Addendum 02

DOCUMENT 00 91 00

DATE: March 26, 2026

PROJECT: Bath Local Schools Tennis Court Improvements
2560 Bible Road
Lima, Ohio 45801

PROJECT #: 26009.00

OWNER: Mike Estes
Superintendent
2560 Bible Road
Lima, Ohio 45801

ARCHITECT: Garmann Miller
38 South Lincoln Drive
P.O. Box 71
Minster, Ohio 45865

TO: Prospective Bidders

This addendum form is a part of the Contract Documents and modifies the Construction Documents dated March 5, 2026 with amendments and additions noted below.

Acknowledge receipt of this Addendum on the Bid Form. Failure to do so may disqualify the Bidder.

This addendum consists of 2 pages, 3 specification sections, 0 re-issued drawing sheets, and 0 exhibits.

FOR INFORMATION ONLY

1. The windscreen will need to fit the 120'length x 10' height on the east and west fencelines as previously shown on L1.1. Graphics for the windscreen are TBD.

GARMANN MILLER

CHANGES TO THE PROJECT MANUAL

1. Section 32 13 13 Concrete Paving
   a. Article A Curing Compound, Subparagraph 1. Revise to clarify that only sidewalks receive this curing compound. Do not use where Color Coating System is to be utilized.
   b. Add Article B Self Leveling Polyurethane Sealant to be used at all expansion joints.

2. Section 32 17 24 Concrete Surface Color Coating System, Article 3.02 Surface Preparation, Add paragraph "G. Fill expansion joints and control joints with acrylic patch binder in accordance with manufacturer's instructions.

3. Section 32 31 13 Chain Link Fences and Gates,
   a. Article 2.03 Components, A. Framework; Subparagraph 3; Change to read: "Top, Intermediate, Bottom and Brace Rail."
   b. Article 3.01 Installation, Subparagraph F; Change to read "Install bottom and intermediate rails on all fencing and gate leaves."
   c. Article 3.01 Installation, Subparagraph J; Change to read "Fasten fabric to top rail, line posts, braces, intermediate and bottom rail with tie wire at maximum 15" on centers."

CHANGES TO THE DRAWINGS

N/A

ATTACHMENTS

The following attachments are included and are part of this addendum:

Specification Sections 32 13 13, 32 17 24, 32 31 13

END OF ADDENDUM

GARMANN MILLER

SECTION 32 13 13
CONCRETE PAVING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Concrete paving,

1.02 RELATED REQUIREMENTS

A. Section 31 22 00 - Grading.

B. Section 31 23 23 - Fill.

C. Section 32 11 23 - Aggregate Base Courses.

1.03 REFERENCE STANDARDS

A. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete; 1991 (Reapproved 2009).

B. ACI 301 - Specifications for Structural Concrete; 2016.

C. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete; 2000 (Reapproved 2009).

D. ACI 305R - Guide to Hot Weather Concreting; 2010.

E. ACI 306R - Guide to Cold Weather Concreting; 2016.

F. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement; 2020.

G. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2021.

H. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete; 2021b.

I. ASTM C260/C260M - Standard Specification for Air-Entraining Admixtures for Concrete; 2024.

J. ASTM C494/C494M - Standard Specification for Chemical Admixtures for Concrete; 2019.

K. ASTM C661 - Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer; 2015 (Reapproved 2022).

L. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018 (Reapproved 2024).

M. ASTM D1752 - Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction; 2018.

1.04 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data on joint filler, admixtures, and curing compound.

C. Product Data: Manufacturer's data sheets on striping paint product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

