ADDENDUM ACKNOWLEDGMENT

ADDENDUM NO. 1 Dated: <u>6/30/23</u>

Bid Due Date: 7/13/23

NOTICE

It is the sole responsibility of the bidder to ensure that it has received any and all Addenda and the Philadelphia Redevelopment Authority may in their sole discretion reject any bid for which all Addenda have not been executed and returned.

RFP FOR

Project No.: 16517E-03-02

Description: Pelbano Recreation Center

IS AMENDED AS FOLLOWS:

- 1. Addenda will be posted on phdcphila.org. Each Bidder shall ascertain prior to submitting a proposal that Bidder has received all Amendments issued, and shall acknowledge their receipt in their proposal submission.
- 2. Remove the following drawings & specification sections from the original bid documents and replace with the attached drawings & specification sections:

L100, Site Plan

L102, Site Plan

L200, Layout Key Plan

L201, Layout Plan – Area 1

L202 Layout Plan - Area 2

L300, Materials Plan

L350, Paving Plan

L351, Paving Plan – Area 1

L352, Paving Plan – Area 2

L830, Details = Paving

L840, Details = Site Furnishings

L841, Details = Site Furnishings

L842, Details = Site Furnishings

L850, Details - Court Layout

L900, Planting Key Plan

SP100, Plumbing Plan

000110 Table of Contents

000115 List of Drawings

004114 Construction Bid Proposal

3. Add the following sheets and specification sections:

L843, Details - Site Furnishings

L844, Details - Site Furnishings

L845, Details - Site Furnishings

L846, Details - Site Furnishings

L847, Details - Site Furnishings

L848, Details - Site Furnishings

033000 Cast-in-Place Concrete

032000 Concrete Reinforcing

101110 Signage

Bidder must acknowledge receipt of Addenda in their proposal submission.

SECTION 000110 TABLE OF CONTENTS

DIVISION 0 - BIDDING AND CONTRACT REQUIREMENTS:

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002113	Instructions to Bidders
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004114	Construction Bid Proposal Form
004313	Bid Bond
007200	Standard Contract Requirements
007343	Prevailing Wage Rates Schedule

DIVISION 1 - GENERAL REQUIREMENTS

017123	Field Engineering
017329	Cutting, Patching, Sleeves and Inserts
017423	Cleaning
017700	Closeout Procedures - Certificate of Substantial Completion Form
017823	Operation and Maintenance Manuals
017836	Warranties
017839	Project Record Documents
•	- TECHNICAL SPECIFICATIONS
022113	Project Survey and Layout
024116	Site and Structure Demolition
031100	Concrete Formwork
032000	Concrete Reinforcing
033000	Cast-in-Place Concrete
101110	Signage
116813	Playground Equipment
129300	Site Furnishings
311313	Selective Landscape Preservation & Plant Removal
312000	Earth Moving
312310	Excavation, Backfill & Subgrade Preparation for Pavement
312500	Soil Erosion and Sedimentation Controls
320116.71	Milling of Asphalt Pavement
321216	Asphalt Paving
321373	Concrete Paving Joint Sealants
321600	Concrete Curbing and Sidewalks
321816.13	Poured-in-Place Safety Surface
323113	Chain Link Fences and Gates
329000	Landscape Planting
329210	Turf Grass Seeding
329223	Turf Grass Sodding
330110	Protection of Existing Utilities

END

SECTION 000115 LIST OF DRAWINGS

Drawing No.	<u>Title</u>
L000	Cover Sheet
L020	Existing Conditions Plan
C-200	Demolition Plan
C-300	Grading Plan
C-301	Grading Plan
C-400	Erosion and Sediment Control Plan
C-401	Erosion and Sediment Control Details
C-402	Erosion and Sediment Control Notes
C-403	Erosion and Sediment Control Notes
C-404	Erosion and Sediment Control Notes
L100	Site Plan
L101	Site Plan – Area 1
L102	Site Plan – Area 2
L200	Layout Key Plan
L201	Layout Plan – Area 1
L202	Layout Plan – Area 2
L300	Materials Plan
L350	Paving Plan
L351	Paving Plan – Area 1
L352	Paving Plan – Area 2
L500	Soils Plan
L540	Soils Profile
L600	Play Equipment Plan
L601	Play Equipment Plan – Area 1
L602	Play Equipment Plan – Area 2
L700	Site Sections
L870	Play Equipment Details
L871	Play Equipment Details

L872	Play Equipment Details
L830	Details – Paving
L840	Details – Site Furnishings
L841	Details – Site Furnishings
L842	Details – Site Furnishings
L843	Details – Site Furnishings
L844	Details – Site Furnishings
L845	Details – Site Furnishings
L846	Details – Site Furnishings
L847	Details – Site Furnishings
L848	Details – Site Furnishings
L850	Details – Court Layout
L900	Planting Key Plan
L960	Planting Details
SP100	Plumbing Plan

SECTION 004114 CONSTRUCTION BID PROPOSAL

PHILADELPHIA REDEVLOPMENT AUTHORITY

PELBANO PLAYGROUND 8101 BUSTLETON AVE. PHILADELPHIA, PA 19152

THIS BID FORM IS COMPLETE AND MUST NOT BE SEPARATED. IF ANY SHEET OR SHEETS ARE DETACHED WHEN SUBMITTED AS A BID, THE PHILADELPHIA REDEVELOPMENT AUTHORITY RESERVES THE RIGHT TO REJECT YOUR BID.

FIRM NAME	
FIRM ADDRESS	
FEDERAL EIN	TOTAL BASE BID
)

To the Philadelphia Redevelopment Authority:

I, the undersigned Bidder, hereby propose to furnish all the labor, materials and equipment, perform the whole of the work, and submit to all conditions, as represented, intended and implied, both particularly and generally, by the Plans, Special Specifications, Standard Specifications, Standard Details, Standard Contract Requirements, Form of Agreement, the Ordinance authorizing the work and this bid at the prices herein stated, and agrees that each item bid shall be complete in itself, and the Philadelphia Redevelopment Authority may increase or diminish the amount of work thereunder, or omit the item without invalidating the unit price bid for it or any other item, on the following terms to wit:

A. BID AMOUN	H	
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I will complete the Work in accordance with the Contract Documents for the following Bid Amount as defined in Section 00700, Standard Contract Requirements. (Insert Bid Amount in words as well as figures.)

