

SECTION 02820

FENCING

PART 1 - GENERAL

1.01 SUMMARY:

- A. Section Includes under ADD ALTERNATE #3 requirements for refurbishing and replacing all existing black vinyl-coated chain link mesh and any and all posts, rails, and hardware that are damaged on the existing fencing at the practice facility including but not limited to the end fencing on the west end of the field, the fencing around the lacrosse court, and the fencing at the basketball court. Any replaced or refurbished items shall match the existing dimensions, shapes, and colors on site.
- B. Related Sections
  - 1. Section 02200 – Site Preparation
  - 2. Section 03300 – Cast-in-Place Concrete

1.02 SUBMITTALS:

- A. Submit Product Data in accordance with SECTION 01300 for the following:
  - 1. Back Vinyl-Coated Mesh
  - 2. Black painted posts and rails.
  - 3. Black painted hardware and fittings.
- B. Submit Samples in accordance with SECTION 01300 for the following:
  - 1. Back Vinyl-Coated Mesh

1.03 QUALITY ASSURANCE:

- A. Field Conditions
  - 1. Field Measurements: Verify layout information for chain link fences shown on Drawings in relation to existing structures. Verify dimensions by field measurements.

1.04 WARRANTY

- A. Special Warranty: Installer agrees to repair or replace components of chain link fences that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Deterioration of metals, metal finishes, and other materials beyond normal weathering.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING:

- A. Fencing components:
  - 1. Transport to the site, store, and cover in a manner which will ensure that no damage shall occur to it from moisture, dirt, grease, or any other cause that might impair bond to concrete or chip finish coatings.
  - 2. Store on the site at all times, a supply of approved reinforcing steel to ensure that there will be no delay of the work.

PART 2 – PRODUCTS

2.01 MATERIALS:

A. Chain Link Fabric

1. General: Provide fabric in one-piece heights measured between top and bottom of outer edge of selvage knuckle according to “CLFMI Product Manual” and requirements indicated below:
  - a. Fabric Height: Ten feet (10’) (3 m)
  - b. Steel Wire for Fabric: Wire diameter of 9 gauge
  - c. Mesh Size: Two inches (2”) (50 mm)
  - d. Vinyl-Coating: Color Black, according to ASTM F934.
  - e. Selvage: Knuckled at both selvages.

B. Fence Framework

1. Post and Rails: ASTM F1043 for framework, including rails, braces, and line; terminal; and corner posts. Provide members with minimum dimensions and wall thickness according to ASTM F1043 based on the following:
  - a. Fence Height: 10’ (3 m)
  - b. All fence framework diameters, thicknesses, heights, and lengths shall match existing on site.
  - c. Fence framework shall be painted black to match existing fence, according to ASTM F934.

C. Tension Bar

1. Polymer-Coated Steel Bar: 3/16” x 3/4”, tension bar according to ASTM F1664, Class 1 over zinc-coated steel bar. Fastened with tension bar slips at 12” intervals.
  - a. Color: Match chain link fabric, according to ASTM F934.

D. Fittings

1. Provide fittings in accordance with ASTM F626.
2. All fittings shall be color black to match existing fence.

~~B-E.~~ Grout and Anchoring Cement

1. Non-shrink, nonmetallic grout: factory-packaged, non-staining, noncorrosive, nongaseous grout complying with ASTM C1107/C1107M. Provide grout, recommended in writing by manufacturer, for exterior applications.
2. Anchoring Cement: Factory-packaged, non-shrink, non-staining, hydraulic-controlled expansion cement formulation for mixing with water at Project site to create pourable anchoring, patching, and grouting compound. Provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating, and that is recommended in writing by the manufacturer for exterior applications.

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PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for locations and scope, as well as phase of work – synthetic turf at lacrosse court shall be coordinated with fence repairs, and other conditions affecting the performance of the work.
- B. Proceed with installation only after coordination has been completed and unsatisfactory conditions have been corrected.

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3.02 PREPARATION

- A. Stake any locations needed for replaced posts to mark fence line. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.

3.03 CHAIN LINK FENCE INSTALLATION

- A. Install chain link fencing according to ASTM F567 and more stringent requirements specified.
- B. Post Excavation: Drill or hand-excavate holes for posts to diameters and spacings indicated, in firm, re-compacted soil. Do not reuse concrete footings.
- C. Post setting: Set posts in concrete at locations where posts are to be replaced in firm, re-compacted soil.
  - 1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.
  - 2. Concrete Fill: Place concrete around posts to dimensions indicated and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.
    - a. Concealed Concrete: Place top of concrete 2 inches (50 mm) below grade to allow covering with surface material.
- D. Terminal Posts: Install terminal end or corner posts according to ASTM F567.
- E. Line Posts: Replace line posts in exact locations of existing damaged post to retain spacing and structure of existing fence line.
- F. Post Bracing and Intermediate Rails: Install according to ASTM F567, maintaining plumb position and alignment of fence posts. Diagonally brace terminal posts to adjacent line posts with truss rods and turnbuckles. Install braces at end posts and at both side of corner posts.
  - 1. Locate horizontal braces at existing height of non-replaced pieces parallel to top and bottom rails. Install so posts are plumb when diagonal rod is under proper tension.
- G. Tension Bar: Install according to ASTM F567, maintaining plumb position and alignment of fence posts. Fasten fabric to tension wire with tension bar clips, spaced a maximum of 12 inches (300 mm) on center. Install tension bar at posts.
- H. Top Rail: Install according to ASTM F567, maintaining plumb position and alignment of fence posts. Run rail continuously through line post caps, bending to radius for curved run and terminating into rail end attached to posts or posts caps fabricated to receive rail at terminal posts. Provide expansion couplings as recommended in writing by the fencing manufacturer.
- I. Intermediate and Bottom Rails: secure to posts with fittings.
- J. Chain Link Fabric: Apply fabric to outside of enclosed framework (match existing on site). Leave 1 inch (25 mm) bottom clearance between finish grade or surface and bottom

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selvage unless otherwise indicated. Pull fabric taut and tie to posts, rails, and tension bars. Anchor to framework so fabric remains under tension after pulling force is released.

- K. Tension or Stretcher Bars: Thread through fabric and secure to end and corner posts with the tension bands spaced not more than 15 inches (380 mm).
- L. Tie Wires: Use wire of proper length to firmly secure fabric to line posts and rails. Attach wire at one end to chain-link fabric, wrap wire around post a minimum of 180 degrees, and attach other end to chain-link fabric according to ASTM F626. Bend ends of wire to minimize hazard to individuals and clothing.
  - 1. Maximum spacing: Tie fabric to line posts at 12 inches (300 mm) on center and to braces at 24 inches (610 mm) on center.
- M. Fasteners: Install nuts for tension bands and carriage bolts on the side of fence opposite the fabric side.

PART 4 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. FENCING for ADD ALTERNATE #3 shall be measured as a Lump Sum for parts and labor required to make repairs as needed.

4.02 PAYMENT

- A. FENCING for ADD ALTERNATE #3 shall be paid at the Contract Unit Price per Lump Sum, as specified above and as specified herein to consist of all labor, and other incidentals.
- B. Gravel Borrow and Excavation shall be paid for separately as noted under Gravel Borrow, or Excavation in SECTION 02300 Earthwork or under their respective item as noted in the specifications.

4.03 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT
02820-1	Fencing	LS

END OF SECTION