1.05 QUALITY ASSURANCE

A. Perform work in accordance with ACI 301.

B. Obtain cementitious materials from same source throughout.

C. Follow recommendations of ACI 305R when concreting during hot weather.

D. Follow recommendations of ACI 306R when concreting during cold weather.

E. Installer Qualifications: Installer with minimum three years experience in similar projects.

1.06 ENVIRONMENTAL REQUIREMENTS

A. Do not place concrete when base surface temperature is less than 40 degrees F, or surface is wet or frozen.

PART 2 PRODUCTS

2.01 PAVING ASSEMBLIES

A. Comply with applicable requirements of ACI 301.

B. Concrete: 4,000 psi 28 day concrete, 5 inches thick. Medium broom finish.

2.02 FORM MATERIALS

A. Form Materials: As specified in Section 03 10 00, comply with ACI 301.

B. Joint Filler: Preformed; sponge rubber or cork (ASTM D1752).
   1. Thickness: 1/2 inch.

2.03 REINFORCEMENT

A. Reinforcing Steel: ASTM A615/A615M, Grade 80 (80,000 psi) yield strength; deformed billet steel bars; unfinished.

B. Dowels: ASTM A615/A615M, Grade 40 - 40,000 psi yield strength; deformed billet steel bars; unfinished finish.

C. Bar Supports: Bolsters, chairs, spacers, supporting, and fastening reinforcement bars, welded with fabric and dowels in place. Manufacture supports according to CRSI's Manual of Standard Practice.

2.04 CONCRETE MATERIALS

A. Obtain cementitious materials from same source throughout.

B. Cement: ASTM C 150, Type I - Normal portland type, grey color.
   1. Acquire all cement for entire project from same source.

C. Supplementary Cementitious Materials:
   1. Fly Ash: ASTM C618, Type C or F may be used up to a maximum of 25% of the total cementitious materials content in all concrete mixes, unless otherwise noted.
   2. Ground Granulated Blast-Furnace Slag: ASTM C989, Grade 100 or 120 maybe used up to a maximum of 35% of the total cementitious material content in all concrete mixes, unless otherwise noted.
   3. The exact percentages shall be used on a successful test placement on the project site

D. Fine and Coarse Aggregates:
   1. ASTM C33, Class 3S, normal weight aggregates, uniformly graded, non-exceeding 1-1/2 inch nominal size.
   2. ASTM C330, light weight aggregates.
   3. Combined aggregate gradation for slabs shall be 8%-18% for large top size aggregate (1 1/2") or 8 - 22% for smaller top size aggregates (1" of 3/4") retained on each sieve below the top size and above the No. 100.
   4. Aggregate Supply: Provide aggregate from one source of supply to maintain uniformity of color size and shape.

E. Water: Clean and not detrimental to concrete.
   1. ASTM C94

F. Air-Entraining Admixtures: ASTM C260/C260M.
   1. Acceptable Manufacturers:
      a. Air-Mix or Perma-Air, Euclid Chemical.

b. Sealtight AEA WR Meadows, Inc.
c. Darex AEA or Daravair, WR Grace Company.
d. Axim Italcmenti Group.
e. Promix.
f. Substitutions: See Section 01 60 00 - Product Requirements.

G. Chemical Admixtures: ASTM C494/C494M, Type A - Water Reducing.
1. Do not use chemicals that will result in soluble chloride ions in excess of 0.1 percent by weight of cement.

2.05 ACCESSORIES

A. Curing Compound: ASTM C 309, Type 1, Class A.
1. Clear waterborne membrane-forming curing compound for sidewalks only. Do not use Curing Compound where Color Coating System is being used.
a. Day Chem Rez Cure: Dayton Superior Corporation
b. Diamond Clear Vox: Euclid Chemical Co.
c. Safe-Cure Clear; Chem Masters

B. Self-Leveling Polyurethane Sealant: ASTM C920, Grade P, Uses M and A; single or multi-component; explicitly approved by manufacturer for traffic exposure; not expected to withstand continuous water immersion .
1. Hardness Range: 35 to 55, Shore A, when tested in accordance with ASTM C661.
2. Color: Grey
3. Service Temperature Range: Minus 40 to 180 degrees F.
4. Applications:
a. Expansion joints in concrete sidewalks and vehicular paving and wherever new concrete is adacent to existing concrete pavement.
5. Manufacturers:
a. Pecora Corporation; Dynatrol II-SL: www.pecora.com.
b. The QUIKRETE Companies; QUIKRETE® Polyurethane Self-Leveling Sealant: www.quikrete.com.
c. Sika Corporation; Sikaflex-1c SL: www.usa-sika.com.
d. W. R. Meadows, Inc; POURTHANE SL: www.wrmeadows.com.
e. Substitutions: See Section 01 60 00 - Product Requirements.

2.06 CONCRETE MIX DESIGN

A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.

B. Concrete Strength: Establish required average strength for each type of concrete on the basis of field experience or trial mixtures, as specified in ACI 301.
1. For trial mixtures method, employ independent testing agency acceptable to Architect for preparing and reporting proposed mix designs.

