



# Monumental Iron Works®



## The Finest Ornamental Iron

Ornamental iron fences and gates have been the architectural choice for attractive security worldwide on public, commercial, industrial, and residential properties for hundreds of years.

Monumental Iron Works®

fences and gates from Master Halco add beauty and security to properties throughout the country. Combining modern technology with traditional elegance and craftsmanship, Master Halco is able to offer a unique, modern ornamental solution with the look of fencing forged by the hands of master blacksmiths.

Monumental Iron Works fences and gates bring a combination of aesthetic elegance and security to residential, commercial, industrial, and institutional properties. Satisfy your architectural goals with a wide variety of options, designs, and styles crafted for outstanding value. The quality of our materials manufactured to our high specification requirements allow us to provide a durable, cost-effective fence system that will last for many years.

## Crafted Elegance & Construction

Monumental Iron Works is a modular system, made up of many component parts designed to support each other. When completely assembled, these parts create one of the strongest ornamental fence systems on the market. Using industrial rivets, the constructed panels have the solid look and feel of authentic ornamental iron. Because there are no welds, red rust problems that typically destroy the integrity of other fence systems and detract from the beauty of ornamental designs are virtually eliminated. Also gone are the semi-annual



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maintenance costs associated with repainting a welded system. Monumental Iron Works utilizes a duplex coating of polyester resin over hot-dip galvanized steel for corrosion protection, durability

# Monumental Iron Works®

and a great appearance that lasts for years. A 15-Year Limited Warranty reinforces peace of mind in knowing you've selected the finest ornamental fence system available.

We offer a wide variety of modular products, including preassembled panels, gates, posts, finials, and tops in our standard black color. Select your Monumental Iron Works style and Master Halco will deliver the finest quality and highest value in ornamental picket fencing. Pre-assembled panels and matching gates are available in 2, 3 or 4 rail systems ranging in heights from 3 feet to 8 feet. Choose from the traditional Imperial Styles or the classic Estate Styles. Monumental Iron Works ornamental picket fences and gates complement any architectural design and provide elegance, distinction, and security.

## Top 3 Reasons to Buy Monumental Iron Works®

### 1. In-Stock

- Ready for quick delivery to your local Master Halco distributor branch.

### 2. Labor & Time Savings

- Pre-assembled panels for faster installations.
- Patented Pro-Arc™ brackets adjusts 30 degrees up/down/left/right for easy field installation tolerances.

### 3. Low Maintenance

- UV and weather resistant powder coating applied to individual pieces BEFORE assembly to better resist cracking, flaking and peeling at the panel's pivot points.
- Constructed with industrial drive rivets to eliminate potential red rust problems associated with welded systems.

Shown: Imperial D-Modified style with flat post caps



## Partial List of MIW® Installation Sites

### **Colleges and Universities:**

Yale University  
Harvard University  
Stanford University  
Drexel University  
Johns Hopkins University  
West Point  
Air Force Academy  
Georgia Tech  
University of Alabama  
University of Maryland  
University of Pennsylvania  
University of Toledo  
Old Dominion University  
William & Mary College  
Holyoke College

### **Municipal and Government Projects:**

FBI Headquarters  
Social Security Administration  
U.S. Post Office  
Library of Congress  
National Arboretum  
World Trade Center, Baltimore  
Federal Hill Park  
Chicago Parks  
Oriole Park at Camden Yards  
V.A. Cemeteries  
Philadelphia Naval Yards  
Aberdeen Proving Grounds  
HUD Housing Projects  
JFK Airport  
Philadelphia Airport  
Newark Airport  
Tampa Airport

