SECTION 07 40 00

METAL ROOF AND WALL PANELS

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\*\* NOTE TO SPECIFIER \*\* Corrugated Metals Incorporated; Roofing and Panels products.  
.  
This section is based on the products of Corrugated Metals Incorporated, which is located at:  
6550 Revlon Drive  
Belvidere, IL 61008  
Toll Free Tel: 800-621-5617  
Fax: 815-323-1317  
Email: [request info (info@corrugated-metals.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=Corrugated+Metals+Incorporated&coid=31691&rep=&fax=815-323-1317&message=RE:%20Spec%20Question%20(07410cor):%20%20&mf=)  
Web: <http://www.corrugated-metals.com>   
 [[Click Here](http://www.arcat.com/arcatcos/cos9531/arc31691.html)] for additional information.  
Corrugated Metals, Inc. (CMI) is a leading manufacturer of roll formed metal products, serving the Construction, Original Equipment and Defense Industries since 1887.  
  
Our 125 history has taught us that in order to be successful, we must be focused on the needs of our customers. To us, "Customer-Focused" means more than just supplying products; it means that we need to offer solutions to their problems. We accomplish this task by a) building upon our knowledge of the markets we serve, b) offering a professional, competent and capable staff and c) having a serious commitment to quality.  
  
CMI is proud to offer an excellent selection of products, coupled with high-volume production capacity, a broad range of equipment capabilities and innovative design engineering. We leverage these characteristics to build long-term customer relationships.

1. GENERAL
   1. SECTION INCLUDES

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

* + 1. Preformed, prefinished metal roof panels.
    2. Preformed, prefinished metal wall panels.
    3. Miscellaneous trim, flashing, closures and accessories.
    4. Fastening devices.
  1. RELATED SECTIONS

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

* + 1. Section 05 12 16 - Fabricated Fireproofed Steel Columns.
    2. Section 05 40 00 - Cold-Formed Metal Framing.
    3. Section 05 40 00 - Cold-Formed Metal Framing.
    4. Section 06 10 00 - Rough Carpentry.
    5. Section 07 21 26 - Blown Insulation.
    6. Section 07 71 23 - Manufactured Gutters and Downspouts.
    7. Section 07 91 26 - Joint Fillers.
  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 A240 - Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
       2. ASTM A480/A480M - Standard Specification for General Requirements for Flat-Rolled Stainless and Heat-Resisting Steel Plate, Sheet, and Strip.
       3. ASTM A606/A606M - Standard Specification for Steel, Sheet and Strip, High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, with Improved Atmospheric Corrosion Resistance.
       4. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
       5. ASTM A792/A792M - Standard Specification for Steel Sheet, 55 Percent Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
       6. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
    2. American Society of Civil engineers (ASCE):
       1. ASCE 7 - Minimum Design Loads for Buildings and Other Structures.
    3. American Iron and Steel Institute (AISI):
       1. Specification for the Design of Cold formed Steel Structural Members.
  1. PERFORMANCE AND DESIGN REQUIREMENTS
     1. Design Requirements for Roof Systems:
        1. System Design: Metal roof system as designed by the manufacturer shall be a complete system. All components of the system shall be supplied by the same manufacturer.
        2. Roof Panels: Steel panels shall be designed in accordance with the AISI Cold-Formed Steel Design Manual.
        3. Design Loads: Design load application shall be in accordance with local building code.
        4. Wind Loads: The design wind loads shall be based on the wind criteria in accordance with local building code.
        5. Deflection: Deflection requirements shall be in accordance with the applicable building code, or as a minimum, L/180 for wind load (but not less than 10 psf (49 kg/sq m).
        6. Thermal Expansion and Contraction: Completed metal roofing and flashing system shall be capable of withstanding expansion and contraction of components caused by changes in temperature without buckling, producing excess stress on structure, anchors or fasteners, or reducing performance ability. Design temperature differential shall be not less than 200 degrees F (93 degrees C).
        7. Accessories and Fasteners: Accessories and fasteners shall be capable of resisting the specified design wind suction forces in accordance with local building code.
     2. Design Requirements for Wall Systems:
        1. System Design: Metal wall a system as designed by the manufacturer shall be a complete system. All components of the system shall be supplied by the same manufacturer.
        2. Wall Panels: Steel panels shall be designed in accordance with the AISI Cold-Formed Steel Design Manual.
        3. Design Loads: Design load application shall be in accordance with local building code.
        4. Wind Loads: The design wind loads shall be based on the wind criteria in accordance with local building code.
        5. Deflection: Deflection requirements shall be in accordance with the applicable building code, or as a minimum, L/180 for wind load (but not less than 10 psf (49 kg/sq m).
        6. Thermal Expansion and Contraction: Completed metal wall and flashing system shall be capable of withstanding expansion and contraction of components caused by changes in temperature without buckling, producing excess stress on structure, anchors or fasteners, or reducing performance ability. Design temperature differential shall be not less than 200 degrees F (93 degrees C).
        7. Accessories and Fasteners: Accessories and fasteners shall be capable of resisting the specified design wind suction forces in accordance with local building code.
  2. 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. Installation methods.
     3. Shop Drawings: Elevations and plans showing layout of roof and wall panels, sections and details, fastening and joint details, trim, flashing, vents, openings, sealant and accessories. Show details of interfaces with adjacent products, weatherproofing, terminations, and penetrations of metal work.
     4. Design Loads: Submit manufacturer's minimum design load calculations according to ASCE 7, Method 2 for Components and Cladding. In no case shall the design loads be taken to be less than those specified herein.