C. Admixtures:
1. Use of admixtures: Admixtures, except air entraining mixture, are not allowed except with permission of Architect.
2. Use air-entraining admixture in exterior exposed concrete unless otherwise indicated. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having total air content with a tolerance of plus 1 - 1/2 percent with the following limits:
a. Concrete structures and slabs exposed to freezing and thawing, deicer chemicals, or hydraulic pressure(all above grade):
1) 6.0 percent(severe exposure) 3/4 inch max. aggregate
2) Other concrete (not exposed to freezing, thawing, or hydraulic pressure or to receive a surface hardener: 2 percent to 4 percent air

3. NO calcium chloride will be permitted.

D. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates recommended by manufacturer.

E. Normal Weight Concrete:
   1. Compressive Strength, per ASTM C 39 at 28 days: As scheduled.
   2. Water-Cement Ratio: Provide concrete for following conditions with maximum water-cement (W/C) ratios as follows:
      a. Subjected to deicer/watertight and freezing and thawing: W/C 0.45.
      b. Subjected to brackish water, salt spray, or deicer: W/C 0.40
   3. Slump Limits: Proportion and mixes to result in concrete slump a point of placement as follows:
      a. Slump limit for concrete containing high-range water reducing admixture (superplasticizers): Not more than 8 inches after adding admixture to site-verified 2 to 3 inch slump concrete.

2.07 MIXING

A. Transit Mixers: Comply with ASTM C94/C94M.
   1. When air temperature is between 85 degrees F and 90 degrees F, reduce mixing and delivery time from 1 1/2 hour to 75 minutes, and when air temperature is above 90 degrees F, reduce mixing and delivery time to 60 minutes.
   2. Use set retarding admixtures during hot weather only when approved by Owner's Representative.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify compacted subgrade is acceptable and ready to support paving and imposed loads.

B. Verify gradients and elevations of base are correct.

3.02 SUBBASE

A. See Section 32 11 23 for construction of base course for work of this Section.

3.03 PREPARATION

A. Provide 12 mil polyethylene vapor barrier below concrete surface. Per tennis surfacing manufacture's recomendations.

B. Moisten base to minimize absorption of water from fresh concrete.

3.04 FORMING

A. Place and secure forms to correct location, dimension, profile, and gradient.

B. Assemble formwork to permit easy stripping and dismantling without damaging concrete.

C. Place joint filler vertical in position, in straight lines. Secure to formwork during concrete placement.

3.05 PLACING CONCRETE

A. Before placing concrete, inspect, and complete formwork installation, reinforcing steel, and install items to be embedded or cast in. Notify other trades to permit installation of their work.
   1. Do not place concrete around manholes or other structures until they are at the required finish elevation and alignment.

B. Moisten subbase to provide a uniform dampened condition at the time concrete is placed.

C. Place concrete in accordance with ACI 304R.

D. Place concrete continuously over the full width of the panel and between predetermined construction joints. Do not break or interrupt successive pours such that cold joints occur.

E. Consolidate concrete by mechanical vibrating equipment supplemented by rodding or tamping. Use equipment and procedures to consolidate concrete complying with ACI 309R.

3.06 JOINTS

A. General: Construct contraction, construction and isolation joints true to line with faces perpendicular to surface plan of concrete. Construct transverse joints at right angles to the centerline, unless otherwise indicated.
   1. Align curb, gutter, and sidewalk joints.
   2. When joining existing paving, place transverse joints to align with previously placed joints, unless indicated otherwise

B. Construction Joint: Set construction joints at side and end termination of paving at locations where paving operations are stopped unless paving terminates at isolation joints.
   1. Continue reinforcement across construction joints unless otherwise indicated.

C. Expansion Joints:
   1. Place 1/2 inch wide expansion joints at 30 foot intervals unless otherwise indicated on drawings and to separate paving from vertical surfaces and other components and in pattern indicated.
   2. Form joints with joint filler extending from bottom of pavement to within 1/2 inch of finished surface.
   3. Furnish joint fillers in one-piece lengths for full width being placed wherever possible. Where more than one length is required lace or clip joint filler sections together.
   4. Secure to resist movement by wet concrete.

D. Contraction Joints: Provide weakened-plane contraction joints, section concrete into areas as shown on Drawings. Construct contraction joints for a depth of 1/4 of the concrete thickness.
   1. Tooled Joints: Form contraction joints in fresh concrete by grooving and finishing each edge of joint with radiused jointer tool.
   2. Provide joints at five (5) feet intervals if not indicated on pl.

