Builders Fence Co., Inc. HANDBOOK FOR ORNAMENTAL RRON

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Builders Fence Company, Inc. reserves the right to make changes in designs and specifications or improvements on its products without notice and without incurring any obligation to incorporate these changes products previously manufactured.

The purchaser and/or user should consult governing agencies for local codes and/or requirements pertaining to the installation of the proposed fence.


## BUILDERS FENCE COMPANY, INC.

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## What is BFC?

Builders Fence Company, Inc. is one of the United States' leading manufacturers of ornamental iron fences, gates and security products.

With four major California production and warehouse facilities (Los Angeles, Sacramento, Fontana and El Cajon) as well as a fifth facility in Tacoma, Washington, BFC supplies hundreds of thousands of ornamental iron panels for delivery nationwide.

For 50 years, Builders Fence Company has been supplying ornamental iron fence for industrial, commercial and residential applications. All BFC fence material and hardware is designed and fabricated in-plant by highly skilled experienced craftsman to meet the most demanding standards of quality control. The specialized production methods used at BFC are further assurance of enduring quality and beauty.

With this publication, we have brought together a variety of information about BFC ornamental iron products in an attempt to aid architects, engineers, designers and their associates to more clearly specify these materials and accessories on their plans.

More specific questions can be answered by a BFC product specialist. Please call.

## Custom Fabrication

Builders Fence Company is one of the only manufacturers specializing in custom fabrication, working regularly with architects, engineers and landscape architects, and designers to tailor ornamental iron fence to the most demanding and unique requirements.

Send us your drawings, plans or specifications.

## Product Description

Builders Fence Company, Inc. manufactures a full line of ornamental iron fencing products for any standard or custom application. From panels and gates to security products and hardware, BFC ornamental iron is the top choice of designers and architects.

## Material Specifications

Unless specified otherwise, all BFC ornamental iron is manufactured with square, cold or hot-rolled steel tubing. Material sizes are listed by grade in Figure 1.

> Standard Grade - (Residential )
> Rail:
> 1" square 16 GA .
> Picket: $\quad 5 / 8 "$ square 18 GA .
> Heavy Grade - (Residential )
> Rail: $\quad 11 / 2$ " square 16 GA .
> Picket: $3 / 4$ " square 18 GA .
> Heavy Grade - ( Commercial )
> Rail: $\quad 11 / 2$ " square 14 GA .
> Picket: $\quad 3 / 4$ " square 16 GA.
> Rail: $\quad 2$ " square 14 GA .
> Picket: 1 " square 16 GA .

See page 5 for material finishes

Figure 1: Material Specifications

## Stock Styles

The BFC ornamental iron styles are available in the grades indicated by Figure 2.


Figure 2: Stock Styles

## Stock Sizes

Panels are manufactured according to grade in stock sizes as illustrated in Figure 3.

Lengths are manufactured as close to $8^{\prime}, 10^{\prime}$ and $12^{\prime}$ as possible while allowing for an even $4^{\prime \prime}$ picket spacing the entire length of the panel.

## Standard Grade

Height:
$3^{\prime}, 4^{\prime}, 5^{\prime}, 6^{\prime}$
Length (actual): 94", 120", 143 1/2"
Heavy \& Extra Heavy Grade

| Height: | $5^{\prime}, 6^{\prime}, 7^{\prime}, 8^{\prime}$ |
| :--- | ---: |
| Length (actual): | $94^{\prime \prime}, 118^{\prime \prime}, 142^{\prime \prime}$ |

## Guardian Style *

Height:
7', $8^{\prime}, 9^{\prime}, 10^{\prime}$
Length (actual): $\quad 94 ", 118 ", 142 "$

* Not recommended less than 7 feet high from finish grade

Figure 3: Stock Sizes

## Ground Clearance

The ground clearance for the various styles is shown by Figure 4.


## Picket Spacing

Standard iron fencing has a stock $37 / 8^{\prime \prime}$ spacing between the pickets ( $41 / 2$ " o/c). Heavy fencing has either a 4 " spacing ( $43 / 4$ " o/c) or a $51 / 4^{\prime \prime}$ spacing ( 6 " o/c). Extra heavy fencing has either a 4 " spacing ( 5 " o/c) or a 5 " spacing ( 6 " o/c). Other picket spacings are available to meet any custom design or specification.