(1) General Conditions	\$
(2) Temporary Protection	\$
(3) Demolition	\$
(4) Site work	\$
(5) New Paving Asphalt	\$
(6) New Paving Concrete	\$
(7) Furnish and Install Play Equipment	\$
(8) Furnish and Install Play Safety Surface	\$
(9) Furnish and Install New Site Furnishing	\$
(10) Furnish and Install New Fence	\$
(11) Landscaping, Trees, and Plantings	\$
TOTAL BASE BID AMOUNT	\$
	DOLLARS

65/30/2023

(13) ALLOWANCE No. 2: Bidders are to include the amount of \$30,000.00 to their base bid amount for new site signage. Refer to Allowances, Section 012100 for more details. THIRTY THOUSAND DOLLARS, \$30,000.00.]

TOTAL BASE BID (Base Bid plus Allowance(s)).

ALTERNATES [if used]

ADD ALTERNATE No. 1 Basketball hoop

ADD ALTERNATE No. 1 AMOUNT

B. **COMPLETION**

I will substantially complete the Work, ready for final payment, in accordance with the Contract Documents within 150 consecutive calendar days counting from the date stated in the Notice to Proceed.

C. ADDENDA

65/30/2023

Bidder must attach Addendum Acknowledgement sheets for all Addenda, if applicable.

EXECUTION OF CONTRACT

This contract consists of the Standard Contract Requirements; the Department's Standard Details and Specifications, as they apply; the Department's General Bidding and Contract Requirements; the Technical Specifications; the Bid; the Plans with all of the notes thereon (excluding any records or reports of test borings, underground structures, and test piles); any additional exhibits or attachments to any of the foregoing; and any addenda thereto issued by the PRA/City (collectively, the "Contract").

NOTE: ANY CONTRACT THAT IS NOT EXECUTED IN ACCORDANCE WITH THE INSTRUCTIONS PROVIDED BELOW, MAY, IN THE SOLE DISCRETION OF THE PHILADELPHIA REDEVELOPMENT AUTHORITY, BE REJECTED.

SIGNING OF CONTRACT

If Contractor is an INDIVIDUAL or a PARTNERSHIP, date and sign the Contract here, with original

PELBANO PLAYGROUND – 16517E – Addendum #1 BID PROPOSAL CONSTRUCTION

DOLLARS

004114 - 3

signatures, in ink.	
Thisday of	2019
(Signature of Owner, Partner)	(Type or Print Name and Title)
(Business Name of Bidder)	
President or Vice-President of the corporation Assistant Treasurer of the corporation; and (c) a signed by the President or Vice-President; and	Ign the Contract here with original signatures, in ink, by (a) AND (b) Secretary, Assistant Secretary, Treasurer or affix the seal of the corporation. If the Contract is not Secretary, Assistant Secretary; Treasurer or Assistant plution authorizing the person signing in place of such attion.
	day of
	CORPORATE SEAL
(Corporate or Business Name of Bidder)	
(Address, Including Zip Code)	
(Telephone Number)	
(Signature of President or Vice President) or	(Signature of Secretary, Asst. Secretary, Treasurer Assistant Treasurer
(Type or Print Name and Title)	(Type or Print Name and Title)

CONSTRUCTION

65/30/2023

SECTION 032000 - CONCRETE REINFORCING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Steel reinforcement bars. B.

Related Sections:

- 1. Division 03 Section "Cast-in-Place Concrete".
- 2. Division 07 Section "Sitework Joint Sealants".

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
 - 1. Review the following:
 - Special inspection and testing and inspecting agency procedures for field quality control.
 - b. Construction contraction and isolation joints.
 - c. Steel-reinforcement installation.

1.4 ACTION SUBMITTALS

- A. Product Data: For each of the following.
 - 1. Each type of steel reinforcement.
 - 2. Epoxy repair coating.
 - 3. Zinc repair material.
 - 4. Bar supports.
 - 5. Mechanical splice couplers.
- B. Shop Drawings: Comply with ACI SP-066:
 - 1. Include placing drawings that detail fabrication, bending, and placement.
 - 2. Include bar sizes, lengths, materials, grades, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, location of splices, lengths of lap splices, details of mechanical splice couplers, details of welding splices, tie spacing, hoop spacing, and supports for concrete reinforcement.

- 3. For structural thermal break insulated connection system, indicate general configuration, insulation dimensions, tension bars, compression pads, shear bars, and dimensions.
- C. Construction Joint Layout: Indicate proposed construction joints required to build the structure.
 - 1. Location of construction joints is subject to approval of Landscape Architect.

1.5 INFORMATIONAL SUBMITTALS

- A. Welding certificates.
 - 1. Reinforcement To Be Welded: Welding procedure specification in accordance with AWS D1.4/D1.4M.
- B. Material Certificates: For each of the following, signed by manufacturers:
 - 1. Epoxy-Coated Reinforcement: CRSI's "Epoxy Coating Plant Certification."
 - 2. Dual-Coated Reinforcement: CRSI's "Epoxy Coating Plant Certification." C.

Material Test Reports: For the following, from a qualified testing agency:

- 1. Steel Reinforcement:
 - a. For reinforcement to be welded, mill test analysis for chemical composition and carbon equivalent of the steel in accordance with ASTM A706/A706M.
- 2. Mechanical splice couplers. D.

Field quality-control reports.

E. Minutes of preinstallation conference.

1.6 QUALITY ASSURANCE

- A. Testing Agency Qualifications: An independent agency, qualified in accordance with ASTM C1077 and ASTM E329 for testing indicated.
- B. Welding Qualifications: Qualify procedures and personnel in accordance with AWS D1.4/D 1.4M.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage and to avoid damaging coatings on steel reinforcement.
 - 1. Store reinforcement to avoid contact with earth.
 - 2. Do not allow epoxy-coated reinforcement to be stored outdoors for more than 60 days without being stored under an opaque covering.

- 3. Do not allow dual-coated reinforcement to be stored outdoors for more than 60 days without being stored under an opaque covering.
- 4. Do not allow stainless steel reinforcement to come into contact with uncoated reinforcement.

PART 2 - PRODUCTS

2.1 STEEL REINFORCEMENT

- A. Reinforcing Bars: ASTM A615/A615M, Grade 60 (Grade 420), deformed.
- B. Galvanized Reinforcing Bars:
 - 1. Steel Bars: ASTM A615/A615M, Grade 60 (Grade 420), deformed bars.

