SECTION 07 42 43

INSULATED METAL WALL PANELS

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\*\* NOTE TO SPECIFIER \*\* Metl-Span; insulated metal roof and wall panels.  
This section is based on the products of Metl-Span, which is located at:  
1720 Lakepointe Dr. Suite 101  
Lewisville, TX 75057-6425  
Toll Free Tel: 844-574-5367  
Tel: 972-619-7266  
Fax: 972-420-9382  
Email: [request info (info@metlspan.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=Metl-Span&coid=34178&rep=&fax=972-420-9382&message=RE:%20Spec%20Question%20(07432met):%20%20&mf=)  
Web: <http://www.metlspan.com>   
 [ [Click Here](https://www.arcat.com/arcatcos/cos34/arc34178.html) ] for additional information.  
Metl-Span is a world leader in the manufacturing of insulated metal panels for commercial, industrial, and cold storage buildings. Metl-Span is devoted to manufacturing and marketing only the finest insulated building panel products.  
As a pioneer in insulated panel development for over thirty years, Metl-Span has made significant contributions to many product design innovations and technology, which are industry standards today. Metl-Span is constantly expanding their research and technological capabilities in order to develop the highest quality products possible.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Insulated metal wall panels.
    2. Fire-resistant, insulated metal wall and ceiling panels.
    3. Metal panel wall backup system.
    4. Accessories and trim.
  1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 05 12 13 - Architecturally-Exposed Structural Steel Framing.
    2. Section 05 40 00 - Cold-Formed Metal Framing.
    3. Section 07 41 43 - Composite Roof Panels- Insulated Metal Roof Panels.
    4. Section 07 62 00 - Sheet Metal Flashing and Trim.
    5. Section 07 90 00 - Joint Protection.
    6. Section 13 30 00 - Special Structures.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. ASTM International (ASTM):
       1. ASTM A 653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-iron Alloy Coated (Galvannealed) by the Hot-Dip Process.
       2. ASTM A 755 - Standard Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Prepainted by the Coil-Coating Process for Exterior Exposed Building Products.
       3. ASTM A 792 - Standard Specification for Steel Sheet, Aluminum-Zinc Alloy Coated Steel by the Hot-Dip Process
       4. ASTM C 273 - Shear Properties of Sandwich Core Materials
       5. ASTM C 518 - Standard Test Method for Steady State Heat Flux Measurements and Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
       6. ASTM C 612 - Specification for Mineral Fiber Block and Board Thermal Insulation.
       7. ASTM D 1621 - Compressive Properties of Rigid Cellular Plastics
       8. ASTM D 1622 - Apparent Density of Rigid Cellular Plastics
       9. ASTM D 1623 - Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics
       10. ASTM D 2244 - Test Method for Calculation of Color Differences from Instrumentally Measured Color Coordinates.
       11. ASTM D 4214 - Test Methods for Evaluating Degree of Chalking of Exterior Paint Films.
       12. ASTM D 6226 - Standard Test Method for Open Cell Content of Rigid Cellular Plastics.
       13. ASTM E 72 - Standard Test Methods of Conducting Strength Tests of Panels for Building Construction.
       14. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
       15. ASTM E 90 - Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements
       16. ASTM E 119 - Test Methods for Fire Tests of Building Construction and Materials.
       17. ASTM E 283 - Standard Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
       18. ASTM E 331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
       19. ASTM E 1592 - Structural Performance of Metal Roofing and Siding Systems by Uniform Static Air Pressure Difference
    2. American Architectural Manufacturer's Association (AAMA):
       1. AAMA 501.1 - Standard Test Method for Exterior Windows, Curtain Walls and Doors for Water Penetration Using Dynamic Pressure.
    3. American Society of Civil Engineers (ASCE):
       1. ASCE 7 - Minimum Design Loads for Buildings and Other Structures.
    4. Canadian Standards Association (CAN):
       1. CAN 4-S101 - Standard Methods of Fire Endurance Tests of Building Construction and Materials.
       2. CAN/ULC S102 - Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.
       3. CAN/ULC S134 - Fire Test of Exterior Wall Assemblies.
       4. CAN/ULC S138 - Fire Growth of Insulated Building Panels in a Full-Scale Room Configuration.
    5. FM Global (FM):
       1. FM 4880 - Evaluating Insulated Wall or Wall and Roof/Ceiling Assemblies, Plastic Interior Finish Materials, Plastic Exterior Building Panels, Wall/Ceiling Coating Systems, and Interior or Exterior Finish Systems.
       2. FM 4881 - Standard for Class Exterior Wall Systems.
    6. Green Seal (GS):
       1. GS-11 - Green Seal Standard for Paints and Coatings, Edition 3.2, October 26, 2015,
    7. National Fire Protection Association (NFPA):
       1. NFPA 259 - Test Method for Potential Heat of Building Materials.
       2. NFPA 285 - Evaluation of Fire Propagation Characteristics of Exterior Non-Load Bearing Wall Assemblies.
       3. NFPA 286 - Fire Test of Evaluating Conditions of Wall and Ceiling Finish to Roof Fire Growth.
    8. US Green Building Council (USGBC):
       1. Leadership in Energy and Environmental Design (LEED) Green Building Rating System.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data: Manufacturer's data sheets on each product to be used, including:
        1. Preparation instructions and recommendations.
        2. Storage and handling requirements and recommendations.
        3. Material type, metal thickness and finish.
        4. Installation methods.
     3. Shop Drawings: Show layouts of metal panels. Include details of each condition of installation, panel profiles, and attachment to building. Provide details at a minimum scale 1-1/2-inch per foot of edge conditions, joints, fastener and sealant placement, flashings, openings, penetrations, and special details. Make distinctions between factory and field assembled work.
        1. Include data indicating compliance with performance requirements.
        2. Indicate points of supporting structure that must coordinate with metal panel system installation.
        3. Include structural data indicating compliance with performance requirements and requirements of local authorities having jurisdiction.

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if colors have already been selected.

* + 1. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
    2. Panel Sample: Submit 1 foot (305 mm) high by full width sample panel for each profile specified indicating the metal, texture, color and finish.

\*\* NOTE TO SPECIFIER \*\* Delete the following paragraphs if LEED is not applicable.

* + 1. LEED Submittals: Provide documentation of how the requirements of Credit will be met:
       1. EA - Energy and Atmosphere:
          1. EA Credit 1: Optimize Energy Performance: Demonstrate percentage of performance improvement that meets or surpasses ASHRAE/IESNA Standard 90.1-2004.
          2. EA Credit 2: Minimum Energy Performance: Roof panels contribute to higher energy efficiency of a building that must comply with a 10 percent improvement in the performance compared to benchmark rating based on ASHRAE/IESNA Standard 90.1-2007 (with errata but without addenda) in EA Prerequisite 2.
       2. MR - Material and Resource:
          1. MR Credit 1.1 & 1.2: Building Reuse:

Maintain Existing Walls, Floors and Roof.

Maintain Interior Non-Structural Elements.

* + - * 1. MR Credit 3: Materials Reuse
        2. MR Credit 4: Recycled Content:

Percentage weight of post-consumer and pre-consumer recycled content using materials with recycled content.

Recycled content value of product assembly by weight.

Indicate total value (cost) of each product used.

* + - * 1. MR Credit 6: Rapidly Renewable Materials: Foam core in panels using rapidly renewable buildings materials and products for 2.5 percent of the total value of all building materials and products used in the project (based on cost.)
      1. IEQ - Indoor Environmental Quality:
         1. IEQ Credit 4.1: Low-Emitting Materials, Adhesives and Sealants: Product data on adhesives and sealants to comply with standards of California Department of Public Heath v1.1-2010 and South Coast Air Quality Management District Rule 1113.
         2. IEQ Credit 4.2: Low-Emitting Materials, Paints and Coatings: Product data for paint and coatings demonstrating compliance with the VOC limits as established in Green Seal Standard GS-11.
    1. Buy American Act Certification: Submit documentation certifying that products comply with provisions of the Buy American Act 41 U.S.C 10a-10d.
    2. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Company specializing in manufacturing factory foamed in place insulated metal panels with a minimum documented experience of ten years.
     2. Installer Qualifications: Company specializing in installation of the products specified for projects of similar size and scope with minimum five years documented experience.

\*\* NOTE TO SPECIFIER \*\* Delete options not required.

* + - 1. Certified by metal panel manufacturer.
      2. Installer's Field Supervisor: Experienced mechanic certified by metal panel manufacturer supervising work on site.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Buy American Compliance: Materials provided under work of this Section shall comply with the following requirements:
       1. Buy American Act of 1933 BAA-41 U.S.C. 10a-10d.
       2. Buy American provisions of Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA).
  1. DELIVERY, STORAGE, AND HANDLING
     1. Store products in accordance with Manufacturer's written instructions. Store under cover in manufacturer's unopened packaging with labels intact until ready for installation.
     2. Shield foam insulated metal roof panels from direct sunlight until installation.
     3. Store products off the ground, with panels sloped for drainage and covered to protect factory finishes from damage.
     4. Do not overload roof structure with stored materials. Do not permit material storage or traffic on completed roof surfaces.
  2. WARRANTY
     1. Special Manufacturer's Warranty: Submit Manufacturer's two (2) year limited warranty providing panels to be free from defects in materials and workmanship, beginning from the date of substantial completion excluding coil coatings (paint finishes) that are covered under a separate warranty.
     2. The installation contractor shall issue a separate warranty against defects in installed materials and workmanship, beginning from the date of substantial completion of the installation.
     3. Special Panel Finish Warranty: Submit Manufacturer's limited warranty on the exterior paint finish for adhesion to the metal substrate and limited warranty on the exterior paint finish for chalk and fade.