## Stock Gates

Regal, Empire and Napoleon style gates have sides that extend $3 / 4$ " above the top rail and are flush on the bottom rail. Aristocrat, Modern, and Guardian styles have gates sides which extend 5 $1 / 2^{\text {" }}$ above the top rail ( $1 / 2$ " below pickets) and the gate side is $4 "$ below the bottom rail.

As with chain link gates, a 4 ' opening gate is 44 " actual width (with standard clamp-on hardware). This allows for a 4 " hardware clearance.

## Swing Gate Hardware

Clamp-on gate hinges are available for post sizes from $11 / 2^{\prime \prime}$ sq. to $21 / 2^{\prime \prime}$ sq. and for gate frame sizes from 1 " sq. to 2 " sq. See page 14 for illustration.

Weld-on gate hinges are available for all size gate leafs, ball bearing type and butt hinge type for $180^{\circ}$ swing.

See page 15 for illustration.
Clamp-on gate latches are available for post sizes $11 / 2^{\prime \prime}$ sq. to $21 / 2^{\prime \prime}$ sq. and for gate frame sizes from 1" sq. to 2 " sq.

See page 14 for illustration.
Dead bolt and lever locksets are available with steel weld-in boxes. BFC can furnish locksets in all manufacturer's standard finishes.

See page 17 and 19 for illustration.
Combination locks and exit devices are available in different styles to accommodate various security requirements.

See page 18 and 19 for illustration.

# Designing Ornamental Iron Fencing 

## What is the Fence to do?

Show a property line?
Protect property?
Keep animals or people in or out?
Meet municipal pool codes?
Decorate?
Once the purpose of the ornamental iron has been established, direct the customer toward the product with the best style and specifications to meet his needs. Options include complete iron fences, iron between pilasters, door guards, railings, columns and gates. Be aware of the municipal codes concerning fence requirements around pools. Self closing gate hardware can be included with our gates. Also note that scrolls in the pool fences are considered a "step" and will most likely not be passed by an inspector. Familiarize yourself with local regulations concerning front and back fence height limitations and any legislation related to door and window guards.

## Describe the Fence Line

As you make a preliminary sketch of the fence line, clearly and accurately label all known dimensions of the fence plan. State all dimensions as "height by width" (H x W).

Put in enough dimensions so you can clearly understand the fence plan upon review at a later date. This will make it easier for you to place an accurate order for materials. Measure and price to the next highest foot when dimensions do not come out to even footage. Remember that each panel must be rounded up to full footage for pricing.

## Posts

Designate on the ground plan where the fence is to go. The outside edge of the posts go on the property line (this establishes ownership of the fence). If the fence is to be shared, the posts go down the center of the line.

## Corner and End Posts

A corner is any change of direction of the fence. This does not include gate openings, but it does include any attachments. An ornamental iron post may or may not be used as an end post.

## Line Posts

Line posts are laid out between the corner posts, gate posts, end posts and ends without posts. Line posts are usually not more than $8^{\prime}$ apart. To compute the number of line posts needed, divide the distance between end, corner or gate post by 8 . This will give you the number of 8 foot panels needed for each section.

## Gate Posts

Gate posts stand on either side of the gates. All gate posts are 2 " square or larger, with the possible exception of gates that are less than $3^{\prime} \times 3^{\prime}$. In that case, gate posts can be $11 / 2^{\prime \prime}$ square.

## Flanged Posts

Flanged posts are used on wood floors and decking. They may be used on other flat surfaces such as slab floors in homes. (Be aware of water and electrical lines.) The flanges are welded on squarely. Therefore, if the deck slants, the post will slant also. There are two types of post flanges available: regular decorative flanges which are $31 / 2^{\prime \prime}$ square with $1 / 4^{\prime \prime}$ holes and available for $11 / 2^{\prime \prime}$ or 2 " posts; and heavy flat flanges which are 6 " or 8 " square x $1 / 4^{\prime \prime}$ thick with $5 / 8$ " holes and available for any size post.

