

This section is based on the products of Alumi-Guard, Inc., which is located at:  
 2401 Corporate Blvd.  
 Brooksville, FL 34604.  
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Alumi-Guard™ is a manufacturer of maintenance free aluminum fencing with nationwide distribution. Alumi-Guard™ was founded upon three basic but very important principles. Our mission is to supply a high quality and durable product for a competitive price with unsurpassed customer service. That means your project can be completed with a high quality product for a fair price on schedule.  
   
 Alumi-Guard™ fencing is constructed with heavy wall aluminum extrusions. All of the fencing is finished in Armor-Guard™ TGIC® polyester powder coating. This finish has been tested in Florida's hot, humid, high salt concentrated environment. It surpasses the 3000-hour salt spray test. That is more than double what AAMA mandates. Because Armor-Guard™ powder coating is twice as thick and twice as hard as baked on enamel finishes, it is much more durable and will look attractive for a very long time. Alumi-Guard™ offers a lifetime limited warranty on the finish and workmanship of all its materials.

SECTION 05 73 00

ORNAMENTAL ALUMINUM RAILINGS

(GUARDRAILS)

1. GENERAL
   * + 1. SUMMARY
          1. Section Includes:

Retain following subparagraphs below that are required.

Section 03 30 00 – Concrete

Section 03 11 13 – Cast-In Place Concrete

* + - 1. DELEGATED DESIGN FOR FOUNDATIONS OF GUARDRAIL POSTS
         1. Delegated Engineering Responsibility: Require ornamental aluminum railings installer to employ a professional engineer, licensed in the state where the project is located, to provide an engineering design for connections of the railings to adjacent building construction required to meet concept expressed in the Contract Documents that includes the following:

Comprehensive engineering analysis indicating location, type, magnitude, and direction of loads imposed on building construction.

Preparation of engineering calculations, shop drawings, and other submittals with professional seal affixed according to respective jurisdictional licensing regulation.

* + - 1. PREINSTALLATION MEETINGS

Retain "Preinstallation Conference" Paragraph below if Work of this Section is extensive or complex enough to justify a conference.

* + - * 1. Preinstallation Conference: Conduct conference at Project site.
      1. PERFORMANCE REQUIREMENTS
         1. Structural Requirements:

Alumi-Guard Aluminum Guardrail systems performance meets or exceeds design loading specified in Chapter 16 of the IBC, Section R301 of IRC. As shown with Professional Engineered calculations.

* + - * 1. Structural Performance: Comply with performance requirements specified, as determined by testing of manufacturer's standard ornamental aluminum railings representing those indicated for this Project without failure due to defective manufacture, fabrication, installation, or other defects in construction.
        2. Structural Requirements: Engineer ornamental aluminum railings to withstand live and dead loads according to authorities having jurisdiction, applicable local building codes, and information indicated within limits and under conditions indicated, without material failure or permanent deformation of structural members.

Handrails and Top Rails of Guards:

Uniform Load: 50 lbf/lf applied in any direction.

Concentrated Load: 200 lbf applied in any direction.

Concentrated Load at Infill of Guards: 50 lbf applied horizontally on an area not to exceed 1 sq ft.

Load Assumption: Loads need not be assumed to act concurrently.

* + - 1. SUBMITTALS
         1. Product Data: Manufacturer’s technical literature for each product specified.

Include preparation instructions and recommendations.

Include storage and handling requirements and recommendations.

Include manufacturer’s installation instructions.

* + - * 1. Shop Drawings: Elevations of guardrail panels, spacing of components, hardware, and gates. Provide foundations for guardrail post shop drawings by professional engineer.
        2. Samples for Initial Selection: For each finish product and finish specified, sets of color chips representing manufacturer’s full range of available colors.
        3. Samples for Verification: For each material and for each color specified representing each color specified.

Provide samples [**24 inches**] <**Insert dimension**> square of replica of guardrail panel.

* + - 1. QUALITY ASSURANCE
         1. Manufacturer Qualifications: Company specializing in manufacturing. Products specified in this section with minimum five years documented experience.
         2. Installer Qualifications: Installer Qualifications: Products listed in this section should be installed by a single installer with a minimum of five years demonstrated experience in installing products of the same type and scope as specified.
         3. Mockups: Build mockups to verify selections made under sample submittals, to demonstrate aesthetic effects, and to set quality standards for fabrication and installation.

Include [**6 foot**] <**Insert dimension**> length of guardrail complying with requirements.

Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

* + - 1. DELIVERY, STORAGE, AND HANDLING
         1. Transport, handle, store and protect guardrail components so they are in undamaged condition when installed.
         2. Store guardrail components in manufacturer’s unopened packaging to protect surfaces until ready for installation.
         3. Store guardrail components off the ground in a dry, protected, covered and secure area.
      2. FIELD CONDITIONS
         1. Install fencing components only when weather conditions are in comply with manufacturer’s installation instructions.
      3. WARRANTY
         1. Manufacturer’s Warranty: Provide warranty that manufacturer agrees to repair or replace products or components that fail in materials or workmanship within the specified warranty period. Manufacturer also warrants that the powder coated finish will not chip, crack, or flake.

Warranty Period: Limited lifetime warranty - 30 years from date of installation.

For additional warranty information, see www.http://alumi-guard.com/products/warranty

1. PRODUCTS
   * + 1. MANUFACTURER
          1. Acceptable Manufacturer: Barrette Outdoor Living; 2401 Corporate Blvd, Brooksville, FL 34604. Toll Free: (877) 258-6448. Phone: (352) 754-8555. Fax: (354) 544-8442. Email: info@alumi-guard.com. Web: www.alumi-guard.com

Retain one of the following two paragraphs.

* + - * 1. Substitutions: Not permitted.
        2. Substitutions: Submit request for substitution according to Division 01 requirements.
      1. MATERIALS

General: General: Provide aluminum free from pitting, seam marks, roller marks, stains, discolorations, and other imperfections where exposed to view on finished units.

Aluminum: Alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with not less than strength and durability properties of alloy and temper designated below for each aluminum form required.

Extruded Bar and Tube: ASTM B 221 (ASTM B 221 M), alloy 6063-T5/T52

Extruded Structural Pipe and Tube: ASTM B 429, alloy 6063-T832.

Plate and Sheet: ASTM B 209 (ASTM B 209M), alloy 6061-T6.

Die and Hand Forgings: ASTM B247 (ASTM B 247 M), alloy 6061-T6

Castings: ASTM B 26, Alloy ADC12

* + - * 1. Fasteners: Screws of ASTM A 276, 410 stainless steel with heads painted to match fencing color.
        2. Accessories: As required by conditions, post caps, wall brackets, scrolls, finials, and other miscellaneous hardware fabricated of aluminum.

Retain one of the following two paragraphs for post foundations.

* + - * 1. Concrete: Types specified in Division 03 Section “Cast-in-Place Concrete.”
        2. Concrete: ASTM C 94, Option A; minimum 3,000 psi strength at 28 days.
      1. ORNAMENTAL RAILING
         1. Railing General:

Aluminum Top-Cap Sections: 1.82 inch tall by 1.92 inch wide; with top thickness 0.060 inch

Pickets: .75 inch square

Retain one or more of the following paragraphs and subparagraphs as required for project. If more than one fencing types is required, distinguish among the types on the Drawings and in this Specification.

* + - * 1. Style: Continuous Top-Cap or Post-to-Post
        2. Grade: Commercial.
        3. Channels: [**2**][**3**].
        4. Picket Spacing:

Standard: 3.875 inches.

* + - * 1. Panel Length Inside Posts:

Nominal 73.33 inches

* + - * 1. Posts:

1. 2.5 inches square with 0.125 inch wall thickness..

* + - * 1. Railing Panel Height:

40.625 inches (nominal) Installed height: 42.625”

* + - * 1. Options: None
      1. FABRICATION
         1. General: Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.
         2. Connection: Fabricate railings with non-welded connections unless otherwise indicated.
         3. Mechanical Connections: Connect members with mechanical fasteners and fittings.
      2. FINISH

Retain one of the following two paragraphs and subparagraphs.

* + - * 1. SuperDurable Polyester Powder Coating: High performance polyester, medium glass, applied to over 2.0 mil thickness complying with AAMA 2604 with the following performance characteristics:

Meet or exceed 3,000 hour salt spray test according to ASTM B 117.

Meet or exceed a H-2H pencil hardness according to ASTM D 3363.

Meet or exceed a 5B rating on the ASTM D 3359 adhesion test.

* + - * 1. Color: [**Black**][**Florida Bronze**][**Light Bronze**][**White**][**Gray**]

1. EXECUTION
   * + 1. INSTALLATION
          1. Install railings in locations shown in compliance with manufacturer’s written instructions. During installation, aluminum components shall be carefully handled and stored to avoid contact with abrasive surfaces. Install components in sequence as recommended by railing manufacturer.
       2. ERECTION TOLERANCES
          1. Maximum Variation from Plumb: 1/4 inch.
       3. CLEANING
          1. Clean aluminum guardrail with mild detergent and rinse with clean water.
          2. Remove mortar from aluminum guardrail using a 10 percent solution of muriatic acid followed immediately by several rinses of clean water.
       4. ADJUSTING
          1. Touch-up paint scratched surfaces using paint pens supplied by manufacturer that match guardrail color. Spray-paint touch-up and/or overspray is not covered under warranty.

END OF SECTION

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