\*\*NOTE TO SPECIFIER\*\* Retain finish warranty paragraph corresponding to selected metal panel finish system. Coordinate chalk and fade performance with applicable Metl-Span finish and color found at www.metlspan.com. No warranty is offered for the interior painted surface of the panel. Delete options not required.

* + - 1. Fluoropolymer Two-Coat System:
         1. Color fading in excess of 5 for copper, silver metallic and bright red; Hunter units per ASTM D 2244.
         2. Color fading in excess of 10 for copper, silver metallic and bright red; Hunter units per ASTM D 2244.
         3. Chalking in excess of 6 for copper, silver metallic and bright red or 8 rating per ASTM D 4214.
         4. Failure of adhesion, peeling, checking, or cracking.
      2. Modified Silicone-Polyester Two-Coat System:
         1. Color fading in excess of 5 for crimson red; Hunter units per ASTM D 2244.
         2. Color fading in excess of 7 for crimson red; Hunter units per ASTM D 2244.
         3. Chalking in excess of 7 for crimson red or 8 rating per ASTM D 4214.
         4. Failure of adhesion, peeling, checking, or cracking.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Metl-Span, which is located at: 1720 Lakepointe Dr. Suite 101; Lewisville, TX 75057-6425; Toll Free Tel: 844-574-5367; Tel: 972-619-7266; Fax: 972-420-9382; Email: [request info (info@metlspan.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=Metl-Span&coid=34178&rep=&fax=972-420-9382&message=RE:%20Spec%20Question%20(07432met):%20%20&mf=); Web: <http://www.metlspan.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
  1. PERFORMANCE REQUIREMENTS
     1. General: Provide metal panel system meeting performance requirements as determined by application of specified tests by a qualified testing facility on manufacturer's standard assemblies.
     2. Structural Performance: Provide metal panel assemblies capable of withstanding the effects of indicated loads and stresses within limits and under conditions indicated, as determined by ASTM E 72 or ASTM E 1592 applied in accordance with ICC AC 04, Section 4, Panel Load Test Option or Section 5, Panel Analysis Option:

\*\* NOTE TO SPECIFIER \*\* Consult structural engineer and edit below as required by local codes. Insert structural data below if not indicated on drawings.

* + - 1. Wind Loads: Determine loads based on applicable building code, wind speed, importance factor, exposure category, and internal pressure coefficient indicated on drawings.
         1. Wind Negative Pressure: Certify capacity of metal panels by testing of proposed assembly.
      2. Deflection Limits: Withstand inward and outward wind-load design pressures in accordance with applicable building code.

\*\* NOTE TO SPECIFIER \*\* Select deflection option required. Delete options not required.

* + - * 1. Maximum Deflection: 1/120 of the span with no evidence of failure.
        2. Maximum Deflection: 1/180 of the span with no evidence of failure.
        3. Maximum Deflection: 1/240 of the span with no evidence of failure.

\*\* NOTE TO SPECIFIER \*\* Retain FM Approvals' listing requirement for FM Global-insured projects or where FM Global requirements are used as minimum design standard. Delete if not required

* + 1. FM Approvals Listing: Comply with FM Approval 4881. Provide metal wall panel assembly listed in FM Approval Guide.
    2. Fire Performance Characteristics: Provide metal panel systems with the following fire-test characteristics determined by indicated test standard as applied by testing and inspection agency acceptable to authorities having jurisdiction.
       1. Surface-Burning Characteristics: The insulating core shall have been tested per ASTM E 84. The core shall have:
          1. Flame spread index: 25 or less.
          2. Smoke developed index: 450 or less.
       2. Room Test Performance: FM Global 4880: The panel assembly shall not support a self-propagating fire which reaches any limits of the 50 feet (15.24 m) high corner test structure as evidenced by flaming or material damage of the ceiling of the assembly.
       3. Fire Propagation: The fire assembly shall meet the requirements of the standard for NFPA 285
       4. Fire Growth: The fire assembly shall meet the requirements of the standard for NFPA 286
       5. Potential Heat: Determined in accordance with NFPA 259

\*\* NOTE TO SPECIFIER \*\* Retain Paragraph below for Canadian Projects. Delete if not required.

* + - 1. Canadian Certifications:
         1. Surface Burning Characteristics: The composite panel shall have to be tested per CAN/ULC S102. Meets the National Building Code of Canada requirements.
         2. Fire Endurance Tests of Building Construction and Materials: The composite panel shall have to be tested per CAN/ULS S101. Meets 15 minute stay in place requirement.
         3. Fire Test of Exterior Wall Assemblies. The composite panel shall have to be tested per CAN/ULS S134. Complies with the fire spread and heat flux limitations required by the National Building Code of Canada.
         4. Fire Growth of Insulated Building Panels in a Full-Scale Room Configuration: The composite panel shall have to be tested per CAN/ULS S138 Met the Criteria of the Standard.
      2. IBC Chapter 26: Panel Performance under the above test methods, shall meet the requirements of IBC, Chapter on foam plastics.
    1. Air Infiltration, ASTM E 283:
       1. Maximum 0.0002 cfm/sq. ft. (0.001 L/s per sq. m) at static air pressure difference of 1.57 lbf/sq. ft. (75 Pa).
       2. Maximum 0.0009 cfm/sq. ft. (0.005 L/s per sq. m) at static-air-pressure difference of 6.24 lbf/sq. ft. (300 Pa).
       3. Maximum 0.01 cfm/sq. ft. (0.050 L/s per sq. m) at static-air-pressure difference of 20 lbf/sq. ft. (958 Pa).
    2. Water Penetration Static Pressure:
       1. ASTM E 331: No uncontrolled water penetration at a static pressure of 20 lbf/sq. ft. (958 Pa).
       2. ASTM E 331 Modified, 2 hour duration: No uncontrolled water penetration at a static pressure of 6.24 lbf/sq. ft. (300 Pa).

\*\* NOTE TO SPECIFIER \*\* Retain paragraph below for Florida projects. Delete if not required.

* + 1. Florida State Building Code Compliance: Provide insulated metal wall panels complying with requirements for installation under Florida State Building Code outside of high velocity wind zone.
    2. 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. Allow for deflection and design for thermal stresses caused by temperature differences from one side of the panel to the other.

\*\* NOTE TO SPECIFIER \*\* The specific configuration of thermal performance testing has a significant impact on the published results. The thermal performance testing performed by Metl-Span and described below conforms to industry standard testing and ASHRAE 90.1 requirements.

* + 1. Thermal Performance: When tested in accordance with ASTM C 518, Measurement of Steady State thermal Transmission, the panels shall provide a k factor of 0.14 btu/sf/hr/deg F at a 75 degrees F (24 degrees C) mean temperature, as required by code, or 0.126 btu/sf/hr/deg F at a 40 degrees F (4 degrees C) mean temperature.
  1. MATERIALS

\*\* NOTE TO SPECIFIER \*\* Delete material options not required.

* + 1. Galvanized Steel: G-90 galvanized coated steel conforming to ASTM A 653 or AZ-50 aluminum-zinc alloy coated steel, conforming to ASTM A 792, minimum grade 33, prepainted by the coil-coating process per ASTM A 755.
    2. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A792, structural quality, Grade 50, Coating Class AZ50prepainted by the coil-coating process per ASTM A 755.
    3. Foam Insulating Core: Polyurethane with zero ozone depletion potential blowing agent:
       1. Closed Cell Content, ASTM D 6226: Minimum 90 percent.
       2. Compressive Strength, ASTM D 1621: As required to meet structural performance requirements and with a minimum of 22 psi.
       3. Shear Strength, ASTM C 273: As required to meet structural performance requirements and with a minimum of 36 psi.
       4. Tensile Strength, ASTM D 1623: As required to meet structural performance requirements and with a minimum of 41 psi.
       5. Minimum Density: 2.0 pcf (32 kg/m3) as determined by ASTM D 1622.
    4. Mineral Wool Insulating Core: Mineral wool, ASTM C612, Type IV B, Category 2, non-combustible, with oriented strand fibers aligned perpendicular to metal facing panels:
       1. Nominal density of 8.5 lb/cu. ft. (128 kg/cu. m).
       2. Thermal resistivity of 3.61 deg F x h x sq. ft./Btu x in. at 75 deg F (30.2 K x m/W at 24 deg C).

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. INSULATED METAL WALL PANELS

\*\* NOTE TO SPECIFIER \*\* Select one of the following wall panel types and delete the ones not required.

* + 1. Concealed Fastener, Insulated Metal Wall Panels with Foam Core: Structural metal panels consisting of exterior metal sheet with five major tapered inverted ribs 1 by 1/4 inches (25.4 by 6.4 mm) with a mesa profile between the inverted ribs, and interior metal sheet with a Mesa or Light Mesa profile, with factory foamed-in-place polyurethane core in thermally-separated profile, with tongue-and-groove panel edges, attached to supports using concealed fasteners.
       1. Basis of Design: Metl-Span, CF Flute.

