

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



**Aluminum Cantilever Slide Gates- Chain Link and Ornamental
TrusTracII™ Series 3000 Double Track
(For Gate Openings up to 40' and Overall maximum heights of 12')**

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. This section includes design, fabrication and installation criteria and detail for internal roller aluminum cantilever slide gates.

1.02 REFERENCES:

- A. ASTM F 1184: Standard Specification for Industrial and Commercial Horizontal Slide Gates, Type 2, Class 2. (2.02).
- B. ASTM A123: Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel. (2.02.D).
- C. AWS D1.2: American Welding Society Structural Welding Code. (2.01.E).
- D. ASTM F 2200: Standard Specification for Automated Vehicular Gate Construction (2.02.F).
- E. U.L. 325: Safety Standards by Underwriter's Laboratory. (2.02.F).

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 TrusTracII™ Series 3000 Double Track Aluminum Cantilever 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 internal roller aluminum cantilever 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.
- B. All requests for submittal of an approved equal must be made to and approved by the architect prior to the published scheduled bid date. Products submitted after the bid date will not be accepted.
- C. Changes in specifications may not be made after the published date of bid.
- D. 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)

2.02 INTERNAL ROLLER ALUMINUM CANTILEVER SLIDE GATE

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



Aluminum Cantilever Slide Gates- Chain Link and Ornamental
TrusTrac™ Series 3000 Double Track
(For Gate Openings up to 40' and Overall maximum heights of 12')

A. Gate Frame:

- 1) Materials to be in accordance with ASTM F 1184 Type II Class 2 (ref: 1.02.A).

Size/Material Grade/Weight:

Component	Tube dimensions	Aluminum Grade Spec.	Min. weight per linear ft (lbs)
Top Primary Members	2" x 5" □	6063-T52	2.02
	TrusTrac™ (x2) enclosed track	6061-T6	9.20
Bottom Horizontal Frame Member	5" x 2 3/4" x .320/.190 Channel	6061-T6	3.90
End Vertical Members	2" x 2" □	6061-T6	2.10
Primary Internal Vertical Members	2" x 2" □	6063-T52	1.12
Intermediate Vertical Members	1" x 2" □	6063-T52	0.82
Tension Bracing	2" x 2" □	6063-T52	1.12

Note: Gates with heights greater than 8 ft. tall and that exceed shipping constraints will include (2) horizontal splice rails with hardware for bolt together field splicing with structural materials as follows:

Horizontal Splice Rails	(2) 1" x 2" □	6063-T52	0.82 (x 2)
-------------------------	---------------	----------	-------------

B. Construction:

1. No distinction of left-hand or right-hand is necessary in specifying or fabricating this gate.
2. Primary Vertical Members are to be equidistant and not to exceed 6 ft. spacing.
3. Intermediate Vertical members are to be equidistant between the Primary Vertical Members.
4. Horizontal tension bracing is provided at each end of the gate.
5. Gate frames that exceed shipping constraints (or requested to ship in shorter lengths) will be provided in (2) halves with splice provisions as follows:
 - a. The splice location will be a minimum of one bay width (6 ft.) from adjacent gate posts when in the 'full open' and 'full closed' position.
 - b. The Primary Vertical Member located at the splice joint will consist of (2) 1 in. x 2 in. 6061-T6511 solid rectangular aluminum bars weighing no less than 2.35 lbs./linear ft. Members are pre-drilled to mate at a minimum of 16 in. centers.
 - c. A 3/8 in. thick predrilled aluminum splice plate will span the splice location on the bottom horizontal channel. It will be welded to one side with mating predrilled holes on the opposite side for field assembly at the job site.
 - d. The TrusTrac™ splice location and the Top Primary Horizontal Member splice locations will not coincide within 6 ft. of each other. In the area of overlap, the track and gate frame will be predrilled for field assembly.
 - e. All hardware, chain-link filler and barbed wire provided for field assembly
6. Counter-balance length shall be 50% of the leaf length extending over the gate opening. Filler material shall be installed in the counter-balance area.

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



Aluminum Cantilever Slide Gates- Chain Link and Ornamental TrusTracII™ Series 3000 Double Track (For Gate Openings up to 40' and Overall maximum heights of 12')

7. Trussing:

- a. Each bay shall include four (4) 1/4" thick aluminum gussets welded into each corner of the bay.
- b. Stainless steel wire rope is cross trussed diagonally between all Primary Vertical Members and attached to the gusset via galvanized turnbuckles between the wire rope and each bottom corner gusset to allow for adjustment. Size of wire and turnbuckles are dictated by the length of the gate as follows:

Gate Opening	Turnbuckle Size	Wire Size
< 30'	3/8" x 6"	3/16"
30' +	1/2" x 6"	1/4"

- c. Wire rope shall be secured to the gusset with a single cable thimble and a crimped cable clamp. The overhang shall be braced exactly as the lead front end of the gate.

C. Track and Truck Assemblies:

- 1. A separate extruded one-piece aluminum enclosed track shall be attached to both sides of the top horizontal gate frame.
 - a. The track is welded to the top horizontal member on both the top and bottom of the extrusion at no more than 3 ft. on center.
 - b. The aluminum track shall be of 6061-T6 aluminum alloy weighing no less than 4.6 lb/linear ft.
 - c. The aluminum track is to be rated as adequate for a 3000 lb. total load from each 10 in. truck assembly.
- 2. Four swivel type 10 in. steel truck assemblies are supplied (two for each track), each having (8) wheel bearings and (2) horizontal alignment wheels.
 - a. Each wheel bearing to be 2 in. diameter by 9/16 in. wide with hardened and ground steel raceways encasing sealed cylindrical roller bearings. Each bearing to have a minimum capacity of 6,000 lbs. each.
 - b. The front and rear of the truck shall include (2) matching side-rolling wheels to ensure truck alignment in the track during all normal operations of the gate.
 - c. Each 8-wheel truck assembly to be tested at a 9,500 lb. peak load capacity.
 - d. The trucks shall be mounted to post brackets by a galvanized steel 5/8 in. diameter shank.

D. 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.

E. Gate Frame Finish:

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

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



Aluminum Cantilever Slide Gates- Chain Link and Ornamental
TrusTracII™ Series 3000 Double Track
(For Gate Openings up to 40' and Overall maximum heights of 12')

- F. Filler: Gates (regardless of manual or automated operation) shall not have any opening that would allow a 2-1/4 in. (or larger) sphere to pass through the body of the gate from grade level through 6 ft. height for the entire length of the gate frame, including the 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 in. wall square aluminum tubing members, 6063-T52 alloy, weighing no less than 0.516 lbs/ft.
 - b. Pickets are 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. Double post assemblies are required for supporting the gate/track on each side of the frame. Each gate post is a minimum of 4 in. O.D. schedule 40 weighing 9.11 lb/ft or as per architect specifications. All post shall be supported by concrete footings as specified. See 3.01.B
- B. A minimum of 2 double gate posts are required for cantilevering the tail section of the gate. The latch post can be either a single gate post or double post assembly to match the cantilevering gate posts (total of 1 latch post and 2 double support posts minimum).

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 diameter and 6 in. deeper than the bottom of the gate post. Posts should be set a minimum depth of 36 in. for all cantilever gates. Crown the finished concrete at the top of the grade to shed water.
- B. Check each post for vertical and top alignment.

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



Aluminum Cantilever Slide Gates- Chain Link and Ornamental
TrusTracII™ Series 3000 Double Track
(For Gate Openings up to 40' and Overall maximum heights of 12')

3.02 GATE INSTALLATION

- A. Install gate per manufacturer's instructions. Gate should be set level and travel freely, without resistance or binding.
- B. Ensure all safety devices and signs are installed and in proper working order.
- C. 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.