

**AMERISTAR® PERIMETER SECURITY USA INC.
EXODUS® - Egress Gate System – PreHung Gate
Construction Specification – SECTION 32 31 19**

PART 1 - GENERAL

1.01 WORK INCLUDED

The contractor shall provide all labor, materials and appurtenances necessary for installation of the egress gate system defined herein at (specify project site).

1.02 RELATED WORK

Section ____ - Earthwork

Section ____ - Concrete

Section ____ - Fence & Gates

1.03 SYSTEM DESCRIPTION

The manufacturer shall supply a total egress gate system of the Ameristar® Exodus® (specify Flange Mount, Surface Plate Mount or Direct Bury) or Double Flange Mount installation method and (specify 1" picket w/ expanded metal, 1" picket w/ perforated metal, Pale w/ expanded metal, pale w/ perforated metal, anti-scale pale w/ expanded metal, anti-scale pale w/ perforated metal, perforated metal only, or expanded metal only) infill. The system shall include all components (i.e., gate, jamb frame, infill, mullion for Exodus Double and hardware) required.

1.04 QUALITY ASSURANCE

Pre-hung gate system produced by a manufacturer with minimum 10 years experience in gate manufacturing. The contractor shall provide laborers and supervisors who are thoroughly familiar with the type of construction involved and materials and techniques specified.

1.05 REFERENCES

- ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process.
- ASTM B117 - Practice for Operating Salt-Spray (Fog) Apparatus.
- ASTM D523 - Test Method for Specular Gloss.
- ASTM D714 - Test Method for Evaluating Degree of Blistering in Paint.
- ASTM D822 - Practice for Conducting Tests on Paint and Related Coatings and Materials using Filtered Open-Flame Carbon-Arc Light and Water Exposure Apparatus.
- ASTM D1654 - Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments.
- ASTM D2244 - Test Method for Calculation of Color Differences from Instrumentally Measured Color Coordinates.
- ASTM D2794 - Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
- ASTM D3359 - Test Method for Measuring Adhesion by Tape Test.
- ASTM F2408 – Ornamental Fences Employing Galvanized Steel Tubular Pickets.
- IBC Group I-2 Egress Requirements

1.06 SUBMITTAL

The manufacturer's submittal package shall be provided prior to installation.

1.07 PRODUCT HANDLING AND STORAGE

Upon receipt at the job site, all materials shall be checked to ensure that no damages occurred during shipping or handling. Materials shall be stored in such a manner to ensure proper ventilation and drainage, and to protect against damage, weather, vandalism, and theft.

1.08 PRODUCT WARRANTY

Gate system (i.e. gate, jamb frame, and infill) shall be warranted within specified limitations, by the manufacturer for a period of three (3) years from date of original purchase. Warranty shall cover any defects in workmanship and material finish, including cracking, peeling, chipping, blistering, or corroding. See full product warranty online or request from Ameristar.

PART 2 - MATERIALS

2.01 MANUFACTURER

The gate system shall conform to the Ameristar Exodus Egress Gate (specify Flange Mount, Surface Plate Mount or Direct Bury) or Double Flange Mount installation method and (specify 1" picket w/ expanded metal, 1" picket w/ perforated metal, Pale w/ expanded metal, pale w/ perforated metal, anti-scale pale w/ expanded metal, anti-scale pale w/ perforated metal, perforated metal only, or expanded metal only) infill, manufactured by Ameristar Perimeter Security in Tulsa, Oklahoma.

2.02 MATERIAL

A. Steel material for gate framework (i.e. jamb frame & gate), shall be galvanized prior to forming in accordance with the requirements of ASTM A653/A653M, with minimum yield strength of 45,000 psi (310 MPa). The steel shall be hot-dip galvanized to meet the requirements of ASTM A653/A653M with a minimum zinc coating weight of 0.90 oz/ft² (276 g/m²), Coating Designation G-90.

B. Infill frame shall be 12ga steel. Expanded metal mesh shall be ¾" x #9 flattened or Perforated metal mesh shall be 3/16" round x ½" x 18ga.

C. Ornamental picket infill material shall consist of 1" square x 14 Ga. tubing for pickets. Pickets shall be spaced no greater than 5" o.c. Infill frame shall be 12ga steel. Expanded metal mesh shall be ¾" x #9 flattened or Perforated metal mesh shall be 3/16" round x ½" x 18ga.

D. If applicable - material for pales shall be 2.75" x .75" x 14ga. corrugated shape. Standard pale spacing shall be no greater than 6" o.c. or anti-scale pale spacing at no greater than 4.25" o.c.