### **Estate Properties:**

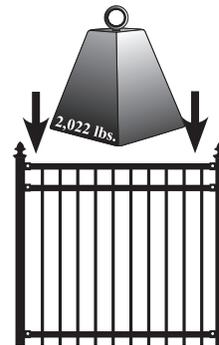
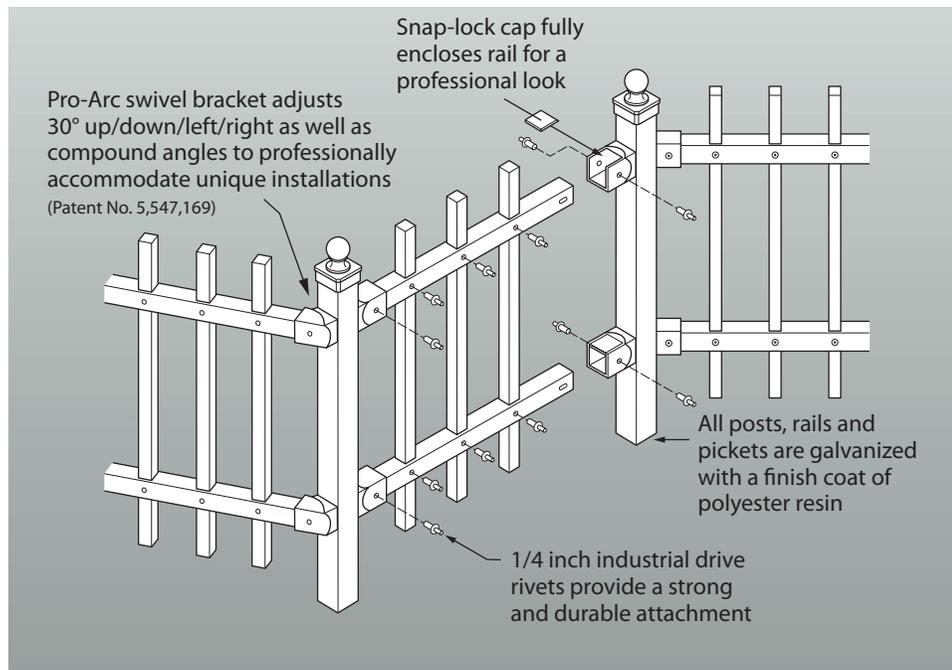
Custom Built Homes  
Executive Homes  
Residential Homes

### **Other Institutions:**

The Church of Jesus Christ of Latter Day  
Saints  
Cleveland Plain Dealer  
Baltimore Sun News Papers  
Glaxo  
Eli Lilly  
Ameriflora  
Max and Erma's Restaurants  
Marion Merrel Dow

# Monumental Iron Works®

## Superior Construction & Strength

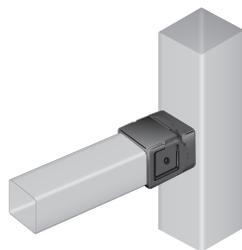


A leading university's independent lab tested our fence's strength. They found, before failure, we held up to:

- 2,022 lbs. of vertical download
- 1,021 lbs. of horizontal load

### Pro-Arc™ Brackets

The patented bracket fastens panels to the posts using a bolt-thru design for added strength and security. By swiveling 30° in any direction it allows for grade and layout changes. The fully enclosed bracket is very user-friendly allowing for field installation tolerances while providing a finished look from unsightly rail cuts, short sections, and biased panels.



### Coating

A duplex coating of polyester resin over hot-dipped galvanized steel ensures a long, low maintenance life. Coating before assembly-instead of after-provides an even, smooth finish that resists cracking, flaking and peeling at the panel's pivot points. This gives a full measure of protection in the areas where moisture accumulates and rust begins.

### Industrial Drive Rivets

To increase panel strength, industrial drive rivets with 1,100 lbs. of holding power and 1,500 lbs. of sheer strength fasten each picket to the rails giving the system the solid look and feel of traditional ornamental iron. Fastening each picket to the rails creates an integral structure that provides fixed-point loading and spreads any vertical or horizontal force over the entire section. This avoids the possible drawbacks of welding, such as weakened metal that can cause pickets to tear away from the rails or the burn-off of galvanized coating which can lead to rust.

### Installation

All posts and rails are pre-drilled for fast, user-friendly assembly and installation. This also reduces the chance of errors that result from drilling holes during field installation.

## Pickets

Steel pickets, 19 per panel, are 3/4 inch square and have a 16 gauge wall thickness. Each picket is riveted to the rail for maximum strength. For design flexibility and to customize your fence, choose from three picket tops.