2.2 REINFORCEMENT ACCESSORIES

- A. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded-wire reinforcement in place.
 - 1. Manufacture bar supports from steel wire, plastic, or precast concrete in accordance with CRSI's "Manual of Standard Practice," of greater compressive strength than concrete and as follows:
 - a. For concrete surfaces exposed to view, where legs of wire bar supports contact forms, use CRSI Class 1 plastic-protected steel wire, all-plastic bar supports, or CRSI Class 2 stainless steel bar supports.
 - b. For epoxy-coated reinforcement, use CRSI Class 1A epoxy-coated or other dielectric-polymer-coated wire bar supports.
 - c. For dual-coated reinforcement, use CRSI Class 1A epoxy-coated or other dielectricpolymer-coated wire bar supports.
 - d. For zinc-coated reinforcement, use galvanized wire or dielectric-polymer-coated wire bar supports.
 - e. For stainless steel reinforcement, use CRSI Class 1 plastic-protected steel wire, allplastic bar supports, or CRSI Class 2 stainless steel bar supports.
- B. Steel Tie Wire: ASTM A1064/A1064M, annealed steel, not less than 0.0508 inch (1.2908 mm) in diameter.
 - 1. Finish: Galvanized.

2.3 FABRICATING REINFORCEMENT

A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protection of In-Place Conditions:
 - 1. Do not cut or puncture vapor retarder.
 - 2. Repair damage and reseal vapor retarder before placing concrete.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that reduce bond to concrete.

3.2 INSTALLATION OF STEEL REINFORCEMENT

- A. Comply with CRSI's "Manual of Standard Practice" for placing and supporting reinforcement.
- B. Accurately position, support, and secure reinforcement against displacement.
 - 1. Locate and support reinforcement with bar supports to maintain minimum concrete cover.
 - 2. Do not tack weld crossing reinforcing bars.
- C. Preserve clearance between bars of not less than 1 inch (25 mm), not less than one bar diameter, or not less than 1-1/3 times size of large aggregate, whichever is greater. D. Provide concrete coverage in accordance with ACI 318 (ACI 318M).
- E. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.
- F. Splices: Lap splices as indicated on Drawings.
 - 1. Bars indicated to be continuous, and all vertical bars to be lapped not less than 36 bar diameters at splices, or 24 inches (610 mm), whichever is greater.
 - 2. Stagger splices in accordance with ACI 318 (ACI 318M).

3.3 JOINTS

- A. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.
 - 1. Place joints perpendicular to main reinforcement.
 - 2. Continue reinforcement across construction joints unless otherwise indicated.
 - 3. Do not continue reinforcement through sides of strip placements of floors and slabs.

3.4 INSTALLATION TOLERANCES

A. Conform to ACI 117 (ACI 117M).

3.5 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified testing and inspecting agency to perform tests and inspections and to submit reports. B. Inspections:

1. Steel-reinforcement placement.

END OF SECTION 032000

SECTION 033000 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

- 1. Cast-in-place concrete seat wall, including concrete materials, mixture design, placement procedures, and finishes. B. Related Sections:
 - 1. Division 03 Section "Concrete Reinforcing".
 - 2. Division 07 Section "Site Joint Sealants".
 - 3. Division 32 Section "Protective Playground Surfacing".
 - 4. Division 32 Section "Playground Equipment".

1.3 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash, slag cement, other pozzolans, and silica fume; materials subject to compliance with requirements.
- B. Water/Cement Ratio (w/cm): The ratio by weight of water to cementitious materials.

1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
 - 1. Require representatives of each entity directly concerned with cast-in-place concrete to attend, including the following:
 - a. Contractor's superintendent.
 - b. Independent testing agency responsible for concrete design mixtures.
 - c. Ready-mix concrete manufacturer.
 - d. Concrete Subcontractor.

2. Review the following:

- a. Special inspection and testing and inspecting agency procedures for field quality control.
- b. Construction joints, control joints, isolation joints, and joint-filler strips.
- c. Semirigid joint fillers.
- d. Vapor-retarder installation.

- e. Anchor rod and anchorage device installation tolerances.
- f. Cold and hot weather concreting procedures.
- g. Concrete finishes and finishing.
- h. Curing procedures.
- i. Forms and form-removal limitations.
- j. Shoring and reshoring procedures.
- k. Methods for achieving specified floor and slab flatness and levelness.
- 1. Floor and slab flatness and levelness measurements.
- m. Concrete repair procedures.
- n. Concrete protection.
- o. Initial curing and field curing of field test cylinders (ASTM C31/C31M.)
- p. Protection of field cured field test cylinders.

1.5 ACTION SUBMITTALS

- A. Product Data: For each of the following.
 - 1. Portland cement.
 - 2. Fly ash.
 - 3. Slag cement.
 - 4. Blended hydraulic cement.
 - 5. Silica fume.
 - 6. Performance-based hydraulic cement
 - 7. Aggregates.
 - 8. Admixtures:
 - a. Include limitations of use, including restrictions on cementitious materials, supplementary cementitious materials, air entrainment, aggregates, temperature at time of concrete placement, relative humidity at time of concrete placement, curing conditions, and use of other admixtures.
 - 9. Color pigments.
 - 10. Fiber reinforcement.
 - 11. Vapor retarders.
 - 12. Floor and slab treatments.
 - 13. Liquid floor treatments.
 - 14. Curing materials.
 - 15. Joint fillers.
 - 16. Repair materials.
- B. Design Mixtures: For each concrete mixture, include the following:
 - 1. Mixture identification.
 - 2. Minimum 28-day compressive strength.
 - 3. Durability exposure class.
 - 4. Maximum w/cm.
 - 5. Calculated equilibrium unit weight, for lightweight concrete.

- 6. Slump limit.
- 7. Air content.
- 8. Nominal maximum aggregate size.
- 9. Steel-fiber reinforcement content.
- 10. Synthetic micro-fiber content.
- 11. Indicate amounts of mixing water to be withheld for later addition at Project site if permitted.
- 14. Intended placement method.
- 15. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

C. Shop Drawings:

- 1. Construction Joint Layout: Indicate proposed construction joints required to construct the structure.
- 2. Location of construction joints is subject to approval of the Landscape Architect.
- D. Concrete Schedule: For each location of each Class of concrete indicated in "Concrete Mixtures" Article, including the following:
 - 1. Concrete Class designation.
 - 2. Location within Project.
 - 3. Exposure Class designation.
 - 4. Formed Surface Finish designation and final finish.
 - 5. Final finish for floors.
 - 6. Curing process.
 - 7. Floor treatment if any.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For the following:
 - 1. Installer: Include copies of applicable ACI certificates.
 - 2. Ready-mixed concrete manufacturer.
 - 3. Testing agency: Include copies of applicable ACI certificates.
- B. Material Certificates: For each of the following, signed by manufacturers:
 - 1. Cementitious materials.
 - 2. Admixtures.
 - 3. Fiber reinforcement.
 - 4. Curing compounds.
 - 5. Floor and slab treatments.
 - 6. Bonding agents.
 - 7. Adhesives.
 - 8. Vapor retarders.
 - 9. Semirigid joint filler.