E. Gate shall be 1.75" x 14ga steel reinforced structural design with ¼" plate reinforced hinge mounting.

F. Hinges shall be stainless steel five knuckle bearing hinges with non-removable pin and stainless steel fasteners.

G. Removable mullion (Exodus Double only) shall be L980 Lockable Mullion.

2.03 FABRICATION

A. Gate shall be pre-drilled to accept appropriate hardware set. Infill frames shall be fabricated as a single unit. Frame shall be of welded construction inset with mesh filler, attachment to gate frame by means of security fasteners.

B. Gate jamb frame shall be fully welded consisting of 3" x 12ga square tubing for main jamb, 1" square gate stop, and strike mounting block, with gate stop bumpers. Jamb to include an electrical access point with conduit point of connection. Electrical connection to gate by means of Power Transfer connection mounted in jamb and gate. Gate shall be pre-assembled.

C. Gate threshold to be mounted with fasteners allowing for placement below grade or removal after gate installation.

D. Gate shall have clear opening (from gate stop to face of gate open to 90 degrees) of 41.5" meeting IBC Group I-2 Egress requirements.

E. Gate hardware to consist of exterior rated devices. Gate and hardware to be pre-assembled prior to shipping.

F. The manufactured galvanized gate shall be subjected to a multi-stage pretreatment/wash, followed by a dual stage coating process consisting of a cathodic electro-coat epoxy primer base coat and an electrostatic spray topcoat application, a PermaCoat® powder coat system. Steel framework is subjected to a six-stage pretreatment/wash followed by an electrostatic spray application of PermaCoat Color System, a two-coat powder system. The base coat is a thermosetting epoxy powder coating (gray in color). The top coat is a "no-mar" TGIC polyester powder coat finish with a minimum thickness of 2 mils (0.0508mm). The stratification-coated framework shall be capable of meeting the performance requirements for each quality characteristic shown in Table 2.

PART 3 - EXECUTION

3.01 PREPARATION

All new installation shall be laid out by the contractor in accordance with the construction plans.

3.02 GATE INSTALLATION

Post installation for flange mount systems shall be spaced according Table 1. Posts set in concrete footers shall have a minimum depth of 36" (Note: In some cases, local restrictions of freezing weather conditions may require a greater depth). The "Earthwork" and "Concrete" sections of this specification shall govern material requirements for the concrete footer. Posts setting by other methods such as flanged, plated posts or grouted core-drilled footers are permissible only if shown by engineering analysis to be sufficient in strength for the intended application.

3.03 GATE INSTALLATION MAINTENANCE

When cutting/drilling gate components or posts adhere to the following steps to seal the exposed steel surfaces; 1) Remove all metal shavings from cut area. 2) Apply zinc-rich primer to thoroughly cover cut edge and/or drilled hole; let dry. 3) Apply 2 coats of custom finish paint matching fence color. Failure to seal exposed surfaces per steps 1-3 above will negate warranty. Ameristar spray cans or paint pens shall be used to prime and finish exposed surfaces; it is recommended that paint pens be used to prevent overspray. Use of non-Ameristar parts or components will negate the manufactures' warranty.

3.05 CLEANING

The contractor shall clean the jobsite of excess materials; post-hole excavations shall be scattered uniformly away from posts.

Table 1 – Exodus Egress Gate – Flange Mounting Option

Post Type	Square				
Post Size	2.5"	3"	4"	6"	8"
Post Setting On Center - single / double	58.5" / 103.5"	59" / 104"	60" / 105"	62" / 107"	64" / 109"
Inside Post Spacing - single / double	56" / 101"	56" / 101"	56" / 101"	56" / 101"	56" / 101"
Post Type	I-Beam				
Post Size	3"			4"	
Post Setting On Center - single / double	60.25" / 105"			60.25" / 105"	
Inside Post Spacing - single / double	58.75" / 102.25"			58.75" / 102.25"	

Table 2 – Coating Performance Requirements

Quality Characteristics	ASTM Test Method	Performance Requirements
Adhesion	D3359 – Method B	Adhesion (Retention of Coating) over 90% of test area (Tape and knife test).
Corrosion Resistance	B117, D714 & D1654	Corrosion Resistance over 3,500 hours (Scribed per D1654; failure mode is accumulation of 1/8" coating loss from scribe or medium #8 blisters).
Impact Resistance	D2794	Impact Resistance over 60 inch lb. (Forward impact using 0.625" ball).
Weathering Resistance	D822 D2244, D523 (60° Method)	Weathering Resistance over 1,000 hours (Failure mode is 60% loss of gloss or color variance of more than 3 delta-E color units).