## POST RECOMMENDATIONS

## Post Sizes

1. $11 / 2^{"}$ SQUARE REGULAR for terminal, corner and line posts for fences up to 5 feet high.
2. 2" SQUARE REGULAR for terminal, corner and line post for fences up to 6 feet high; and gates with up to 15 square feet.
3. 2 " SQUARE HEAVY for terminal, corner and line post for fences 6 or more feet high; and gates with 15 to 25 square feet.
4. $21 / 2^{\prime \prime}$ SQUARE HEAVY for gates with 25 to 40 square feet.
5. 4" SQUARE HEAVY for gates with over 40 square feet.
6. $11 / 4$ " SQUARE available upon request.
7. 6 " SQUARE and $8 "$ SQUARE available for special applications.

## Post lengths

1. SET IN DIRT WITH CONCRETE ( 6 " diameter hole); - 24 " longer than the gross height of the fence for normal climatic conditions. (If frost line condition occurs, add height of fence to depth of frost line plus two additional inches to determine total post length).
2. CORE DRILLED AND SET IN CONCRETE SLAB; -6 " to 12 " longer than the gross height of the fence.
3. FLANGED BASE (Regal, Empire or Napoleon styles); - Same as height of fence plus 3/4".
4. FLANGED BASE (Aristocrat or Modern styles); - Same as height of fence minus $1 / 2^{\prime \prime}$.

|  | Regular 14 GA . | Heary | $\underset{.250}{\text { X-Heary }}$ |
| :---: | :---: | :---: | :---: |
| $11 / 2^{\prime \prime}$ sq. | - | - |  |
| 2 " sq. | - | - |  |
| $21 / 2^{\prime \prime}$ sq. |  | - |  |
| 3 " sq. |  | - |  |
| 4 " sq. |  | - | - |
| 6 " sq. |  |  | - |
| 8 " sq. |  |  | - |

Figure 2: Stock Styles

## Post Caps

(All posts need caps)

1. Pressed steel caps are available for posts 1" square to 8 " square.
2. Square posts over 8 " and 2 " $\times 4$ " rectangular posts are manufactured with flat caps, welded on.

Describe any special conditions for each post including core drilling, embedment in dirt, flat plate base or any other requirements.

## Material Colors

## 14 Standard Polyurethane Colors 10 Standard Polyester Powder Coat Colors Custom Color Matching is Available

Polyurethane paint is a high solids aliphatic two-component polyurethane coating system for use where exterior durability and color control are essential.

## Material Finishes

## BFC Recommended Finishes

GALVA-GUARD I, II and III provide long lasting beauty and superior corrosion protection.

## GALVA-GUARD I - Recommended Paint Finish

 Pre-Galvanized Tubing, Primed \& Polyurethane Painted: Materials are fabricated using galvanized tubing and finished with one spray coat of high solids polyurethane primer and one spray coat of high solids gloss black polyurethane paint.
## GALVA-GUARD II - For Even More Protection

Hot-Dipped Galvanized \& Polyurethane Painted: After fabrication, materials are hot-dipped galvanized per ASTM-A 123 and finished with one spray coat of high solids polyurethane primer and one spray coat of high solids gloss black polyurethane paint.
GALVA-GUARD III - Recommended Powder Finish
Pre-Galvanized Tubing \& Polyester Powder Coated: Materials are fabricated using galvanized tubing and finished with one powder coat of zinc-rich epoxy primer and one coat of gloss black polyester powder.

## BFC Other Finishes

> In addition to our galvanized steel finishes above, BFC also offers these more economical finishes for use in dry, non-corrosive environments.

POLYESTER POWDER COAT over Galvanized Tubing
Powder Coated: After fabrication, materials are power washed in an iron phosphate solution and receive one coat of gloss black polyester powder.
POLYESTER POWDER COAT over Plain Steel
Powder Coated: After fabrication, materials are power washed in an iron phosphate solution and receive one coat of gloss black polyester powder.

## POLY-PRO +, over Plain Steel

Polyurethane Painted: After fabrication, materials are power washed in an iron phosphate solution and receive one spray coat of high solids polyurethane primer and one spay coat of high solids gloss black polyurethane paint.

## TWO COAT ENAMEL over Plain Steel

After fabrication, materials are power washed in an iron phosphate solution and receive one spray coat of rust inhibitive primer and one spay coat of gloss black enamel.