3.07 FINISHING

A. Nonslip Broom Finish (Ns-Brm-FN): Apply nonslip broom finish to exterior concrete platforms, steps, walks, curbs, gutters and ramps.
   1. Immediately after float finishing, slightly roughen concrete by brooming with fiber bristle broom, perpendicular to main traffic route unless otherwise indicated on drawing.

B. Area Paving: Light broom, texture perpendicular to pavement direction unless otherwise indicated on drawings.

C. Sidewalk Paving: Light broom, texture perpendicular to direction of travel with troweled and radiused edge 1/4 inch radius unless otherwise indicated on drawing.

D. Curbs and Gutters: Light broom, texture parallel to pavement direction.

E. Place curing compound on exposed concrete surfaces immediately after finishing. Apply in accordance with manufacturer's instructions.

3.08 TOLERANCES

A. Maximum Variation of Surface Flatness: 1/4 inch in 10 ft.

B. Maximum Variation From True Position: 1/4 inch.

3.09 FIELD QUALITY CONTROL

A. An independent testing agency will perform field quality control tests, as specified in Section 01 43 00 - Quality Assurance.

B. The owner will employ services of an independent testing agency to perform specified testing and inspections

C. Provide free access to concrete operations at project site and cooperate with appointed firm.

D. Submit proposed mix design of each class of concrete to inspection and testing firm for review prior to commencement of concrete operations.

E. Tests of concrete and concrete materials may be performed at any time to ensure compliance with specified requirements.

F. Compressive Strength Tests: ASTM C 39. For each test, mold and cure three concrete test cylinders. Obtain test samples for every 50 cu yd or less of each class of concrete placed in a day or for each 3000 square feet of surface area placed..
   1. Cure specimens on job site under same conditions at concrete it represents
   2. Test one specimen at 7 days
   3. Test one specimen at 28 days
   4. Retain one specimen in reserve for later testing if required.

G. Take one additional test cylinder during cold weather concreting, cured on job site under same conditions as concrete it represents.

H. Slump: ASTM C 143, one test for each concrete load at point of discharge, and one for each set of compressive strength test specimens.

3.10 DEFECTIVE CONCRETE

A. Test Results: The testing agency shall report test results in writing to Owner's Representative and Contractor within 24 hours of test.

B. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.

C. Repair or replacement of defective concrete will be determined by the Owner's Representative. The cost of additional testing shall be borne by Contractor when defective concrete is identified.

D. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Architect for each individual area.

3.11 PROTECTION

A. Immediately after placement, protect pavement from premature drying, excessive hot or cold temperatures, and mechanical injury.

B. Do not permit pedestrian or vehicular traffic over pavement until 75 percent design strength of concrete has been achieved.

END OF SECTION

SECTION 32 17 24
CONCRETE SURFACE COLOR COATING SYSTEM

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Sports surface color coating system.

1.02 RELATED REQUIREMENTS

A. Section 32 13 13 - Concrete Paving.

1.03 REFERENCE STANDARDS

A. American Sports Builders Association (ASBA).

B. United States Tennis Association (USTA) Rules of Tennis.

C. International Tennis Federation (ITF).

1.04 PRICE AND PAYMENT PROCEDURES

1.05 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Convene a preinstallation meeting one week before starting work of this section; require attendance by all relevant installers, and architect.

1.06 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B. Product Data: Submit manufacturer’s product data, including surface and crack preparation and application instructions.

C. Samples: Submit manufacturer’s color samples of color coating.

D. Applicator’s Project References: Submit applicator’s list of successfully completed concrete court surface color coating system projects, including project name, location, type and quantity of color coating system applied, and date of application.

E. Warranty Documentation: Submit manufacturer’s standard warranty.

1.07 QUALITY ASSURANCE

A. Manufacturer’s Qualifications:
   1. Manufacturer regularly engaged, for past 5 years, in manufacture of surface color coating systems.

B. Applicator's Qualifications:
   1. Applicator regularly engaged, for past 3 years, in application of surface color coating systems.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to site in manufacturer’s original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B. Storage and Handling Requirements:
   1. Store and handle materials in accordance with manufacturer’s instructions.
   2. Keep materials in manufacturer’s original, unopened containers and packaging until application.
   3. Store materials in clean, dry area indoors.
   4. Store materials out of direct sunlight.
   5. Keep materials from freezing.
   6. Protect materials during storage, handling, and application to prevent contamination or damage.

