SECTION 07 42 13

PREFORMED METAL WALL PANELS

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\*\* NOTE TO SPECIFIER \*\* Englert, Inc.; preformed metal wall panel products.  
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This section is based on the products of Englert, Inc., which is located at:  
1200 Amboy Ave.  
Perth Amboy, NJ 08861  
Toll Free Tel: 800-364-5378  
Tel: 732-826-8614  
Fax: 732-826-8865  
Email: [request info (arcat@englertinc.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=Englert,+Inc.&coid=32304&rep=&fax=732-826-8865&message=RE:%20Spec%20Question%20(07412eng):%20%20&mf=)  
Web: <https://www.englertinc.com> | <http://www.leafguard.com>   
 [ [Click Here](http://www.arcat.com/arcatcos/cos32/arc32304.html) ] for additional information.  
Since 1966, Englert has evolved into one of the pre-eminent forces in metal roofing, rainware, coil coating and portable roll-forming equipment. From the development of LeafGuard, the revolutionary leaf-shedding gutter system to a fully integrated metal roofing manufacturer with an in-house continuous coil coating line, Englert has always been a pioneer in construction products. Englert continues to lead the industry with its new line of Energy Star compliant paint systems!  
This specification includes Englert's flush interlocking wall panel system, available in a wide range of colors and gauges that offers architects and builders additional creative ideas when designing with metal.  
Englert has years of experience and takes pride in working out design details for the integration of Englert metal walls in a building's design.

1. GENERAL
   1. SECTION INCLUDES

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

* + 1. Preformed, prefinished metal wall panels and flashings.
    2. Miscellaneous trim, flashing, closures and accessories.
    3. 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 13 - Architecturally-Exposed Structural Steel Framing.
    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 19 - Foamed-In-Place Insulation.
    6. Section 07 41 13 - Metal Roof Panels.
    7. Section 07 71 23 - Manufactured Gutters and Downspouts.
    8. Section 07 91 23 - Backer Rods.
  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 A 792 Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
    2. ASTM B 209 Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
    3. American Iron & Steel Institute (AISI) Specification for the Design of Cold formed Steel Structural Members.
  1. DESIGN / PERFORMANCE REQUIREMENTS
     1. Design Requirements for Wall Systems:
        1. Wall Panels: Steel panels shall be designed in accordance with ASCE-7. Hat channel furring/girts to be designed in accordance with AISI Cold-Formed Steel Design Manual.
        2. Design Loads: Design load application shall be in accordance with local building code.
        3. Wind Loads: The design wind loads shall be based on the wind criteria in accordance with local building code.
        4. 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).
        5. 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: Showing layout of panels, anchoring details, joint details, trim, flashing, and accessories. Show details of weatherproofing, terminations, and penetrations of metal work.

\*\* 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 and profile specified, two samples, minimum size 6 inches (150 mm) long, representing actual product, color, and profile.
    3. Delegated Design Submittal: For metal wall panel assembly indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation. The professional engineer is to be licensed in the state where the project is located.
    4. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
    5. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic cleaning and maintenance of all components.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Company specializing in production of Architectural Sheet Metal Products of the type specified with a minimum 10 years documented experience.
     2. Installer Qualifications: Company specializing in installation of Architectural Sheet Metal Products of the type specified with a minimum 5 years documented experience.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
       1. Finish areas designated by Architect.
       2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
       3. Refinish mock-up area as required to produce acceptable work.
  1. 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 packaging in a clean, dry location until ready for installation.
     3. Stack all materials to prevent damage and to allow for adequate ventilation. Elevate on end to promote drainage.
     4. Panels with strippable film must not be stored in the open, exposed to the sun.
     5. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.
  2. SEQUENCING
     1. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
  3. 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.
  4. WARRANTY
     1. Provide Paint finish with the manufacturer's limited 35 five year warranty against cracking, peeling and fade (not to exceed 5 N.B.S. units).
     2. Provide Galvalume material with the manufacturer's limited 20 year warranty against failure due to corrosion, rupture or perforation.
     3. Provide applicator warranty covering watertightness of the wall system for the period of 2 years from the date of substantial completion.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Englert, Inc., which is located at: 1200 Amboy Ave.; Perth Amboy, NJ 08861; Toll Free Tel: 800-364-5378; Tel: 732-826-8614; Fax: 732-826-8865; Email: [request info (arcat@englertinc.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=Englert,+Inc.&coid=32304&rep=&fax=732-826-8865&message=RE:%20Spec%20Question%20(07412eng):%20%20&mf=); Web: <https://www.englertinc.com> | <http://www.leafguard.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. MATERIALS
     1. Steel Sheet: Galvalume Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process in conformance with ASTM A 792.
        1. Thickness:

\*\* NOTE TO SPECIFIER \*\* Select one of the following two thickness paragraphs as required. Delete thicknesses not required.