\*\* 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. Product Data for Credit MR 4.1 and MR 4.2: For products having recycled content, documentation including percentages by weight of post-consumer and preconsumer recycled content.
          1. Include statement indicating costs for each product having recycled content.
       2. Product Data for Credit SS 7.2: Heat Island effect - Roof for having a solar reflectance index that meets the credit requirements for the majority of the roof surface, including printed statement of SRI rating.
       3. Product Data for Credit MR 5.1 and Credit MR 5.2: Submit data, including location and distance from Project of material manufacturer and point of extraction, harvest or recovery for main raw material.
          1. Include statement indicating cost for each regional material and the fraction by weight that is considered regional.

\*\* 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. Verification Samples: For each finish product specified, two samples, minimum size 12 inches (305 mm) square, representing actual product, color, and texture.
    3. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
    4. Closeout Submittals:
       1. Provide executed copy of manufacturer's warranty as applicable.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Company specializing in factory production with fixed based roll forming equipment for the profiles and s type specified with a minimum 10 years documented experience and a documented, standardized quality control program such as ISO-9001 approval.
     2. Installer Qualifications: Company specializing in installation of Metal Roof and Wall Panel Products of the type specified with a minimum 5 years documented experience.
  2. DELIVERY, STORAGE, AND HANDLING
     1. Deliver panels to job site properly packaged to provide protection against transportation damage.
     2. Store products in manufacturer's unopened and undamaged packaging with label intact in a clean, dry indoor location until ready for installation.
     3. Stack all materials to prevent damage and to allow for adequate ventilation. Elevate one end to promote drainage.
     4. Panels with strippable film must not be stored in the open, exposed to the sun.
     5. Protect panels from contact with materials that could cause staining or discoloration of the finish.
  3. SEQUENCING
     1. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
  4. PROJECT CONDITIONS
     1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits. Do not install panels over wet or frozen substrate.
  5. WARRANTY
     1. Provide Paint finish with the manufacturer's limited 20 five year warranty against cracking, peeling and fade (not to exceed 5 N.B.S. units).

