

INSTRUCTIONS: BarnettBates “Quick-Spec” Guideline

Note: This specification guideline is provided in Adobe PDF format (.pdf). It includes several imbedded notes (highlighted in blue text) to assist the specifying architect. Any text may be deleted or edited as necessary. To adapt spec. to your specific project:

- Save this document to disk “as is” with all notations and instructions, for future use.
- Open this document. Begin review of contents.
- Select (and retain) desired material style information. (Delete information pertaining to styles not selected and delete blue-highlighted text.)
- Select (and retain) desired finish specification information. (Delete information pertaining to finish not selected and delete blue-highlighted text)
- Make sure all blue instructional copy is deleted and adjust vertical spacing, if needed.
Note: Page numbering will automatically adjust.
- Choose “Save as” under the “File” tab (at top listing) and indicate a project-specific name. This will save modified specification to your computer for use as needed with project specification documents.

SECTION 10240

GRILLES & SCREENS

Note: Select either “STB”, “AA” or “STL” line subhead line below – delete the lines not selected.

AA PRODUCT GROUP: BARNETTBATES CORPORATION (800) 541-3912
STB PRODUCT GROUP: BARNETTBATES CORPORATION (800) 541-3912
STL PRODUCT GROUP: BARNETTBATES CORPORATION (800) 541-3912

PART 1 GENERAL

1.01 SUMMARY

A. Products supplied but not installed under this section

1. Aluminum infill panels
2. Aluminum banding and/or tube framing (as required)

B. Related work specified elsewhere

1. Installation “by others” (not manufacturer) – See Summary of Work, (Work Under Other Contracts or Owner Furnished Items), -- Section _____
2. Concrete – Section _____ (as needed)

3. Earthwork – Section _____ (as needed)
4. Structural Steel -- Sections _____ (as needed)

1.02 PERFORMANCE REQUIREMENTS

A. Loading

1. Design and size components to withstand dead loads and live loads caused by positive and negative wind loads acting normal to the plane of enclosure including building corners in accordance with ASCE 7, BOCA and OSHA code requirements. Components to be sized in consideration of regional geographic wind characteristics.

B. Finish

Note: Select and include specification information indicated below for either Clear Anodizing or TGIC Polyester Powder Coat finish system. (Call to discuss third alternative Kynar finish system. Spec.information may be available soon.). Delete finish system information not selected.

Clear Anodizing: Coating in full accordance with Military Specification 8625F, Indicated as Type II conventional acid bath coating produced from sulfuric acid.

Chemical Finishing- Etched

A.A.	COMMON	DESCRIPTION	EXAMPLE OF FINISHING METHOD
C-22	R-1	Medium matte minimum thickness of 5 microns	Sodium hydroxide (caustic soda) 30-45 gr/li @ 60c.- 65c. for 5 minutes.

Anodic Coating - General

A.A.	COMMON	DESCRIPTION	EXAMPLE OF FINISHING METHOD
A-212	201	Clear coating minimum thickness of 5 microns	15% sulfuric acid @ 20c., 12 amps/sq. ft. for 10 min.

TGIC Polyester Powder Coat: Epoxy pre-coat / Color Coat / TGIC Polyester Powder Coat Finish 20-Year Warranty System.

TGIC Polyester Powder Coat Finish System

Test Methods	Powder Properties	Requirement
(Prime coat)	DuPont # ELH503S5	(Gray Morning)
(Test color coat)	DuPont # PFB-603-S9	(Bike Black)
(ASTM D5965-96,C	Specific Gravity	1.29 +/- 0.05
	Theoretical Coverage	1.49 ft 2/lb/mil
ASTM D3451-92, 13	Mass Loss During Cure Max. Storage Temp.	less than 1% 75 degrees F.

Test Methods	Coating Properties	Requirement
ASTM D523-89	Gloss at 60 percent	85+
DPC TM 10.219	PCI Powder Smoothness	8

ASTM D2454-95	Overbake Resistance,	Time 100%
ASTM D3363-92a	Pencil Hardness	2H
ASTM D2794-93	Dir/Rev Impact, Gardner	160/160in/lbs
ASTM D3359-97	Adhesion, Cross Hatch	5Bpass
ASTM D522-93a	Flexibility, Mandrel	1/8"dia. no fracture
ASTM B117-97	Salt Spray	4,000 hours
UL DTOV2Org.Coatings	Steel Enclosures, Electrical Equipment	Recognized

