

SECTION 07 42 16

INSULATED CORE METAL WALL PANELS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Foamed-insulation-core horizontal and vertical metal wall panel assembly with integral reveals and profiled panels, with related metal trim and accessories, and the following integrated components:

1.2 RELATED REQUIREMENTS

- A. Division 01 Section "Sustainable Design Requirements"
- B. Division 05 Section "Cold-Formed Metal Framing" for support framing for insulated core metal wall panels.
- C. Division 07 Section "Air Barriers" for transition and flashing components of air/moisture barrier.
- D. Division 07 Section "Sheet Metal Flashing and Trim" for sheet metal copings, flashings, reglets and roof drainage items.
- E. Division 07 Section "Joint Sealants" for field-applied joint sealants.

1.3 REFERENCES

- A. American Architectural Manufacturers Association (AAMA):
 - 1. AAMA 501.1 - Standard Test Method for Water Penetration of Windows, Curtain Walls and Doors Using Dynamic Pressure.
 - 2. AAMA 501.2 - Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtainwalls and Sloped Glazing Systems.
 - 3. AAMA 621 - Voluntary Specification for High Performance Organic coatings on Coil Coated Architectural Hot Dipped Galvanized (HDG) and Zinc-Aluminum Coated Steel Substrates.
 - 4. AAMA 508-07 - Voluntary Test Method and Specifications for Pressure Equalized Rain Screen Wall Cladding Systems.
 - 5. AAMA 1503 - Voluntary Test Method for Thermal Transmittance and Condensation Resistance.
 - 6. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.
- B. Air Movement and control Association International, Inc. (AMCA):
 - 1. AMCA 500-L - Test Methods for Louvers, Dampers.
- C. American Society of Civil Engineers (ASCE):

1. ASCE 7 - Minimum Design Loads for Buildings and Other Structures.

D. ASTM International (ASTM):

1. ASTM A 653/A 653M - Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
2. ASTM A 666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
3. ASTM A 755 - Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Prepainted by the Coil-Coating Process for Exterior Exposed Building Products.
4. ASTM B 117 - Standard Practice for Operating Salt Spray (Fog) Apparatus.
5. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
6. ASTM C 209 - Standard Test Methods for Cellulosic Fiber Insulating Board.
7. ASTM C 645 - Specification for Nonstructural Steel Framing Members.
8. ASTM C 754 - Specification for Installation of Steel Framing Members to Receive Screw Attached Gypsum Panel Products.
9. ASTM C 1363 - Standard Test Method for Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus.
10. ASTM D 635 - Standard Test Method For Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position.
11. ASTM D 968 - Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive.
12. ASTM D 1929 - Standard Test Method for Determining Ignition Temperature of Plastics.
13. ASTM D 2244 - Test Method for Calculation or Color Differences from Instrumentally Measured Color Coordinates.
14. ASTM D 3359 - Standard Test Methods for Measuring Adhesion by Tape Tests.
15. ASTM D 4585 - Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation.
16. ASTM D 4587 - Standard Practice for Fluorescent UV-Condensation Exposures of Paint and Related Coatings.
17. ASTM E 72 - Standard Test Methods of Conducting Strength Tests of Panels for Building Construction.
18. ASTM E 84 - Test Methods for Surface Burning Characteristics of Building Materials.
19. ASTM E 119 - Test Methods for Fire Tests of Building Construction and Materials.
20. ASTM E 283 - Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen.
21. ASTM E 329 - Standard Specification for Agencies Engaged in Construction Inspection and/or Testing.
22. ASTM E 331 - Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.

23. ASTM E 1886 - Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials.
24. ASTM E 1996 - Specification for Performance of Exterior Windows, Curtain Walls, Doors and Impact Protective Systems Impacted by Windborne Debris in Hurricanes.
25. ASTM G 154 - Standard Practice for Operating Fluorescent Light Apparatus for UV Exposure of Nonmetallic Materials.