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Corrugated Metals Incorporated, which is located at: 6550 Revlon Drive; Belvidere, IL 61008; Toll Free Tel: 800-621-5617; Fax: 815-323-1317; Email: [request info (info@corrugated-metals.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=Corrugated+Metals+Incorporated&coid=31691&rep=&fax=815-323-1317&message=RE:%20Spec%20Question%20(07410cor):%20%20&mf=); Web: <http://www.corrugated-metals.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. PREFORMED METAL ROOF AND WALL PANELS

\*\* NOTE TO SPECIFIER \*\* Edit the following metal roof and wall panel paragraphs as required and applicable to project requirements. Delete the paragraphs not applicable.

* + 1. Sinewave: Corrugated metal panels designed for horizontal and vertical applications.

\*\* NOTE TO SPECIFIER \*\* Delete application option not required.

* + - 1. Application: Metal Roof Panels.
      2. Application: Metal Wall Panels.

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

* + - 1. Material: Aluminum Sheet with gauge as required by Design Requirements.
      2. Material: Steel Sheet with gauge as required by Design Requirements.
      3. Material: Stainless Steel Sheet with gauge as required by Design Requirements.
      4. Material: Weathering Steel Sheet with gauge as required by Design Requirements.

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

* + - 1. Profile: Sinewave 2.67 by 1/2 inches (67.8 x 13 mm):
         1. Roofing Coverage: 40 inches (1016 mm).

Overall Width: 44-1/2 inches (1130 mm).

* + - * 1. Roofing Coverage: 24 inches (610 mm).

Overall Width: 27-1/2 inches (699 mm).

* + - * 1. Siding Coverage: 42-2/3 inches (1084 mm).
        2. Corrugated Profile: 2.67 inches (67.8 mm) o.c.

Depth: 1/2 inch (13 mm).

* + - 1. Profile: Sinewave 2.67 by 3/4 inches (67.8 by 19 mm):
         1. Roofing Coverage: 37-1/3 inches (948 mm).

Overall Width: 41-3/4 inches (1060 mm).

* + - * 1. Siding Coverage: 40 inches (1016 mm).

Overall Width: 41-3/4 inches (1060 mm).

* + - * 1. Corrugated Profile: 2.67 inches (67.8 mm) o.c.

Depth: 3/4 inch (19 mm).

* + - 1. Profile: Sinewave 2.67 by 7/8 inches (67.8 by 22 mm):
         1. Roofing Coverage: 34-2/3 inches (881 mm).

Overall Width: 39-1/8 inches (994 mm).

* + - * 1. Siding Coverage: 37-1/3 inches (948 mm).

Overall Width: 39-1/8 inches (994 mm).

* + - * 1. Corrugated Profile: 2.67 inches o.c. (67.8 mm).

Depth: 7/8 inch (22 mm).

* + - 1. Profile: Sinewave 3 by 1 inches (76 by 25 mm):
         1. Roofing Coverage: 36 inches (mm).

Overall Width: 37.5 inches (mm).

* + - * 1. Roofing Coverage: 24 inches (mm).

Overall Width: 25.5 inches (mm).

* + - * 1. Siding Coverage: 36 inches (mm).

Overall Width: 37.5 inches (mm).

* + - * 1. Siding Coverage: 24 inches (mm).

Overall Width: 25.5 inches (mm).

* + - * 1. Corrugated Profile: 3 inches o.c. (76 mm).

Depth: 1 inch (25 mm).

* + - 1. Length: 1 ft to 16 ft (305 to 4877 mm).
    1. Bold Rib: Ribbed metal panels designed for horizontal and vertical applications.

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

* + - 1. Application: Metal Roof Panels.
      2. Application: Metal Wall Panels.

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

* + - 1. Material: Aluminum Sheet with gauge as required by Design Requirements.
      2. Material: Steel Sheet with gauge as required by Design Requirements.
      3. Material: Stainless Steel Sheet with gauge as required by Design Requirements.
      4. Material: Weathering Steel Sheet with gauge as required by Design Requirements.

\*\* NOTE TO SPECIFIER \*\* Delete profile option not required.