## ONE COAT ENAMEL over Plain Steel

After fabrication, materials are power washed in an iron phosphate solution and receive one coat of gloss black enamel. This one coat system is intended as a primer. It is recommended that a top coat be applied.

## Standard Styles Illustrated

Illustrations 1 through 5 on the following pages show the Standard Styles available in BFC Ornamental Iron. Picket location and spacing is indicated for each style.

## For finish options, see page 5 - MATERIAL FINISHES

## Aristocrat Style

## PICKET POSITION

SPACING IS
3 7/8" ACTUAL


- 1" Square top \& bottom rail, 16 GA.
- $5 / 8$ " Square pickets, 18 GA.
- $41 / 2$ " on center ( $37 / 8^{\prime \prime}$ actual) space between pickets


Illustration 1: Typical Standard Aristocrat Panel

## Modern Style

PICKET POSITION


- 1" Square top \& bottom rail, 16 GA.
- $5 / 8^{\prime \prime}$ Square pickets, 18 GA.
- $41 / 2$ " on center (3 7/8" actual) space between pickets


Illustration 2: Typical Standard Modern Panel
For other grades see Figure 1 on page 2.
Page 6

## Standard Styles Illustrated

## Regal Style

## PICKET POSITION



- 1" Square top \& bottom rail, 16 GA.
- $5 / 8$ " Square pickets, 18 GA.
- $41 / 2$ " on center ( $37 / 8^{\prime \prime}$ actual) space between pickets



## Empire Style

Illustration 3: Typical Standard Regal Panel

## PICKET POSITION

| $\square$ | SPACINGIS <br> $37 / 8^{\prime \prime}$ ACTUAL | $\square$ |
| :--- | :--- | :--- |

- 1" Square top \& bottom rail, 16 GA.
- $5 / 8$ " Square pickets, 18 GA.
- $41 / 2$ " on center (37/8" actual)
space between pickets


Napoleon Style


Illustration 5: Typical Standard Napoleon Panel

## Installation Variations

## Elevation Changes

Elevation changes require a post. In other words, a level fence that starts up or down a slope must have a post where the slope starts and ends. Likewise, if a fence changes height (as in step height changes), there must be a post at the point of each height change.

Note any slope the fence must cross. Is it uphill or downhill.


Illustration 6: Biased and Stepping Panels

## Attachment

Point out any place the fence will attach to existing posts, walls or structures and note how the fence is to be attached. Indicate what the fence is to be attached to and the location for the attachment.

## Pilasters

For pilasters further than $8^{\prime}$ apart, a center leg may be put in the middle for support. If the distance is more than $10^{\prime}$ between pilasters, or the fence is greater than $5^{\prime}$ in height, it is recommended that a post be used in the center.

## Special Situations

List any special conditions that might need consideration, such as children or small dogs.

## Custom Fabrication

At Builders Fence Company, we manufacture a comprehensive line of standard fences, gates and hardware in sizes, styles and grades that will fit most designs and plans. In addition, we are one of the few manufacturers that specializes in custom fabrication, working regularly with architects and designers to tailor ornamental iron fence to the most demanding and unique requirements.

BFC will modify any of our regular styles, or manufacture an entirely new look based on your specifications to accommodate particular problems or designs. For more complete information on BFC custom fabrication capabilities to keep you a step ahead, contact one of our representatives.

## Installation Variations

## Biased Panels

Biased panels are made on an angle to match the ground contours. Such a panel is used when the customer does not want the fence to step, or when over the length of the panel, there is more than a 4" drop (for Regal, Napoleon or Empire styles) and more than a 2 " drop (for Aristocrat and Modern styles) in question. Measure the length of the biased panel to the next foot and be sure to include a post at the top and the bottom of the bias. Include the dimensions shown in illustration 7.


Illustration 7: Hillside or Biased Panel

## Tapered Panels

Tapered panels allow for a fence with a level top line while adjusting for changes in ground elevation. Be sure to note the height of both ends of the tapered panel a viewed from outside the fence line.


## Curved Panels

Curved panels are used to soften a corner or to match an existing design or to create a soft flowing fence line. Be sure to include the measurements indicated by illustration 9 .