- 10. Joint-filler strips.
- 11. Repair materials.
- C. Material Test Reports: For the following, from a qualified testing agency:
 - 1. Portland cement.
 - 2. Fly ash.
 - 3. Slag cement.
 - 4. Blended hydraulic cement.
 - 5. Silica fume.
 - 6. Performance-based hydraulic cement.
 - 7. Aggregates.
 - 8. Admixtures:
- a. Permeability-Reducing Admixture: Include independent test reports, indicating compliance with specified requirements, including dosage rate used in test. D. Field quality-control reports.
- E. Minutes of preinstallation conference.

1.8 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified installer who employs Project personnel qualified as an ACI Certified Flatwork Technician and Finisher and a supervisor who is a certified ACI Flatwork Concrete Finisher/Technician or an ACI Concrete Flatwork Technician [with experience installing and finishing concrete, incorporating permeability-reducing admixtures].
 - 1. Post-Installed Concrete Anchors Installers: ACI-certified Adhesive Anchor Installer.
- B. Ready-Mixed Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C94/C94M requirements for production facilities and equipment.
- C. Laboratory Testing Agency Qualifications: A testing agency qualified in accordance with ASTM C1077 and ASTM E329 for testing indicated and employing an ACI-certified Concrete Quality Control Technical Manager.
- D. Field Quality-Control Testing Agency Qualifications: An independent agency, qualified in accordance with ASTM C1077 and ASTM E329 for testing indicated.

1.9 PRECONSTRUCTION TESTING

- A. Preconstruction Testing Service: Engage a qualified testing agency to perform preconstruction testing on each concrete mixture.
 - 1. Include the following information in each test report:
 - a. Admixture dosage rates.

- b. Slump.
- c. Air content.
- d. Seven-day compressive strength.
- e. 28-day compressive strength.
- f. Permeability.

1.10 DELIVERY, STORAGE, AND HANDLING

A. Comply with ASTM C94/C94M and ACI 301 (ACI 301M).

1.11 FIELD CONDITIONS

- A. Cold-Weather Placement: Comply with ACI 301 (ACI 301M) and ACI 306.1 and as follows.
 - 1. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
 - 2. When average high and low temperature is expected to fall below 40 deg F (4.4 deg C) for three successive days, maintain delivered concrete mixture temperature within the temperature range required by ACI 301 (ACI 301M).
 - 3. Do not use frozen materials or materials containing ice or snow.
 - 4. Do not place concrete in contact with surfaces less than 35 deg F (1.7 deg C), other than reinforcing steel.
 - 5. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mixture designs.
- B. Hot-Weather Placement: Comply with ACI 301 (ACI 301M) and ACI 305.1 (ACI 305.1M), and as follows:
 - 1. Maintain concrete temperature at time of discharge to not exceed 95 deg F (35 deg C).
 - 2. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.

PART 2 - PRODUCTS

2.1 CONCRETE, GENERAL

A. ACI Publications: Comply with ACI 301 (ACI 301M) unless modified by requirements in the Contract Documents.

2.2 CONCRETE MATERIALS

A. Source Limitations:

- 1. Obtain all concrete mixtures from a single ready-mixed concrete manufacturer for entire Project.
- 2. Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant.
- 3. Obtain aggregate from single source.

- 4. Obtain each type of admixture from single source from single manufacturer. B.

 Cementitious Materials:
- 1. Portland Cement: ASTM C150/C150M, Type II.
- C. Normal-Weight Aggregates: ASTM C33/C33M, coarse aggregate or better, graded. Provide aggregates from a single source.
 - 1. Maximum Coarse-Aggregate Size: 1-1/2 inches (38 mm). D.

Air-Entraining Admixture: ASTM C260/C260M.

- E. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures that do not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride in steel-reinforced concrete.
 - 1. Water-Reducing Admixture: ASTM C494/C494M, Type A.
 - 2. Retarding Admixture: ASTM C494/C494M, Type B.
 - 3. Water-Reducing and -Retarding Admixture: ASTM C494/C494M, Type D.
 - 4. High-Range, Water-Reducing Admixture: ASTM C494/C494M, Type F.
 - 5. High-Range, Water-Reducing and -Retarding Admixture: ASTM C494/C494M, Type G.
 - 6. Plasticizing and Retarding Admixture: ASTM C1017/C1017M, Type II. F.

Water and Water Used to Make Ice: ASTM C94/C94M, potable.

2.3 REPAIR MATERIALS

- A. Repair Overlayment: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/4 inch (6 mm) and that can be filled in over a scarified surface to match adjacent floor elevations.
 - 1. Cement Binder: ASTM C150/C150M portland cement or hydraulic or blended hydraulic cement, as defined in ASTM C219.
 - 2. Primer: Product of topping manufacturer recommended for substrate, conditions, and application.
 - 3. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch (3.2 to 6 mm) or coarse sand as recommended by topping manufacturer.
 - 4. Compressive Strength: Not less than 5000 psi (34.5 MPa) at 28 days when tested in accordance with ASTM C109/C109M.

2.4 CONCRETE MIXTURES, GENERAL

- A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, in accordance with ACI 301 (ACI 301M).
 - 1. Use a qualified testing agency for preparing and reporting proposed mixture designs, based on laboratory trial mixtures.

- B. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:
 - 1. Fly Ash or Other Pozzolans: 25 percent by mass.
 - 2. Slag Cement: 50 percent by mass.
 - 3. Silica Fume: 10 percent by mass.
 - 4. Total of Fly Ash or Other Pozzolans, Slag Cement, and Silica Fume: 50 percent by mass, with fly ash or pozzolans not exceeding 25 percent by mass and silica fume not exceeding 10 percent by mass.
 - 5. Total of Fly Ash or Other Pozzolans and Silica Fume: 35 percent by mass with fly ash or pozzolans not exceeding 25 percent by mass and silica fume not exceeding 10 percent by mass.
- C. Admixtures: Use admixtures in accordance with manufacturer's written instructions.