\*\* NOTE TO SPECIFIER \*\* Prior to selecting metal thickness and panel thickness below, consult manufacturer's span tables and review selection against panel thickness requirements and span condition. Select appropriate panel configuration to meet requirements of design wind pressure. Important: Consult this document when specifying gauge with the intent that it meet a prescriptive decimal thickness requirement in addition to strength performance requirements. Delete options not required.

* + - 1. Exterior Face Sheet: Galvanized steel.
         1. Thickness: 26 gauge.
         2. Thickness: 24 gauge.
         3. Thickness: 22 gauge.
         4. Surface Texture: Stucco embossed.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Modified silicone-polyester two-coat system.
        2. Finish: Fluoropolymer two-coat system.
        3. Finish: Fluoropolymer two-coat metallic and pearlescent color system.
        4. Finish: Fluoropolymer two-coat weathered metal color system.
        5. Finish: Fluoropolymer two-coat aurora color system.
        6. Color: As indicated on Drawings.
        7. Color: To be selected by Architect.
        8. Color: Match Architect's custom color.
        9. Color: \_\_\_\_.
      1. Interior Face Sheet: Galvanized steel.
         1. Thickness: 26 gauge.
         2. Thickness: 24 gauge.
         3. Thickness: 22 gauge.

\*\* NOTE TO SPECIFIER \*\* Delete texture options not required.

* + - * 1. Surface Texture: Stucco embossed with Mesa profile.
        2. Surface Texture: Stucco embossed with Light Mesa profile.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Polyester two-coat system.
        2. Finish: Modified silicone-polyester two-coat system.
        3. Finish: Fluoropolymer two-coat system.
        4. Finish: Vinyl plastisol two-coat system.
        5. Finish: 304 Stainless Steel.
        6. Finish: 316 Stainless Steel.
        7. Color: As indicated on Drawings.
        8. Color: To be selected by Architect.
        9. Color: Match Architect's custom color.
        10. Color: \_\_\_\_.
      1. Panel Width: 42 inches (1067 mm).

\*\* NOTE TO SPECIFIER \*\* Delete panel thickness options not required.

* + - 1. Panel Thickness: 2 inch (51 mm).
      2. Panel Thickness: 2.5 inch (64 mm).
      3. Panel Thickness: 2.75 inch (70 mm).
      4. Panel Thickness: 3 inch (76 mm).
      5. Panel Thickness: 4 inch (102 mm).
      6. Panel Thickness: 5 inch (127 mm).
      7. Panel Thickness: 6 inch (152 mm).
      8. Panel Thickness: As indicated on drawings.
    1. Concealed Fastener, Insulated Metal Panel with Foam Core: Structural metal panel consisting of flush, smooth exterior metal sheet, and interior metal sheet with a Light Mesa profile, with factory foamed-in-place polyurethane core in thermally-separated profile, with tongue-and-groove panel edges, attached to supports using concealed fasteners.
       1. Basis of Design: Metl-Span, CF Architectural.

\*\* NOTE TO SPECIFIER \*\* Prior to selecting metal thickness and panel thickness below, consult manufacturer's span tables and review selection against panel thickness requirements and span condition. Select appropriate panel configuration to meet requirements of design wind pressure. Important: Consult this document when specifying gauge with the intent that it meet a prescriptive decimal thickness requirement in addition to strength performance requirements. Delete options not required.

* + - 1. Exterior Face Sheet: Galvanized steel.
         1. Thickness: 22 gauge.

\*\* NOTE TO SPECIFIER \*\* Delete texture options not required.

* + - * 1. Surface Texture: Stucco embossed.
        2. Surface Texture: Smooth unembossed.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Modified silicone-polyester two-coat system.
        2. Finish: Fluoropolymer two-coat system.
        3. Finish: Fluoropolymer two-coat metallic and pearlescent color system.
        4. Finish: Fluoropolymer two-coat weathered metal color system.
        5. Finish: Fluoropolymer two-coat aurora color system.
        6. Color: As indicated on Drawings.
        7. Color: To be selected by Architect.
        8. Color: Match Architect's custom color.
        9. Color: \_\_\_\_.
      1. Interior Face Sheet: Galvanized steel.
         1. Thickness: 26 gauge.
         2. Thickness: 24 gauge.
         3. Thickness: 22 gauge.

\*\* NOTE TO SPECIFIER \*\* Delete texture options not required.

* + - * 1. Surface Texture: Stucco embossed with Light Mesa profile.
        2. Surface Texture: Smooth unembossed with Light Mesa profile.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Polyester two-coat system.
        2. Finish: Modified silicone-polyester two-coat system.
        3. Finish: Fluoropolymer two-coat system.
        4. Finish: Fluoropolymer two-coat metallic color system.
        5. Color: As indicated on Drawings.
        6. Color: To be selected by Architect.
        7. Color: Match Architect's custom color.
        8. Color: \_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Delete panel width options not required.

* + - 1. Panel Width: 24 inches (610 mm).
      2. Panel Width: 30 inches (762 mm).
      3. Panel Width: 36 inches (914 mm).
      4. Panel Width: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Delete panel thickness options not required.

* + - 1. Panel Thickness: 2 inch (51 mm).
      2. Panel Thickness: 2.5 inch (64 mm).
      3. Panel Thickness: 3 inch (76 mm).
      4. Panel Thickness: 4 inch (102 mm).
      5. Panel Thickness: As indicated on drawings.
    1. Concealed Fastener, Insulated Metal Panel with Foam Core: Structural metal panels consisting of exterior metal sheet and interior metal sheet with matching 4 by 1/8 inch (102 by 3 mm) o.c. profile. Factory foamed-in-place polyurethane core in thermally-separated profile, with tongue-and-groove panel edges, attached to supports using concealed fasteners.
       1. Basis of Design: Metl-Span, CF Mesa.

\*\* NOTE TO SPECIFIER \*\* Prior to selecting metal thickness and panel thickness below, consult manufacturer's span tables and review selection against panel thickness requirements and span condition. Select appropriate panel configuration to meet requirements of design wind pressure. Important: Consult this document when specifying gauge with the intent that it meet a prescriptive decimal thickness requirement in addition to strength performance requirements. Delete options not required.

* + - 1. Exterior Face Sheet: Galvanized steel.
         1. Thickness: 26 gauge.
         2. Thickness: 24 gauge.
         3. Thickness: 22 gauge.

\*\* NOTE TO SPECIFIER \*\* Delete texture options not required.

* + - * 1. Surface Texture: Stucco embossed.
        2. Surface Texture: Smooth unembossed.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Modified silicone-polyester two-coat system.
        2. Finish: Fluoropolymer two-coat system.
        3. Finish: Fluoropolymer two-coat metallic and pearlescent color system.
        4. Finish: Fluoropolymer two-coat weathered metal color system.
        5. Finish: Fluoropolymer two-coat aurora color system.
        6. Color: As indicated on Drawings.
        7. Color: To be selected by Architect.
        8. Color: Match Architect's custom color.
        9. Color: \_\_\_\_.
      1. Interior Face Sheet: Galvanized steel.
         1. Thickness: 26 gauge.
         2. Thickness: 24 gauge.
         3. Thickness: 22 gauge.

\*\* NOTE TO SPECIFIER \*\* Delete texture options not required.

* + - * 1. Surface Texture: Stucco embossed with Light Mesa profile.
        2. Surface Texture: Smooth unembossed with Light Mesa profile.
        3. Surface Texture: Stucco embossed with Mesa profile.
        4. Surface Texture: Smooth unembossed with Mesa profile.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Polyester two-coat system.
        2. Finish: Modified silicone-polyester two-coat system.
        3. Finish: Fluoropolymer two-coat system.
        4. Finish: Vinyl plastisol two-coat system.
        5. Finish: 304 Stainless Steel.
        6. Finish: 316 Stainless Steel.
        7. Color: As indicated on Drawings.
        8. Color: To be selected by Architect.
        9. Color: Match Architect's custom color.
        10. Color: \_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Delete panel width options not required.

* + - 1. Panel Width: 30 inches (762 mm).
      2. Panel Width: 36 inches (914 mm).
      3. Panel Width: 42 inches (1067 mm).
      4. Panel Width: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Delete panel thickness options not required.

* + - 1. Panel Thickness: 2 inch (51 mm).
      2. Panel Thickness: 2.5 inch (64 mm).
      3. Panel Thickness: 3 inch (76 mm).
      4. Panel Thickness: 4 inch (102 mm).
      5. Panel Thickness: 5 inch (127 mm).
      6. Panel Thickness: 6 inch (152 mm).
      7. Panel Thickness: As indicated on drawings.
    1. Concealed Fastener, Insulated Metal Wall Panels with Foam Core: Structural metal panels consisting of exterior metal sheet and interior metal sheet with matching 4 by 1/16 inch (102 by 1.5 mm) o.c. profile. Factory foamed-in-place polyurethane core in thermally-separated profile, with tongue-and-groove panel edges, attached to supports using concealed fasteners.
       1. Basis of Design: Metl-Span, CF Light Mesa.

\*\* NOTE TO SPECIFIER \*\* Prior to selecting metal thickness and panel thickness below, consult manufacturer's span tables and review selection against panel thickness requirements and span condition. Select appropriate panel configuration to meet requirements of design wind pressure. Important: Consult this document when specifying gauge with the intent that it meet a prescriptive decimal thickness requirement in addition to strength performance requirements. Delete options not required.