E. Factory Mutual Global (FMG):

1. ANSI/FMG 4880 Standard for Evaluating Insulated Wall & Roof/Ceiling Assemblies.
2. ANSI/FMG 4881 Standard for Evaluating Class 1 Exterior Wall Assemblies.

F. Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA):

1. Architectural Sheet Metal Manual.

G. Underwriters Laboratories, Inc. (UL):

1. UL 263 - Fire Tests of Building Construction and Materials.
2. UL 723 - Test for Surface Burning Characteristics of Building Materials.
3. UL 972 - Standard of Safety for Burglary Resisting Glazing Material

1.4 PERFORMANCE REQUIREMENTS

- A. General: Provide metal wall panel system meeting performance requirements as determined by application of specified tests by a qualified testing agency on manufacturer's standard assemblies.
- B. Air Infiltration: Maximum 0.06 cfm/sq. ft. (0.3 L/s per sq. m) per ASTM E 283 at a static-air-pressure difference of 6.24 lbf/sq. ft. (300 Pa), using minimum 10-by-10 foot (3050-by-3050 mm) test panel that includes horizontal and vertical joints.
- C. Water Penetration, Static Pressure: No uncontrolled water penetration per ASTM E 331 at a minimum static differential pressure of 15 lbf/sq. ft. (718 Pa), using minimum 10-by-10 foot (3050-by-3050 mm) test panel that includes horizontal and vertical joints.
- D. Water Penetration, Static Pressure - 2 hour duration: Panel system shall demonstrate no water penetration when tested in accordance with ASTM E331 at 6.24 psf pressure differential for a two (2) hour duration to satisfy International Building Code, Section 1403.2. Panel systems unable to demonstrate compliance with this requirement will require a separate weather-resistive barrier installed behind the wall panel system to comply with International Building Code requirements.

- E. Water Penetration, Dynamic Pressure: No uncontrolled water penetration per AAMA 501.1 at a minimum static differential pressure of 15 lbf/sq. ft. (718 Pa), using minimum 10-by-10 foot (3050-by-3050 mm) test panel that includes horizontal and vertical joints.
- F. System Performance: A 3rd party test report utilizing the standard ASTM E 283, E 331 and AAMA 501 procedures following the test protocol described in AAMA 508-07 must be submitted prior to bid. Test panel must include a horizontal joint, with an imperfect air barrier.
1. Bidders supplying panel systems that have not successfully passed AAMA 508-07 shall provide a backup system that meets the air and water infiltration values as listed above in sections 1.5.B - 1.5.E.
- G. Water Absorption: Maximum 1.0 percent absorption rate by volume when tested according to ASTM C 209.
- H. Structural Performance: Provide metal wall panel assemblies capable of withstanding the effects of indicated loads and stresses within limits and under conditions indicated, per ASTM E 72:
1. Wind Loads: Determine loads based on uniform pressure, importance factor, exposure category, and basic wind speed indicated on drawings.
 2. Limits of Deflection: Composite wall panel system shall withstand scheduled wind pressure with the following allowable deflection:
 - a. Maximum allowable deflection limited to L/180 deflection of panel perimeter normal to plane of wall with no evidence of failure.
 3. Secondary Metal Framing: Design secondary metal framing according to AISI's "Standard for Cold-Formed Steel Framing - General Provisions."
 - a. Backer Flash & Gasket - Provide a minimum bearing surface for metal wall panels at the following locations:
 1. Horizontal Panel System: 3" wide at vertical joints.
 4. Seismic Performance: Comply with ASCE 7 Section 9, "Earthquake Loads."
- I. Thermal Movements: Allow for thermal movements from variations in both ambient and internal temperatures. Accommodate movement of support structure caused by thermal expansion and contraction.
- J. Thermal Performance: Thermal-resistance (R) value indicated, per ASTM C 1363, with the following conditions:
1. 15 mph (24.1 km/h) exterior wind speed and still air on interior.
 2. Include side joint and standard fastening.

3. Base R value reported on performance of specified panel, taking into account integral reveals and profiling with resultant reduction in panel insulation thickness.

K. Fire Performance Characteristics: Provide metal composite wall systems that comply with the performance requirements of Chapter 26 Plastic of the 2012 International Building Code.

1. Fire Performance of Insulated Wall: Class 1 wall panel per ANSI/FM 4880 & 4881.

1.5 QUALITY ASSURANCE

A. Manufacturer/Source: Provide metal wall panel system and panel accessories from a single manufacturer.

B. Manufacturer Qualifications: Approved manufacturer listed in this Section with minimum 10 years experience in manufacture of similar products in successful use in similar applications.

1. Approval of Comparable Products: Submit the following in accordance with project substitution requirements, within time allowed for substitution review:

- a. Product data, including certified independent test data indicating compliance with requirements. Include detailed data indicating compliance with AAMA 508-07 performance specified in this section.
- b. Samples of each component.
- c. Sample submittal from similar project.
- d. Project references: Minimum of 5 installations not less than 5 years old, with Owner and Architect contact information.
- e. Sample warranty.

2. Substitutions are permitted but must be approved with COR and A/E prior to bidding.

C. Wall Systems Installer Qualifications: Experienced Installer with minimum of 5 years experience with successfully completed projects of a similar nature and scope, and employing workers trained by manufacturer to install products of this Section.

D. Testing Agency Qualifications: Qualify in accordance with requirements of ASTM E 329.

E. Mockups: Build mockup in size and location indicated. Show details of composite wall panel system. Demonstrate methods and details of installation. Show details of gasketed return vertical joints, penetrations, doors, windows, louvers, pipe openings, inside and outside corners, top and bottom of wall, horizontal and vertical joints.

1. Approval of mockup does not relieve Contractor of responsibility to comply with all requirements of contract documents.
2. Approved mockup may become part of installation if approved by Architect.

1.6 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Conduct preinstallation meeting at site attended by Owner, Architect, manufacturer's technical representative, and other trade contractors.
 1. Coordinate building framing in relation to composite wall panel system.
 2. Coordinate windows, doors and louvers, and other openings and penetrations of composite wall panel system.

1.7 ACTION SUBMITTALS

- A. Product Data: Manufacturer's data sheets for specified products.
- B. Shop Drawings: Provide shop drawings prepared by manufacturer or manufacturer's authorized dealer. Include full elevations showing openings and penetrations. Include details of each condition of installation and attachment. Provide details at a minimum scale 1-1/2-inch per foot of all required trim and extrusions needed for a complete installation
 1. Indicate points of supporting structure that must coordinate with composite wall panel system installation.
- C. Samples for Initial Selection: For each product specified including sealants and gaskets. Provide representative color charts of manufacturer's full range of colors.
- D. Samples for Verification: Provide 24-inch section of wall panel showing finishes, horizontal joinery, vertical joint return, injected core material, panel stiffener and anchoring details. Provide 12-inch long pieces of each extruded aluminum trim and gaskets.

1.8 INFORMATIONAL SUBMITTALS

- A. Product Test Reports: Indicating compliance of products with requirements, from a qualified independent testing agency.
- B. Buy American Act Certification: Submit documentation certifying that products comply with provisions of the Buy American Act 41 U.S.C 10a - 10d.
- C. Manufacturer's warranty: Submit sample warranty.

1.9 CLOSEOUT SUBMITTALS

- A. Maintenance data.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. Protect products of composite wall panel system during shipping, handling, and storage to prevent staining, denting, deterioration of components or other damage.
 - 1. Deliver, unload, store, and erect composite wall panel system and accessory items without misshaping panels or exposing panels to surface damage from weather or construction operations.