2.5 CONCRETE MIXTURES

- A. Type A Seat Walls and Footings
 - 1. Normal weight concrete
 - 2. Strength f'c = 4000 psi (at 28 days)
 - 3. Shrinkage limit = 0.04%
 - 4. Min SCM = 15 percent of cementitious
 - 5. Slump = 5", or as required by Contractor

2.6 CONCRETE MIXING

- A. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete in accordance with ASTM C94/C94M. Mix concrete materials in appropriate drum-type batch machine mixer.
 - 1. For mixer capacity of 1 cu. yd. (0.76 cu. m) or smaller, continue mixing at least 1-1/2 minutes, but not more than five minutes after ingredients are in mixer, before any part of batch is released.
 - 2. For mixer capacity larger than 1 cu. yd. (0.76 cu. m), increase mixing time by 15 seconds for each additional 1 cu. yd. (0.76 cu. m).
 - 3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mixture type, mixture time, quantity, and amount of water added. Record approximate location of final deposit in structure.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verification of Conditions:
 - 1. Before placing concrete, verify that installation of concrete forms, accessories, and reinforcement, and embedded items is complete and that required inspections have been performed.
 - 2. Do not proceed until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Provide reasonable auxiliary services to accommodate field testing and inspections, acceptable to testing agency, including the following:
 - 1. Daily access to the Work.
 - 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 - 3. Secure space for storage, initial curing, and field curing of test samples, including source of water and continuous electrical power at Project site during site curing period for test samples.
 - 4. Security and protection for test samples and for testing and inspection equipment at Project site.

3.3 JOINTS

- A. Construct joints true to line, with faces perpendicular to surface plane of concrete.
- B. Construction Joints: Coordinate with floor slab pattern and concrete placement sequence.
 - 1. Install so strength and appearance of concrete are not impaired, at locations indicated on Drawings or as approved by Landscape Architect.
 - 2. Place joints perpendicular to main reinforcement.
 - a. Continue reinforcement across construction joints unless otherwise indicated.
 - b. Do not continue reinforcement through sides of strip placements of floors and slabs.
 - 3. Form keyed joints as indicated. Embed keys at least 1-1/2 inches (38 mm) into concrete.
 - 4. Locate joints for beams, slabs, joists, and girders at third points of spans. Offset joints in girders a minimum distance of twice the beam width from a beam-girder intersection.
 - 5. Locate horizontal joints in walls and columns at underside of floors, slabs, beams, and girders and at the top of footings or floor slabs.
 - 6. Space vertical joints in walls as indicated on Drawings. Unless otherwise indicated on Drawings, locate vertical joints beside piers integral with walls, near corners, and in concealed locations where possible.
- C. Control Joints in Slabs-on-Ground: Form weakened-plane control joints, sectioning concrete into areas as indicated. Construct control joints for a depth equal to at least one-fourth of concrete thickness as follows:
 - 1. Grooved Joints: Form control joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch (3.2 mm). Repeat grooving of control joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.
- D. Isolation Joints in Slabs-on-Ground: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.
 - 1. Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface unless otherwise indicated on Drawings.

- 2. Terminate full-width joint-filler strips not less than 1/2 inch (13 mm) or more than 1 inch (25 mm) below finished concrete surface, where joint sealants, specified in Section 079200 "Joint Sealants," are indicated.
- 3. Install joint-filler strips in lengths as long as practicable. Where more than one length is required, lace or clip sections together.

3.4 CONCRETE PLACEMENT

- A. Before placing concrete, verify that installation of formwork, reinforcement, embedded items, and vapor retarder is complete and that required inspections are completed.
 - 1. Immediately prior to concrete placement, inspect vapor retarder for damage and deficient installation, and repair defective areas.
 - 2. Provide continuous inspection of vapor retarder during concrete placement and make necessary repairs to damaged areas as Work progresses.
- B. Notify Landscape Architect and testing and inspection agencies 24 hours prior to commencement of concrete placement.
- C. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301 (ACI 301M), but not to exceed the amount indicated on the concrete delivery ticket.
- D. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete is placed on concrete that has hardened enough to cause seams or planes of weakness.
 - 1. If a section cannot be placed continuously, provide construction joints as indicated.
 - 2. Deposit concrete to avoid segregation.
 - 3. Deposit concrete in horizontal layers of depth not to exceed formwork design pressures and in a manner to avoid inclined construction joints.
 - 4. Consolidate placed concrete with mechanical vibrating equipment in accordance with ACI 301 (ACI 301M).
 - a. Do not use vibrators to transport concrete inside forms.
 - b. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches (150 mm) into preceding layer.
 - c. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity.
 - d. At each insertion, limit duration of vibration to time necessary to consolidate concrete, and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.
- E. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.
 - 1. Do not place concrete floors and slabs in a checkerboard sequence.
 - 2. Consolidate concrete during placement operations, so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
 - 3. Maintain reinforcement in position on chairs during concrete placement.

- 4. Screed slab surfaces with a straightedge and strike off to correct elevations.
- 5. Level concrete, cut high areas, and fill low areas.
- 6. Slope surfaces uniformly to drains where required.
- 7. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface.
- 8. Do not further disturb slab surfaces before starting finishing operations.

3.5 FINISHING FORMED SURFACES

A. As-Cast Surface Finishes:

- 1. ACI 301 (ACI 301M) Surface Finish SF-2.0: As-cast concrete texture imparted by formfacing material, arranged in an orderly and symmetrical manner with a minimum of seams.
 - a. Patch voids larger than 3/4 inch (19 mm) wide or 1/2 inch (13 mm) deep.
 - b. Remove projections larger than 1/4 inch (6 mm).
 - c. Patch tie holes.
 - d. Surface Tolerance: ACI 117 (ACI 117M) Class B.

3.6 INSTALLATION OF MISCELLANEOUS CONCRETE ITEMS

A. Filling In:

- 1. Fill in holes and openings left in concrete structures after Work of other trades is in place unless otherwise indicated.
- 2. Mix, place, and cure concrete, as specified, to blend with in-place construction.
- 3. Provide other miscellaneous concrete filling indicated or required to complete the Work.

3.7 CONCRETE CURING

- A. Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
 - 1. Comply with ACI 301 (ACI 301M) and ACI 306.1 for cold weather protection during curing.
 - 2. Comply with ACI 301 (ACI 301M) and ACI 305.1 (ACI 305.1M) for hot-weather protection during curing.
 - 3. Maintain moisture loss no more than 0.2 lb/sq. ft. x h (1 kg/sq. m x h), calculated in accordance with ACI 305.1,) before and during finishing operations.
- B. Curing Formed Surfaces: Comply with ACI 308.1 (ACI 308.1M) as follows:
 - 1. Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces.
 - 2. Cure concrete containing color pigments in accordance with color pigment manufacturer's instructions.
 - 3. If forms remain during curing period, moist cure after loosening forms.
 - 4. If removing forms before end of curing period, continue curing for remainder of curing period, as follows:

- a. Continuous Fogging: Maintain standing water on concrete surface until final setting of concrete.
- b. Continuous Sprinkling: Maintain concrete surface continuously wet.
- c. Absorptive Cover: Pre-dampen absorptive material before application; apply additional water to absorptive material to maintain concrete surface continuously wet.
- d. Water-Retention Sheeting Materials: Cover exposed concrete surfaces with sheeting material, taping, or lapping seams.
- e. Membrane-Forming Curing Compound: Apply uniformly in continuous operation by power spray or roller in accordance with manufacturer's written instructions.
 - 1) Recoat areas subject to heavy rainfall within three hours after initial application.
 - 2) Maintain continuity of coating and repair damage during curing period.