## Rails

Exceptionally strong, polyester coated 11 gauge 1-1/2 inch x 1-3/8 inch x 8 foot galvanized steel "U" rails hold up in high traffic areas. The self-draining "U" design prevents moisture from collecting, offering maximum protection against rust. Pre-punched slotted rail holes allow for speedy alignment and easy rivet attachment of the rail to the Pro-Arc bracket.

## Posts

Factory pre-drilled mounting holes permit fast field installation while maintaining the integrity of the powder-coated finish. Steel posts are available in several sizes for almost any application. Posts can be flange-mounted on walls and concrete pads, or set into sleeves.



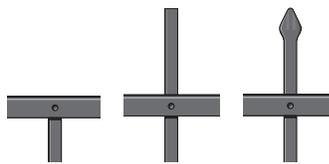
Shown: Imperial B style with acorn post caps

## Configurations & Options



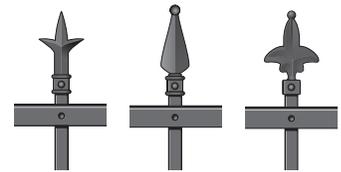
### Fencing and Matching Gates

Distinctive Estate or Imperial styles to choose from. Available in 2-, 3- or 4-rail styles at heights from 3' to 8'.



### Picket Tops

Choose from Flush Top, Picket Top or Spear Top pickets.



### Finials

Choose from Triad, Quad-Flair or Fleur-de-lis finials.



**Post Caps** Choose from Flat, Ball or Acorn.



**Posts** Available in 2-1/2", 3" and 4" square.



**Color** Black



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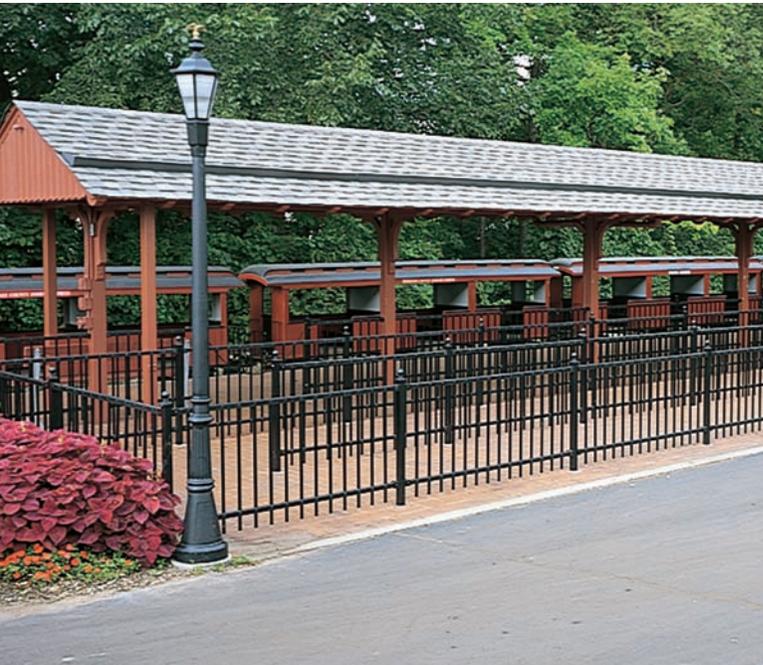
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## Imperial Style Panels and Gates

The design of our Imperial style is based on traditional iron picket fences dating back to 1892. Long accepted as an outstanding value because of their quality construction, durability, numerous options and affordable pricing, Imperial fences and gates by Monumental Iron Works™ provide an exceptional ornamental picket fence system where elegant simplicity is desired. With pickets spaced 3-15/16 inches apart, Monumental Iron Works fences offer a high degree of security while preserving the practicality and charm of a traditional picket fence. Imperial style is an ideal choice where a combination of strength and classic appearance is desired.

