

SECTION 05 7300

PRIVACY FENCE

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PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Ornamental Aluminum Railing.

1.2 RELATED SECTIONS

- A. Section 01 3515 – LEED Requirements
- B. Section 03 3000 - Cast-In-Place Concrete: Placement of sleeves cast in concrete.
- C. Section 04 2000 - Unit Masonry: Placement of anchors in masonry
- D. Section 05 5000 - Metal Fabrications: Furnishing of sleeves cast in concrete.
- E. Section 06 1000 – Rough Carpentry: Placement of blocking in wall construction.
- F. Section 07 1300 – Sheet Waterproofing
- G. Section 09 9116 – Gypsum Board Assemblies: Placement of backing plates in stud wall construction

1.3 REFERENCES

- A. ANSI A1264.1 - Safety Requirements for Workplace Floor and Wall Openings, Stairs, and Railing Systems.
- B. ASTM B 211 - Standard Specification for Aluminum and Aluminum-Alloy Bar, Rod, Wire.
- C. ASTM B 247 - Standard Specification for Aluminum and Aluminum Die Forgings, Hand Forgings and rolled Ring Forgings.
- D. ASTM B 429 - Standard Specification for Aluminum-Alloy Extruded Structural Pipe and Tube.

- E. ASTM E 935 - Standard Test Methods for Permanent Metal Railing Systems and Rails for Buildings.

1.4 DESIGN / PERFORMANCE REQUIREMENTS

- A. Comply with requirements of building authorities having jurisdiction in Project location.
- B. Structural Performance: Engineer, fabricate, and install, guardrails, and railing systems to withstand, when tested per ASTM E 935, loadings required by applicable building and safety codes but not less than the following:
 - 1. Design Loads: Design to the following requirements. Concentrated and uniform loading need not be applied simultaneously.
 - 2. Uniform load: 50 pounds per foot (74.3 kg/m) applied at the top in any direction.
 - 3. Concentrated load: 200 pounds (90.6 kg) applied at the top in any direction.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01 3000 – Administrative Requirements, for submittal procedures
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Details of material and construction.
 - 3. Storage and handling requirements and recommendations.
 - 4. Installation methods and requirements.
- C. Shop Drawings: Submit shop drawings for fabrication and installation of ornamental metalwork. Include plans, elevations and detail sections. Indicate materials, methods, finishes and types of joinery, fasteners, anchorages and accessory items.
- D. Load Tests: Submit test results from ASTM E 935 conducted on the manufacturer's supplied system indicating compliance with required structural loading.
- E. Selection Samples: For each finish product specified, two complete sets of color charts representing manufacturer's full range of available colors and patterns.
- F. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
- G. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic cleaning and maintenance of all components.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 1-year documented experience producing systems specified in this section.
- B. 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.
 - 4. Accepted mock-ups shall be comparison standard for remaining Work

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened, properly labeled, original packaging until ready for installation.
- B. Store components to avoid damage from moisture, abrasion, and other construction activities.
- C. Keep handling to a minimum. Exercise caution to avoid damage to factory applied finishes.

1.8 SEQUENCING

- A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.9 PROJECT CONDITIONS

- A. 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.
- B. Field Measurements: Take measurements of actual dimensions where necessary for fit without gaps. Indicate measurements on shop drawings.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Superior Aluminum Products, Inc.; 555 E. Main St., P. O. Box 430, Russia, OH 45363. Phone: 937-526-4065. Fax: 937-526-3904. Email: info@superioraluminum.com. Web: www.superioraluminum.com.
 - 1. Product: Series 7V Privacy Fence
- B. Substitutions: Not permitted.

- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 PRIVACY FENCE

- A. Guard Rail Series 7V Aluminum Privacy Fence: Series 7V railings shall contain specialized post and pickets built to accept privacy panels. Top and bottom rails shall enter posts via machined openings. Pickets shall be 1-1/2 (3.81 cm) inch x 3/4 inch (1.91 cm) on 4-1/2 inch (11.43 cm) maximum centers, shall run between the top and bottom rail, and shall contain specialized openings for privacy panels. Picket and post fasteners shall be concealed.
 - 1. Guard Rail Posts:
 - a. Provide 4-inch (10.16 cm) square posts
 - 2. Top Rail:
 - a. Standard 2-inch (5.08 cm) wide by 1-5/8 inch (4.13 cm) high top rail.
 - 3. Bottom Rail:
 - a. Size – 3/4 inch (1.91 cm) wide by 1-5/8 inch (4.13 cm) high
 - 4. Receiver Pickets:
 - a. 1-1/2 inch (3.81 cm) by 3/4 inch (1.905 cm) with specialized opening to receive privacy panel
 - 5. Privacy Panel
 - a. 4-1/4-inch (10.795 cm) x .007-inch (.0178 cm) panel to be attached via receiver pickets'
 - 6. Height:
 - a. As indicated on the Drawings
 - 7. Base: Size to fit the posts specified
 - a. Heavy-Duty Surface Mount Base
 - b. Cover Flange for Embedded Posts
 - c. Side-Mount Corner Base
 - d. Side-Mount Base
 - e. As indicated on the Drawings.