3.8 TOLERANCES

A. Conform to ACI 117 (ACI 117M).

3.9 JOINT FILLING

- A. Prepare, clean, and install joint filler in accordance with manufacturer's written instructions.
 - 1. Defer joint filling until concrete has aged at least one month.
 - 2. Do not fill joints until construction traffic has permanently ceased.
- B. Remove dirt, debris, saw cuttings, curing compounds, and sealers from joints; leave contact faces of joints clean and dry.
- C. Install semirigid joint filler full depth in saw-cut joints and at least 2 inches (50 mm) deep in formed joints.
- D. Overfill joint, and trim joint filler flush with top of joint after hardening.

3.10 CONCRETE SURFACE REPAIRS

A. Defective Concrete:

- 1. Repair and patch defective areas when approved by Landscape Architect.
- 2. Remove and replace concrete that cannot be repaired and patched to Landscape Architect's approval.
- B. Patching Mortar: Mix dry-pack patching mortar, consisting of 1 part portland cement to 2-1/2 parts fine aggregate passing a No. 16 (1.18-mm) sieve, using only enough water for handling and placing.

- C. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.
 - 1. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than 1/2 inch (13 mm) in any dimension to solid concrete.
 - a. Limit cut depth to 3/4 inch (19 mm).
 - b. Make edges of cuts perpendicular to concrete surface.
 - c. Clean, dampen with water, and brush-coat holes and voids with bonding agent.
 - d. Fill and compact with patching mortar before bonding agent has dried.
 - e. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.
 - 2. Repair defects on surfaces exposed to view by blending white portland cement and standard portland cement, so that, when dry, patching mortar matches surrounding color.
 - a. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching.
 - b. Compact mortar in place and strike off slightly higher than surrounding surface.
 - 3. Repair defects on concealed formed surfaces that will affect concrete's durability and structural performance as determined by Landscape Architect.
- D. Perform structural repairs of concrete, subject to Landscape Architect's approval, using epoxy adhesive and patching mortar.
- E. Repair materials and installation not specified above may be used, subject to Landscape Architect's approval.

3.11 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing and inspecting agency to perform tests and inspections and to submit reports.
 - Testing agency to be responsible for providing curing container for composite samples on Site and verifying that field-cured composite samples are cured in accordance with ASTM C31/C31M.
 - 2. Testing agency to immediately report to Landscape Architect, Contractor, and concrete manufacturer any failure of Work to comply with Contract Documents.
 - 3. Testing agency to report results of tests and inspections, in writing, to Owner, Landscape Architect, Contractor, and concrete manufacturer within 48 hours of inspections and tests.
 - a. Test reports to include reporting requirements of ASTM C31/C31M,
 - ASTM C39/C39M, and ACI 301, including the following as applicable to each test and inspection:
 - 1) Project name.
 - 2) Name of testing agency.

- 3) Names and certification numbers of field and laboratory technicians performing inspections and testing.
- 4) Name of concrete manufacturer.
- 5) Date and time of inspection, sampling, and field testing.
- 6) Date and time of concrete placement.
- 7) Location in Work of concrete represented by samples.
- 8) Date and time sample was obtained.
- 9) Truck and batch ticket numbers.
- 10) Design compressive strength at 28 days.
- 11) Concrete mixture designation, proportions, and materials.
- 12) Field test results.
- Information on storage and curing of samples before testing, including curing method and maximum and minimum temperatures during initial curing period.
 Type of fracture and compressive break strengths at seven days and 28 days.
- B. Batch Tickets: For each load delivered, submit three copies of batch delivery ticket to testing agency, indicating quantity, mix identification, admixtures, design strength, aggregate size, design air content, design slump at time of batching, and amount of water that can be added at Project site.
- C. Inspections:
 - 1. Batch Plant Inspections: On a random basis, as determined by Landscape Architect.
- D. Concrete Tests: Testing of composite samples of fresh concrete obtained in accordance with ASTM C 172/C 172M to be performed in accordance with the following requirements:
 - 1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd. (4 cu. m), but less than 25 cu. yd. (19 cu. m), plus one set for each additional 50 cu. yd. (38 cu. m) or fraction thereof.
 - a. When frequency of testing provides fewer than five compressive-strength tests for each concrete mixture, testing to be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
 - 2. Slump: ASTM C143/C143M:
 - a. One test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture.
 - b. Perform additional tests when concrete consistency appears to change.
 - 3. Air Content: ASTM C231/C231M pressure method, for normal-weight concrete:
 - a. One test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
 - 4. Concrete Temperature: ASTM C1064/C1064M:

- a. One test hourly when air temperature is 40 deg F (4.4 deg C) and below or 80 deg F (27 deg C) and above, and one test for each composite sample.
- 5. Compression Test Specimens: ASTM C31/C31M:
 - a. Cast and laboratory cure two sets of two 6-inch (150 mm) by 12-inch (300 mm) or 4-inch (100 mm) by 8-inch (200 mm) cylinder specimens for each composite sample.
 - 6. Compressive-Strength Tests: ASTM C39/C39M.
 - a. Test one set of two laboratory-cured specimens at seven days and one set of two specimens at 28 days.
 - b. A compressive-strength test to be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.
- 7. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength, and no compressive-strength test value falls below specified compressive strength by more than 500 psi (3.4 MPa) if specified compressive strength is 5000 psi (34.5 MPa), or no compressive strength test value is less than 10 percent of specified compressive strength if specified compressive strength is greater than 5000 psi (34.5 MPa).
- 8. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Landscape Architect but will not be used as sole basis for approval or rejection of concrete.
- 9. Additional Tests:
 - a. Testing and inspecting agency to make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Landscape Architect.
 - b. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C42/C42M or by other methods as directed by Landscape Architect.
 - 1) Acceptance criteria for concrete strength to be in accordance with ACI 301 (ACI 301M), Section 1.6.6.3.
- 10. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
- 11. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.

3.12 PROTECTION

- A. Protect concrete surfaces as follows:
 - 1. Protect from petroleum stains.
 - 2. Diaper hydraulic equipment used over concrete surfaces.
 - 3. Prohibit vehicles from interior concrete slabs.
 - 4. Prohibit use of pipe-cutting machinery over concrete surfaces.

