SECTION 32 31 00 / FENCE AND GATES
SECTION 32 30 00.11 / PERIMETER SECURITY BARRIERS

Aluminum V-Track Slide Gates
(For Gate Openings up to 30 ft. and Overall maximum heights of 12 ft.)

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. This section includes design, fabrication and installation criteria and detail for Aluminum V-Track Slide Gates. Includes: Chain Link and Ornamental filler materials.

1.02 REFERENCES

A. ASTM F1184: Standard Specification for Industrial and Commercial Horizontal Slide Gates, Type 2, Class 1. (2.02).

B. ASTM A123: Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel. (2.02.C).

C. AWS D1.2: American Welding Society Structural Welding Code. (2.01.E).

D. ASTM F2200: Standard Specification for Automated Vehicular Gate Construction (2.02.E).

E. U.L.325: Safety Standards by Underwriter's Laboratory. (2.02.E).

1.03 SUBMITTALS:

A. Shop drawings of gates with all dimensions, details and finishes. Drawings must include post foundations.

B. Gate specifications, material certification and/or installation instructions for job-specific criteria (upon request).

C. AWS welding procedure specifications. See (2.01.E). (upon request).

PART 2 - PRODUCTS

2.01 MANUFACTURER

A. Gate type shall be ValuTrac™ Series 2500 Aluminum V-Track Slide Gate as manufactured by JAMIESON MANUFACTURING CO., 4221 Platinum Way, Dallas, TX 75237; PH: (888) 286-3362 www.jamiesonfence.com.

B. Substitution of products from other manufacturers who possess documented industry experience in the manufacturing of Aluminum V-Track Slide Gates will be considered by the architect as equal if they meet all specifications for fabrication, design, size and gauge of all component parts.

C. All requests for submittal of an approved equal must be made to and approved by the architect prior to the published scheduled bid date.

D. Changes in specifications may not be made after the published date of bid.

E. Upon written notification prior to weldment that gates require construction in a fabricating plant certified to AWS D1.2, manufacturer's fabricating plant shall provide proof of certification that:

1. All weld processes conform to documented Welding Procedure Specification and Procedure Qualification Record to insure conformance to the AWS D1.2 welding code.

2. All welders employed for welding under this specification have successfully completed the qualification requirements using the procedures of the AWS D1.2 Code. Individual Certificates of Welder Qualification shall be provided upon request.

(Ref: 1.02.C and 1.03.C)

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2.02 V-TRACK SLIDE GATE

A. Gate Frame:

1. Materials to be in accordance with ASTM F1184, Type II, Class 1 (ref: 1.02.A).

   Grade/Size/Weight:

Component	Gate Opening < 50 ft.		
	6" V-Groove Wheel (Three Wheel)		
	Tube dimension	Min. weight per linear ft (lbs)	Grade (if diff)
Top Primary Members	3" x 4"	2.07	6063-T52
Bottom Primary Channel Member	2-3/4" x 5"	3.089	6061-T6
End Vertical Primary Members	2" x 2"	2.10	6061-T6
Primary Vertical Members	2" x 2"	1.12	6063-T52
Tension Bracing	2" x 2"	1.12	6063-T52

2. Construction:

   a. No distinction of left-hand or right-hand is necessary in specifying or fabricating this gate.

   b. Primary Vertical Member to be centered in gate leaf. All vertical members will then be equidistant and not to exceed 6 ft. spacing.

   c. Horizontal Tension Bracing is provided each end of the panel.

   d. The gate frame will have provisions for two wheels located at the intersection of the Bottom Horizontal Frame Member and Primary Vertical Members at exact middle of the gate and the first primary internal vertical members at each end of the gate. Ground clearance from grade to the bottom of the gate frame to be ≤ 3 in.

   e. Trussing:

      i. Each bay shall include four (4) ¼ in. thick aluminum gussets welded into each corner of the bay.
      ii. 3/16 in. stainless steel wire rope is trussed diagonally between all primary vertical members and attached to the bottom gussets via galvanized 3/8 in. x 6 in. turnbuckles to allow for adjustment.
      iii. Wire rope shall be secured to gussets and turnbuckles with a single cable thimble and a crimped cable clamp. The tail section shall be braced exactly as the lead front end of the gate.

   f. The gate will include a tail section extending into the drawback area. Length of the "tail section" will be adequate to stabilize the gate with guide posts and provide a location for automated devices and accessories (operator, chain brackets or drive rails). Tail section length is to be determined by size of the gate opening as follows:

Gate Opening	Tail Length
< 26'	4'
26' to 30'	6'

B. The gate is to have two solid steel V-Groove Wheels that slide freely on ground mounted V-Track.

1. V-Groove Wheels are to be 4" in diameter and weigh a minimum of 4.45 lbs. each

   a. Each wheel is to be rated at a 5,000 lb. weight capacity with sealed double bearings mounting to a ½ in. diameter shaft.

   b. Wheels to be maintenance free with no grease requirements or fittings.

   c. Wheel brackets shall be fabricated from ¼ in. steel plate and located as per 2.02.A.2d above.