Illustration 9: Curved Panel Dimensions

## Notches

A notch is a situation where a corner of a gate or a panel is cut out to facilitate installation around a low wall, or other small obstacle the fence will have to fit around. Fully describe any cut outs in the fence.


Illustration 10 : Notched Panel

## BFC Gates

## Gates (available in all styles)

For swing gates (single and double) indicate on which side the gates are hung and the direction of opening (as viewed from outside the fence line looking in). For slide gates, indicate the direction of travel for opening. For either type of gate, be sure to indicate the measurements of the required opening (height by width).

> Illustration 11: Typical Heavy Regal Single Swing Gate with Lock Box


Illustration 12: Typical Heavy Regal Double Swing Gate



Illustration 14: Double Gate


## BFC Gates

## Customized Gates

These are just a few samples of the beautifully designed gates that BFC can manufacture to your specifications. We provide detailed drawings with any required special instructions.

Options can include a variety of castings, scrollwork, plates, lettering, accessories, etc.

Send your sketch or ideas to your sales representative.

Illustration 15: Single Gate


## BFC Gates

## Cantilever Rolling Gate

The gate is made approximately $50 \%$ longer than the opening.

## Component Grades

## PICCOLO <br> - For Medium Size Gates - <br> 33 foot maximum opening, $2,200 \mathrm{lb}$. maximum load.



Illustration 17: Heavy Regal Cantilever Gate

## - For Large Size Gates -

66 foot maximum opening, $4,400 \mathrm{lb}$. maximum load.

## Bottom Track Cantilever Gate System



System Components: All items are galvanized
(A) Receiver Cup - 2 each required
(B) End Wheel Cap - 2 each required
(C) Cantilever Gate Trolly - 2 each required
(D) Hook Bolts - 12 each required
(E) (Optional) Trolly Ground Plate -2 each required
(F) * Cantilever Bottom Track - 1 or more required
(G) BFC Type II (over head roller set) -2 each required

* Sold in full lengths only

Illustration 18: Heavy Regal Cantilever Gate with System Components

## Bottom Track Cantilever Gate System

## Cantilever Rolling Gate System Components:

## Each Gate Requires

1 or more Cantilever Bottom Track *

2 each
2 each Cantilever Gate Trolly (Optional) Trolly Ground Plate
12 each Hook Bolts
2 each Receiver Cup
2 each End Wheel Cap
2 each BFC Type II
(over head roller set)

## Component Grades

## PICCOLO

- For Medium Size Gates -
* 236" long track sold in

FULL LENGTHS ONLY.
33 foot maximum opening
(2,200 lb. maximum applied $)$
load, must be calculated. )

- All items are galvanized -


## GRANDE

- For Large Size Gates -
* 236" long track sold in FULL LENGTHS ONLY. 66 foot maximum opening.
( $4,400 \mathrm{lb}$. maximum applied $)$
( load, must be calculated. )
- All items are galvanized -

See page 25 for a typical shop drawing showing a more detailed view of the components of a cantilever gate system.


## BFC Basic Clamp-on Swing Gate Hardware Kits



Kits A1-A9 to steel post self-closing gravity to steel post self-closing gravity

Kits C1-C9
Kits D1 - D5
Kits E1-E9
Kits F1 -F7
two-way self-closing


Kits G1-G6
to masonry

Kits H1-H3 adjustable

Kits J1 - J6 gate side

Kits K1-K6 embedded bolts

Kits L1-L2 self-closing to masonry

Kits L3-L4 two-way to masonry


Illustration 20: Hardware Kits

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## Swing Gate Hardware



Ball Bearing Hinge (small, medium \& large)


Roller Bearing Hinge (extra heavy duty)


Hydraulic Closers


Heavy Lockable Drop Rod


Combination Locks

Self-Closing Butt Hinge


Blank Butt Hinge


Ball Bearing Butt Hinge


Exit Devices

## Rolling Gate Hardware



Slide Gate Roller Assembly


Industrial Slide Gate Latch


Galvanized V-Track - for use with V-Groove Wheel


V-Groove Wheels Malleable Iron


V-Groove Wheels (solid steel) up to 5,000 lbs. capacity per wheel

## Accessories




Circles \& Hoops


Top Scrolls


## Locks



Trilogy T2 Series


Simplex 5020


Unican EE/1011


Trilogy Lock ETDL (outside trim for exit device)

## Combination Locks

These are just a few samples of the beautifully designed locks that come in a variety to choose from.