- 5. Prohibit placement of steel items on concrete surfaces.
- 6. Prohibit use of acids or acidic detergents over concrete surfaces.
- 7. Protect liquid floor treatment from damage and wear during the remainder of construction period. Use protective methods and materials, including temporary covering, recommended in writing by liquid floor treatments installer.

END OF SECTION 033000

SECTION 101110 - SIGNAGE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

- 1. Site verification, fabrication, delivery, and installation of all sign types and quantities indicated in the final approved Copy List and Sign Location Plan. Fabricator to verify the sign quantities from the Copy List and Sign Location Plans and if discrepancies exist, notify the Designer of any such discrepancies.
- 2. Work shall include all support structures and fasteners required for installation.
- 3. Work shall include all design engineering needed to produce the project to comply with all applicable municipal, state and federal code, and structural soundness. Fabricator is responsible for submitting engineered drawings signed and sealed by structural engineer.
- 4. Fabricator to provide all services, subcontractors, labor, materials and equipment needed to complete the work described in this design drawings and specifications document.
- 5. It is the Fabricator's responsibility to have all drawings signed and sealed by a Structural Engineer.
- 6. Fabricator shall visit site before construction begins and inspect each proposed sign location. Any issues or concerns shall be communicated to the Designer in writing within twenty-four (24) hours.
- 7. Upon award of the bid, the selected Fabricator shall arrange a meeting with the Designer to review the scope of work.
- 8. Fabricator will be responsible for generating evacuation maps at all programmed locations based on template provided by Designer.
- 9. Fabricator will be responsible for providing the Designer and Owner a project schedule that outlines durations for all work including delivery dates for submittals and Designer and Owner review time. Sign Contractor shall update and reissue the schedule throughout the project and communicate all changes/impacts on the schedule to Designer and Owner.
- 10. Prior to installation, the Fabricator shall conduct a pre-install walk through with the Designer and Owner to address any potential issues/questions.
- 11. At the substantial completion of the project the Fabricator shall perform a walk-through with the Designer and Owner to inspect the installation and create a punch list of all unsatisfactory items. Fabricator is required to complete all punch list items within 3-4 weeks of receipt of punch list.

1.3 REFERENCE STANDARDS

- A. The following materials reference standards will apply to the work materials (use most current version of reference standards):
 - 1. ASTM A36 Structural Steel
 - 2. ASTM A123 Zinc (Hot Galvanized) coatings on products fabricated from rodded, pressed,

- and forged steel shape, plates and bars.
- 3. ASTM B221 Aluminum-alloy extruded bars, rods, wire, shapes and tubes.
- 4. ASTM D822 Light and water exposure apparatus (carbon-arc type) for testing paint, varnish, lacquer, and related products.
- 5. ASTM E84 Surface-burning characteristics of building materials, lacquer and related products.
- 6. AWI Comply with applicable requirements of "Architectural Woodwork Quality Standards" published by the Architectural Woodwork Institute.
- 7. CDA Copper Development Association, Inc.
- 8. FS L-P-391 Plastic sheet, rods and tubing, rigid, cast materials
- 9. FS L-P-387 Plastic sheet, laminated, thermosetting
- 10. PS-1 Construction and industrial plywood
- 11. PEI Porcelain Enamel Institute
- 12. TM B135 QQ-B-613 (Fed Spec) Brass, Muntz 280
- 13. UL-943 Fluorescent lamp ballasts

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified fabricator.

1.6 QUALITY ASSURANCE

- A. All work to be done in a professional manner and to the highest trade standards. Fabricator is responsible for ensuring the quality standards above for all related professional and trade subcontracted work including: general carpentry, masonry, electrical, landscaping, or utilities required for the installation of all sign types as described, unless otherwise agreed to by Owner. All subcontracted work must meet the general accepted professional standards.
- B. Work done and materials furnished shall meet the highest industry standards in every respect and, unless otherwise specified, materials and equipment shall be new and of the latest design. C. The Design Intent Package should provide everything necessary for a complete contract.
- D. In the event of conflict or omission, the Fabricator shall consult the Designer for resolution. All clarifications are to be made in writing in the form of an RFI from the Fabricator to the Designer.
- E. Use only personnel thoroughly skilled and experienced with the products and method for fabrication and installation of signage specified.
- F. The Owner shall reserve the right to reject any shop drawings, samples or other submittals, as well as any finished product or installation, that cannot meet the standard of quality established. Any such decision will be considered final and not subject to recourse.
- G. Materials and hardware not specified, but necessary to the complete functioning of the sign, shall conform to the quality level established.

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H. Substitutions of items specifically indicated in this specifications package that serve the same

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L. Alternate Fabrication

- 1. The drawings show design intent only. The Fabricator is responsible for fabrication and overall level of quality. Any changes in design, materials, fabrication techniques or details necessary to the successful completion of this project should be communicated to the Designer in a timely fashion.
- 2. Further development and engineering of Designer's details (for fabrication and installation) is expected and should be shown in the shop drawings.
- 3. The Designer recognizes that manufacturers may have shop fabrication techniques that differ from details shown. Suggested changes in fabrication that do not alter the design intent nor reduce the quality will be considered by the De-signer, provided they are submitted in sketch form, as soon as possible, prior to shop drawing preparation.

1.7 PROJECT CONDITIONS

A. Existing Conditions

- 1. Carefully examine the site before submitting a bid. Be informed as to the nature and location of the Work, general and local conditions including climate, adjacent properties and utilities, conformation of the ground, the nature of subsurface conditions, the character of equipment and facilities needed prior to and during execution of the Work.
- 2. Should the Contractor, in the course of Work, find any discrepancies between Drawings and physical conditions or any omissions or errors in Drawings, or in layout as furnished by the Landscape Architect, it will be their duty to inform the Landscape Architect immediately in writing for clarification. Work done after such discovery, unless authorized by the Landscape Architect, will be done at the Contractor's risk.

1.8 WARRANTIES

- A. Warrant all products (including, but not limited to: materials, hardware and finishes) against any and all defects based on manufacturers' supplied warranties from date of installation.
- B. All manufacturer warranties should be submitted to the Designer and Owner for review.
- C. Vinyl die-cut letters: warranted against delamination from substrate.
- D. Paint finishes: warranted against fading or chalking, corrosion developing beneath paint surfaces of the support systems (except for obvious vandalism or other external damage to the paint surfaces).
- E. Corrosion of the fastenings.
- F. The signs not remaining true and plumb on their supports during normal wear.
- G. Fading of the colors when matched against a sample of the original color and material.

- H. Discoloration of metal finishes.
- I. Adhesives, e.g. tape and epoxy
- J. Paneling not remaining true and plumb on their supports during normal wear.