2. Ground track to be fabricated from 1 in. angle iron inverted and welded to base plate.

a. Base plate to be ¼ in. x 5 in. steel plate with two 5/8 in. Ø holes provided each end and on alternating sides of the inverted angle at no greater than a 24 in. space.

b. Entire assembly to be galvanized as per ASTM A123 (ref: 1.02.B) after fabrication.

c. Gate opening and track must have a consistent grade throughout the length of the gate travel.

C. Hardware:

1. All gate hardware; guide assemblies and hangers shall be manufactured from malleable iron, low carbon or pressed steel, galvanized as per ASTM A123 (ref: 1.02.B) after fabrication and furnished by the gate manufacturer.

2. Latches shall have a provision for locking devices.

D. Gate Frame Finish:

1. Choice of Natural Aluminum or Polymer Powder Coated to match fence color as specified and approved by the architect.

E. Filler: Gates (regardless of manual or automated operation) shall not have any opening that would allow a 2-¼ in. (or larger) sphere to pass through the body of the gate from grade level through 48 in. in height for the entire length of the gate frame- including tail section (ref: 1.02.D and 1.02.E).

1. Chain Link Fence Fabric Filler:

a. The chain link fabric filler shall be of the approved type and size as specified for the applicable fence project.

b. The chain link fabric filler shall be stretched along the overall length of the gate including the counter-balanced area.

c. Assembly:

i. Attach the fabric to the gate frame by inserting a steel tension bar vertically through the last link of the fabric at both ends of the gate frame.

ii. The tension bars are secured to the gate frame by attaching steel tension bands around frame and through the last link of fabric containing the tension bar.

iii. A tension wire shall be stretched and attached along the top and bottom of the fabric filler and attached to the gate frame with tie wires looped through provided slots in each of the aluminum gussets in the corners of each bay. This ensures that the fabric filler is taut and secure, thus adding support to the entire gate frame. Use standard fence industry ties to secure fabric in middle to primary and intermediate verticals.

2. Ornamental Picket:

a. All vertical filler pickets shall be constructed from 1 in. x 1 in. x 0.125 wall square aluminum tubing, 6063-T52 alloy, weighing no less than .516 lbs/ft. (or as specified by architect).

b. Optional filler pickets: ¾ in. x ¾ in. x 0.125 wall weighting not less than 0.368 lbs./ft. Maximum spacing between horizontal members should not exceed 42 in.

c. Pickets to be attached to rails by means of welding picket to top and bottom of each rail at point of contact.

2.03 POSTS:

A. Gate Posts (typical):

a. Chain link: 4 in. schedule 40 weighing 9.11 lb/ft. (unless otherwise specified).
b. Ornamental: 4 in. square x 3/16 in. wall weighing 9.42 lb/ft. (unless otherwise specified).

B. All gates require 1 latch post and either 1 or 2 double stabilizing gate posts:

a. Openings < 26 ft. require one double post assembly,

b. Openings > 26 ft. require two double post assemblies.

PART 3 – EXECUTION:

3.01 POST INSTALLATION

A. Footing diameter and depth are functions of soil conditions, wind load, size of the gate and potentially other job specific conditions. As such, the architect, engineer of record or other technically capable resource must determine the appropriate footing specifications.

- Note: *Unless otherwise specified by the architect or engineer of record*, excavate footings to a diameter a minimum of 4 times the post diameter and 6 in. deeper than the bottom of the gate post. Posts should be set a minimum depth of 36 in. for all V-Track gates. Crown the finished concrete at the top of the grade point to shed water.

B. Check each post for vertical and top alignment.

3.02 GATE INSTALLATION

A. The V-Groove wheels roll on steel V-Tracks secured to concrete with wedge type anchors. (Sold Separately)

B. V-Tracks must be installed parallel to the guide roller posts and the gate should maintain a level vertical position while moving across the drive opening. The grade of the track should be flat to prevent the gate frame from dragging on elevated places on the track. Also, un-level tracks can cause the gate to move unintentionally, creating a safety hazard.

C. Install gate. Make sure that gate rolls free of binding.

D. Attach latch and make sure that gate is received by latch in a secure manner.

3.03 CLEANING

A. Clean up debris and remove from the site.