1.11 WARRANTY

- A. Special Manufacturer's Warranty: On manufacturer's standard form, in which manufacturer agrees to repair or replace metal wall panel assemblies that fail in materials and workmanship within two years from date of Substantial Completion.
- B. Special Panel Finish Warranty: On manufacturer's standard form, in which manufacturer agrees to repair or replace wall panels that evidence deterioration of finish within **twenty** years from date of Substantial Completion.
- C. Weather Tightness Warranty: On manufacturer's standard form, in which manufacturer agrees to repair or replace wall panels that evidence moisture penetration within and behind metal panels within 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SYSTEM DESCRIPTION

- A. Insulated Core Metal Wall Panel System: Factory-foamed-in-place horizontal wall panel system consisting of exterior metal face sheet with interior metal liner panel, bonded to factory foamed-in-place core in thermally-separated profile, utilizing no glues or adhesives, with factory sealed tongue-and-groove and pressure-equalized rainscreen-designed horizontal joint, attached to supports using concealed fasteners.

2.2 MANUFACTURERS

- A. Basis of Design: **CENTRIA, Formawall Dimension Series Insulated Core Metal Wall Panels.** Provide basis of design product, or comparable product approved by Architect prior to bid.
 - 1. CENTRIA Architectural Systems; Moon Township, PA 15108-2944. Tel: (800)759-7474. Tel: (412)299-8000. Fax: (412)299-8317. Email: info@CENTRIA.com. Web: www.CENTRIA.com.

2.3 PANEL MATERIALS

- A. Metallic-Coated Steel Face Sheet: Coil-coated, ASTM A 755/A 755M.

1. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A 653M, G90, structural quality.
2. Face Sheet Thickness: Minimum 0.036 inch/20 gage (0.91 mm) thick.
3. Surface: Smooth, flat.

B. Exposed Coil-Coated Finish:

1. Fluoropolymer Two-Coat System: 0.8 mil primer with 0.8 mil 70 percent PVDF fluoropolymer color coat, AAMA 621.

a. Basis of Design: **CENTRIA Duragard.**

2. Color: As indicated. Provide selection from manufacturer's standard colors.

C. Metallic-Coated Steel Liner Sheet: Coil-coated, ASTM A 755/A 755M, 0.019 inch/26 gage (0.48 mm) thick.

1. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A 653M, G90, structural quality.
2. Surface: Embossed planked.
3. Interior Liner Panel Finish: 0.2 mil primer with 0.6 mil acrylic color coat.

D. Exposed Trim and Fasteners: Match panel finish.

2.4 INSULATION FOR PANEL CORES

A. Metal Panel Foamed-Insulation-Core: Foamed-in-place isocyanurate.

1. Density: Minimum 2.7 lb/cu. ft. (43.4 kg/cu. m)

2.5 FOAMED-INSULATION-CORE METAL WALL PANELS

A. Foamed-Insulation-Core Metal Wall Panels: Factory-foamed-in-place horizontal wall panel system consisting of an exterior metal face sheet with interior metal liner panel forming a thermally separated profile, bonded to factory foamed-in-place core, and with factory-sealed tongue-and-groove and rainscreen-designed pressure-equalized horizontal side joint, configured with weep-hole-vented chamber to maintain equalized atmospheric pressure reducing potential for moisture drive into wall assembly, attached to supports using concealed fasteners.

1. Exclusions: The following do not meet the requirements of this Section:

- a. Laminated panels.
- b. Barrier wall-designed systems.
- c. Systems relying upon venting only at vertical joints to attain pressure equalization.
- d. Systems relying upon field-installed gaskets or wet seals to meet performance requirements.

2. Horizontal Panel - Side Joint: Side joints with positive drip edge, sloped drain shelf and integral venting to the exterior along the panel length to permit moisture drainage and to allow air to enter the pressure equalization chamber. Side joints shall have a 2-3/8-inch baffle interlock and shall provide effective pressure equalization as demonstrated by testing specified in 1.4.F.
3. Horizontal Panel - End Joint: End joints for insulated metal panels shall be designed to allow moisture to be drained from the panel's side joint. No end dam sealant is to be applied to the ends of the side joint at the end joint location.
 - a. Backer Flash - A continuous back-up flash behind the end joint is required with two beads of field applied non-curing butyl sealant between the panel and back up flashing for each panel. The field applied non-curing butyl sealant shall be married to the panel's shop applied non-curing butyl sealant within the panel's side joint.

Insulated Metal Vertical Joint (IMV) - End joint shall include an integrated, Insulated Metal Vertical Joint. The Insulated Metal Vertical Joint shall be recessed 1-3/16" deep and be 1" wide. The Insulated Metal Vertical Joint should not add exterior sightlines, contain exposed metal edges or exposed wet seals. The Insulated Metal Vertical Joint shall be constructed of mineral wool adhered to a metal face of the same material, gage and color as the face of the panel.

4. Panel Ends: Flat Panels - Factory formed trimless ends, tabbed under panel horizontal shelf.
5. Panel Width: 10" (254 mm) - 40" (1016 mm)
6. Panel Profile: Flat in locations and sizes indicated.
7. Panel Reveals:
 - a. Horizontal panels
 - 1) Flat Panels: 1" reveal
8. Panel Thickness: 3.00 inch - T (76 mm), flat
9. Thermal-Resistance (R) Value: 3"-flat - R-21.

2.6 METAL WALL PANEL ACCESSORIES

- A. General: Provide complete metal wall panel assembly incorporating trim, copings, fasciae, parapet caps, soffits, sills, inside and outside corners, and miscellaneous flashings. Provide manufacturer's factory-formed clips, shims, flashings, gaskets, lap tapes, closure

strips, and caps for a complete installation. Fabricate accessories in accordance with SMACNA Manual.

- B. Formed Flashing and Trim: Match material, thickness, and color of metal wall panel face sheets.
- C. Extrusion Trim: Provide manufacturer-provided extruded trim for the following locations and as indicated on Drawings:
 - 1. Base trim.
 - 2. Coping.
 - 3. Panel installation perimeter.
 - 4. Opening perimeters.
- D. Sealants: Type recommended by metal wall panel system manufacturer for application, meeting requirements of Division 07 Section "Joint Sealants."
- E. Flashing Tape: 4-inch wide self-adhering butyl flashing tape.
- F. Panel Attachment Clips: Concealed G-90 galvanized steel clip configured to prevent overdriving of fastener and crushing of foam core, with panel fasteners engaging both face and liner elements and mechanically attaching to panel supports. Clip configured also to be utilized without removing significant portions of the foam at each clip location.
- G. Fasteners: Self-tapping screws, bolts, nuts, and other acceptable fasteners recommended by panel manufacturer. Where exposed fasteners cannot be avoided, supply corrosion-resistant fasteners with heads matching color of metal wall panels by means factory-applied coating.

2.7 METAL WALL PANEL SUPPORT STRUCTURE

- A. Provide 2" depth backup structure behind metal panels that attach to exterior sheathing. Attachment structure to be designed and engineered by panel manufacturer to support panels to wall structure. Rigid Insulation to be applied between vertical structural members before metal panel installation.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine metal wall panel system substrate with Installer present. Inspect for erection tolerances and other conditions that would adversely affect installation of metal wall panels.
- B. Wall Substrate: Confirm that wall substrate is within tolerances acceptable to metal wall panel system manufacturer.
 - 1. Maximum deviations acceptable:

- a. 1/4-inch in 20 feet (6.4 mm in 6 m) vertically or horizontally from face plane of framing.
 - b. 1/2-inch (12.7 mm) from flat substrate on any building elevation.
 - c. 1/8-inch in 5 feet (3.2 mm in 1.5 m).
- C. Framing: Inspect framing that will support metal wall panels to determine if support components are installed as indicated on approved shop drawings. Confirm presence of acceptable framing members at recommended spacing to match installation requirements of metal wall panels.
- D. Openings: Verify that windows, doors, louvers and other penetrations match layout on shop drawings.
- E. Advise G.C., in writing, of all out- of-tolerance work and other deficient conditions prior to proceeding with metal wall panel installation.
- F. Correct out of tolerance work and other deficient conditions prior to proceeding with insulated panel installation.