* + - 1. Profile: Bold Rib I.
         1. Coverage: 31-1/2 inches (800 mm).

Overall Width: 33-1/2 inches (851 mm).

* + - * 1. Ribbed Profile: 10-1/2 inches (267 mm) o.c.

Top Rib: 1-7/16 inches (37 mm) wide.

Bottom Profile: 5-5/8 inches (143 mm) wide.

Depth: 2-11/32 inches (60 mm).

* + - 1. Profile: Bold Rib II.
         1. Coverage: 42 inches (1067 mm).

Overall Width 44 inches (1118 mm).

* + - * 1. Ribbed Profile: 10-1/2 inches (267 mm) o.c.

Top Rib: 5-5/8 inches (143 mm) wide.

Bottom Profile: 1-7/16 inches (37 mm) wide.

Depth: 2-11/32 inches (60 mm).

* + 1. V-Beam: V-Beam ribbed metal panels designed for horizontal and vertical applications.

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

* + - 1. Application: Metal Roof Panels.
      2. Application: Metal Wall Panels.

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

* + - 1. Material: Aluminum Sheet with gauge as required by Design Requirements.
      2. Material: Steel Sheet with gauge as required by Design Requirements.
      3. Material: Stainless Steel Sheet with gauge as required by Design Requirements.
      4. Material: Weathering Steel Sheet with gauge as required by Design Requirements.
      5. Coverage: 34-1/8 inches (867 mm).
         1. Overall Width: 37-1/2 inches (953 mm).
      6. Ribbed Profile: 4-7/8 inches (124 mm) o.c.
         1. Top Rib: 3/4 inches (19 mm) wide.
         2. Bottom Profile: 3/4 inches (19 mm) wide.
         3. Depth: 1-3/4 inches (44 mm).
    1. Box Rib: Ribbed metal panels designed for horizontal and vertical applications.

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

* + - 1. Application: Metal Roof Panels.
      2. Application: Metal Wall Panels.

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

* + - 1. Material: Aluminum Sheet with gauge as required by Design Requirements.
      2. Material: Steel Sheet with gauge as required by Design Requirements.
      3. Material: Stainless Steel Sheet with gauge as required by Design Requirements.
      4. Material: Weathering Steel Sheet with gauge as required by Design Requirements.

\*\* NOTE TO SPECIFIER \*\* Delete profile option not required. Note that 45-5/8 inch (1159 mm) wide sheet for 4 inch (102 mm) Box Rib is only available in aluminum,

* + - 1. Profile: Box Rib 4 inch (102 mm).
         1. Coverage: 36 inches (914 mm)

Overall Width: 38-1/2 inches (978 mm)

* + - * 1. Coverage: 44 inches (1118 mm).

Overall Width: 45-5/8 inches (1159 mm).

* + - * 1. Ribbed Profile: 4 inches (102 mm) o.c.

Top Rib: 1-5/8 inches (41 mm) wide.

Bottom Profile: 1-3/8 inches (35 mm) wide.

Depth: 1 inch (25 mm).

* + - 1. Profile: Box Rib 8 inch (203 mm).
         1. Coverage: 40 inches (1016 mm).

Overall Width: 41-5/8 inches (1057 mm)

* + - * 1. Coverage: 48 inches (1219 mm).

Overall Width: 49-5/8 inches (1260 mm).

* + - * 1. Ribbed Profile: 8 inches (203 mm) o.c.

Top Rib: 5-5/8 inches (143 mm) wide.

Bottom Profile: 1-3/8 inches (35 mm) wide.

Depth: 1 inch (25 mm).

* + 1. 6 Inch RIB: Ribbed metal panels designed for horizontal and vertical applications.

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

* + - 1. Application: Metal Roof Panels.
      2. Application: Metal Wall Panels.