Some of the specifications include; master and user codes, key bypass, vandal and weather-proof, easy to install and suitable for outdoor applications.


Unican 6200

## Locks

## Electric Release System

This kit includes: A release lockbox, electric release, stepdown transformer and a electric push-buttom.


Electric Release System


Schlage \& Kwikset Deadbolt and Passage Locks


Exit Devices and Trims

## Exit Devices and Lock Sets

Many styles of locks and exit devices are available, along with weldable steel boxes. Gates are furnished with lockbox and plate prepared per device templates.

## Accessories



Illustration 26: Castings for $1 / 2$ " square, $5 / 8$ " square and $3 / 4$ " square pickets


## Special Custom Designs

## Beautiful \& Elegant Variations

Available in residential and commercial grades.

We will gladly modify any of our styles to accommodate your particular problems or designs, or we will fabricate an entirely new look based on your own specifications.

Aristocrat style with alternating height pickets
002 Aristocrat style with double top rail
003 Aristocrat style with cast iron knuckle every other picket
004 Aristocrat style with doggie pickets
005 Aristocrat style with arching pickets
006 Aristocrat style with swooping pickets

007 Empire style with cast iron finials and steel scroll work

008A Regal style with horizontal castings
009 Regal style with double top rail and "C" scrolls
010 Regal style with vertical castings
011 Regal style with two rows of cast iron knuckles every other picket
012 Regal style with double top and bottom rails with circles between rails


004
 005


006



010


Available in
Rose, Grape, Oak, Bird of
Paradise and other styles to choose from.

011


012


## Security Door Guards



Single Door


Sliding Glass Door


Illustration 29: Security Doors

## Door Guards

Door guards are Regal Style and fully designed to specifications.

## Optional Features Include:

Perforated Metal Strip
Fly Strip
Expanded Metal, 1/2" \#16
Passage Latch, (handle or manual)
Deadbolt Lock Sets
Lockguard
Solid Pickets
Security Door Handle

## Security Door Specifications:

- 1 " x $1 \quad 1 / 2$ " 16 GA. tubular steel outer frame
- 1 " x 1 " 16 GA. tubular steel inner door frame
- $5 / 8$ " square 18 GA . tubular steel vertical pickets at $41 / 2^{\prime \prime}$ on center
- After fabrication, materials are power washed in an iron phosphate solution and receive one coat gloss black enamel
- Two sets of decorative scrolls per door (3/16" x 1/2")
- Heavy duty lock box with single or double cylinder deadbolt lock ( 1 " throw)
- 1 " x $11 / 2$ " frame drilled six $3 / 8$ " holes (or specify mounting method)
- Six 5/6" x 4" one-way screws


## Laser Cutting Designs



Illustration 30: Plate Designs


SAMPLE SHOP DRAWING

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Illustration 31: Typical Shop Drawing
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SAMPLE OF A CUSTOM CANTILEVER SLIDE GATE DRAWING

Illustration 32: Typical Shop Drawing

# SPECIFICATIONS <br> B F C IRON 

## PART 1 - General

1.01 WORK INCLUDED

This specification covers ornamental iron fence materials including ornamental iron gates, posts and hardware.
$1.02 \quad$ RELATED WORK
Section_- - Earthwork
Section_-_ Concrete
Section__ - Painting

### 1.03 SYSTEM DESCRIPTION

The manufacturer shall supply a complete ornamental fencing system including all components defined herein (fence panels, posts, gates and hardware).

### 1.04 QUALITY ASSURANCE

The contractor must be familiar with the construction methods and materials involved in ornamental iron fencing.

### 1.05 REFERENCES

ASTM A 36 - Structural Steel, Bars, Flats, and Shapes
ASTM A 123 - Zinc (Hot-dipped Galvanized) Coatings
ASTM A 500 - Steel Structural Tubing in Rounds and Shapes
ASTM A 513 - Electric-Resistance-Welded Carbon and Alloy Steel Mechanical Tubing

### 1.06 SUBMITTALS

Submit the manufacturer's shop drawings and literature prior to installation. Approved shop drawings shall become the basis for acceptance of the work.