Application

Electrostatic Spray, 300 degrees F.	Cure Schedule (Time at substrate temp.)
Pretreatment: White Metal Blast (2mil. Min.etch)	
Substrate: 0.032 in. CRS	10 Min. @ 400f.
Film Thickness	8.0-10.0 Milis

1.03 SUBMITTALS

- A. Product Data.** Supply printed materials indicating specified infill pattern design, spacing and component material sizes.
- B. Drawings.** Erection and detail shop drawings will be provided showing layout and location of all component parts. Panel sizes, clips, gates, gate hardware, attachment details, base requirements and panel installation bolts will be enumerated on the drawings. Installation bolts will be supplied by the installer (not by manufacturer). Drawings to be approved by customer prior to fabrication.
- C. Samples.** A sample will be provided for each panel type selected (additional samples available if needed). Each sample approximately 10" x 10" to be coated with the specified finish system.
- D. Warranty document.** Provide complete manufacturer's finish and workmanship documents.

1.04 QUALITY ASSURANCE

- A. Fabricator qualifications.** A firm experienced in producing fencing/infill/gate products similar to those indicated for the project and with a record of successful in-service performance.
- B. Metal Bar Grating Standards.** Comply with applicable requirements as listed below.
 1. Non-Heavy Duty Metal Bar Gratings Comply with NAAMM MBG 531, "Metal Bar Grating Manual for Steel, Stainless Steel, and Aluminum Gratings and Stair Treads

- C. **Welding.** Manufacturer to utilize quality shop welding procedures according to AWS Structural Welding Code guidelines.

1.05 PROJECT CONDITIONS

- A. **Field Measurements.** Verification of dimensions and layout information for fencing/infill/gates shown on drawings “by others” (not by manufacturer)
See – Summary of Work, (Work Under Other Contracts or Owner Furnished Items), Section _____

1.06 WARRANTY SUMMARY (See 1.03 Submittals for added information)

- A. **Materials and workmanship.** Manufacturer to warrant the original purchaser for systems to be free from defects in material and workmanship and all fabrications to be in accordance with NAAMM steel fabrication industry tolerances and standards.
Manufacturer to supply written warranty information in accordance with specification requirements.

- B. **20-Year Finish Warranty.** When supplied with “BB-20”, 20-year warranty TGIC polyester powder coat finish system (not applied over hot-dip galvanizing), manufacturer guarantees supplied components will not rust, peel or blister for a period of Twenty (20) years from the date of purchase. Damage from accident, improper transport, improper installation, normal finish wear, vandalism or abuse and certain additional items listed on warranty documents are not covered. Warranty is limited to pro-rated value of the coating only, not to exceed original cost of coating. Manufacturer to supply written warranty information in accordance with specification requirements.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. **BarnettBates Corporation Joliet, IL (800-541-3912) Manufacturer to custom fabricate components as required.**

2.02 MATERIALS

Note: Select and include specification information indicated below for “Rectangular” main bar shape, “I-bar” main bar shape or “Formed Louver” main bar shape . Delete the main bar shape(s) not selected.

- A. **Main Bars: Rectangular aluminum extrusions** 6063-T6 or 6061-T6
(per ASTM B-221)
- A. **Main Bars: “I-bar”) aluminum extrusions** 6063-T6 or 6061-T6
(per ASTM B-221)
- A. **Main Bars: “Formed Louver”) aluminum extrusions** 6063-T6 or 6061-T6
(per ASTM B-221)
- B. **Crossbar: Expanded 5/16” diameter tubular extrusions – centered in main bars:**
(per ASTM B-210)
- C. **Banding/Framing Bars:** Rectangular aluminum extrusions 6063-T6 or 6061-T6
- D. **Material Style:**

Note: Select and include either “Style STB-(deep parallel bars)”, “Style STL-(louvers)” or “Style AA- (standard parallel bars)” section below—delete the section(s) not selected. Delete lines in selected chart which are not applicable to the style number selected.

Style STB (Deep Parallel Bars) Infill / Sunscreen / Fencing Patterns

Note: Select “Standard” style numbers from chart below. Many other style combinations are available. Non-standard styles are specified as “custom” with a “C” followed by BarnettBates size and finish code for required bar sizes and spacings, for example: **STB-C-32-8-CA-82** (Call for assistance with custom style specification)

Delete rows in chart for style numbers not selected.