* + - * 1. 22 gauge.
        2. 24 gauge.
    1. Aluminum Sheet: Aluminum sheet conforming with ASTM B 209.
       1. Thickness:

\*\* NOTE TO SPECIFIER \*\* Select one of the following two thickness paragraphs as required. Delete thicknesses not required.

* + - * 1. 0.032 inch (0.81 mm) for panels and trim.
        2. 0.032 inch (0.81 mm) for panels and trim.
    1. Factory Finish: Kynar 500 PVDF resin-based coating, applied by the manufacturer on a continuous coil coating line.
       1. Standard top side color coating comprised of a 0.70 - 0.80 mil full strength, 70% Kynar 500/Hylar 5000 fluorocarbon (Polyvinylidene Fluoride PVF2) coating over urethane primer of 0.20 - 0.30 mil on finish side. Total face dry film thickness: 1.0 mil + 0.2 mil.
       2. Reverse side shall be coated with primer and wash coat of 0.30 mil plus or minus 0.05 mil.
       3. Finish shall conform to all tests for adhesion, flexibility, and longevity as specified by the Kynar 500 PVDF resin-based coating supplier.
       4. Color:
          1. As selected from the manufacturer's standard range.
          2. Custom color as selected by the Architect.
    2. Strippable Film: Apply to the top side of the painted coil to protect the finish during fabrication, shipping and field handling. Strippable film must be removed immediately before installation.
  1. PREFORMED METAL WALL PANELS
     1. Type: Englert H-12-3 multi-purpose metal wall panels designed for horizontal and vertical applications, with ribs and a concealed fastening leg, and lock. Panels to be of interlocking design with concealed fasteners.
        1. Material:

\*\* NOTE TO SPECIFIER \*\* Select one of the following two paragraphs and delete the one not required.

* + - * 1. Steel Sheet gauge as required by Design Requirements.
        2. Aluminum Sheet gauge as required by Design Requirements.
      1. Coverage: 12 inches.
      2. Depth: 7/8 inch.
      3. Profile:
         1. H-12-3 with 3 ribs uniformly spaced at 4 inches on center
    1. Type: Englert H-16-4 multi-purpose metal wall panels designed for horizontal and vertical applications, with ribs and a concealed fastening leg, and lock. Panels to be of interlocking design with concealed fasteners.
       1. Material:

\*\* NOTE TO SPECIFIER \*\* Select one of the following two paragraphs and delete the one not required.

* + - * 1. Steel Sheet gauge as required by Design Requirements.
        2. Aluminum Sheet gauge as required by Design Requirements.
      1. Coverage: 16 inches.
      2. Depth: 7/8 inch.
      3. Profile:
         1. H-16-4 with 4 ribs uniformly spaced at 4 inches on center.
    1. Type: Englert 2.67 inches by .5 inch multi-purpose metal wall panels designed for horizontal and vertical applications, with ribs and exposed fasteners. Panels to be of lap joint design.
       1. Material:

\*\* NOTE TO SPECIFIER \*\* Select one of the following two paragraphs and delete the one not required.

* + - * 1. Steel Sheet gauge as required by Design Requirements.
        2. Aluminum Sheet gauge as required by Design Requirements.
      1. Coverage: 40 inches.
      2. Depth: 1/2 inch.
      3. Profile:
         1. Corrugated with lap joints.
    1. Type: Englert 2.67 inches by .875 inch multi-purpose metal wall panels designed for horizontal and vertical applications, with ribs and exposed fasteners. Panels to be of lap joint design.
       1. Material:

\*\* NOTE TO SPECIFIER \*\* Select one of the following two paragraphs and delete the one not required.