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

* + - 1. Material: Aluminum Sheet with gauge as required by Design Requirements.
      2. Material: Steel Sheet with gauge as required by Design Requirements.
      3. Material: Stainless Steel Sheet with gauge as required by Design Requirements.
      4. Material: Weathering Steel Sheet with gauge as required by Design Requirements.
      5. Coverage: 36 inches (914 mm).
         1. Overall Width: 36-5/8 inches (930 mm).
      6. Ribbed Profile: 6 inches (152 mm) o.c.
         1. Top Rib: 1-1/8 inches (29 mm) wide.
         2. Bottom Profile: 3-1/2 inches (89 mm) wide.
         3. Depth 1-1/2 inch (38 mm).
    1. B-deck: Large and small ribbed metal panels designed for horizontal and vertical applications.

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

* + - 1. Application: Metal Roof Panels.
      2. Application: Metal Wall Panels.

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

* + - 1. Material: Structural Steel, grade 40 or 40 ksi yield.
      2. Material: Sheet with gauge as required by Design Requirements.
      3. Coverage: 36 inches (914 mm).
         1. Overall Width: 36.-5/8 inches (930 mm).
      4. Ribbed Profile: 6 inches (152 mm) o.c.
         1. Top Rib: 1-1/8 inches (29 mm) wide.
         2. Bottom Profile: 3-1/2 inches (89 mm) wide.
         3. Depth 1-1/2 inch (38 mm).
    1. R-Panel:

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

* + - 1. Material: Aluminum Sheet with gauge as required by Design Requirements.
      2. Material: Steel Sheet with gauge as required by Design Requirements.
      3. Material: Stainless Steel Sheet with gauge as required by Design Requirements.
      4. Material: Weathering Steel Sheet with gauge as required by Design Requirements.
      5. Coverage: 36 inches (914 mm).
         1. Overall Width: 39 inches (991 mm).
      6. Ribbed Profile:
         1. Top Rib: 1 inch (25 mm) wide and 12 inches (305 mm) o.c.
         2. Bottom Rib: 4 inches (102 mm) o.c. between tall ribs.
         3. Depth: 1-1/4 inch (32 mm).
    1. Cor-Rib: Ribbed metal panels designed for horizontal and vertical applications.

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

* + - 1. Application: Metal Roof Panels.
      2. Application: Metal Wall Panels.

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

* + - 1. Material: Aluminum Sheet with gauge as required by Design Requirements.
      2. Material: Steel Sheet with gauge as required by Design Requirements.
      3. Material: Stainless Steel Sheet with gauge as required by Design Requirements.
      4. Material: Weathering Steel Sheet with gauge as required by Design Requirements.
      5. Cor-Rib Coverage: 40 inches (1016 mm).
         1. Overall Width: 43.375 inches (1102 mm)
      6. Ribbed Profile: 3/4 inch (19 mm) wide and 2.67 inches (67.8 mm) o.c.
         1. Depth: 9/16 inch (14 mm).
    1. Exterior Architectural Wall Panels: Flush metal liner panels designed for horizontal and vertical applications.
       1. Application: Exterior Wall Liner Panels.

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

* + - 1. Material: Aluminum Sheet with gauge as required by Design Requirements.
      2. Material: Steel Sheet with gauge as required by Design Requirements.
      3. Material: Stainless Steel Sheet with gauge as required by Design Requirements.
      4. Material: Weathering Steel Sheet with gauge as required by Design Requirements.
      5. FAP Exterior Wall Panel:
         1. Coverage: 12 inches (305 mm).

Depth: 1-1/2 inches (38 mm).

* + 1. Interior Wall Liner Panel: Flush metal liner panels designed for horizontal and vertical applications.
       1. Application: Interior Wall Liner Panels.

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

* + - 1. Material: Aluminum Sheet with gauge as required by Design Requirements.
      2. Material: Steel Sheet with gauge as required by Design Requirements.
      3. Material: Stainless Steel Sheet with gauge as required by Design Requirements.
      4. Material: Weathering Steel Sheet with gauge as required by Design Requirements.