* + - 1. Exterior Face Sheet: Galvanized steel.
         1. Thickness: 26 gauge.
         2. Thickness: 24 gauge.
         3. Thickness: 22 gauge.

\*\* NOTE TO SPECIFIER \*\* Delete texture options not required.

* + - * 1. Surface Texture: Stucco embossed.
        2. Surface Texture: Smooth unembossed.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Modified silicone-polyester two-coat system.
        2. Finish: Fluoropolymer two-coat system.
        3. Finish: Fluoropolymer two-coat metallic and pearlescent color system.
        4. Finish: Fluoropolymer two-coat weathered metal color system.
        5. Finish: Fluoropolymer two-coat aurora color system.
        6. Color: As indicated on Drawings.
        7. Color: To be selected by Architect.
        8. Color: Match Architect's custom color.
        9. Color: \_\_\_\_.
      1. Interior Face Sheet: Galvanized steel.
         1. Thickness: 26 gauge.
         2. Thickness: 24 gauge.
         3. Thickness: 22 gauge.

\*\* NOTE TO SPECIFIER \*\* Delete texture options not required.

* + - * 1. Surface Texture: Stucco embossed with Light Mesa profile.
        2. Surface Texture: Smooth unembossed with Light Mesa profile.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Polyester two-coat system.
        2. Finish: Modified silicone-polyester two-coat system.
        3. Finish: Fluoropolymer two-coat system.
        4. Finish: Vinyl plastisol two-coat system.
        5. Finish: 304 Stainless Steel.
        6. Finish: 316 Stainless Steel.
        7. Color: As indicated on Drawings.
        8. Color: To be selected by Architect.
        9. Color: Match Architect's custom color.
        10. Color: \_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Delete panel width options not required.

* + - 1. Panel Width: 30 inches (762 mm).
      2. Panel Width: 36 inches (914 mm).
      3. Panel Width: 42 inches (1067 mm).
      4. Panel Width: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Delete panel thickness options not required.

* + - 1. Panel Thickness: 2 inch (51 mm).
      2. Panel Thickness: 2.5 inch (64 mm).
      3. Panel Thickness: 3 inch (76 mm).
      4. Panel Thickness: 4 inch (102 mm).
      5. Panel Thickness: 5 inch (127 mm).
      6. Panel Thickness: 6 inch (152 mm).
      7. Panel Thickness: As indicated on drawings.
    1. Concealed Fastener, Insulated Metal Wall Panels with Foam Core: Structural metal panels consisting of exterior metal sheet with minor striations 1/16 by 1 inch (1.6 by 25.4 mm) o.c., and interior metal sheet with a light mesa profile, with factory foamed-in-place polyurethane core in thermally-separated profile, with tongue-and-groove panel edges, attached to supports using concealed fasteners.
       1. Basis of Design: Metl-Span, CF Striated.

\*\* NOTE TO SPECIFIER \*\* Prior to selecting metal thickness and panel thickness below, consult manufacturer's span tables and review selection against panel thickness requirements and span condition. Select appropriate panel configuration to meet requirements of design wind pressure. Important: Consult this document when specifying gauge with the intent that it meet a prescriptive decimal thickness requirement in addition to strength performance requirements. Delete options not required.

* + - 1. Exterior Face Sheet: Galvanized steel.
         1. Thickness: 24 gauge.
         2. Thickness: 22 gauge.

\*\* NOTE TO SPECIFIER \*\* Delete texture options not required.

* + - * 1. Surface Texture: Stucco embossed.
        2. Surface Texture: Smooth unembossed.
        3. Reveals: 1/4 inch (6.3 mm).
        4. Reveals: 1/2 inch (12.7 mm).
        5. Reveals: 3/4 inch (19 mm).
        6. Reveals: 1 inch (25.4 mm).

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Modified silicone-polyester two-coat system.
        2. Finish: Fluoropolymer two-coat system.
        3. Finish: Fluoropolymer two-coat metallic and pearlescent color system.
        4. Finish: Fluoropolymer two-coat weathered metal color system.
        5. Finish: Fluoropolymer two-coat aurora color system.
        6. Color: As indicated on Drawings.
        7. Color: To be selected by Architect.
        8. Color: Match Architect's custom color.
        9. Color: \_\_\_\_.
      1. Interior Face Sheet: Galvanized steel.
         1. Thickness: 26 gauge.
         2. Thickness: 24 gauge.
         3. Thickness: 22 gauge.

\*\* NOTE TO SPECIFIER \*\* Delete texture options not required.

* + - * 1. Surface Texture: Stucco embossed with Light Mesa profile.
        2. Surface Texture: Smooth unembossed with Light Mesa profile.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Polyester two-coat system.
        2. Finish: Modified silicone-polyester two-coat system.
        3. Finish: Fluoropolymer two-coat system.
        4. Finish: Vinyl plastisol two-coat system.
        5. Color: As indicated on Drawings.
        6. Color: To be selected by Architect.
        7. Color: Match Architect's custom color.
        8. Color: \_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Delete panel width options not required.

* + - 1. Panel Width: 24 inches (610 mm).
      2. Panel Width: 30 inches (762 mm).
      3. Panel Width: 36 inches (914 mm).
      4. Panel Width: 42 inches (1067 mm).
      5. Panel Width: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Delete panel thickness options not required.

* + - 1. Panel Thickness: 2 inch (51 mm).
      2. Panel Thickness: 2.5 inch (64 mm).
      3. Panel Thickness: 2.75 inch (70 mm).
      4. Panel Thickness: 3 inch (76 mm).
      5. Panel Thickness: 4 inch (102 mm).
      6. Panel Thickness: As indicated on drawings.
    1. Concealed Fastener, Insulated Metal Wall Panels with Foam Core: Structural metal panels consisting of flat exterior metal sheet with heavy, stucco-embossed pattern, and interior metal sheet with a light mesa profile, with factory foamed-in-place polyurethane core in thermally-separated profile, with tongue-and-groove panel edges, attached to supports using concealed fasteners.
       1. Basis of Design: Metl-Span, CF Santa Fe.

\*\* NOTE TO SPECIFIER \*\* Prior to selecting metal thickness and panel thickness below, consult manufacturer's span tables and review selection against panel thickness requirements and span condition. Select appropriate panel configuration to meet requirements of design wind pressure. Important: Consult this document when specifying gauge with the intent that it meet a prescriptive decimal thickness requirement in addition to strength performance requirements. Delete options not required.

* + - 1. Exterior Face Sheet: Galvanized steel.
         1. Thickness: 24 gauge.
         2. Thickness: 22 gauge.
         3. Surface Texture: Heavy stucco embossed.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Modified silicone-polyester two-coat system.
        2. Finish: Fluoropolymer two-coat system.
        3. Finish: Fluoropolymer two-coat metallic and pearlescent color system.
        4. Finish: Fluoropolymer two-coat weathered metal color system.
        5. Finish: Fluoropolymer two-coat aurora color system.
        6. Color: As indicated on Drawings.
        7. Color: To be selected by Architect.
        8. Color: Match Architect's custom color.
        9. Color: \_\_\_\_.
      1. Interior Face Sheet: Galvanized steel.
         1. Thickness: 26 gauge.
         2. Thickness: 24 gauge.
         3. Thickness: 22 gauge.

\*\* NOTE TO SPECIFIER \*\* Delete texture options not required.

* + - * 1. Surface Texture: Stucco embossed with Light Mesa profile.
        2. Surface Texture: Smooth unembossed with Light Mesa profile.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Polyester two-coat system.
        2. Finish: Modified silicone-polyester two-coat system.
        3. Finish: Fluoropolymer two-coat system.
        4. Finish: Vinyl plastisol two-coat system.
        5. Color: As indicated on Drawings.
        6. Color: To be selected by Architect.
        7. Color: Match Architect's custom color.
        8. Color: \_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Delete panel width options not required.

* + - 1. Panel Width: 24 inches (610 mm).
      2. Panel Width: 30 inches (762 mm).
      3. Panel Width: 36 inches (914 mm).
      4. Panel Width: 42 inches (1067 mm).
      5. Panel Width: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Delete panel thickness options not required.

* + - 1. Panel Thickness: 2 inch (51 mm).
      2. Panel Thickness: 2.5 inch (64 mm).
      3. Panel Thickness: 2.75 inch (70 mm).
      4. Panel Thickness: 3 inch (76 mm).
      5. Panel Thickness: 4 inch (102 mm).
      6. Panel Thickness: As indicated on drawings.
    1. Concealed Fastener, Insulated Metal Wall Panels with Foam Core: Structural metal panels consisting of flat exterior metal sheet with 7.2 rib pattern, and interior metal sheet with mesa profile, with factory foamed-in-place polyurethane core in thermally-separated profile, with tongue-and-groove panel edges, attached to supports using concealed fasteners.
       1. Basis of Design: Metl-Span, CF 7.2 Insul-Rib.

\*\* NOTE TO SPECIFIER \*\* Prior to selecting metal thickness and panel thickness below, consult manufacturer's span tables and review selection against panel thickness requirements and span condition. Select appropriate panel configuration to meet requirements of design wind pressure. Important: Consult this document when specifying gauge with the intent that it meet a prescriptive decimal thickness requirement in addition to strength performance requirements. Delete options not required.

* + - 1. Exterior Face Sheet: Galvanized steel.
         1. Thickness: 26 gauge.
         2. Thickness: 24 gauge.
         3. Thickness: 22 gauge.