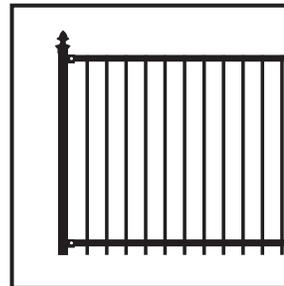


Shown: Imperial D-Modified style with ball post caps

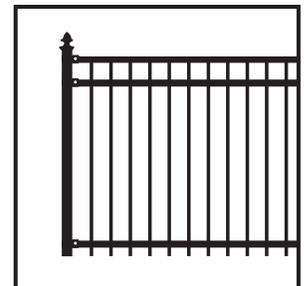


Shown: Imperial A style with ball post caps

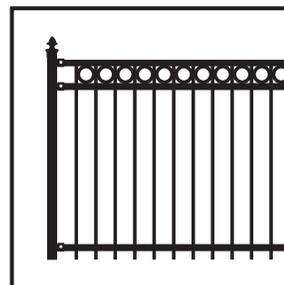
### Imperial A



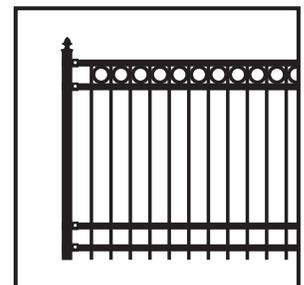
### Imperial B



### Imperial D Modified



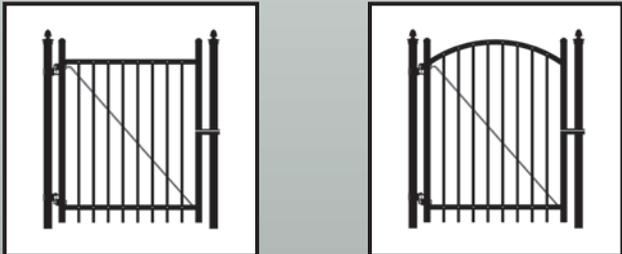
### Imperial D



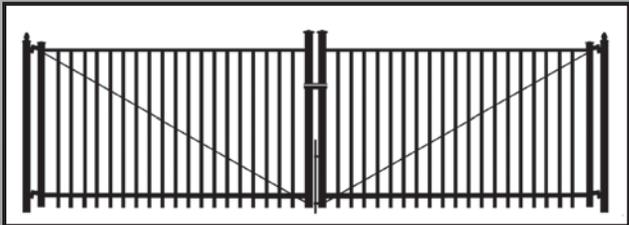
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**Imperial A**