3.2 PREPARATION

- A. Secondary Metal Framing: Install secondary metal framing components as indicated. Install secondary metal framing and other metal panel supports per ASTM C 754 and metal wall panel manufacturer's recommendations.

3.3 METAL WALL PANEL SYSTEM INSTALLATION

- A. General: Install metal wall panel system in accordance with approved shop drawings and manufacturer's recommendations. Install metal wall panels in orientation, sizes, and locations indicated. Anchor metal wall panels and other components securely in place. Provide for thermal and structural movement
- B. Attach panels to metal framing using recommended clips, screws, fasteners, sealants, and adhesives indicated on approved shop drawings.
1. Fasteners for Steel Wall Panels: Stainless-steel for exterior locations and locations exposed to moisture; carbon steel for interior use only.
 2. Apply elastomeric sealant continuously between metal base channel (sill angle) and concrete, and elsewhere as indicated or, if not indicated, as approved by manufacturer.
 3. Fasten metal wall panels to supports with concealed clips at each joint at location, spacing, and with fasteners recommended by manufacturer. Install clips to supports with self-tapping fasteners.
 4. Provide weatherproof escutcheons for pipe and conduit penetrating exterior walls.

5. Horizontal Joinery: Working from base of installation to top connect upper panel to lower panel at dry seal joinery.
6. Vertical Joinery: Provide reveal between vertical ends of panels as shown on shop drawings using hardware and gaskets furnished by manufacturer to form a weather tight seal between panels.
7. Dissimilar Materials: Where elements of metal wall panel system will come into contact with dissimilar materials, treat faces and edges in contact with dissimilar materials as recommended by manufacturer.

C. Joint Sealers: Install gaskets, joint fillers, and sealants where indicated and where required for weatherproof performance of metal wall panel assemblies.

1. Seal panel end utilizing 2 beads of non-curing butyl aligning with factory-applied seal in adjacent panel pocket; apply continuously without gaps to complete panel system air barrier.
2. Seal metal wall panel to supports or back-up flashing sealant, full width of panel. Seal side joints where recommended by metal wall panel manufacturer. Do not install sealant in locations that will interfere with drainage of pressure-equalized panel chambers.
3. Prepare joints and apply sealants per Division 07 Section "Joint Sealants."

3.4 ACCESSORY INSTALLATION

A. General: Install metal wall panel accessories with positive anchorage to building and weathertight mounting and provide for thermal expansion. Coordinate installation with flashings and other components.

1. Install related flashings and sheet metal trim per requirements of Division 07 Section "Sheet Metal Flashing and Trim."
2. Install components required for a complete metal wall panel assembly, including trim, copings, corners, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
3. Comply with performance requirements and manufacturer's written installation instructions.
4. Provide concealed fasteners except where noted on approved shop drawings.
5. Set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.

3.5 FIELD QUALITY CONTROL

A. The panel installer shall water test panel [and window] areas for each crew at least twice during installation schedule and once at the conclusion of the installation.

B. Progress or check tests can be performed by the installer following test procedures noted in AAMA 501.2. No independent test agency need

to be employed in this test phase. Results of this test phase is to be recorded and reported to the panel manufacturer.

- C. Final AAMA 501.2 testing will be conducted by an independent test agency following project completion. Areas of test are to be determined by the Architect/Engineer and General Contractor/Contract Manager and the panel installer. Engagement of the test agency is the responsibility of the [GC/CM] [panel installer]. A field representative from the panel manufacturer is required for the final inspection and testing.

3.6 CLEANING AND PROTECTION

- A. Remove temporary protective films. Clean finished surfaces as recommended by metal wall panel manufacturer. Clear weep holes and drainage channels of obstructions, dirt, and sealant. Maintain in a clean condition during construction.
- B. Replace damaged panels and accessories that cannot be repaired by finish touch-up or minor repair.

END OF SECTION