2.3 Gates

- A. Provide swinging gates of type and size indicated on the Drawings. Equip gates with manufacturer's standard as required for complete functional operation.
 - 1. Construction:
 - a. Frame: Welded frame fabricated from post, top rail and bottom rail material.
 - b. Infill: Match the railing design and configuration.
 - 2. Size: As shown on the drawings
- B. Hardware:
 - 1. Hinges: Size and type as determined by manufacturer.
 - a. Minimum of two hinges per leaf
 - 2. Latch
 - a. Lock Latch
 - b. Magna Latch

2.4 MATERIALS

- A. Rail, Post and Pickets: Aluminum extrusions; alloy and temper 6063-T4 or 6063-T6 or 6005A-T61 for rail and posts, and 6063-T5 for rectangular pickets.
 - 1. Tube: ASTM B 211.
- B. Base Flanges, Anchors, and railing accessories: ASTM B 247.
 - 1. Bases cast from manufacturer's standard A-356-T6, 535, or 713 aluminum alloys or solid extruded 6063 aluminum alloy stock.
 - 2. Base flanges and railing accessories cast from manufacturer's standard 319, A-356, A-356-T6, 535, or 713 aluminum alloys.
 - 3. Anchorages: Provide concrete anchorage for fastening and complying with applicable Federal standards. All fasteners used in the system shall be aluminum or stainless steel.
- C. Fasteners: Provide concrete anchorage for fastening and complying with applicable Federal standards. All fasteners used in the system shall be aluminum or stainless steel.
- D. Grout: Non-shrink Portland cement-based hydraulic grout, mixed and applied in accordance with manufacturer's instructions; gypsum-based material is not acceptable. Provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating and recommended by manufacturer for exterior use.

2.5 FINISH

A. Standard Architectural Coating (AAMA 2603):

1. White
2. Black
3. Dark Bronze
4. Gray
5. Custom colors as selected.

2.6 FABRICATION

- A. Tolerances: Verify dimensions on site prior to shop fabrication for proper connection to building structure or substrate.
- B. Components or railing sections shall be fabricated to exact measurements specified through Drawings and field dimensions.
- C. Railing sections shall be fabricated at the manufacturing facility in largest practical site delivery.
- D. Railings angled horizontally, machine castings to proper angle.
- E. Posts grouted in concrete to have one nominal 1/4 inch (6.0 mm) nominal diameter weep hole, 1/2 inch (12.0 mm) nominal above post collar, in the plane of the rail
- F. Provide components required for anchorage of framing. Fabricate anchors and related components of material and finish as required, or as specifically noted.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared. Fully review the supporting structure and substrate to verify a structurally sound base for anchoring railing system.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Coordinate railing installation with installation of waterproof membrane or coating Specified in Section 07 1300 – Sheet Waterproofing.
- C. Ensure that adjacent surfaces, structures, and finishes are protected from damage by construction activities of this section.

- D. Use wood blocks and padding to prevent damage to railing members and fittings during erection.
- E. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Keep perimeter lines straight, plumb, and level.
- C. Provide grounds, clips, backing materials, adhesives, brackets, anchors, and accessories necessary for a complete installation.
- D. Expansion Bolt Mounting: Anchor through base plates to concrete substrate.
- E. Sleeve Mounting:
 - 1. Arrange for casting of sleeves or core drill concrete to provide holes for railing uprights.
 - 2. After setting, fill holes with hydraulic grout; brace members until grout is cured.
- F. Connect railing components in accordance with manufacturer's instructions applicable to the specified system.
- G. Tighten all fasteners so that completed railing is rigid and free of play at joints and component attachments.
- H. Gates:
 - 1. Install gates and adjust hardware for smooth operation.
 - 2. After installation, test gate. Open and close a minimum of five times. Correct any deficiencies and adjust.

3.4 ERECTION TOLERANCES

- A. Install plumb and level, securely fastened, with vertical members plumb.
 - 1. Maximum variation from plumb: 1/4 inch (6.0 mm).
 - 2. Maximum misalignment from true position: 1/4 inch (6.0 mm).
 - 3. Maximum misalignment between adjacent separated members: 1/8 inch (3.0 mm).

3.5 CLEANING

- A. Remove dust or other foreign matter from component surfaces; clean finishes in accordance with AAMA 609 and AAMA 610-02.

3.6 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION