

CSI ARCHITECTURAL METAL LLC

[CSI LOGO]

SECTION 07 42 13 CSI-WAP™ ARCHITECTURAL PLATE PANEL SYSTEMS

Manufacturer Specification – Working Draft v0.1
Prepared for Architect / Specifier Use

Note: This section is intended to specify CSI-furnished metal panels, metal panel accessories, panel attachment components, fabricated trim, and related items provided as part of the CSI-WAP™ panel scope. Weather-resistive barriers, structural framing, sheathing, insulation, primary waterproofing, and adjacent wall assembly components are by others unless specifically included in CSI's project scope.

Revision History

Version	Date	Prepared By	Description
0.1	2026-07-08	CSI / ChatGPT	Initial industry-standard draft based on CSI scope and reference specification format.

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SECTION 07 42 13

CSI-WAP™ ARCHITECTURAL PLATE PANEL SYSTEMS

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes: Furnish CSI-WAP™ Architectural Plate Panel Systems as shown on Drawings and as specified, including the following items provided as part of the metal panel scope:

1. Solid aluminum plate wall panels.
2. Formed architectural metal plate panels.
3. Open-joint and closed-joint metal panel configurations.
4. Perforated metal panels where indicated.
5. Image-perforated metal panels where indicated.
6. Custom fabricated corners, returns, closures, copings, fascias, soffits, trims, and related metal accessories indicated as part of the metal panel work.
7. Panel stiffeners, reinforcement, clips, brackets, anchors, fasteners, shims, isolators, and attachment components required for CSI-furnished panels.
8. Shop-fabricated flashing and trim associated with the CSI-WAP™ panel system where indicated.

B. Work Not Included: Unless specifically included in the Contract Documents or CSI proposal, this Section does not include primary structural framing, sheathing, insulation, weather-resistive barriers, air barriers, vapor barriers, waterproofing membranes, sealants by adjacent trades, or correction of substrate deficiencies.

C. Related Sections: Coordinate Work of this Section with applicable requirements of the following:

9. 05 40 00 - Cold-Formed Metal Framing.
10. 06 10 00 - Rough Carpentry.
11. 07 21 00 - Thermal Insulation.
12. 07 25 00 - Weather Barriers.
13. 07 27 00 - Air Barriers.
14. 07 42 93 - Soffit Panels.
15. 07 62 00 - Sheet Metal Flashing and Trim.
16. 07 92 00 - Joint Sealants.

1.2 DEFINITIONS

A. Metal Plate Panel: Solid sheet or plate metal panel fabricated to the profiles, dimensions, joint conditions, and attachment requirements indicated on Drawings and approved Shop Drawings.

B. Open-Joint System: Metal panel system with intentionally open joints designed to permit drainage and ventilation behind panels. Primary water resistance is provided by wall assembly components by others.

C. Closed-Joint System: Metal panel system with mechanically interlocked, sealed, gasketed, or covered joints as indicated on Drawings and approved Shop Drawings.

D. Oil Canning: Visible waviness in flat metal surfaces. Minor oil canning is inherent in architectural sheet and plate metal products and is not cause for rejection if panels comply with specified materials, thicknesses, fabrication tolerances, and approved samples or mockups.

E. Design Assist: Technical support by CSI Architectural Metal LLC during design development, detailing, engineering coordination, fabrication planning, or installation coordination. Design assist does not transfer design responsibility for substrates, structural framing, waterproofing, or adjacent construction unless expressly agreed in writing.

1.3 REFERENCES

A. Comply with the latest adopted editions of applicable standards, except where more stringent requirements are indicated.

17. AAMA 508 - Voluntary Test Method and Specification for Pressure Equalized Rain Screen Wall Cladding Systems.
18. AAMA 509 - Voluntary Test and Classification Method for Drained and Back Ventilated Rain Screen Wall Cladding Systems.

19. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum.
20. AAMA 2605 - Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.
21. ASCE/SEI 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures.
22. ASTM A240/A240M - Stainless Steel Plate, Sheet, and Strip.
23. ASTM B209/B209M - Aluminum and Aluminum-Alloy Sheet and Plate.
24. ASTM B221 - Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
25. ASTM D2244 - Calculation of Color Tolerances and Color Differences.
26. ASTM D4214 - Evaluating Degree of Chalking of Exterior Paint Films.
27. ASTM E330/E330M - Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
28. SMACNA - Architectural Sheet Metal Manual.
29. Aluminum Association - Aluminum Design Manual.
30. International Building Code as adopted by authority having jurisdiction.

1.4 PERFORMANCE REQUIREMENTS

- A. General Performance: Provide metal panel materials, fabrication, and attachment components capable of withstanding loads and service conditions applicable to the CSI-furnished metal panel system without failure of panels, panel attachment components, or metal accessories.
- B. Structural Performance: Design CSI-furnished panels and attachment components to resist positive and negative wind pressures indicated on Drawings or required by applicable code, based on project-specific engineering where required.
- C. Deflection Limits: Unless otherwise indicated, limit panel deflection under design wind pressure to L/180 of span for panel faces and L/240 for exposed subframing members supporting metal panels.
- D. Thermal Movement: Allow for thermal movement of metal panels and accessories resulting from ambient and surface temperature changes. Provide clips, slots, clearances, and movement joints as required to prevent buckling, overstressing of components, fastener failure, or distortion beyond approved tolerances.
- E. Water Management: Metal panel system shall shed water and permit drainage at panel joints, flashings, and terminations as indicated. Primary water and air resistance behind the panels is by others unless otherwise indicated.
- F. Corrosion Control: Isolate dissimilar metals and corrosive substrates to minimize galvanic corrosion. Provide compatible fasteners, shims, separators, and isolators for CSI-furnished components.
- G. Fire Performance: Where required by code or Contract Documents, provide metal panel materials and assemblies coordinated with applicable fire performance requirements. Compliance of overall wall assembly, including insulation, sheathing, air barrier, weather barrier, and fireblocking, is by others unless expressly included in CSI scope.

1.5 SUBMITTALS

- A. Product Data: Submit product data for metal panels, attachment components, accessories, finishes, and fasteners.
- B. Shop Drawings: Submit shop drawings showing fabrication and installation layouts of metal panels, including elevations, panel identification, joint sizes, panel profiles, corners, returns, edge conditions, terminations, attachment components, trim, flashings, closures, and special conditions.
- C. Engineering Submittals: Where delegated design is required, submit structural calculations and details signed and sealed by a Professional Engineer licensed in the Project jurisdiction.
- D. Samples for Initial Selection: Submit finish samples for each exposed metal finish indicated.
- E. Samples for Verification: Submit minimum 12 inch by 12 inch samples of each exposed finish and minimum 12 inch long samples of representative panel joints, trim, or accessories when requested.
- F. Qualification Data: Submit manufacturer and installer qualification information when requested.
- G. Closeout Submittals: Submit maintenance instructions, cleaning instructions, warranty documents, and as-built panel information where required.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in fabrication of architectural metal panel systems of similar type and complexity for not less than five years.

B. Installer Qualifications: Installer experienced in architectural metal panel installation of similar size, complexity, material, and attachment method.

C. Preinstallation Conference: Conduct preinstallation conference at Project site prior to installation of metal panels. Review substrate conditions, adjacent construction, approved shop drawings, tolerances, sequencing, access, protection, and installation procedures.

D. Mockups: Provide mockups where indicated. Mockups shall include typical panel joints, corners, trim, attachments, finish, and adjacent interface conditions as required by Architect. Approved mockups may remain as part of the Work if undisturbed at Substantial Completion.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver panels and accessories in protective packaging to prevent damage during transportation and handling.

B. Store materials above ground on platforms or pallets, under ventilated weather-resistant covers, and protected from condensation, standing water, staining, abrasion, and deformation.

C. Handle panels to prevent bending, twisting, warping, scratching, and finish damage. Use clean gloves when handling exposed architectural finishes.

D. Do not store panels in contact with materials that may cause staining, corrosion, or surface damage.

1.8 FIELD CONDITIONS

A. Proceed with installation only when substrate and field conditions are acceptable for installation in accordance with approved Shop Drawings and manufacturer's written instructions.

B. Field verify dimensions prior to fabrication where field measurements are required. Notify Architect of discrepancies affecting panel fabrication or installation.

1.9 COORDINATION

A. Coordinate metal panel work with adjacent trades, including framing, sheathing, weather barrier, air barrier, waterproofing, glazing, doors, louvers, penetrations, sealants, roofing, soffits, and flashings.

B. Do not begin installation until substrates and adjacent construction that will be concealed by metal panels are complete and acceptable.

1.10 WARRANTY

A. Manufacturer's Warranty: Provide manufacturer's standard limited warranty covering defects in CSI-furnished materials and fabrication for period indicated in Contract Documents.

B. Finish Warranty: Provide finish manufacturer's standard warranty for factory-applied finishes where applicable.

C. Installer Warranty: Provide installer workmanship warranty where required by Contract Documents.

D. Warranties do not cover failure of substrates, structural framing, sheathing, waterproofing, air barriers, weather barriers, sealants by others, improper maintenance, abuse, or damage caused by other trades.

PART 2 – PRODUCTS

2.1 MANUFACTURER

A. Basis-of-Design Manufacturer: CSI Architectural Metal LLC, Odessa, Florida.

B. Product: CSI-WAP™ Architectural Plate Panel System.

C. Substitutions: Comparable products by other manufacturers must comply with requirements of this Section and be approved in accordance with Division 01 substitution procedures. Substitutions shall include documented compliance with materials, fabrication, finish, attachment, engineering, warranty, and project-specific performance requirements.

2.2 METAL PANEL SYSTEM

A. General: Provide factory-fabricated architectural metal plate panels and accessories in configurations shown on Drawings and approved Shop Drawings.

B. Panel Configurations: Provide one or more of the following as indicated:

31. Flat plate panels.

32. Formed return plate panels.
33. Reveal panels.
34. Open-joint rainscreen panels.
35. Closed-joint panels.
36. Perforated panels.
37. Image-perforated panels.
38. Curved panels where indicated.
39. Soffit, fascia, coping, corner, and trim components associated with metal panel work.

C. Panel Joints: Joint widths, reveals, gaskets, covers, open joints, closed joints, and sealant conditions shall be as indicated on Drawings and approved Shop Drawings.

2.3 MATERIALS

- A. Aluminum Plate and Sheet: ASTM B209/B209M, alloy and temper suitable for forming, welding, finishing, and structural performance required. Typical alloys include 3003-H14, 5005, 5052-H32, and 6061 where indicated or required.
- B. Aluminum Extrusions: ASTM B221, alloy and temper suitable for structural and finish requirements.
- C. Stainless Steel: ASTM A240/A240M, Type 304, 316, 316L, or 444 as indicated.
- D. Copper: Architectural copper sheet or plate complying with applicable ASTM requirements and as indicated.
- E. Zinc: Architectural zinc sheet or plate complying with EN 988 or approved equivalent where indicated.
- F. Thickness: Provide thickness indicated on Drawings or approved Shop Drawings. Where not indicated, provide thickness required to satisfy engineering, fabrication, and appearance requirements.
- G. Minimum Aluminum Plate Thickness: Unless otherwise indicated, provide exposed aluminum plate panels not less than 0.125 inch thick for CSI-WAP™ plate panel applications.