Sun-Tamer Sunscreen Materials			
	Bar Size	Material Hole Size	
		Main Bar Spacing c/c	Crossbar Spacing c/c
Style Number			
STB-5	1" x 3/16"	2"	2"
STB-6	1" x 3/16"	4"	4"

STB-1	2" x 1/8"	1 1/2"	8"
STB-7	2" x 1/8"	1 3/16"	8"
STB-2	3" x 3/16"	2"	8"
STB-3	4" x 1/4"	2 3/8"	6"
STB-4	4" x 1/8"	4"	12"
STB-8	4" x 3/16"	2 1/4"	6"

Style STL (Formed Louvers) Infill / Sunscreen / Fencing Patterns

*Note: Select "Standard" style numbers from chart below.
Delete rows in chart for style numbers not selected.*

Specify Style	Sun-Tamer Sunscreen		
	Formed Louvers	Material Hole Size	
		Main Bar Spacing c/c	Crossbar Spacing c/c
	STL-80	Block 80%	2"
STL-100	Block 100%	1 5/8"	6"

Style AA (Standard Parallel Bars) Infill / Sunscreen / Fencing Patterns

*Note: Select "Standard" style numbers from chart below. Many other style combinations are available. Non-standard styles are specified as "custom" with a "C" followed by BarnettBates size code for required bar sizes and spacings, for example: **AA-C-32-8-CA-82** (Call for assistance with custom style specification).*

Delete rows in chart for style numbers not selected.

Style Number	Architectural Accent Fencing/Infill		
	Bar Size	Material Hole Size	
		Main Bar Spacing c/c	Crossbar Spacing c/c
	AA-5	1 1/2" x 1/8"	1"
AA-1	1" x 1/8"	1"	6"
AA-2	1" x 3/16"	2"	2"
AA-3	1" x 3/16"	2 1/2"	6"
AA-4	1" x 3/16"	4"	4"

2.03 FABRICATION

- A. **Fabrication per shop drawings** Panels, posts, attachments, framing, gates and all supplied components will be fabricated per detail shop drawings supplied by manufacturer.
- B. **NAAMM** Prior to shipment, all fabricated components will be analyzed and meet standard NAAMM fabrication requirements and tolerances.
- C. **OSHA , BOCA** Fabricated components, when installed properly will meet applicable OSHA, and/or BOCA loading requirements.

2.04 FINISH SYSTEM

Note: Select and include specification information indicated below for either Clear Anodizing or TGIC Polyester Powder Coat finish system. Delete information for finish system not selected.

Clear Anodized Finish

Coating in full accordance with Military Specification 8625F, Indicated as Type II conventional acid bath coating produced from sulfuric acid. All supplied components will be finished with this system. (See section 1.02, B, 1.)

BarnettBates BB-20® 20-year Warranty Polyester Powder Coat Finish System. All supplied components will be finished with this system (or equal, if approved by architect). Process:

- 1) All fabricated product to be 100% sandblasted to white metal for removal of scale, oil and debris to create a minimum 2mil etching for proper adhesion.
- 2) Electrostatic application of DuPont Gray Morning epoxy powder primer with 375f. minimum 15 minute duration heat cure for maximum corrosion protection.
- 3) Immediate electrostatic application of DuPont TGIC polyester powder color coat while metal temperature is minimum of 300f. and heat cure for minimum 10 minutes at 400f.

This process provides an average of 8-10 mils total coating thickness. **Coating withstands more than 4,000 hours salt spray.** (Complete testing results available upon request. See PERFORMANCE REQUIREMENTS 1.02,B, 2.)

Note: Color to be selected from the following standard colors. Select required color below – delete all color listing information not selected. (Specific color match or other colors are extra cost options)

Color Selection Indicated Below:

ALMOND	PFT500S8
AERO YELLOW	PFY601S9
RED BARON	PFR400S9
BLUE STREAK II	PFK604S9
EVERGREEN	PFG500S9
SAFETY ORANGE	PFS500S8
GRAY ASA-70	PFH502S8
BIKE BLACK	PFB603S9
SKY WHITE	PFW510S9
STATUARY BRONZE	PFJ407A5
LUCY BROWN	PFJ403S9

PART 3 EXECUTION

PART 3 “by others” (not manufacturer) – See Summary of Work, (Work Under Other Contracts or Owner)
Section _____

3.01 EXAMINATION

A. Examine areas and conditions With installer present, examine area and conditions for a verified survey of property lines and legal boundaries, site clearing, concrete work, steel frame and support structure work (as necessary) earthwork, pavement work and other conditions affecting performance.

1. For ground fencing areas, do not begin installation before final grading is completed.

B. Proceed with installation Proceed with installation only after unsatisfactory conditions have been corrected.

3.01 INSTALLATION, GENERAL

INSTALLATION “by others”, (not manufacturer) – See Summary of Work, (Work Under Other Contracts or Owner), Section _____

END OF SECTION