### 1.07 DELIVERY, STORAGE, \& HANDLING

Deliver to the job site materials in good condition and properly protected against damage to factory-finished surfaces.
Store materials in a clean, dry location and in such a way as to avoid damage, especially from dust, chemicals and moisture in the air by covering with protective material. Handle materials carefully on the job site to protect factory finishes.

### 1.08 WARRANTY

Builders Fence Co., Inc. hereby certifies that it manufactures the ornamental iron fencing and gates in accordance with specifications and/or shop drawings supplied by BFC. Builders Fence Co., Inc. assumes the responsibility of providing products meeting BFC's prescribed specifications. Local environmental factors vary widely, therefore BFC does not guarantee that its product will perform in any defined manner in any specific environment. Damage to coating due to
shipment and installation is to be expected and must be adequately touched up or repainted immediately after occurrence by installer to meet original specification standards.

## PART 2 - Products

### 2.01 ACCEPTABLE MANUFACTURERS

The ornamental fencing system shall be manufactured by:

> Builders Fence Company, Inc.
> P.O.Box 125
> Sun Valley, CA 91353-0125
> $1 \bullet 800 \bullet 767 \bullet 0367$

### 2.02 MATERIALS

A. Pickets, rails, and posts shall be manufactured from tubing meeting the requirements of ASTM A 513 or A 500 Grade B.
B. Solid steel bars, flat plates and shapes shall be manufactured from steel conforming to the requirements of ASTM A 36.
C. Pickets for gates shall be of the same size and style as those in the fence panels. Frames for gates shall be of sufficient size and thickness to provide adequate support without sag. Adjustable trussing may be required. Gate hardware shall be supplied by the manufacturer and shall be of sufficient size and capacity to support the gate specified.

### 2.03 FABRICATION — General

A. Steel used in the manufacturing of panels, gates and posts shall conform to the ASTM standards specified and shall be new prime material.
B. Panels, gates and flanged posts shall be of welded construction. No wire rods, screws or rivets shall be accepted to attach pickets to rails. Layout and welding shall be done by experienced craftsmen. Welds shall be made by the gas metal arc method and welds shall be neat, clean and of the sizes indicated on the drawings. All flush welds shall be ground smooth.
C. After fabrication panels, gates and posts shall be power washed in a phosphoric acid solution, rinsed and dried.
Finish shall be chosen from one of the following: BFC GALVA-GUARD I
BFC GALVA-GUARD II
BFC GALVA-GUARD III
BFC POLY-PRO +

## PART 3 - Execution

### 3.01 PREPARATION

A. The contractor shall layout the new fence in
accordance with the fence construction plans, shop drawings, and all applicable requirements and codes.
B. The contractor shall verify any grade changes or surface irregularities.
C. Discrepancies between the approved shop drawings and field conditions must be approved by the architect or engineer prior to proceeding with the installation.

### 3.02 INSTALLATION

A. Fence posts shall be set plumb and level at spaces shown on the drawings. Footings shall be of the sizes indicated. Post caps shall be as indicated on the drawings.
B. Fence panels shall be welded or bolted to the posts. Field welding of rail to the post shall be a complete 360 degree (all four sides) and shall be the size indicated on the drawings. Welds shall be cleaned and coated with a primer the same day the welding is performed. Bolted connections shall use bolts and tabs of the size indicated on the drawings. After tightening bolt, threads shall be peened.
C. Gates shall be installed plumb and level and shall be the sizes and style indicated on the drawings. The contractor shall install any gate stops that may be required. Any padlock provisions or strikes shall be field attached to assure alignment. The contractor shall lubricate the hinges, rollers and other gate hardware after installation. D. All field welds and any abrasions to factory coatings shall be thoroughly cleaned, re-primed and touched up by the contractor with paint of the same quality, color and gloss of that used by the manufacturer.

### 3.03 CLEANING

A. The contractor shall clean job site of excess materials.
B. Post hole excavations shall be scattered uniformly away from the posts or removed as directed.
C. Concrete splatter shall be cleaned from exposed posts.
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