

MERCHANTS METALS®

SECTION 323119.10 – SECURE WELD PLUS® DECORATIVE ORNAMENTAL STEEL FENCE

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

- 1. Decorative ornamental galvanized metal tubular picket fence system.

B. Related Sections:

- 1. Division 03 Concrete
- 2. Division 31 Earthwork

1.3 REFERENCES

A. American Society for Testing Materials:

- 1. A239 Practice for Locating the Thinnest Spot in a Zinc(Galvanized) Coating on Iron or Steel Articles
- 2. A653/A653M Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
- 3. A1008/A1008M Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High- Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable
- 4. A1011/A1011M Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low- Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength
- 5. B117 Practice for Operating Salt Spray (Fog) Apparatus
- 6. D523 Test Method for Specular Gloss
- 7. D714 Test Method for Evaluating Degree of Blistering of Paints
- 8. D1654 Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments
- 9. D2244 Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates
- 10. D2794 Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)
- 11. D3359 Test Methods for Measuring Adhesion by Tape Test
- 12. E4 Practices for Force Verification of Testing Machines
- 13. F2814 Guide for Design and Construction of Ornamental Steel Picket Fence Systems for Security Purposes
- 14. F2408 Standard Specification for Ornamental Fences Employing Galvanized Steel Tubular Pickets

1.4 SUBMITTALS

- A. Product Data: Manufactures information for each type of product indicated.
- B. Shop Drawings: Product elevations, sections, and details as necessary.
- C. Product Warranty: Pickets, Posts, and Rails standard limited warranty that ornamental fence system is free from defects in material and workmanship including cracking, peeling, blistering and corroding for a period of 10 years from the date of purchase.

5. QUALITY ASSURANCE

- A. The contractor shall provide laborers and supervisors who are thoroughly familiar with the type of construction involved and the materials and techniques specified.
- B. Provide complete fence system and gates, with all components provided by a single manufacturer, including all panels, posts, gates, fittings and hardware.
- C. Manufacturer Qualifications: Company specializing in manufacturing of steel ornamental picket fence systems with a minimum of 5 years documented experience.

1.6 PRODUCT HANDLING AND STORAGE

- A. Panels, gates, posts, and accessories to be delivered to the project site assembled and coated. Upon receipt at the job site, all materials shall be checked to ensure that no damages occurred during shipping.
- B. Materials shall be handled and stored properly to protect against damage, weather, vandalism and theft.

PART 2 – PRODUCTS

2.1 SECURE WELD PLUS® DECORATIVE ORNAMENTAL STEEL FENCE

- A. A. Approved manufacture: Merchants Metals® www.merchantsmetals.com
Phone: (888) 260-1600 Fax: (888) 261-3600 tech-info@merchantsmetals.com
- B. Products from other qualified manufacturers who have ten years or more experience manufacturing steel ornamental picket fencing will be considered by the architect as equal if approved in writing 10 days prior to biddings, and they meet all specifications for design, size, and gauge of metal parts and fabrication. Picket fences and gates must be obtained from a single source.
- C. Securely welded biasable fence system shall rack 45 degrees based on an 8' nominal panel if required.
- D. Choose style: Lafayette, Kent, Monroe (Non-Biasable), or Curve Top.
- E. Choose nominal height: 4', 5', 6', 8', or Custom.
- F. Pickets, Posts, and Rails: Galvanized square steel tubular members manufactured per ASTM F2408, having minimum yield strength of 45,000 psi. Choose one: Residential, Commercial, or Industrial.
 - 1. Residential: Picket 5/8" square 18 gauge with pickets 4-9/16" O.C., Rail 1" square 16 gauge, actual panel width 94", 120", or custom.
 - 2. Commercial: Picket 3/4" square 16 gauge 4-3/4" O.C., Rail 1-1/2" square 14 gauge, actual panel width 94", 120", or custom.
 - 3. Industrial: Picket 1" square 16 gauge 5" O.C., Rail 2" square 14 gauge, actual panel width 94", 120", or custom.
- G. Finish: Manufactured in compliance with ASTM F2408 - Corrosion Resistance Salt Spray Test per ASTM B117, Impact Resistance per ASTM D2794, and Adhesion per ASTM D3359 Method B.
All primary components shall receive a thorough cleaning and pre-treatment with a 10-step process: Hot alkaline cleaner, clear water rinse, hot iron phosphate application, clear water rinse, reverse Osmosis rinse, dry off oven heat, zinc enriched powder primer coat at 2-4 mils., gel oven heat, Ultra polyester finish T.G.I.C. powder coat at 2-4 mils., and final curing oven.
Choose color: Black, Brown, White, Green, Almond, or Custom.

2.2 ACCESSORIES

- A. Rail/Post Bracket – Bracket system ensures easy installation without the need to weld in the field.
- B. Post Caps: Cast aluminum or malleable iron or formed steel manufactured to form a weather-tight closure. Choose Cap style: Ball or flat tops - on all posts.
- C. Rings: Decorative rings as required.
- D. Finial Tops for Pickets – Choose: Square Top, Quad Flair with Ball or Triad Spear.

2.3 GATES

- A. Ornamental picket swing gates (see section 32 31 19.20)
- B. Ornamental picket pre-hung gates (see section 32 31 19.30)

C. Ornamental picket cantilever slide gates (see section 32 31 19.40)

4. SETTING MATERIALS

- A. Concrete: Minimum 28 day compressive strength of 3,000 psi.
- B. Flanged Post: Provide flanged base plates with 4 holes for surface mounting where indicated. (For wall mount or pad mount situations.)

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify areas to receive fencing are completed to final grades and elevations.
- B. Property lines and legal boundaries of work to be clearly established by the general contractor or property owner.

3.2 FENCE INSTALLATION

- A. Install fence per manufacturer's recommendations.
- B. Space posts uniformly at manufacturer's standard face to face of post dimension unless instructed otherwise.
- C. Set posts in concrete. Dig holes having a diameter 4 times the diameter of the post, and 6" deeper than the bottom of the post. Crown concrete at top to shed water.

3.3 CLEANING

- A. Clean up debris and remove from the site.

END OF SECTION