\*\* NOTE TO SPECIFIER \*\* Delete texture options not required.

* + - * 1. Surface Texture: Stucco embossed.
        2. Surface Texture: Smooth unembossed.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Modified silicone-polyester two-coat system.
        2. Finish: Fluoropolymer two-coat system.
        3. Finish: Fluoropolymer two-coat metallic and pearlescent color system.
        4. Finish: Fluoropolymer two-coat weathered metal color system.
        5. Finish: Fluoropolymer two-coat aurora color system.
        6. Color: As indicated on Drawings.
        7. Color: To be selected by Architect.
        8. Color: Match Architect's custom color.
        9. Color: \_\_\_\_.
      1. Interior Face Sheet: Galvanized steel.
         1. Thickness: 26 gauge.
         2. Thickness: 24 gauge.
         3. Thickness: 22 gauge.

\*\* NOTE TO SPECIFIER \*\* Delete texture options not required.

* + - * 1. Surface Texture: Stucco embossed with Light Mesa profile.
        2. Surface Texture: Smooth unembossed with Light Mesa profile.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Polyester two-coat system.
        2. Finish: Modified silicone-polyester two-coat system.
        3. Finish: Fluoropolymer two-coat system.
        4. Finish: Vinyl plastisol two-coat system.
        5. Color: As indicated on Drawings.
        6. Color: To be selected by Architect.
        7. Color: Match Architect's custom color.
        8. Color: \_\_\_\_.
      1. Panel Width: 36 inches (914 mm).

\*\* NOTE TO SPECIFIER \*\* Delete panel thickness options not required.

* + - 1. Panel Thickness: 3 inch (76 mm).
      2. Panel Thickness: 4 inch (102 mm).
      3. Panel Thickness: 5 inch (127 mm).
      4. Panel Thickness: 6 inch (152 mm).
      5. Panel Thickness: As indicated on drawings.
    1. Concealed Fastener, Insulated Metal Wall Panels with Foam Core: Structural metal panels consisting of flat exterior metal sheet with heavy, stucco finish, and interior metal sheet with a light mesa profile, with factory foamed-in-place polyurethane core in thermally-separated profile, with tongue-and-groove panel edges, attached to supports using concealed fasteners.
       1. Basis of Design: Metl-Span, CF Tuff Wall.

\*\* NOTE TO SPECIFIER \*\* Prior to selecting metal thickness and panel thickness below, consult manufacturer's span tables and review selection against panel thickness requirements and span condition. Select appropriate panel configuration to meet requirements of design wind pressure. Important: Consult this document when specifying gauge with the intent that it meet a prescriptive decimal thickness requirement in addition to strength performance requirements. Delete options not required.

* + - 1. Exterior Face Sheet: Galvanized steel.
         1. Thickness: 24 gauge.
         2. Thickness: 22 gauge.
         3. Surface Texture: Heavy embossed.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Fiber-reinforced polymer coating.
        2. Color: As indicated on Drawings.
        3. Color: To be selected by Architect.
        4. Color: Match Architect's custom color.
        5. Color: \_\_\_\_.
      1. Interior Face Sheet: Galvanized steel.
         1. Thickness: 26 gauge.
         2. Thickness: 24 gauge.
         3. Thickness: 22 gauge.

\*\* NOTE TO SPECIFIER \*\* Delete texture options not required.

* + - * 1. Surface Texture: Stucco embossed with Light Mesa profile.
        2. Surface Texture: Smooth unembossed with Light Mesa profile.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Polyester two-coat system.
        2. Finish: Modified silicone-polyester two-coat system.
        3. Finish: Fluoropolymer two-coat system.
        4. Finish: Vinyl plastisol two-coat system.
        5. Color: As indicated on Drawings.
        6. Color: To be selected by Architect.
        7. Color: Match Architect's custom color.
        8. Color: \_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Delete panel width options not required.

* + - 1. Panel Width: 36 inches (914 mm).
      2. Panel Width: 42 inches (1067 mm).
      3. Panel Width: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Delete panel thickness options not required.

* + - 1. Panel Thickness: 2 inch (51 mm).
      2. Panel Thickness: 2.5 inch (64 mm).
      3. Panel Thickness: 3 inch (76 mm).
      4. Panel Thickness: 4 inch (102 mm).
      5. Panel Thickness: As indicated on drawings.
    1. Concealed Fastener, Insulated Metal Wall Panels with Foam Core: Structural metal panels consisting of flat exterior metal sheet with the look of precast concrete finish, and interior metal sheet with a light mesa profile, with factory foamed-in-place polyurethane core in thermally-separated profile, with tongue-and-groove panel edges, attached to supports using concealed fasteners.
       1. Basis of Design: Metl-Span, CF Tuff-Cast.

\*\* NOTE TO SPECIFIER \*\* Prior to selecting metal thickness and panel thickness below, consult manufacturer's span tables and review selection against panel thickness requirements and span condition. Select appropriate panel configuration to meet requirements of design wind pressure. Important: Consult this document when specifying gauge with the intent that it meet a prescriptive decimal thickness requirement in addition to strength performance requirements. Delete options not required.

* + - 1. Exterior Face Sheet: Galvanized steel.
         1. Thickness: 24 gauge.
         2. Thickness: 22 gauge.
         3. Surface Texture: Heavy stucco embossed.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Fiber-reinforced polymer coating.
        2. Color: As indicated on Drawings.
        3. Color: To be selected by Architect.
        4. Color: Match Architect's custom color.
        5. Color: \_\_\_\_.
      1. Interior Face Sheet: Galvanized steel.
         1. Thickness: 26 gauge.
         2. Thickness: 24 gauge.
         3. Thickness: 22 gauge.

\*\* NOTE TO SPECIFIER \*\* Delete texture options not required.

* + - * 1. Surface Texture: Stucco embossed with Light Mesa profile.
        2. Surface Texture: Smooth unembossed with Light Mesa profile.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Polyester two-coat system.
        2. Finish: Modified silicone-polyester two-coat system.
        3. Finish: Fluoropolymer two-coat system.
        4. Finish: Vinyl plastisol two-coat system.
        5. Color: As indicated on Drawings.
        6. Color: To be selected by Architect.
        7. Color: Match Architect's custom color.
        8. Color: \_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Delete panel width options not required.

* + - 1. Panel Width: 36 inches (914 mm).
      2. Panel Width: 42 inches (1067 mm).
      3. Panel Width: As indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Delete panel thickness options not required.

* + - 1. Panel Thickness: 2 inch (51 mm).
      2. Panel Thickness: 2.5 inch (64 mm).
      3. Panel Thickness: 3 inch (76 mm).
      4. Panel Thickness: 4 inch (102 mm).
      5. Panel Thickness: As indicated on drawings.
    1. Concealed Fastener, Insulated Metal Wall Panels with Foam Core: Structural metal panels consisting of exterior metal sheet and interior metal sheet with matching Mesa or Light Mesa profile. Factory foamed-in-place polyurethane core in thermally-separated profile, with tongue-and-groove panel edges, attached to supports using concealed fasteners.
       1. Basis of Design: Metl-Span, CF Partition.

\*\* NOTE TO SPECIFIER \*\* Prior to selecting metal thickness and panel thickness below, consult manufacturer's span tables and review selection against panel thickness requirements and span condition. Select appropriate panel configuration to meet requirements of design wind pressure. Important: Consult this document when specifying gauge with the intent that it meet a prescriptive decimal thickness requirement in addition to strength performance requirements. Delete options not required.

* + - 1. Exterior Face Sheet: Galvanized steel.
         1. Thickness: 26 gauge.
         2. Thickness: 24 gauge.
         3. Thickness: 22 gauge.

\*\* NOTE TO SPECIFIER \*\* Delete surface texture option not required.

* + - * 1. Surface Texture: Stucco embossed with Mesa profile, 4 by 1/8 inch (102 by 3 mm) o.c.
        2. Surface Texture: Stucco embossed with Light Mesa profile, 4 by 1/16 inch (102 by 1.5 mm) o.c.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Polyester two-coat system.
        2. Finish: Modified silicone-polyester two-coat system.
        3. Finish: Fluoropolymer two-coat system.
        4. Finish: Vinyl plastisol two-coat system.
        5. Finish: 304 Stainless Steel.
        6. Finish: 316 Stainless Steel.
        7. Color: As indicated on Drawings.
        8. Color: To be selected by Architect.
        9. Color: Match Architect's custom color.
        10. Color: \_\_\_\_.
      1. Interior Face Sheet: Galvanized steel.
         1. Thickness: 26 gauge.
         2. Thickness: 24 gauge.
         3. Thickness: 22 gauge.

\*\* NOTE TO SPECIFIER \*\* Delete texture options not required.

* + - * 1. Surface Texture: Stucco embossed with Light Mesa profile.
        2. Surface Texture: Stucco embossed with Mesa profile.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Polyester two-coat system.
        2. Finish: Modified silicone-polyester two-coat system.
        3. Finish: Fluoropolymer two-coat system.
        4. Finish: Vinyl plastisol two-coat system.
        5. Finish: 304 Stainless Steel.
        6. Finish: 316 Stainless Steel.
        7. Color: As indicated on Drawings.
        8. Color: To be selected by Architect.
        9. Color: Match Architect's custom color.
        10. Color: \_\_\_\_.
      1. Panel Width: 44.5 inches (1130 mm).

\*\* NOTE TO SPECIFIER \*\* Delete panel thickness options not required.

* + - 1. Panel Thickness: 2 inch (51 mm).
      2. Panel Thickness: 2.5 inch (64 mm).
      3. Panel Thickness: 2.75 inch (70 mm).
      4. Panel Thickness: 3 inch (76 mm).
      5. Panel Thickness: 4 inch (102 mm).
      6. Panel Thickness: 5 inch (127 mm).
      7. Panel Thickness: 6 inch (152 mm).
      8. Panel Thickness: As indicated on drawings.
    1. Concealed Fastener, Insulated Metal Wall Panels with Foam Core: Structural metal panels consisting of exterior metal sheet and interior metal sheet with matching 4 by 1/16 inch (102 by 1.5 mm) o.c. profile. Factory foamed-in-place polyurethane core in thermally-separated profile, with tongue-and-groove panel edges, attached to supports using concealed fasteners.
       1. Basis of Design: Metl-Span, HPCI Barrier.
       2. Exterior Face Sheet: Galvanized steel.
          1. Thickness: 26 gauge.
          2. Surface Texture: Stucco embossed.
          3. Finish: Igloo White Polyester.
          4. Color: White.
       3. Interior Face Sheet: Galvanized steel.
          1. Thickness: 26 gauge.
          2. Surface Texture: Stucco embossed with Light Mesa profile.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Polyester two-coat system.
        2. Finish: Modified silicone-polyester two-coat system.
        3. Finish: Fluoropolymer two-coat system.
        4. Finish: Vinyl plastisol two-coat system.
        5. Finish: 304 Stainless Steel.
        6. Finish: 316 Stainless Steel.
        7. Color: As indicated on Drawings.
        8. Color: To be selected by Architect.
        9. Color: Match Architect's custom color.
        10. Color: \_\_\_\_.
      1. Panel Width: 42 inches (1067 mm).

\*\* NOTE TO SPECIFIER \*\* Delete panel thickness options not required.

* + - 1. Panel Thickness: 2 inch (51 mm).
      2. Panel Thickness: 2.5 inch (64 mm).
      3. Panel Thickness: 3 inch (76 mm).
      4. Panel Thickness: 4 inch (102 mm).
      5. Panel Thickness: 5 inch (127 mm).
      6. Panel Thickness: 6 inch (152 mm).
      7. Panel Thickness: As indicated on drawings.
    1. Lap Seam, Exposed Fastener, Foamed-Insulation-Core Metal Wall and Roof Panels: Structural metal panels consisting of exterior metal sheet with three major tapered ribs and two minor ribs between each major rib, and interior metal sheet, with factory foamed-in-place polyurethane core in thermally-separated profile, with tongue-and-groove panel edges, attached to supports using exposed fasteners.
       1. Basis of Design: Metl-Span, LS-36.

\*\* NOTE TO SPECIFIER \*\* Delete material options not required.

* + - 1. Material: G90 Galvanized Coated Steel, ASTM A 653.
      2. Material: Aluminum-Zinc Alloy-Coated Steel: ASTM A 792, structural quality, Grade 50, Coating Class AZ-50.
      3. Exterior Face Sheet: Galvanized steel.

\*\* NOTE TO SPECIFIER \*\* Delete thickness options not required.

* + - * 1. Thickness: 22 gauge.
        2. Thickness: 24 gauge.
        3. Thickness: 26 gauge.
        4. Surface Texture: Stucco embossed.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Modified silicone-polyester two-coat system.
        2. Finish: Fluoropolymer two-coat system.
        3. Finish: Fluoropolymer two-coat metallic color system.
        4. Finish: Exposed Galvalume Plus coating.
        5. Color: As indicated on Drawings.
        6. Color: To be selected by Architect.
        7. Color: Match Architect's custom color.
        8. Color: \_\_\_\_.
      1. Interior Face Sheet: Galvanized steel.

\*\* NOTE TO SPECIFIER \*\* Delete thickness options not required.

* + - * 1. Thickness: 22 gauge.
        2. Thickness: 24 gauge.
        3. Thickness: 26 gauge.
        4. Surface Texture: Stucco embossed with Mesa profile.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Polyester two-coat system.
        2. Finish: Modified silicone-polyester two-coat system.
        3. Finish: Fluoropolymer two-coat system.
        4. Finish: Vinyl plastisol two-coat system.
        5. Finish: 304 Stainless Steel.
        6. Finish: 316 Stainless Steel.
        7. Color: As indicated on Drawings.
        8. Color: To be selected by Architect.
        9. Color: Match Architect's custom color.
        10. Color: \_\_\_\_.
      1. Panel Width: 36 inches (914 mm).

\*\* NOTE TO SPECIFIER \*\* Delete panel thickness options not required.

* + - 1. Panel Thickness: 1.5 inch (38 mm).
      2. Panel Thickness: 2 inch (51 mm).
      3. Panel Thickness: 2.5 inch (64 mm).
      4. Panel Thickness: 3 inch (76 mm).
      5. Panel Thickness: 4 inch (102 mm).
      6. Panel Thickness: 5 inch (127 mm).
      7. Panel Thickness: 6 inch (152 mm).
      8. Panel Thickness: As indicated on drawings.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required. When specifying CF 7.2 Insul-Rib, delete the "PERFORMANCE REQUIREMENTS" article earlier in this specification.

* 1. INSULATED METAL WALL PANELS - CF 7.2 INSUL-RIB
     1. Performance Requirements:
        1. General: Provide metal panel system meeting performance requirements as determined by application of specified tests by a qualified testing facility on manufacturer's standard assemblies.
        2. Fire USA:
           1. ASTM E84 - Surface Burning Characteristics of Building Materials.

Flame Spread: Less than 25. Smoke Developed: Less than 450.

* + - * 1. ASTM E119 - Fire Tests of Building Construction Materials

One hour non-load bearing rating with two layers of Type X Gypsum.

Vertical or horizontal installation.

* + - * 1. FM 4880 - Class 1 Fire Rating of Insulated Wall, Ceiling and Roof Panels

Product approved.

Exterior wall requires FM 4881 approval.

* + - * 1. NFPA 259 - Test Method for Potential Heat of Building Materials.

Potential heat of foam plastic insulation contained in the assembly tested in accordance with NFPA 285.

* + - * 1. NFPA 285-19 - Evaluation of Fire Propagation Characteristics of Exterior Non-Load Bearing Wall Assemblies.

Panel assembly met the requirements of the standard

* + - * 1. NFPA 286 - Fire Tests for Evaluating Contribution of Wall and Ceiling Finish to Roof Fire Growth.

Test specimen met the criteria of the IBC Section 803.1.2.1.

* + - 1. Fire Canada:
         1. CAN/ULC S101

Fire Endurance Tests of Building Construction and Materials

One hour non-load bearing fire rating with two layers of Type X Gypsum

Meets 15 minute stay-in-place requirements

* + - * 1. CAN/ULC S102

Surface Burning Characteristics of Building Materials and Assemblies

Meets the National Building Code of Canada requirements

* + - * 1. CAN/ULC S134
        2. Fire Test of Exterior Wall Assemblies
        3. Complies with the fire-spread and heat-flux limitations required by the National Building Code of Canada
        4. CAN/ULC S138
        5. Fire Growth of Insulated Building Panels in a Full-Scale Room Configuration
        6. Met the criteria of the standard
      1. Structural:
         1. ASTM E72 - Strength Tests of Panels for Building Construction

See Load Chart

* + - * 1. ASTM E1592 - Structural Performance of Metal Roof and Siding Systems by Uniform Static Air Pressure Differences

See Load Chart

* + - * 1. FM 4881 - Class 1 Exterior Wall Structural Performance

See FM Wall Load Chart

* + - 1. Thermal Performance:
         1. ASTM C518 - Steady-State Thermal Transmission Properties by Means of the Heat-Flow Meter Apparatus.

K-Factor of 0.114 BTU.in/hr.ft2. degreesF at 35 degrees F mean core

* + - * 1. ASTM C1363- Thermal Performance of Building Materials and Envelope Assemblies.
        2. See Thermal Performance Guide
      1. Air infiltration:
         1. ASTM E283 - Rate of Air Leakage Through Curtain Walls Under Specified Pressure Differences.

Less than 0.01 cfm/ft.2 at 20 psf. Vertical or horizontal installation

* + - 1. Water infiltration:
         1. ASTM E331 - Water Penetration of Exterior Walls by Uniform Static Air Pressure Differences.

No uncontrolled leakage when tested to a static pressure of 20 psf.

Vertical or horizontal installation.

* + - 1. Special Approval from State of Florida: Product has State of Florida approval.
    1. Basis of Design: Metl-Span, CF 7.2 INSUL-RIB Insulated Metal Panel.
       1. Combines traditional bold 7.2 ribbed pattern panels with an insulated core. A unique building for commercial or industrial applications. Installs vertically and horizontally, Utilizes concealed clips and eliminates thermal short circuits.
       2. Width: Nominal 36 inches (914 mm).
       3. Thickness: 3 inch (76 mm).
       4. Thickness: 4 inch (102 mm).
       5. Length, Non-Directional Embossed:
          1. Horizontal: 8 to 32 ft ( m). Vertical: 8 to 40 ft ( m).
       6. Length, Unembossed:
          1. Horizontal: 8 to 32 ft ( m). Vertical: 8 to 40 ft ( m).
       7. Exterior Profile: 7.2 inches ( mm) on center rib pattern, 1-1/2 inches ( mm) tall.