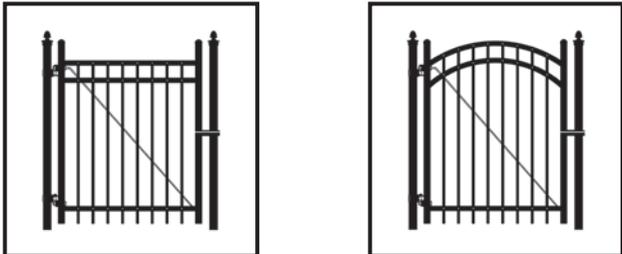


Single

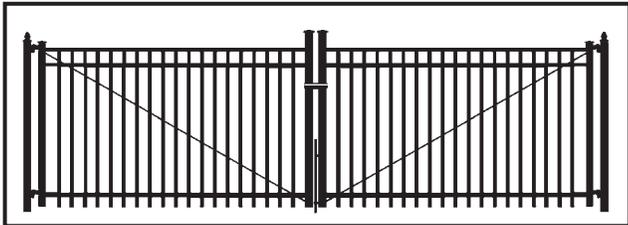


Double

**Imperial B**

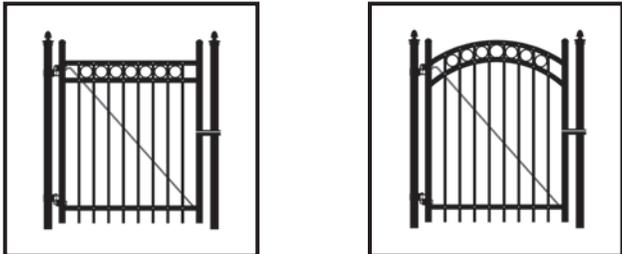


Single

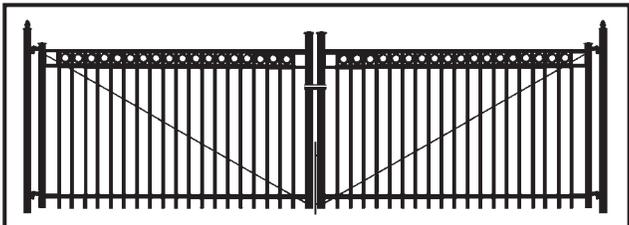


Double

**Imperial D-Modified**



Single



Double

**Imperial D**



Single



Double

## Estate Style Panels and Gates

### Estate A and B

Monumental Iron Works® Estate style with spear top pickets are reminiscent of very early English and European ironwork. The style is contemporary in design and noted for its spear like appearance. The spear top pickets add attractive security and distinction to any architectural design.

### Estate F and G

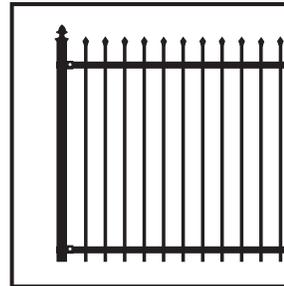
Estate style with finial top options is one of the more ornate styles offered by Monumental Iron Works. The three distinctively ornate finials, triad, quad-flair and fleur-de-lis, add old world charm and dignity to any property.

### Estate K and L

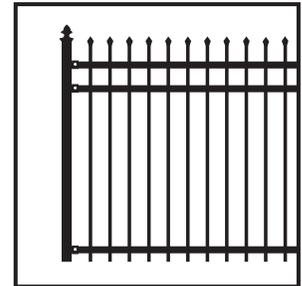
Estate style with picket top is the most contemporary and classic look offered in the Estate series.

Good looking and long lasting, these styles will enhance the beauty and value of any property. Every Monumental Iron Works fence provides lasting beauty and performance. All components are engineered for strength, security and low maintenance.

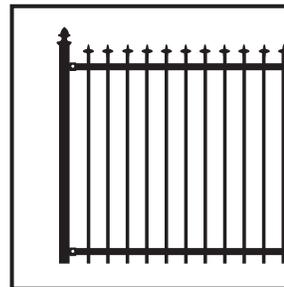
### Estate A



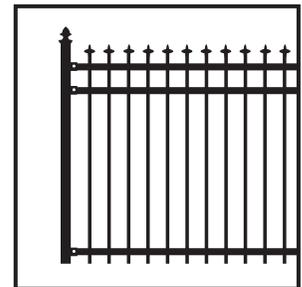
### Estate B



### Estate F



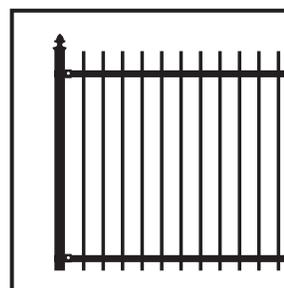
### Estate G



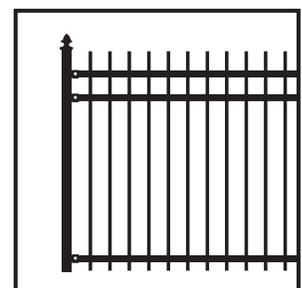
**Shown: Estate F style with triad finials and acorn post caps**



