# Part 1 GENERAL

* 1. **SECTION INCLUDES**
     1. Ornamental Metal Fencing.
     2. Swing Gates.

# GENERAL REQUIREMENTS

* + 1. Verification of Conditions: Verify conditions at site affecting work of this Section and obtain accurate dimensions, elevations and grades. Report major discrepancies be- tween drawings and field dimensions to Architect before starting Work.

# REFERENCES

* + 1. ASTM A36 – Structural Steel.
    2. ASTM A123 - Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
    3. ASTM A307 - Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength.
    4. ASTM A513 - Electric-Resistance-Welded Carbon and Alloy Steel Mechanical Tubing.
    5. ASTM C1107 - Packaged Dry, Hydraulic - Cement Grout (Non-Shrink).
    6. AWS D1.1 - Structural Welding Code, Steel.
    7. AWS A5.1 - Carbon Steel Electrodes for Shielded Metal Arc Welding.
    8. AWS 5.5 - Low Alloy Steel Covered Arc Welding Electrodes.
    9. AISC - American Institute of Steel Construction Specifications.
    10. Chapters 10, 11 and 19A, latest/current California Building Code.

# SUBMITTALS

* + 1. Shop drawings, showing materials, construction and fabrication details, layout and erection diagrams as required, finish of materials and methods of anchorage to adjacent construction. Indicate welding by AWS code symbols.

# Part 2 PRODUCTS

* 1. **MATERIALS**
     1. Steel Tubing: ASTM A513, cold rolled, butt welded or cold-rolled seamless, square or rectangular, minimum 16 gage.
        1. Pickets, Line Posts, Gate Posts, Rails: Sizes as indicated on Drawings.
     2. Steel Bar Stock: ASTM A36.
     3. Threaded Bolts and Nuts: Standard, commercial quality, steel conforming to ASTM A307.
     4. Welding Electrodes: AWS A5.1 or AWS A5.5 E70XX, classification number and procedures recommended by electrode manufacturer for intended use.
     5. Galvanizing: ASTM A123 with average weight per square foot of 2.0 ounces and not less than 1.8 ounces per square foot.
        1. Install vents to allow for hot dip galvanizing.
     6. Touch Up Material for Galvanized Coatings: Anodic zinc-rich coating or hot applied repair compound.
     7. Non-Shrink Grout: ASTM C1107, premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 5,000 pounds per square inch in 24 hours and 8,000 pounds per square inch in 7 days; of consistency suitable for application, and 30 minute working time.
     8. Swing Gate Hardware: Heavy duty, galvanized ferrous metal industrial quality as manufactured by Ameristar Fence, Ameristar Fencing Products, Tulsa, Oklahoma. or equal as approved in accordance with Division 1 for substitutions.
        1. Gate Hardware: Mount at 40 inches above finish floor and according to Section 1010.1.9.2 CBC.

1. Provide strike strap, flat mount.
2. Bolt keeper.
   * + 1. Hinges: Square post hinge, structurally capable of supporting gate leaf and allow opening and closing without binding. Non-lift-off type hinge design shall permit gate to swing 180 degrees inward or outward for exit gates.
       2. Locks for gates: Ornamental type, self-latching bolt and deadbolt, 3/4 inch diameter, adjustable, lockable, with lever, keyed one side.
       3. Locks for exit gates (Exit Path of Travel): Exit Device;

a.Lock Assembly and Paddle: Sargent or Von Duprin.

* + - 1. Padlock capability: Provide padlock capability at non-locking/latching gates.
      2. Install 1/8 in. thick aluminum plate 24 in. high behind panic device centered at 40 in. above finish floor. Secure to gate frame with #8 stainless steel screws at 6 in on center.
      3. Install 1/8 in. thick aluminum plate 10 inches kick plate secure with # 8 stainless steel screws 4 places.
      4. Sign: Provide signs on gate to read "Gate is to remain locked in the open position during school hours or during any public function". Text shall be in 1" white capital letters. Place sign on each side of gate for both directions. Fabricate sign 16 gage enameled aluminum blue color No. 15090. Fed. Standard 595b. Mount at 60 inches above grade on or adjacent to gate.
      5. Exit gates (exit path of travel)

a. 3 ea hinge STA714 4.5x4.5 652 MCK

b. 1 ea exit device 3828F-EN 626 SGT

c.1 ea Closer 351P10 AL SGT

1. 1 ea Cylinder 34 (KA to 327412) 626 SGT
2. 1 ea Collar K24A AL KEE
3. 1 ea Pull 28KHTB 630 SGT
4. 1 ea Canebolt 523-P23 ZC RW
5. 1 ea 10W0403H-26-K35 (Medeco Rim).
   * + 1. Padlocks (one each per gate)
6. Medico #54W5100-06-KW
7. Knox Padlock #3770

# Part 3 EXECUTION

* 1. **FABRICATION**
     1. Provide new stock of standard sizes specified or detailed. Fabricate materials in shop to produce high grade metal work. Form and fabricate to meet required conditions.
     2. Include bolts, screws and other fastenings necessary to secure Work.
     3. Conform applicable work to latest edition of AISC Specifications and AWS D1.1.
     4. Accurately make and tightly fit joints and intersections in true planes with adequate fastenings.
     5. Coordinate Work with work of other sections. Provide punchings and drillings indicated or required for attachment of Work to other Sections.
     6. Welding: Weld joints, unless otherwise indicated or specified, using shielded electric arc method. Use coated welding rods, not fluxed or type recommended by manufacturer for use with parent metal.
     7. Grinding: Grind welds to smooth flush joints.

# GATES

* + 1. Fabricate gates to size and configuration indicated on Drawings, complete with gate hardware.
    2. Install locking fitting to accommodate padlock.
    3. Attachments to gate shall be welded to assembly. No clamp-on or bolted fittings shall be permitted.

# FINISH

* + 1. Following fabrication, clean metal with caustic solution to remove grease, scale, and rust before application of coatings.
    2. After galvanizing, apply two Special Coatings of finish paint as specified in Section 09900.
    3. Color to be determined by Architect.

# PROTECTION

* + 1. Stack frame units and components to prevent damage during transit and storage at work site.

# INSTALLATION

* + 1. Post spacing: Line posts shall be spaced in line maximum of 10 feet on centers.
    2. Post Footings: Set line posts in concrete footings 12 inches in diameter and 24 inch- es deep. Set gate posts in concrete footings 12 inches in diameter and 36 inches deep. Tops of footings: Crowned to shed water. Concrete mix: Minimum 3500 pounds per square inch.
    3. Post Tops: Line posts shall be fitted with pressed steel caps. Gate post top: Welded flush and ground smooth.
    4. Double Gates: Provide drop rod to hold inactive leaf. Provide locking device and pad- lock eyes as an integral part of latch, requiring for locking both gate leaves.

# CLEANING

* + 1. Clean and protect adjoin materials in place, during installation operations. Apply protective covering where and when required, to assure protection from damage until Substantial Completion.

# END OF SECTION