1.09 FIELD CONDITIONS

A. Do not apply surface color coating system when air or surface temperatures are below 50 degrees F during application or within 24 hours after application.

B. Do not apply surface color coating system when rain is expected during application or within 24 hours after application.

PART 2PRODUCTS

2.01 MANUFACTURER

A. SportMaster Sport Surfaces: www.sportmaster.net
   1. Product: SportMaster Color Coating System.

B. Acceptable Manufacturers:
   1. Nova: www.novasports.com
   2. California Product Corporation: www.plexipave.com
   3. Advanced Polymer Technology, Laykold: www.advpolytech.com
   4. Dynaflex Sports Surfacing, www.neyradynaflex.com

C. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 MATERIALS

A. Crack Sealant: Crack Magic.
   1. 100 percent acrylic emulsion elastomeric crack sealant.
   2. Seals cracks up to 1/2 inch wide in asphalt pavement.
   3. Non-Volatile Material: 61 percent, plus or minus 5 percent.
   4. Color: As selected by Engineer / Owner.

B. Crack Filler: Acrylic Crack Patch.
   1. 100 percent acrylic emulsion trowel-grade crack filler.
   2. Fills cracks in asphalt pavement up to 1 inch wide.
   3. Chemical Characteristics, by Weight, Minimum:
      a. Acrylic Emulsion: 10.0 percent.
      b. Hiding Pigment: 0.2 percent.
      c. Mineral Inert Fillers: 78.0 percent.
      d. Film Formers, Additives: 1.8 percent.
      e. Water: 8.5 percent.
   4. Non-Volatile Material: 80 percent, plus or minus 5 percent.
   5. Color: As selected by Engineer / Owner.

C. Patch Binder: Acrylic Patch Binder.
   1. 100 percent acrylic emulsion liquid binder.
   2. Mix on-site with sand and cement.
   3. Levels and repairs low spots and depressions up to 3/4 inch deep in asphalt pavement.
   4. Fill cracks in asphalt up to 1 inch in width.

D. Adhesion Promoter: Acrylic Adhesion Promoter.
   1. Acrylic emulsion primer.
   2. Primes concrete surface and promotes adhesion of color coating system materials.

E. Filler Course: Acrylic Resurfacer.
   1. 100 percent acrylic emulsion resurfacer.
   2. Mix on-site with silica sand.
   3. Apply to asphalt surfaces in preparation of color coating system.
   4. Chemical Characteristics, by Weight, Minimum:
      a. Acrylic Emulsion: 44.0 percent.

b. Hiding Pigment: 2.0 percent.
c. Mineral Inert Fillers: 5.0 percent.
d. Film Formers, Additives: 0.2 percent.
e. Water: 45.0 percent.

5. Non-Volatile Material: 27.5 percent, plus or minus 5.0 percent.
6. Color: As selected by Engineer / Owner.

F. Color Coating: Color Plus System.
1. 100 percent acrylic emulsion coating.
2. Mix on-site with silica sand and water.
3. Color: As selected by Engineer / Owner.

G. Markings Primer: Stripe-Rite.
1. 100 percent acrylic emulsion primer, clear drying.
2. Primes line markings and prevents bleed-under for sharp lines.
3. Chemical Characteristics, by Weight, Nominal:
a. Acrylic Emulsion: 38.0 percent.
b. Hiding Pigment: 0.0 percent.
c. Mineral Inert Fillers: 7.0 percent.
d. Film Formers, Additives: 1.5 percent.
e. Water: 50.0 percent.
4. Non-Volatile Material: 29 percent, plus or minus 5 percent.

H. Paint: Textured Paint.
1. Pigmented, 100 percent acrylic emulsion line paint.
2. Line marking on asphalt tennis courts.
3. Chemical Characteristics, by Weight, Nominal:
a. Acrylic Emulsion: 25.89 percent.
b. Pigment: 14.90 percent.
c. Mineral Inert Fillers: 13.12 percent.
d. Additives: 4.73 percent.
e. Water: 41.36 percent.
4. Non-Volatile Material: 45.17 percent, plus or minus 5 percent.
5. Color: As selected by Engineer / Owner.

