue Berry 2214

5-foot high boards are available in:
Potato Skin 2182
Blanched Almond 2186
Nutmeg Spice 2166

Forbo Color:  **[Selected from manufacturer's standard colors] [Duck Egg 2162] [Potato Skin 2182] [Poppy Seed 2204] [Oyster Shell 2206] [Black Olive 2209] [Nutmeg Spice 2166] [Blanched Almond 2186] [Brown Rice 2187] [Cinnamon Bark 2207] [Mushroom Medley 2208] [Hot Salsa 2210] [Tangerine Zest 2211] [Fresh Pineapple 2212] [Baby Lettuce 2213] [Blue Berry 2214]**.

Natural Cork:

**1/2-inch (13 mm)** factory pre-laminated panel, consisting of **1/4-inch (6 mm)** thick natural cork laminated to **1/4-inch (6 mm)** particleboard substrate under mechanical pressure.

Color:  Natural.

Vinyl:

**1/2-inch (13 mm)** factory pre-laminated panel, consisting of **7/16-inch (11 mm)** impregnated sound-absorbing fiberboard laminated to Class A, vinyl wallcovering under mechanical pressure.

Vinyl-Coated Fabric:

Surface Burning Characteristics:  Flame spread index of 25 or less, and smoke developed index of 450 or less, when tested in accordance with ASTM E84, Class A.

Vinyl Color:  **[Selected from manufacturer's standard colors] [Embassy Taupe] [White Irish Linen] [Embassy Charcoal] [Salem Grey]**.

* + - * 1. Trim:  **[As indicated below under Trim and Accessories] [\_\_\_\_\_\_\_]**.
				2. Accessories:  **[As indicated below under Trim and Accessories] [\_\_\_\_\_\_\_]**.
		1. Trim and Accessories
			1. Trim Series 9800 Knock Down (Multi-Panel/Combo Unit):
				1. Material:  ASTM B221, extruded from aluminum alloy 6063-T5, **0.062-inch (1.57 mm)** clear anodized finish, free from extruding draw marks and surface scratches.
1. Series 9100 has 1/4-inch frame.
Series 9300 has 1-1/2-inch frame.
Series 9500 has 1/8-inch Elite Reveal frame.
Series 9800 has 3/4-inch frame.
	* + - 1. Exposed Frame Width:  **3/4 inch (19 mm)**.

Corner Style:  Square.

1. The paragraph below is optional text

Divider/Joiner Bars:

1. The paragraph below is optional text

**[ASI 544207, H-style divider bar required to transition material types and/or join markerboards] [ASI Spline Joiner required to join markerboards]** where elevations exceed manufacturer's maximum width.

1. Series 9100 has 1/4-inch frame.
Series 9300 has 1-1/2-inch frame.
Series 9500 has 1/8-inch Elite Reveal frame.
Series 9800 has 3/4-inch frame.
	* + - 1. Exposed Frame Width:  **3/4 inch (19 mm)**.

Corner Style:  Square.

* + - 1. Accessories:
1. The paragraph below is optional text
	* + - 1. Marker/Chalk Tray:  **[ASI 544212, angle box style tray complete with end caps] [ASI 544264, flat blade style tray with end caps]**.
2. The paragraph below is optional text
	* + - 1. Markers:  **[Not required] [Include]**.
3. The paragraph below is optional text
	* + - 1. Marker Caddy:  **[Not required] [Include]**.
4. The paragraph below is optional text
	* + - 1. Cloth:  **[Not required] [Include]**.
5. The paragraph below is optional text
	* + - 1. Map Rail:  **[ASI 51, 1-inch (25 mm) wide map rail with natural cork insert and end caps, and two map hooks per 4-foot (1219 mm) length] [ASI 74. 2-inch (51 mm) wide map rail with natural cork insert and end caps, and two map hooks per 4-foot (1219 mm) length] [Not required]**.
6. The paragraph below is optional text

Map Rail Accessories:  Provide and **[[\_\_\_\_\_\_\_]flag holder(s)] [[\_\_\_\_\_\_\_]map rail clip(s)] [[\_\_\_\_\_\_\_]roller bracket(s)]**.

* + - 1. Installation Method:  Easi-Install L-clips.
	1. PART 3 EXECUTION
		1. Examination
			1. Verify existing conditions and field dimensions meet manufacturer's requirements before starting work.
			2. Verify field measurements are as **[indicated on drawings] [indicated on shop drawings] [instructed by manufacturer] [\_\_\_\_\_\_\_]**.
			3. Verify internal wall blocking is ready to receive work and positioning dimensions are as **[indicated on shop drawings] [instructed by manufacturer] [\_\_\_\_\_\_\_]**.
			4. Verify flat wall surface for frameless, adhesive-applied boards.
		2. Preparation
			1. Acclimatize tackable wall panels by removing from packaging in installation area not less than 24 hours before application.
			2. Remove switchplates, wall plates, and surface-mounted fixtures where tackable wall paneling is applied. Reinstall items on completion of installation.
			3. Prepare surfaces using methods recommended by manufacturer for achieving best result for substrate under project conditions.
		3. Installation
1. The paragraph below is optional text
	* + 1. Install in accordance with manufacturer's written instructions.
2. The paragraph below is optional text
	* + 1. Install with **[top of marker tray] [top of chalk tray] [bottom of perimeter frame]** at **[30 inches (760 mm)] [24 inches (610 mm)] [36 inches (914 mm)] [[\_\_\_\_\_] inches ([\_\_\_\_\_] mm)]** above finished floor.
3. The paragraph below is optional text
	* + 1. Secure units level and plumb.
4. The paragraph below is optional text
	* + 1. Butt Joints:  Install with tight hairline joints.
5. The paragraph below is optional text
	* + 1. Carefully cut holes in boards for and **[thermostats] [wall switches] [\_\_\_\_\_\_\_]**.
6. The paragraph below is optional text
	* + 1. Install tackable wall panels in accordance with manufacturer's recommendations on specified substrates with concealed attachments.
		1. Adjusting
			1. Adjust moving parts for smooth operation.
		2. Cleaning
			1. See Section **017000 - Execution and Closeout Requirements** for additional requirements.
			2. Clean board surfaces in accordance with manufacturer's instructions.
		3. Protection
			1. Cover with protective cover, taped to frame.
			2. Protect finishes until completion of project.
			3. Remove temporary protective cover at **[Date of Substantial Completion] [\_\_\_\_\_\_\_]**.
			4. Touch-up damaged finishes after Substantial Completion.
7. END OF SECTION