2.4 PANEL FABRICATION

- A. Fabricate panels in accordance with approved Shop Drawings and project requirements.
- B. Fabrication methods may include CNC routing, cutting, punching, perforating, brake forming, rolling, welding, grinding, sanding, and assembly as required.
- C. Form exposed edges true to line and profile. Provide hems, returns, closures, and stiffened edges where indicated.
- D. Welded Work: Grind and finish exposed welds smooth where indicated. Welds shall be sound, continuous where required, and free of visible cracks, porosity, undercutting, and unacceptable distortion.
- E. Perforated Panels: Provide perforation pattern, open area, panel orientation, and edge margins as indicated on Drawings and approved Shop Drawings.
- F. Image-Perforated Panels: Provide perforation pattern developed from approved artwork, image file, or architect-approved pattern. Submit artwork layout and panel mapping prior to fabrication.
- G. Fabrication Tolerances: Fabricate panels to fit within approved joint dimensions, alignment, and project tolerances. Correct panels with fabrication defects that prevent proper installation or visual acceptance against approved mockups.

2.5 STIFFENERS AND REINFORCEMENT

- A. Provide stiffeners, frames, brackets, or reinforcements where required by panel size, wind load, material thickness, joint configuration, finish, or deflection criteria.
- B. Reinforcement materials shall be compatible with panel material or isolated from panel material to prevent galvanic corrosion.
- C. Attach stiffeners mechanically or by approved adhesive, welding, or combined methods as required by engineering and fabrication requirements.
- D. Reinforcement shall not telegraph through exposed panel faces beyond approved appearance standards.

2.6 ATTACHMENT COMPONENTS

- A. Provide concealed clips, brackets, rails, anchors, fasteners, and related attachment components required for CSI-furnished panels.

- B. Attachment components shall accommodate fabrication tolerances, field tolerances, thermal movement, and structural loads.
- C. Provide fixed and sliding connections as required to prevent restraint of thermal movement.
- D. Provide adjustment capability where indicated or required to align panels within specified tolerances.
- E. Exposed fasteners are not permitted on panel faces unless specifically indicated on Drawings or approved by Architect.

2.7 FASTENERS

- A. Provide stainless steel fasteners for exterior exposed and concealed metal panel connections unless otherwise engineered and approved.
- B. Fasteners shall be compatible with adjoining materials and sized to resist design loads.
- C. Provide isolation washers, gaskets, shims, or separators where required to prevent galvanic corrosion or water intrusion through CSI-furnished components.
- D. Exposed fasteners, where permitted, shall match adjacent finish or be factory finished as approved.

2.8 FLASHING, TRIM, AND ACCESSORIES

- A. Provide metal flashings, trims, closures, end dams, corners, copings, fascia components, soffit components, splice plates, vent screens, closure plates, and miscellaneous accessories associated with CSI-furnished panel work.
- B. Fabricate flashing and trim from same material and finish as adjacent metal panels unless otherwise indicated.
- C. Fabricate exposed accessories without excessive oil canning, buckling, tool marks, or distortion. Fold exposed edges back to form hems where practical.
- D. Provide for thermal movement of long trim, flashing, fascia, and coping components.
- E. Sealants used within CSI-furnished panel components shall be compatible with adjacent materials and finishes.

2.9 FINISHES

- A. General: Finish exposed metal surfaces as indicated on Drawings and approved samples.
- B. High-Performance Organic Coating: Provide factory-applied fluoropolymer coating complying with AAMA 2605 where indicated.
- C. Anodized Aluminum: Provide anodized finish complying with AAMA 611 where indicated.
- D. Stainless Steel Finishes: Provide No. 4, hairline, vibration, bead blasted, mirror, or custom finish as indicated.
- E. Copper and Zinc Finishes: Provide natural, pre-weathered, or specialty finish as indicated and approved.
- F. Finish Performance: Factory-applied finish shall resist fading, chalking, cracking, checking, peeling, and loss of adhesion within limits of finish manufacturer's warranty.

2.10 SOURCE QUALITY CONTROL

- A. Inspect materials and fabricated components prior to shipment.
- B. Minimum inspections shall include material verification, finish verification, dimensional inspection, joint and profile verification, weld inspection where applicable, accessory verification, packaging inspection, and shipping documentation.
- C. Do not ship components with known nonconforming conditions unless accepted in writing by Architect or Owner.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions with Installer present for compliance with requirements affecting installation of metal panels.
- B. Verify that framing, sheathing, weather barrier, waterproofing, openings, penetrations, blocking, and other substrates by others are complete, properly aligned, and acceptable for installation of metal panels.
- C. Verify that substrate tolerances are within limits required by approved Shop Drawings.

- D. Notify Architect in writing of conditions detrimental to installation or performance of metal panel work. Do not proceed until unsatisfactory conditions have been corrected.
- E. Beginning installation constitutes acceptance of substrates and conditions by Installer.

3.2 PREPARATION

- A. Coordinate layout of panels, attachments, flashings, openings, penetrations, and adjacent work prior to installation.
- B. Protect adjacent work from damage during installation.
- C. Confirm that concealed weather barrier and flashing components by others are installed before covering with metal panels.

3.3 INSTALLATION

- A. Install metal panels in accordance with approved Shop Drawings, manufacturer's written instructions, and project requirements.
- B. Install panels true to line, level, plumb, and alignment with uniform joints and reveals.
- C. Anchor panels and attachment components securely in place, allowing for thermal and structural movement.
- D. Do not install damaged panels.
- E. Field cutting of exposed panels is not permitted unless approved. Where field cutting is approved, cut cleanly and protect cut edges as required.
- F. Install panels to allow removal and replacement where indicated by the approved attachment system.
- G. Maintain continuity of drainage paths behind open-joint and rainscreen panels. Do not block weep paths or ventilation openings.

3.4 ACCESSORY INSTALLATION

- A. Install accessories with positive anchorage to supporting construction and with provisions for thermal movement.
- B. Install trim, corners, copings, closures, flashings, and related accessories as metal panel installation proceeds.
- C. Coordinate accessories with adjacent work to provide finished appearance and water-shedding transitions.

3.5 FLASHING AND TRIM

- A. Install flashing and trim true to line and level, with concealed fasteners where practical.
- B. Lap, hem, seal, or join flashing and trim as indicated on approved Shop Drawings.
- C. Provide movement joints in continuous flashing and trim as required to accommodate thermal movement.

3.6 ERECTION TOLERANCES

- A. Install metal panels within the following tolerances unless more stringent tolerances are indicated:
 - 40. Variation from plumb: 1/8 inch in 10 feet, noncumulative.
 - 41. Variation from level: 1/8 inch in 10 feet, noncumulative.
 - 42. Variation from plane: 1/4 inch in 20 feet, noncumulative.
 - 43. Offset between adjacent panel faces: 1/16 inch unless otherwise indicated.
 - 44. Joint width variation: plus or minus 1/16 inch unless otherwise indicated.
- B. Final appearance shall match approved mockup where mockup is required.

3.7 FIELD QUALITY CONTROL

- A. Inspect completed installation for alignment, secure attachment, damaged components, blocked drainage, finish damage, and compliance with approved Shop Drawings.
- B. Correct work that does not comply with specified requirements.
- C. Field testing, if required, shall be performed by testing agency retained by Owner or Contractor as indicated in Contract Documents.

3.8 CLEANING AND PROTECTION

- A. Remove protective film in accordance with manufacturer's instructions. Do not leave protective film in place beyond recommended exposure period.
- B. Clean exposed metal surfaces after installation using methods recommended by finish manufacturer and CSI.
- C. Remove metal filings, debris, unused fasteners, labels, and protective materials from completed work.
- D. Replace panels and accessories that are damaged beyond successful repair.
- E. Protect installed metal panel work from damage by subsequent construction operations.

END OF SECTION 07 42 13