\*\* NOTE TO SPECIFIER \*\* Delete material options not required.

* + - * 1. Embossed Exterior Face: 22 ga. G-90 galvanized.
        2. Embossed Exterior Face: 22 ga. AZ-50 aluminum-zinc coated steel.
        3. Embossed Exterior Face: 24 ga. G-90 galvanized.
        4. Embossed Exterior Face: 24 ga. AZ-50 aluminum-zinc coated steel.
        5. Embossed Exterior Face: 26 ga. G-90 galvanized.
        6. Embossed Exterior Face: 26 ga. AZ-50 aluminum-zinc coated steel.
        7. Unembossed Exterior Face: 24 ga. G-90 galvanized.
        8. Unembossed Exterior Face: 24 ga. AZ-50 aluminum-zinc coated steel.
        9. Unembossed Exterior Face: 26 ga. G-90 galvanized.
        10. Unembossed Exterior Face: 26 ga. AZ-50 aluminum-zinc coated steel.
      1. Interior Profile: Mesa, nominal 1/8 inch (3 mm) deep.

\*\* NOTE TO SPECIFIER \*\* Delete material options not required.

* + - * 1. Embossed Interior Face: 22 ga. G-90 galvanized.
        2. Embossed Interior Face: 22 ga. AZ-50 aluminum-zinc coated steel.
        3. Embossed Interior Face: 24 ga. G-90 galvanized.
        4. Embossed Interior Face: 24 ga. AZ-50 aluminum-zinc coated steel.
        5. Embossed Interior Face: 26 ga. G-90 galvanized.
        6. Embossed Interior Face: 26 ga. AZ-50 aluminum-zinc coated steel.
        7. Unembossed Interior Face: 22 ga. G-90 galvanized.
        8. Unembossed Interior Face: 22 ga. AZ-50 aluminum-zinc coated steel.
        9. Unembossed Interior Face: 24 ga. G-90 galvanized.
        10. Unembossed Interior Face: 24 ga. AZ-50 aluminum-zinc coated steel.
        11. Unembossed Interior Face: 26 ga. G-90 galvanized.
        12. Unembossed Interior Face: 26 ga. AZ-50 aluminum-zinc coated steel.
      1. Core: Foamed-in-place, zero ozone depleting (zero ODP) Class 1 foam.
      2. Joint: Offset double tongue-and-groove with extended metal shelf for positive face fastening. Though fastening required at panel ends.
      3. Insulative Properties: Based on ASTM C1363 and thermal modeling. Panel Widths of 36 inches (914 mm) at 35 degrees F (1.7 degrees C).
         1. U-Factor: 0.066. For 3 inch (76 mm) thick.
         2. U-Factor: 0.043. For 4 inch (102 mm) thick.
         3. R-Factor: 15.2. For 3 inch (76 mm) thick.
         4. R-Factor: 23.3. For 4 inch (102 mm) thick.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. FIRE-RESISTANT, INSULATED METAL WALL AND CEILING PANELS
     1. Performance Requirements:
        1. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E119 by an independent testing agency.
     2. Insulated-Core Metal Wall Backup Panel System: Structural metal panels consisting of exterior metal sheet with Santa Fe heavy embossing or Ultra-Light Mesa profile 1/32-inch- (0.79-mm-) and interior metal sheet with Ultra-Light Mesa profile 1/32-inch- (0.79-mm-) deep, with structural mineral wool core factory-bonded during fabrication in thermally-separated profile, with tongue-and-groove panel edges designed to form weathertight seals, attached to supports using exposed or non-exposed fasteners.
        1. Basis of Design: Metl-Span; ThermalSafe.

\*\* NOTE TO SPECIFIER \*\* Delete panel face material options not required.

* + - 1. Panel Face Material: Galvanized steel.
      2. Panel Face Material: Aluminum-zinc alloy coated steel.
      3. Exterior Face Sheet:

\*\* NOTE TO SPECIFIER \*\* Delete thickness options not required.

* + - * 1. Thickness: 26 gauge, 0.019-inch (0.480-mm).
        2. Thickness: 24 gauge, 0.025-inch (0.635-mm).

\*\* NOTE TO SPECIFIER \*\* Delete surface texture options not required.

* + - * 1. Surface Texture: Santa Fe heavy embossed.
        2. Surface Texture: Ultra-Light Mesa embossed.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Modified silicone-polyester two-coat system.
        2. Finish: Fluoropolymer two-coat system.
        3. Finish: Fluoropolymer two-coat metallic color system.
        4. Color: As indicated on Drawings.
        5. Color: To be selected by Architect.
        6. Color: Match Architect's custom color.
        7. Color: \_\_\_\_.
      1. Interior Face Sheet:

\*\* NOTE TO SPECIFIER \*\* Delete thickness options not required.

* + - * 1. Thickness: 26 gauge, 0.019-inch (0.480-mm).
        2. Thickness: 24 gauge, 0.025-inch (0.635-mm).
        3. Surface Texture: Stucco embossed.

\*\* NOTE TO SPECIFIER \*\* Delete finish and color options not required.

* + - * 1. Finish: Polyester two-coat system.
        2. Finish: Modified silicone-polyester two-coat system.
        3. Finish: Fluoropolymer two-coat system.
        4. Finish: Vinyl plastisol two-coat system.
        5. Finish: 304 Stainless Steel.
        6. Finish: 316 Stainless Steel.
        7. Color: As indicated on Drawings.
        8. Color: To be selected by Architect.
        9. Color: Match Architect's custom color.
        10. Color: \_\_\_\_.
      1. Panel Edge: Flush double tongue-and-groove joinery combined with integral spline providing uninterrupted continuity of mineral wool core.
      2. Panel Width: 42 inches (1067 mm).

\*\* NOTE TO SPECIFIER \*\* Delete panel thickness options not required.

* + - 1. Panel Thickness: 4 inch (102 mm).
      2. Panel Thickness: 5 inch (127 mm).
      3. Panel Thickness: 6 inch (152 mm).
      4. Panel Thickness: 7 inch (178 mm).
      5. Panel Thickness: 8 inch (203 mm).
      6. Panel Thickness: As indicated on drawings.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. METAL WALL BACKUP PANEL SYSTEM
     1. Insulated-Core Metal Wall Backup Panel System: Metal wall backup panel installation consisting of foamed-insulation-core metal-skinned wall panels and accessories, attached to metal framing with specified clips or rails, serving as combined thermal, air, and moisture barrier and support for cladding specified in another section.
        1. Foamed-insulation-core metal-skinned panels with interlocking side joinery and butted end joints.
        2. Interior metal face with planking ribs.
        3. Interlocking joinery to accept concealed fasteners for attachment to supports.
     2. Basis of Design: Metl-Span; BW Systems Insulated Backup Wall Panel, BW Universal System Panel.
        1. Panel Face Material: Aluminum-zinc alloy coated steel sheet.

\*\* NOTE TO SPECIFIER \*\* Delete thickness options not required.

* + - 1. Thickness: 29 gauge, 0.014-inch (0.360-mm).
      2. Thickness: 26 gauge, 0.019-inch (0.480-mm).
      3. Thickness: 24 gauge, 0.025-inch (0.635-mm).
      4. Thickness: 22 gauge, 0.031-inch (0.794-mm).

\*\* NOTE TO SPECIFIER \*\* Delete panel thickness and thermal resistance options not required.

* + - 1. Horizontal Backup Panel Thickness and Thermal Resistance: 2 inches (51 mm), R-13.6, U-.074.
      2. Horizontal Backup Panel Thickness and Thermal Resistance: 3 inches (76 mm), R-20.4, U-.051.

\*\* NOTE TO SPECIFIER \*\* Delete width options not required.

* + - 1. Panel Width: 36 inches (914 mm).
      2. Panel Width: 32 inches (813 mm).

\*\* NOTE TO SPECIFIER \*\* Delete configuration options not required.

* + - 1. Configuration: Type 1, horizontal metal wall backup panels with integral pre-punched thermally isolated Z-girt (BWUH Rail) attachment system configured to serve as attachment points for manufacturer-furnished vertical sub-girts to receive horizontal cladding.
      2. Configuration: Type 2, horizontal metal wall backup panels with integral pre-punched thermally isolated hat channel (BWUV Rail) sub-girt attachment system configured to serve for the direct attachment of vertical cladding.
      3. Configuration: Type 3, horizontal metal wall backup panel with manufacturer-furnished panel clip attachment to serve as attachment points for vertical subgirts to receive horizontal cladding.
      4. Configuration: Type 4, metal wall backup panel for masonry veneer, with manufacturer-furnished Hohmann and Barnard Joint Anchors and Surface Mount Anchors in panel joints and attached at panel midpoints.
    1. Basis of Design: Metl-Span; BW Systems Insulated Backup Wall Panel, BW Stretch System Panel.
       1. Panel Face Material: Galvanized steel.

\*\* NOTE TO SPECIFIER \*\* Delete thickness options not required.

* + - 1. Thickness: 22 gauge, 0.031-inch (0.794-mm).
      2. Thickness: 20 gauge, 0.0375-inch (0.953-mm).

\*\* NOTE TO SPECIFIER \*\* Delete panel thickness and thermal resistance options not required.

* + - 1. Vertical Backup Panel Thickness and Thermal Resistance: 2 inches (51 mm), R-13.6, U-.076.
    1. Vertical Backup Panel Thickness and Thermal Resistance: 2.75 inches (69 mm), R-18.7, U-.056.
       1. Vertical Backup Panel Thickness and Thermal Resistance: 4 inches (101 mm), R-27.2, U-.041.

\*\* NOTE TO SPECIFIER \*\* Delete width options not required.

* + - 1. Panel Width: 36 inches (914 mm).
      2. Panel Width: 30 inches (762 mm).

\*\* NOTE TO SPECIFIER \*\* Delete configuration options not required.

* + - 1. Configuration: Type 1, vertical installation metal wall backup panel with manufacturer-furnished panel attachment clips and horizontal sub-girts attached to panel joinery to receive vertical cladding.
      2. Configuration: Type 2, vertical installation metal wall backup panel with manufacturer-furnished panel attachment clips and vertical sub-girts attached to panel joinery to receive horizontal cladding.
    1. Panel Face Finish: 0.2-mil (0.051-mm) thick primer coat and 0.2-mil (0.051-mm) thick primer coat on interior face.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Louver Blank-Off Panels Finish: 0.8-mil (0.203-mm) thick black silicon polyester color coat on exterior face.
    2. Panel Core: Foamed-in-place modified polyisocyanurate, closed-cell, CFC and HCFC free, with minimum density of 2.4 lb./cu. ft. (39 kg/cu. m) and minimum compressive strength of 15 lb./sq. in. (103 kPa).
    3. Panel Sealant/Vapor Seal: Factory-applied non-curing butyl.
    4. Sub-girts: Metallic-coated steel sheet, ASTM A 653, G90 coating designation; structural quality, 0.054-inch/16-gage (1.37-mm) thick.
  1. ACCESSORlES
     1. General: Provide complete metal panel assemblies incorporating trim, copings, fasciae, gutters and downspouts, and miscellaneous flashings. Provide required fasteners, closure strips, and sealants as indicated in manufacturer's written instructions.

\*\* NOTE TO SPECIFIER \*\* Delete accessories not required.

* + 1. Flashing and Trim: Match material, thickness, and finish of metal panels.
    2. Panel Clips: ASTM A 653, G90 hot-dip galvanized zinc coating, one-piece, configured for concealment in panel joints, and identical to clips utilized in tests demonstrating compliance with performance requirements.
    3. Panel Fasteners: Self-drilling or Self-tapping screws and other acceptable fasteners recommended by metal panel manufacturer. Where exposed fasteners cannot be avoided, supply corrosion-resistant fasteners with heads matching color of metal panels by means of factory-applied coating, with weathertight resilient washers.
    4. Sealant: Sealant as recommended by panel manufacturer.
  1. FABRlCATlON
     1. General: Provide factory fabricated and finished metal panels, trim, and accessories meeting performance requirements, indicated profiles, and structural requirements.
     2. Fabricate metal panel joints configured to accept sealant providing weathertight seal.
     3. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's written instructions, approved shop drawings, and project drawings.
  2. FINISHES
     1. Finishes, General: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturer's written instructions.

\*\* NOTE TO SPECIFIER \*\* Delete options not required.

* + 1. Exterior Face Sheet Coil-Coated Finish System:
       1. Polyester Two-Coat System: 0.20 - 0.25 mil (0.005 - 0.006 mm) primer with 0.7 - 0.8 mil (0.018 - 0.020 mm) color coat.
          1. Basis of Design: Metl-Span, Igloo White.
       2. Silicone-Polyester Two-Coat System: 0.20 - 0.25 mil (0.005 - 0.006 mm) primer with 0.7 - 0.8 mil (0.018 - 0.020 mm) color coat.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - * 1. Meet solar reflectance index requirements.
        2. Basis of Design: Metl-Span, Silicone Polyester.
      1. Fluoropolymer Two-Coat System: 0.20 - 0.3 mil (0.005 - 0.008 mm) primer with 0.7 - 0.8 mil (0.018 - 0.020 mm) 70 percent PVDF fluoropolymer color coat.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - * 1. Meet solar reflectance index requirements.
        2. Basis of Design: Metl-Span, Fluoropolymer.
    1. Interior Face Sheet Coil-Coated Finish System:
       1. Polyester Two-Coat System: 0.20 - 0.25 mil (0.005 - 0.006 mm) primer with 0.7 - 0.8 mil (0.018 - 0.020 mm) color coat.
          1. Basis of Design: Metl-Span, Igloo White.
       2. Silicone-Polyester Two-Coat System: 0.20 - 0.25 mil (0.005 - 0.006 mm) primer with 0.7 - 0.8 mil (0.018 - 0.020 mm) color coat.
          1. Basis of Design: Metl-Span, Silicone Polyester.
       3. Fluoropolymer Two-Coat System: 0.20 mil (0.005 mm) primer with 0.7 - 0.8 mil (0.018 - 0.020 mm) 70 percent PVDF fluoropolymer color coat.
          1. Basis of Design: Metl-Span, Fluoropolymer.
       4. Vinyl Plastisol Two-Coat System: 0.20 mil (0.005 mm) primer with 4 mil (0.10 mm) high solids plastisol finished with PVC technology.
          1. Basis of Design: Metl-Span, Vinyl.
       5. 304 Stainless Steel: 2B 304 Stainless Steel.
          1. Basis of Design: Metl-Span, Stainless Steel.
       6. 316 Stainless Steel: 2B 316 Stainless Steel.
          1. Basis of Design: Metl-Span, Stainless Steel.

1. EXECUTION
   1. EXAMINATION
      1. Examine metal panel system substrate with Installer present. Inspect for erection tolerances and other conditions that would adversely affect installation of metal panels.
         1. Inspect framing that will support insulated metal panels to determine if support components are installed as indicated on approved shop drawings and are within tolerances acceptable to metal panel manufacturer and installer. Confirm presence of acceptable framing members at recommended spacing to match installation requirements of metal panels.
         2. Panel Support Tolerances: Confirm that metal panel supports are within tolerances acceptable to metal panel manufacturer but not greater than the following:
            1. Maximum 1/4 inch (6 mm) in 20 foot (6100 mm) in any direction.
            2. Maximum 3/8 inch (9 mm) over any single wall plane.
            3. Girt Spacing of 8 feet (2438 mm) or More: 1/4 inch (6 mm) out only.
            4. Girt Spacing of Less Than 8 feet (2438 mm): 1/8 inch (3 mm) out only.
            5. CF Architectural Girt Spacing Less Than 4 feet (1219 mm): 1/16 inch (1.5 mm) out only.
      2. Correct out-of-tolerance work and other deficient conditions prior to proceeding with insulated metal panel installation.
   2. INSTALLATION
      1. Install metal panel system in accordance with manufacturer's written instructions, approved shop drawings, and project drawings. Install metal panels in orientation, sizes, and locations indicated. Anchor panels and other components securely in place. Provide for thermal and structural movement.
      2. Attach panels to metal framing using screws, fasteners, sealants, and adhesives recommended for application by metal panel manufacturer.
         1. Fasten metal panels to supports with fasteners at each location indicated on approved shop drawings, at spacing and with fasteners recommended by manufacturer.
         2. Cut panels in field where required using manufacturer's recommended methods.
         3. Provide weatherproof jacks for pipe and conduit penetrating metal panels.
         4. Dissimilar Materials: Where elements of metal panel system will come into contact with dissimilar materials, treat faces and edges in contact with dissimilar materials as recommended by metal panel manufacturer.
      3. Attach panel flashing trim pieces to supports using recommended fasteners and joint sealers.
      4. Joint Sealers: Install sealants where indicated and where required for weatherproof performance of metal panel assemblies.
         1. Seal panel base assembly, openings, panel head joints, and perimeter joints using sealants indicated in manufacturer's instructions.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Seal wall panel joints; apply continuously without gaps in accordance with manufacturer's written instructions, approved shop drawings, and project drawings.
      2. Prepare joints and apply sealants per requirements of Division 07 Section.
    1. Accessories: Install metal panel accessories with positive anchorage to building and weather tight mounting; provide for thermal expansion. Coordinate installation with flashings and other components.
       1. Install components required for a complete metal panel assembly, including trim, copings, flashings, sealants, closure strips, and similar items.
       2. Comply with details of assemblies utilized to establish compliance with performance requirements and manufacturer's written installation instructions.
       3. Set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently weather resistant.
  1. FIELD QUALITY CONTROL

\*\* NOTE TO SPECIFIER \*\* Delete quality control options not required.

* + 1. Testing Agency: Owner will engage an independent testing and inspecting agency acceptable to Architect to perform field tests and inspections and to prepare test reports.
    2. Testing Agency: Engage an independent testing and inspecting agency acceptable to Architect to perform field tests and inspections and to prepare test reports.
    3. Water-Spray Test: After completing portion of metal panel assembly including accessories and trim, test 2-bay area selected by Architect for water penetration, according to AAMA 501.2.
  1. CLEANING
     1. Remove temporary protective films immediately in accordance with metal panel manufacturer's instructions. Clean finished surfaces as recommended by metal panel manufacturer.
  2. PROTECTION
     1. Protect installed products until completion of project.
     2. Replace damaged panels and accessories that cannot be repaired to the satisfaction of the Architect.

END OF SECTION