

SECTION 02832

FENCES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Chain Link Fence.
- B. Wood Fence.
- C. Construction Fence.

1.02 RELATED SECTIONS

- A. Section 03304: Concrete anchorage for posts.

1.03 REFERENCES

- A. ASTM A116: Zinc-Coated (Galvanized) Steel Woven Wire Fence Fabric.
- B. ASTM A123: Zinc (Hot Dip Galvanized) Coatings on Iron and Steel Products.
- C. ASTM A392: Zinc-Coated Steel Chain-Link Fence Fabric.
- D. ASTM F567: Installation of Chain-Link Fence.
- E. ASTM F573: Residential Zinc-Coated Steel Chain Link Fence Fabric.
- F. ASTM F1083: Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence structures.
- G. ASTM F1234: Protective Coating on Steel Framework for Fences.

1.04 QUALITY ASSURANCE

- A. Perform Work in accordance with ASTM F567.

PART 2 PRODUCTS

2.01 CHAIN LINK FENCE MATERIAL AND COMPONENTS

- A. Framing (Steel): ASTM F1083 Schedule 40 galvanized steel pipe, welded construction, coating conforming to ASTM F1234 Type A on pipe exterior and interior.
- B. Fabric Wire (Steel): ASTM A392 zinc coated wire fabric.
- C. Concrete: Type specified in Section 03304.
- D. Line Posts: 1.9 inch O. D. galvanized pipe at 2.72 lbs per foot.
- E. Corner, Gate, Pull, and Terminal Posts: 2.4 inch O.D. galvanized pipe at 2.65 lbs. per foot.

- F. Top Rail: 1.4 inch diameter, plain end, sleeve coupled.
- G. Brace Rail: Minimum 1.6 inch O.D. galvanized pipe and adjustable 3/8 inch truss
- H. Tension Wire: 7 gage, Bottom only.

2.02 WOOD FENCE MATERIAL AND COMPONENTS

- A. Slats: Redwood, cedar, combed spruce or other wood covering acceptable to the City Engineer or his representative.
- B. Bottom and top rail: Minimum 2x4x8 cedar stud.
- C. Corner, Gate, End, or Line Posts: Minimum size 4x4 cedar wood post.
- D. Concrete: Type specified in Section 03304.

2.03 CONSTRUCTION FENCE MATERIAL AND COMPONENTS

- A. Material:
 1. Fabric to be wire mesh which shall conform to AASHTO Designation M-279, nominal 0.9999-inch Farm Grade with standard six (6) inch graduated spacing. The wire mesh shall have a Class 1 zinc coating.
 2. Corner, gate, end or line posts shall be painted metal tee, U or Y channel, angular, or other approved shapes 6'6" in length.

PART 3 EXECUTION

3.01 CHAIN LINK FENCE INSTALLATION

- A. Line Pole Spacing, Straight run, tangents or curves:
 1. Uniform spacing. Maximum 10 feet.
 2. 100-foot radius or less, maximum 5 feet.
 3. 100 to 200 foot radius, maximum 6 feet.
 4. 200 to 500 foot radius, maximum 8 feet.
- B. Set posts plumb, in concrete footings with top of footing 2 inches above finished grade. Slope top of concrete for water runoff.
- C. Line Post Footing: Minimum 6 inches of concrete below bottom of post, 8 inches in diameter.
- D. Corner, Gate, Pull, and Terminal Post Footing: Minimum 6 inches of concrete below bottom of post, 10 inches in diameter. Changes in line of more than 30 degrees shall be considered as corners.
- E. Brace each gate and corner post to adjacent line post with horizontal center brace rail and diagonal truss rods. Install brace rail one bay from end and gate posts.
- F. Provide top rail through line post tops and splice with 6 inch long rail sleeves.
- G. Do not stretch fabric until concrete foundation has cured 7 days.
- H. Stretch fabric between terminal posts or at intervals of 500 feet maximum, whichever is less.

- I. Position bottom of fabric 2 inches above finished grade and on a straight grade between posts. Excavate if necessary, fill only with approval of City Engineer.
- J. Fasten fabric to top rail, line posts, braces, and bottom tension wire with tie wire at maximum 15 inches on centers. Attach fabric to end, corner, and gate posts with tension bars and tension bar clips.
- K. Fence fabric shall be placed on road side of posts unless otherwise indicated.

3.02 WOOD FENCE INSTALLATION

- A. Construction Methods: The cedar posts shall be set true to line and grade in concrete bases at least two (2) feet in depth. All posts shall be sound and free from all decay, splits, multiple cracks, or any other defect which would weaken the posts or otherwise cause them to be structurally unsuitable for the purpose intended.
- B. The maximum distance between posts in any section shall not exceed eight (8) feet. The top and bottom railing shall be securely fastened to the posts with galvanized nails or other acceptable means. Changes in line of 30 degrees or more shall be considered as corners. A minimum of six (6) inches of concrete shall be provided below the bottom of each post. End posts, corner posts, and gate posts shall have a concrete base at least twelve (12) inches in diameter. Bases for line posts shall also be twelve (12) inches in diameter.
- C. Fence slats shall be placed on the roadway side of posts unless otherwise specified. The slats shall be placed approximately one (1) inch above the ground, and on a straight grade between posts by excavating high points of the ground. Filling depressions will be permitted only upon approval of the City Engineer. The slats shall be sound and free from all major decay or defects which would weaken or otherwise cause them to be unsuitable for fence slats. Fastening to top and bottom railing shall be done with two (2) galvanized nails and screw at both the top and bottom rail.

3.03 CONSTRUCTION FENCE INSTALLATION

- A. Construction Methods:
 - 1. Metal fence posts shall be spaced a maximum interval of sixteen (16) feet. Posts spacing measurements shall be made parallel to the ground slope. All posts shall be placed in a vertical position. Metal posts may be installed by driving, if this can be done without damage to the post. Otherwise, they shall be installed to the specified depth (2'6") in larger drilled or dug holes and backfilled and compacted.
 - 2. Corner posts shall be braced in two directions. End and gate posts shall be braced in one direction.
 - 3. Wire mesh fabric shall be drawn tight enough to eliminate all sag without causing the "tension crimps" to fail to function.
 - 4. Any high points along the ground surface which interfere with the placing of wire mesh shall be excavated to provide at least two (2) inches of ground clearance.
 - 5. Every alternate lateral wire in the mesh fabric shall be fastened to each post by means of a clamp.

END OF SECTION