\*\* NOTE TO SPECIFIER \*\* Delete the wall liner panel option not required.

* + - 1. Wall Liner Panel: FL 24 Interior.
         1. Coverage: 24 inches (610 mm).

Depth: 1-7/16 inch (37 mm).

* + - 1. Wall Liner Panel: FL 224 Interior.
         1. Coverage: 24 inches (610 mm).

Depth: 2-7/16 inches (62 mm).

* + 1. Box Beam: Ribbed metal panels designed for horizontal and vertical applications.

\*\* NOTE TO SPECIFIER \*\* Delete application option not required.

* + - 1. Application: Metal roof panels.
      2. Application: Metal wall panels.

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

* + - 1. Material: Aluminum sheet with gauge as required by Design Requirements.
      2. Material: Steel sheet with gauge as required by Design Requirements.
      3. Material: Stainless steel sheet with gauge as required by Design Requirements.
      4. Material: Weathering steel sheet with gauge as required by Design Requirements.
      5. Box Rib 5.33 inch (135 mm):
         1. Coverage: 32 inches (813 mm).

Overall Width: 35-1/2 inches (902 mm).

* + - * 1. Ribbed Profile: 5.33 inches (135 mm) o.c.

Top Rib: 2-1/8 inches (54 mm) wide.

Bottom Profile: 2-1/8 inches (54 mm) wide.

Depth 1-1/2 inches (38 mm).

* + 1. RS 7.2: Perforated ribbed metal panels designed for horizontal and vertical applications.

\*\* NOTE TO SPECIFIER \*\* Delete application option not required.

* + - 1. Application: Metal roof panels.
      2. Application: Metal wall panels.

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

* + - 1. Material: Aluminum sheet with gauge as required by Design Requirements.
      2. Material: Steel sheet with gauge as required by Design Requirements.
      3. Material: Stainless steel sheet with gauge as required by Design Requirements.
      4. Material: Weathering steel sheet with gauge as required by Design Requirements.
      5. Box Rib 7.2 inch (183 mm):
         1. Coverage: 36 inches (914 mm).

Overall Width: 38-7/8 inches (987 mm).

* + - * 1. Ribbed Profile: 7.2 inches (183 mm) o.c.

Top Rib: 2 inches (51 mm) wide.

Bottom Profile: 2 inches(51 mm) wide.

Depth: 1-1/2 inches (38 mm).

* 1. ACCESSORlES
     1. Metal Components:
        1. Provide accessories and other items essential to a complete roof or wall panel installation including panel clips, trim, closures, fascia, soffits, caps and similar metal components.
        2. Metal components fabricated from same gauge and finish as metal panels, unless otherwise noted.
        3. Flashing: Provide the same gauge and finish as the exterior panel, unless otherwise noted.
     2. Fasteners:
        1. Exposed fasteners shall be hex head self-drilling screws with bonded washers and color to match panels. Screws may be either plated steel or stainless steel as noted on the Drawings.
        2. Exposed stainless steel rivets shall match color finish of panel.
     3. Closure Strips: EPDM rubber to match configuration of the covering.
     4. Sealants:
        1. Exposed Sealants: One component silicone based as recommended by panel manufacturer: field applied.
        2. Concealed Sealants: Non-curing, non-skinning butyl, polyisobutylene or polybutane tape as recommended by panel manufacturer; field applied.
  2. MATERIALS

\*\* NOTE TO SPECIFIER \*\* Roof and wall panels are available in various standard substrates. Select the material and finish required from the following paragraphs and delete those that are not required for the project.

* + 1. Prefinished Aluminum Sheet:
       1. Base Metal: ASTM B 209, Alloy 3004, 3003, 3105, 5052, 5083, 3004/7072 Alclad.
       2. Thickness: Available in 0.019 to 0.125 inch (0.48 to 3.17 mm) sheet thickness.

\*\* NOTE TO SPECIFIER \*\* Delete material finish option not required.