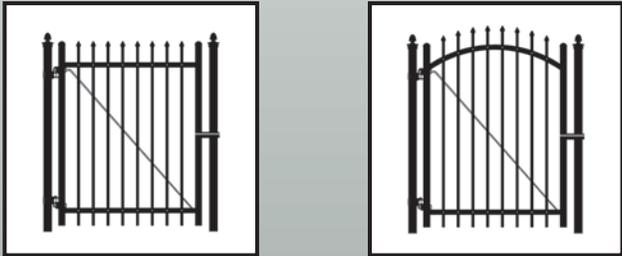
### Estate K



### Estate L



**Estate A**

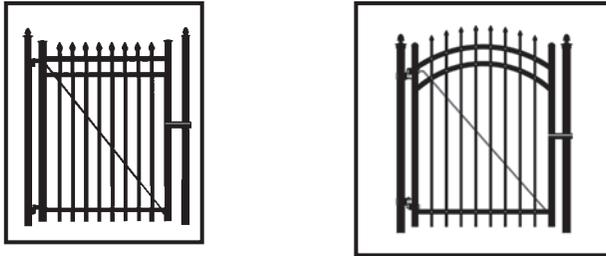


**Single**

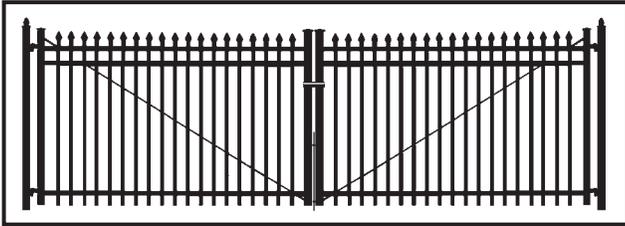


**Double**

**Estate B**



**Single**

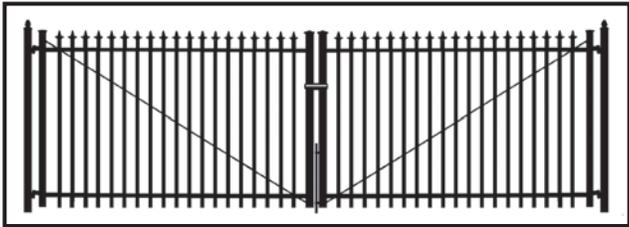


**Double**

**Estate F**



**Single**

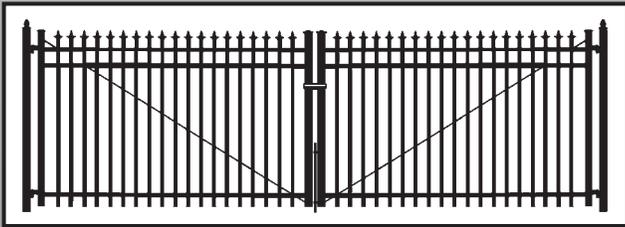


**Double**

**Estate G**



**Single**



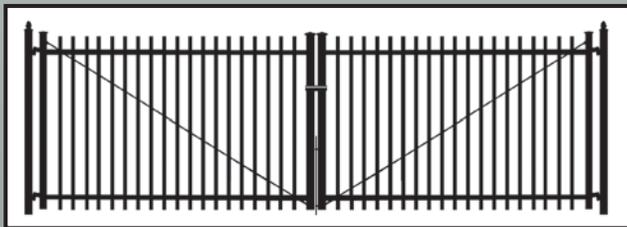
**Double**

Estate Style Gates (cont.)

Estate K



Single

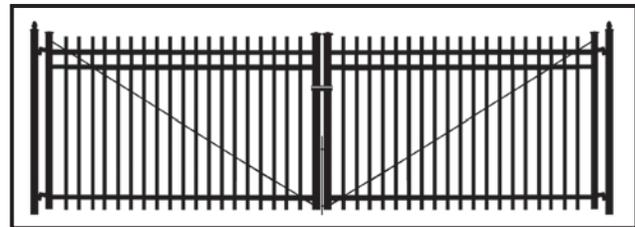


Double

Estate L



Single



Double



Shown: Imperial D Modified style with ball post caps and two single arch gates



Shown: Estate F style with quad-flair finials and ball post caps

## Basic Specifications

### 1.1 Scope:

This specification covers materials and construction requirements for Ornamental Picket Fence.

### 1.2 Materials:

**A. PICKETS:** Galvanized square steel tubular members manufactured per ASTM A 787, having a 45,000 psi (310 MPa) yield strength and G90 zinc coating, 0.90 oz/ft<sup>2</sup> (0.27 kg/M<sup>2</sup>). Space pickets 3-15/16" maximum (100 mm) face to face. The size and wall thickness are listed below.

Size	Wall Thickness	Wgt. Per Ft.*	Yield Strength
3/4" Sq.	16 ga.	0.580 lbs.	45,000 psi

**B. RAILS:** 1-1/2" (38 mm) x 1-3/8" (35 mm) x 1-1/2" (38 mm), 11 gauge (0.120" 3.05 mm) wall thickness steel "U" channel per ASTM A 653 having a 50,000 psi (344 Mpa) yield strength and G90 zinc coating 0.90 oz/ft<sup>2</sup> (0.27 kg/M<sup>2</sup>).

**C. POSTS:** Galvanized square steel tubular members manufactured per ASTM A 787 having a 45,000 psi (310 MPa) yield strength and G90 zinc coating, 0.90 oz/ft<sup>2</sup>. The size and wall thickness are listed below.

Size	Wall Thickness	Wgt. Per Ft.*	Yield Strength
2-1/2" Sq.	14 ga.	2.639 lbs.	45,000 psi
3" Sq.	12 ga.	3.956 lbs.	45,000 psi
4" Sq.	12 ga.	5.293 lbs.	45,000 psi

**D. RAIL BRACKETS:** Die cast of zinc (ZAMAK #3 alloy) per ASTM B86-83Z 33521. Ball and socket design capable of 30° swivel (up/down-left/right). Bracket to fully encapsulate rail end for complete security.

**E. FINIALS (Estate F and G):** Cast aluminum.

**F RINGS (Imperial D and D-Modified):** Cast aluminum.

\* Note: Weight Per Foot provided for reference only.

### 1.3 Assembly:

- A. All panels are pre-assembled.
- B. Rails are attached to posts by means of rail brackets. Rail brackets are attached to posts using a 1/4" bolt and lock nut. Rails are attached to brackets using 1/4" industrial drive rivets.
- C. 4" Rings (Imperial D and D-Modified) are pre-attached.
- D. Attach Finials (Estate F and G) to pickets using a 1/4" industrial drive rivet.

### 1.4 Coating:

Monumental Iron Works utilizes a duplex coating system of polyester resin over hot-dipped galvanized steel for maximum corrosion protection on all posts, pickets and rails.

All fence sections and components are given a 4-stage "Power Wash" pre-treatment process that cleans and prepares the metal substrate to assure complete adhesion of the powder coated finish.

**Stage 1** - All metal substrate is CLEANED and PHOSPHATE treated simultaneously to form an AMORPHOUS STRUCTURE on the metal substrate for SUPERIOR POWDER COATING ADHESION.

**Stage 2** - All metal substrate is given a thorough WATER RINSE to prepare the phosphate-coated metal substrate for the SEAL RINSE.

**Stage 3** - All metal substrate is given a NON-CHROMATED seal for added corrosion protection and improved adhesion.

**Stage 4** - All metal substrate is then baked dry, prior to the application of the POWDER COATING.

All metal substrate is given a polyester resin based powder coated finish applied by the electrostatic spray process to a minimum thickness of 2.5 (0.635 mm) mils. The polyester resin finish is cured in a 450 degree F (232° C) metal temperature for 20 minutes.

**Standard Color** - Black.

### 1.5 Special Warranty:

Provide manufacturer's standard limited warranty that its ornamental fence system is free from defects in material and workmanship including cracking, peeling, blistering and corroding for a period of 15 years from date of purchase.



A Tradition of Fencing Solutions



## For all your fencing needs, you can trust **MASTER HALCO.**

As North America's leading manufacturer and wholesale distributor of perimeter security and fencing, we are the provider of choice for thousands of professional fence and security contractors and quality building material retailers. Since 1961, we have been the industries' premier fencing provider.

We offer a complete line of high quality fence systems in both traditional and unique styles. Our full line of products include vinyl, wood, ornamental, and chain-link fences and automated gates for residential, commercial, industrial, and high security applications.

**Shown on Front Cover: Estate G style with quad-flair finials and ball post caps**



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**MasterHalco.com | 888-MH-Fence**

Branch service centers are located throughout North America.

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