PART 3EXECUTION

3.01 EXAMINATION

A. Examine surfaces to receive color coating system.

B. Notify Architect of conditions that would adversely affect application or subsequent use.

C. Do not begin surface preparation or application until unacceptable conditions are corrected.
1. Starting of work will be construed as Applicator's acceptance of surfaces and conditions within any particular area

3.02 SURFACE PREPARATION

A. Prepare surfaces in accordance with manufacturer's instructions.

B. Protection of In-Place Conditions: Protect adjacent surfaces and landscaping from contact with surface color coating system.

C. Remove dirt, dust, debris, oil, grease, vegetation, loose materials, and other surface contaminants which could adversely affect application of tennis court surface color coating system. Pressure wash entire surface.

D. Concrete Surface
1. New Concrete:

a. Cure new concrete surfaces a minimum of 28 days before application of concrete surface color coating system.
b. Provide medium broom finish or similar roughened texture.

E. Repair cracks, depressions, and surface defects in accordance with manufacturer's instructions before application of filler course and color coating.

F. Level depressions 1/8 inch and deeper with acrylic patch binder in accordance with manufacturer's instructions.

G. Fill expansion joints and control joints with acrylic patch binder in accordance with manufacturer's instructions

H. Apply necessary coats of filler course as required by surface roughness and porosity to provide smooth underlayment for application of color coating.

I. Ensure surface repairs are flush and smooth to adjoining surfaces.

3.03 APPLICATION

A. Apply concrete surface color coating system in accordance with manufacturer's instructions at locations indicated on the Drawings.

B. Mix materials in accordance with manufacturer's instructions.

C. Filler Course:
1. Apply 1 on new concrete

D. Apply a minimum of 2 coats of color coating to prepared surfaces in accordance with manufacturers instructions

E. Allow material drying times in accordance with manufacturer's instructions before applying other materials or opening completed surface to foot traffic.

3.04 LINE MARKINGS

A. Lay out makrings as shown on the drawings. Colors, as selected by Owner.

B. Lay out tennis court line markings in accordance with USTA Rules of Tennis.

C. Apply line markings primer, after masking tape has been laid, to seal voids between masking tape and surface to prevent bleed-under when paint is applied.

D. Apply a minimum of 1 coat of line paint in accordance with manufacturer's instructions.

3.05 PROTECTION

A. Allow paint to dry at least the minimum time specified by the applicable paint standard and not less than that recommended by the manufacturer.

B. Protect applied surface color coating system to ensure that, except for normal weathering, coating system will be without damage or deterioration at time of Substantial Completion.

END OF SECTION

SECTION 32 31 13
CHAIN LINK FENCES AND GATES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Posts, rails, and frames.

B. Wire fabric.

C. Manual gates with related hardware.

1.02 RELATED REQUIREMENTS

A. Section 03 30 00 - Cast-in-Place Concrete: Concrete anchorage for posts.

1.03 REFERENCE STANDARDS

A. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2024.

B. ASTM A392 - Standard Specification for Zinc-Coated Steel Chain-Link Fence Fabric; 2011a (Reapproved 2022).

C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2025a.

D. ASTM F567 - Standard Practice for Installation of Chain-Link Fence; 2023.

E. ASTM F668 - Standard Specification for Polyvinyl Chloride (PVC), Polyolefin and Other Polymer-Coated Steel Chain Link Fence Fabric; 2025.

F. ASTM F1083 - Standard Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures; 2018 (Reapproved 2022).

G. CLFMI CLF-FIG0111 - Field Inspection Guide; 2014.

H. CLFMI CLF-SFR0111 - Security Fencing Recommendations; 2014.

I. CLFMI WLG 2445 - Wind Load Guide for the Selection of Line Post and Line Post Spacing; 2017.

J. CLFMI CLF 2445 - Product Manual - Drawings; 2012.

1.04 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data on fabric, posts, accessories, fittings and hardware.

C. Shop Drawings: Indicate plan layout, spacing of components, post foundation dimensions, hardware anchorage, and schedule of components. See CLFMI CLF-SFR0111 for planning and design recommendations.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.

B. Fence Installer: Company with demonstrated successful experience installing similar projects and products, with not less than five years of documented experience.

C. Comply with Chain Link Fence Manufacturers Institute “Product Manual”.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Chain Link Fences and Gates:
   1. Master-Halco, Inc www.masterhalco.com/#sle.