* + - * 1. Steel Sheet gauge as required by Design Requirements.
        2. Aluminum Sheet gauge as required by Design Requirements.
      1. Coverage: 34.67 inches.
      2. Depth: 7/8 inch.
      3. Profile:
         1. Corrugated with lap joints.
    1. Type: Englert 7.2 inches by 1.75 inch multi-purpose metal wall panels designed for horizontal and vertical applications, with ribs and exposed fasteners. Panels to be of lap joint design.
       1. Material:

\*\* NOTE TO SPECIFIER \*\* Select one of the following two paragraphs and delete the one not required.

* + - * 1. Steel Sheet gauge as required by Design Requirements.
        2. Aluminum Sheet gauge as required by Design Requirements.
      1. Coverage: 36 inches.
      2. Depth: 7/8 inch.
      3. Profile:
         1. Corrugated with lap joints.
    1. Type: Englert 1.25 inches Uniline R multi-purpose metal wall panels designed for horizontal and vertical applications, with ribs and exposed fasteners. Panels to be of lap joint design.
       1. Material:

\*\* NOTE TO SPECIFIER \*\* Select one of the following two paragraphs and delete the one not required.

* + - * 1. Steel Sheet gauge as required by Design Requirements.
        2. Aluminum Sheet gauge as required by Design Requirements.
      1. Coverage: 36 inches.
      2. Depth: 1-1/4 inch.
      3. Profile:
         1. Corrugated with lap joints.
    1. Type: Englert 1.25 inches Uniline RW multi-purpose metal wall panels designed for horizontal and vertical applications, with ribs and exposed fasteners. Panels to be of lap joint design.
       1. Material:

\*\* NOTE TO SPECIFIER \*\* Select one of the following two paragraphs and delete the one not required.

* + - * 1. Steel Sheet gauge as required by Design Requirements.
        2. Aluminum Sheet gauge as required by Design Requirements.
      1. Coverage: 36 inches.
      2. Depth: 1-1/4 inch.
      3. Profile:
         1. Corrugated with lap joints.
    1. Accessories:
       1. Metal Components:
          1. Provide accessories and other items essential to a complete wall panel installation including miscellaneous trim, closures soffits and similar metal components.
          2. Fabricate metal components from same gauge and finish as metal panels, unless otherwise noted.
       2. Flashing: Provide the same gauge and finish as the exterior panel, unless otherwise noted. Hem all exposed edges of flashing on underside, 1/2 inch.
       3. Fasteners:
          1. Concealed fasteners shall be self-drilling screws with bonded washers. Screws may be either galvanized steel or stainless steel as noted on the Drawings.
          2. Exposed stainless steel rivets shall match color finish of panel.
       4. Closure Strips: Polyethylene to match configuration of the covering.
       5. 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.

1. EXECUTION
   1. EXAMINATION

\*\* NOTE TO SPECIFIER \*\* Verify that the substrate meets the minimum requirements of the preformed metal wall panel Manufacturer. The minimum required substrate is 1/2 inch plywood, 22 gauge metal deck or open-framed girts at 2 feet o.c. with one layer of ice and water shield underlayment, a multipurpose, self-adhesive air/water barrier membrane or taped polyurethane sheet. Contact Englert, Inc for additional information.

* + 1. Do not begin installation until substrates have been properly prepared.
    2. Inspect framing to verify that it is free of depressions, waves or projections, and is plumb to 1/4 inch in 20 feet.
    3. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
  1. 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.
  2. INSTALLATION
     1. Install in accordance with manufacturer's instructions. Conform to standards set forth in the Architectural Sheet Metal Manual published by SMACNA to achieve a watertight installation.
     2. Install panels in such a manner that horizontal lines are true and level and vertical lines are plumb.
     3. Remove protective strippable film prior to installation of panels.
     4. Attach panels using manufacturer's fasteners, spaced in accordance with approved shop drawings.
     5. Do not allow panels or trim to come into contact with dissimilar materials.
     6. Remove and replace any panels or components, which are damaged beyond successful repair.
  3. CLEANING
     1. Clean any grease, finger marks or stains from the panels per manufacturer's recommendations.
  4. PROTECTION
     1. Protect installed products until completion of project.
     2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION