

## SECTION 02830

### CHAIN LINK FENCE AND GATES

#### PART 1 GENERAL

##### 1.01 SCOPE OF WORK

The work covered in this section shall include all materials, labor, and equipment necessary for a complete installation of the chain link fencing.

##### 1.02 RELATED WORK

- A. Section 03300 - Concrete
- B. TOWN OF BRASELTON Standard Details, PS-6, Chain Link Fence and Gate.

##### 1.03 REFERENCES

- A. ASTM A 392, Zinc-Coated Steel Chain Link Fence Fabric.
- B. ASTM A 824, Metallic-Coated Marcellled Tension Wire for use with Chain Link Fence Fabric.
- C. ASTM A-121, Standard Specification for Zinc Coated (Galvanized) Steel Barbed Wire.
- D. ASTM F 552, Definitions of Terms Relating to Chain Link Fencing.
- E. ASTM F 567, Standard Practices for Installation of Chain-Link Fence.
- F. ASTM F 626, Standard Specifications for Fence Fittings.
- G. ASTM F 669, Standard Specification for Strength Requirements of Metal Posts and Rails for Industrial Chain Link Fence.
- H. ASTM F 1083, Pipe, Steel, Hot-dipped, Zinc-Coated (Galvanized) Welded, for Fence Structures.
- I. ASTM C 94, Ready Mix Concrete.

#### PART 2 PRODUCTS

##### 2.01 ACCEPTABLE MANUFACTURERS:

- A. Allied Tube and Conduit Corporation.
- B. American Security Fence Corporation.
- C. Southeastern Wire, P.O. Box 1968, Tampa, Florida 33601.

- D. Cyclone Fence (United States Steel Corporation).
- E. Manufacturer and distributor of complete fencing systems, or approved equivalent.

2.02 POSTS AND FABRIC

Posts and fabric shall be as specified in the following table:

<b>Materials</b>	<b>Fence Height - 8 Feet</b>
Fabric	2" Mesh 9 Gauge.
Corner Post	4"
Line Post	2"
Gate Post	6"
Top Rail and Brace	1"

Post sizes should conform to Table 1, ASTM F-1083 (schedule 40 steel pipe). All post and rails shall be hot dipped galvanized per ASTM F-1083.

2.03 TOP RAIL

Top Rail shall be continuous with coupling spaced at intervals not to exceed 20 feet.

2.04 POST TOP

- A. All posts shall be provided with post tops which will fit over the outside of posts to exclude moisture and shall be combination tops with barbed wire supporting arms. Post tops shall be provided with a hole suitable for the through passage of the top rail. Posts without barb arms shall be fitted with a cap.
- B. Barbed wire supporting arms shall be at an angle of 45 degrees, and shall be fitted with clips or other means for securing three lines of barbed wire. The top line shall be approximately 12" horizontally from the fence line and 12" above the top of the fabric and the other lines spaced uniformly between the top line and the top of the fabric.

2.05 POST BRACES

A horizontal, galvanized post brace shall extend to each adjacent line post at mid-height of the fabric for each gate, corner, pull and end post. A diagonal 1/2" diameter truss rod shall also be provided from the line post to the gate, corner, pull, or end post, with a turnbuckle or other equivalent device for tension adjustment. Two diagonal tension truss rods shall be provided for each fence panel adjacent to a gate, end, corner or pull post.

2.06 STRETCHER BAR

Stretcher bars 1/4" x 3/4" inch in size, with length 1" less than fabric height, shall be provided for stretching and securing the fabric at each gate, end, corner and pull post, one for each gate and end post and two for each corner and pull post.

#### 2.07 TENSION

Wire shall be provided along the top and bottom edges. It shall be not less than No. 7 gauge coiled spring wire. Galvanized ties or clips shall be provided for attaching tension wires to fabric.

#### 2.08 WIRE TIES

Shall be 9 gauge.

#### 2.09 BARBED WIRE

Shall be two (2) strand 12 gauge with 4 points at 5" o.c. per ASTM A-121.

#### 2.10 GATE

##### A. Frame

1. Fabricate gate frames from steel pipe to match fence framework. Assemble gate frames by welding or with special fittings and rivets for rigid connections. Rigid connections provide security against removal or breakage.
2. Extend end members of gate frames 1'-0" above to member and prepare to receive 3 strands of wire. Provide clips for securing wire to extensions.
3. Install diagonal cross-bracing consisting of 3/8" diameter adjustable length truss rods on gates to ensure frame rigidity without sag or twist.
4. Fabricate frames of minimum 1-1/2" (NPS).

B. Fabric - Provide same fabric as for fence. Install fabric with stretcher bars at vertical edges and at top and bottom edges. Attach stretcher bars to gate frame at not more than 15" o.c.

C. Gate Hardware: Provide hardware and accessories for each gate, in accordance with the following:

1. Hinges: Size and material to suit gate size, non-lift-off type, and offset to permit 180 degree gate opening. Provide 1-1/2 pair of hinges for each leaf.
2. Latch: Forked type or plunger-bar type to permit operation from either side of gate, with padlock eye as integral part of latch. Center drop to be provided on double gates.
3. Padlock: Bronze cylinder type lock with three (3) keys is to be provided for each set of gates. Locks are to be keyed per direction of TOWN representative.

4. Keeper: Provide keeper for vehicle gates, which automatically engages gate leaf and holds it in open position until manually released.

## 2.11 FINISHES

- A. Galvanized: ANSI/ASTM A 123; 2.0 oz/sq. ft.
- B. Aluminum coating: ASTM A 428; 0.40 oz/sq. ft.
- C. Thermally fused vinyl coating: Dark green color on either coating.
- D. Vinyl Components: Dark green color.
- E. Accessories: Same finish as fabric.

## PART 3 EXECUTION

### 3.01 INSTALLATION

- A. Do not begin installation and erection before final grading is completed.
- B. Work shall be performed in a safe and orderly fashion in accordance with Occupational Safety and Health Administration (OSHA) regulations.

### 3.02 POST INSTALLATION

- A. Excavation: Drill or hand excavate (using posthole digger) holes for posts to diameters and spacing indicated, in firm, undisturbed or compacted soil.
  1. Excavate holes for each post to minimum diameter recommended by fence manufacturer, but not less than 4 times the largest cross-section of post.
  2. Excavate hole depths 3" lower than post bottom, with bottom of posts set not less than 36" below finish grade surface.
- B. Fence Post Setting
  1. Line posts shall be placed equidistant at intervals not to exceed 10 ft. o.c. The intervals to be measured parallel to the grade of proposed fence and in the line of the fence.
  2. Line, end, corner and pull posts shall be of sufficient length to allow for installation to a depth as shown on Detail PS-6.
  3. Posts shall be set vertically and plumb and encased in cylindrical concrete footings at least four times the post diameter, with at least a 2" cover on the bottom of the post. Extend the concrete at least 2" above grade and crown to shed water.

### 3.03 RAIL INSTALLATION

Connect top rail securely to the posts using boulevard clamps or other suitable means, so that a continuous brace is formed.

### 3.04 CHAIN LINK FABRIC

Chain link fence fabric shall be installed over the outside face of the fence framework. Fabric shall be tied to line posts and middle rails with 9 gauge galvanized or aluminum wire spaced 12" maximum.

### 3.05 TENSION WIRES

Install tension wires along bottom of fence before stretching fabric and tie to each post. Fasten fabric to tension wire using 9 gauge, wire ties or galvanized wire hog rings spaced 24" o.c.

### 3.06 BARBED WIRE

Pull wire taut and install to extension arms and secure to end post or terminal arms in accordance with manufacturer's instructions.

### 3.07 GATES

Install gates plumb, level, and secure for full opening without interference. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate.

### 3.08 STRETCHER BARS

Thread through or clamp to fabric 4" o.c. and secure to posts with metal bands spaced 15" o.c.

### 3.09 BRACE ASSEMBLIES

Install braces so posts are plumb when diagonal rod is under proper tension.

END OF SECTION