* + - 1. Material Finish: Bare mill.
      2. Material Finish: Stucco embossed.

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

* + - 1. Paint Finish: Polyvinylidene Fluoride. Coranar two coat PVDF resin system with a total Dry Film Thickness (DFT) of 0.9 to 1.1 mils (0.023 to 0.028 mm).
      2. Paint Finish: Siliconized Polyester. Corasil two coat resin system with a total Dry Film Thickness (DFT) of 0.9 to 1.1 mils (0.023 to 0.028 mm).
      3. Paint Finish: CMI Corasol Plastisol Coil Coating. Corasol two coat SMP resin system with a total Dry Film Thickness (DFT) of 2.1 to 10.2 mils (0.053 to 0.259 mm).

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

* + - 1. Color: \_\_\_\_\_\_\_\_.
      2. Color: As selected from manufacturers standard range.
      3. Color: Custom as selected by the Architect.
    1. Galvanized Steel Sheet: ASTM A 653/A 653M, G90/Z275 zinc coated, coil coated:
       1. Base metal: Commercial quality.
       2. Thickness: Available in 28 to 11 gauge (0.378 to 3.038 mm) sheet thickness.

\*\* NOTE TO SPECIFIER \*\* Delete material finish option not required.

* + - 1. Material Finish: Bare mill.
      2. Material Finish: Stucco embossed.

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

* + - 1. Paint Finish: Polyvinylidene Fluoride. Coranar two coat PVDF resin system with a total Dry Film Thickness (DFT) of 0.9 to 1.1 mils (0.023 to 0.028 mm).
      2. Paint Finish: Siliconized Polyester. Corasil two coat resin system with a total Dry Film Thickness (DFT) of 0.9 to 1.1 mils (0.023 to 0.028 mm).
      3. Paint Finish: CMI Corasol Plastisol Coil Coating. Corasol two coat SMP resin system with a total Dry Film Thickness (DFT) of 2.1 to 10.2 mils (0.053 to 0.259 mm).

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

* + - 1. Color: \_\_\_\_\_\_\_\_.
      2. Color: As selected from manufacturers standard range.
      3. Color: Custom as selected by the Architect.
    1. Galvalume: ASTM A 792/A792M, AZ50, aluminum-zinc alloy coating.
       1. Base metal: Commercial quality.
       2. Thickness: Available in 28 gauge to 14 gauge (0.378 to 1.897 mm) sheet thickness.

\*\* NOTE TO SPECIFIER \*\* Delete material finish option not required.

* + - 1. Material Finish: Bare mill.
      2. Material Finish: Stucco embossed.

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

* + - 1. Paint Finish: Polyvinylidene Fluoride. Coranar two coat PVDF resin system with a total Dry Film Thickness (DFT) of 0.9 to 1.1 mils (0.023 to 0.028 mm).
      2. Paint Finish: Siliconized Polyester. Corasil two coat resin system with a total Dry Film Thickness (DFT) of 0.9 to 1.1 mils (0.023 to 0.028 mm).
      3. Paint Finish: CMI Corasol Plastisol Coil Coating. Corasol two coat SMP resin system with a total Dry Film Thickness (DFT) of 2.1 to 10.2 mils (0.053 to 0.259 mm).

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

* + - 1. Color: \_\_\_\_\_\_\_\_.
      2. Color: As selected from manufacturers standard range.
      3. Color: Custom as selected by the Architect.
    1. Galvalume-Plus: ASTM A 792/A792M, AZ55, aluminum-zinc alloy coating.
       1. Base metal: Commercial quality.
       2. Thickness: Available in 28 gauge to 14 gauge (0.378 to 1.897 mm) sheet thickness.

\*\* NOTE TO SPECIFIER \*\* Delete material finish option not required.

* + - 1. Material Finish: Bare mill.
      2. Material Finish: Stucco embossed.
    1. Stainless Steel: ASTM A 240, Type 304, 3042B, 316.
       1. Base metal: Structural quality.
       2. Thickness: Available in 26 gauge to 16 gauge (0.378 to 1.519 mm) sheet thickness.