2. Merchants Metal www.merchantsmetals.com/#sle.
3. Reeves Southeastern Corp www.reevesse.com.
4. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 MATERIALS

A. PVC-coated steel, complying with ASTM F1665.

B. Concrete: Comply with Section 03 3000 Cast-in-Place Concrete or 32.1313 Concrete Pavement

2.03 COMPONENTS

A. Framework:
   1. Over 10'-0" high fence
      a. Line Posts: 2.875 inch diameter with .203 inch wall thickness
      b. Corner and Terminal Posts: 4.0 inch diameter with .226 inch wall thickness.
   2. Gate Posts: 4 inch diameter.
   3. Top, Intermediate, Bottom and Brace Rail: 1.66 inch diameter with .140 wall thickness, plain end, sleeve coupled.
   4. Gate Frame: 1.66 inch diameter for welded fabrication.
      a. Install pipe bracing as required to prevent gate from sagging.
   5. Color: Black vinly coated

B. Fabric:
   1. General
      a. 1 3/4" inch diamond mesh interwoven
      b. Wire: 9 gage
      c. Selvage:
         1) Top: Knuckle
         2) Bottom: Knuckle
      d. Color: Black vinyl coated
   2. Tie Wire: Aluminum alloy steel wire, 9 gage.
      a. Spacing:
         1) Intermediate Post: Not to exceed 14 inches
         2) Top Rail: Not to exceed 24 inches
         3) Color: Black

2.04 MANUAL GATES AND RELATED HARDWARE

A. Hardware for Single Swinging Gates: 180 degree hinges, 3 in total at each gate; fork latch with gravity drop and padlock hasp; keeper to hold gate in fully open position.

B. Hardware for Double Swinging Gates: 180 degree hinges, 3 in total for each gate leaf; drop bolt on inactive leaf engaging socket stop set in concrete, active leaf latched to inactive leaf preventing raising of drop bolt, padlock hasp; keepers to hold gate in fully open position.

C. Hinges: Finished to match fence components.

D. Latches: Finished to match fence components.

2.05 FINISHES

A. Components and Fabric: Black Vinyl coated over coating of 1.8 ounces per square foot galvanizing.

B. Accessories: Same finish as framing.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install framework, fabric, accessories and gates in accordance with ASTM F567.

B. Set intermediate posts plumb , in concrete footings with top of footing 6 inches below finish grade. Slope top of concrete for water runoff.

C. Line Post Footing Depth Below Finish Grade: ASTM F 567.

D. Corner, Gate and Terminal Post Footing Depth Below Finish Grade: ASTM F 567.

E. Provide top rail through line post tops and splice with 6 inch long rail sleeves.

F. Install bottom and intermediate rails on all fencing and gate leaves.

G. Do not stretch fabric until concrete foundation has cured 28 days.

H. Stretch fabric between terminal posts or at intervals of 100 feet maximum, whichever is less.

I. Position bottom of fabric 1 1/2" maximum above finished grade.

J. Fasten fabric to top rail, line posts, braces, intermediate and bottom rail with tie wire at maximum 15 inches on centers.

K. Attach fabric to end, corner, and gate posts with tension bars and tension bar clips.

L. Do not attach the hinged side of gate to building wall; provide gate posts.

M. Install hardware and gate with fabric to match fence.

N. Provide concrete center drop to footing depth and drop rod retainers at center of double gate openings.

3.02 TOLERANCES

A. Maximum Variation From Plumb: 1/4 inch.

B. Maximum Offset From True Position: 1 inch.

C. Do not infringe on adjacent property lines.

3.03 FIELD QUALITY CONTROL

A. See Section 01 43 00 - Quality Assurance, for additional requirements.

B. Layout: Verify that fence installation markings are accurate to design, paying attention to gate locations, underground utilities, and property lines.

C. Gates: Inspect for level, plumb, and alignment.

D. Workmanship: Verify neat installation free of defects. See CLFMI CLF-FIG0111 for field inspection guidance.

3.04 CLEANING

A. Clean jobsite of excess materials; Remove excess material from post holes.

B. Clean fence with mild household detergent and clean water rinse well.

C. Touch up scratched surfaces using materials recommended by manufacturer. Match touched-up paint color to factory-applied finish.

END OF SECTION