\*\* NOTE TO SPECIFIER \*\* Delete material finish option not required.

* + - 1. Material Finish: Bare mill.
      2. Material Finish: Stucco embossed.
    1. Weathering Steel: ASTM A 606.
       1. Base metal: Structural quality.
       2. Thickness: Available in 22 gauge to 14 gauge (0.378 to 1.897 mm) sheet thickness.
       3. Finish: Naturally oxidized.
  1. FABRlCATlON
     1. Form and fabricate panels to the profiles and configurations indicated on the Drawings.
     2. Factory form panels and components on a stationary industrial rolling mill.
     3. Mark panels with custom metallic finishes with proper panel orientation for field erection.

\*\* NOTE TO SPECIFIER \*\* Panels are available in factory formed standard lengths of 12 inches (305 mm) to 90 feet (2743 cm). Larger lengths are available upon request. Contact the manufacturer for additional information.

* + 1. Fabricate panels to full length indicated.
    2. Fabricate flashings in 10 foot (3048 mm) lengths.

1. EXECUTION
   1. EXAMINATION
      1. Do not begin installation until substrates have been properly prepared.
      2. Inspect framing to verify that installation tolerance is in conformance with AISC Code, Section 7.
      3. Verify primary and secondary framing members are installed and fastened, properly aligned and sloped where required.
      4. Verify openings, curbs, pipes, sleeves, ducts, or vents through panels are solidly set, properly framed and located.
      5. If framing or substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
   2. PREPARATION
      1. Clean surfaces thoroughly prior to installation.
      2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
   3. INSTALLATION
      1. Install roofing and siding systems in accordance with approved shop drawings and manufacturer's printed installation instructions.
      2. Install panels properly aligned, level and plumb.
      3. Panels shall be in full and firm contact with supports and with each other at side and end laps.
      4. Attach panels using manufacturer's fasteners, spaced in accordance with approved shop drawings.
      5. Install panels weather tight.
      6. Do not allow panels or trim to come into contact with dissimilar materials.
      7. Installation shall provide for expansion and contraction of panels and flashings waves, warps, buckles, fastening distress or distortions.
      8. Provide underlayment for roofing panels where required by the manufacturer.
      9. Provide closures at all panel openings.
      10. Coordinate flashing and seals at intersections with adjacent work as required for a watertight installation.
      11. Use tape sealant at side and end laps of all through fastened roof assembles with a slope of 4:12 or less.

\*\* NOTE TO SPECIFIER \*\* Coordinate insulation specifications with Section 07 25 00 - WeatherBarriers including insulation material selection, insulation attachment, and properties.

* + 1. Coordinate with installation of insulation as specified in Section 07 25 00 - WeatherBarriers.
    2. Install metal roofing accessories in accordance with the manufacturer's instructions and the approved shop drawings.
  1. CLEANING
     1. Clean any grease, finger marks or stains from the panels per manufacturer's recommendations.
  2. PROTECTION
     1. Protect installed products until completion of project.
     2. Remove and replace any panels or components, which are damaged beyond successful repair.
     3. Touch-up, repair or replace damaged products before Substantial Completion.
  3. SCHEDULES

\*\* NOTE TO SPECIFIER \*\* Retain Paragraph below if required to suit project requirements. Identify products by name on the Drawings or use this paragraph to define the location of each type of material to be used. The following are some examples of schedule references. Edit as required to suit project or delete and identify products on the Drawings.

* + 1. Schedule Item 01:
       1. \_\_\_\_\_\_.
       2. \_\_\_\_\_\_.
       3. \_\_\_\_\_\_.
    2. Schedule Item 02:
       1. \_\_\_\_\_\_.
       2. \_\_\_\_\_\_.
       3. \_\_\_\_\_\_.

END OF SECTION