K. The Fabricator shall correct any and all material and/or workmanship defects which may appear during the warranty period by restoring defective work to the standard of the contract documents at no cost to the Owner and to the Owner's satisfaction. Corrections include, but are not limited to: disfiguring of any surface due to chalking, rusting, bubbling, or other disintegration of the sign face or of the messages or of the edge finish of the sign inserts or panel.

L. CHPL Samples

- 1. Manufacturer warrants that under normal wear and use the workmanship and materials used in the CHPL product purchased from the Manufacturer will meet the standards set forth on the applicable specification materials and that the product will not delaminate, peel, blister, crack or fade for a period ten (10) full years from the date of purchase.
- 2. In the event that the product does not perform as warranted:
 - a. Manufacturer shall be allowed to conduct an on-site inspection and investigation, or be provided digital images of defects
 - b. Manufacturer shall work directly with the end-user to resolve any warranty matter,
 - c. The sole remedy will be the repair or replacement of the defective product at the sole discretion of the Manufacturer, and/or
 - d. The repair or replacement by Manufacturer shall be limited to the re-manufacture and shipment of the replacement or repaired product to the site of the end-user's product.
- 3. This warranty only applies to the manufacture and material used in the manufacture of the product. Manufacturer shall not be liable for any other costs, including but not limited to installation, labor or other costs or expenses. Any repair or replacement shall be warranted for a period up to the remaining life of the original warranty. Further the repair or replacement costs incurred by Manufacturer shall not exceed the purchase price paid for the product.

1.9 DELIVERY, STORAGE AND HANDLING

- A. Fabricator is responsible for storage of signs and assemblies and protection from damage at the shop, in transit and until erected in place, complete, inspected and accepted by Owner.
- B. Fabricator is responsible for the replacement pilferage both prior to and until inspection and acceptance of installation by the Owner.

PART 2 - PRODUCTS

2.1 CUSTOM HIGH PRESSURE LAMINATE

- A. Provide Custom High pressure laminate as manufacturer by iZone or an approved equal.
- B. Custom High Pressure Laminate material composed of required layers of phenolic resin impregnated brown kraft filler paper to produce specified thicknesses, surfaced by a layers of melamine overlay, graphics imaged on saturation grade paper with UV resistant pigment based process color inks, and with an optically clear UV overlay that will resist no less that 99% of all

- sunlight and UV rays, as well as provide a graffiti resistant surface that allows for removal with standard cleaners.
- C. Layers of material are to be assembled, and heat / pressure consolidated at approximately 1200 PSI at temperatures exceeding 275° Fahrenheit at manufacturer's prescribed time frames.
- D. All manufacturing processes of printing, pressing, machining, finishing and crating to be accomplished within a single standalone manufacturing facility to ensure consistent quality control and providing standard product delivery times of three weeks.

2.2 ALUMINUM

- A. Aluminum shall be of best commercial quality and the various forms shall be straight and true.
- B. There shall be no scratches, scars or buckles. Size thickness, and finish of aluminum shall be per NAAMM "Metal Finishes Manual". Comply with the following industry standards.
- C. Aluminum sheets shall conform to ASTM B209 6061-T6
- D. Aluminum extrusions shall conform to ASTM B241 6063 T6. Wall thickness shall be a minimum of 1/8" thick unless otherwise shown.
- E. Brushed Finishes—Brush with abrasive of increasing grit# in a linear directional pattern.
- F. Final surface shall have visible grain pattern to match sample approved by Designer. Spray with clear protective finish.
- G. Polished Finish—Brush with abrasive of increasing grit#. Buff to a mirror finish with no visible grain. Match sample approved by Designer. Spray with clear protective finish.
- H. Non-Directional Finish—Brush with abrasive mounted in an random orbital sander. Match sample approved by Designer. Spray with clear protective finish.

2.3 WOOD

A. #1 grade black locust lumber. Sustainably harvested. Eased edges. Apply a UV clear coat to enhance the wood grain and provide additional protection.

2.4 CONCRETE

- A. All concrete footers are to be poured in place.
- B. All concrete footers are to be poured from thoroughly mixed and agitated concrete in order prevent unreasonable voids in the finished casting.
- C. Concrete to meet specified "PSI Test" for strength: 3,500 psi minimum. Concrete to meet specified "Slump test" before pouring footing. All footings to extend past the frost line.

D. Any footers or posts for signs will be placed in wet concrete and allowed to fully cure in place before any signage is attached or mounted to it in any way. All exposed faces of concrete shall receive a finish to match existing, adjacent surfaces.

2.5 ADHESIVES AND TAPES

A. VHB Foam Tapes

- 1. Provide 3M Scotch VHB 4930
- 2. Adhesive shall be Acrylic VHB
- 3. Carrier shall be closed cell foam

2.6 ACCESSORIES

A. Anchors and Fastenings

- 1. Provide anchors and fasteners required to secure work in place. Do not expose fastenings on surface of sign panels unless specifically noted otherwise. Do not deform, distort or discolor sign face surfaces by attachment of concealed fastenings.
- 2. All fastenings shall be non-corrosive and resistant to oxidation or other corrosive action, of the same composition completely through their cross sections, particularly when used below grade. Use highest quality stainless steel hardware and fasteners.
- 3. Anchors, inserts or fasteners shall be compatible with sign materials, shall not result in galvanic action or chemical interaction of adhesives and shall have demonstrable and sufficient strength for intended use.
- 4. Steel anchors and fastenings for exterior use shall be galvanized in accordance with ASTM A153.
- 5. Fabricate and install signs with fastenings to withstand all actions imposed by use; 30 psf wind perpendicular to surfaces, water, ice, snow loads and similar forces.
- 6. Anchor bolts in concrete shall be cast in place. Fabricator shall furnish instructions for the setting of anchors and bearing plates. Fabricator shall ascertain that the items are properly set during the process of the work.
- 7. Secure work with fastenings of same color and finish as the components they secure where they are exposed to view, unless noted otherwise. All exposed fasteners must be vandal resistant and have vandal-proof "spanner" type slots to be removed only with a special driver head.

2.7 GRAPHIC STANDARDS

A. Signage Graphic shall be provided by Owner and provided to Contractor for procurement.

B. Typography

- 1. All type shall be computer typeset using typefaces specified in the Design Intent Package with letter spacing adjusted where needed to ensure optical spacing. Absolutely no letters are to touch. Only typefaces specified in the Design Intent Package are to be used.
- 2. Sign type drawings indicate which copy is uppercase and which is lowercase. These should be followed as much as possible. When the message on the Copy List differs from the drawing, the Copy List should be followed.

C. Graphics

- 1. All text, arrows and symbols shall be provided in the sizes, colors, typefaces and letter spacing specified in the Design Intent Package. All text shall be a true, clean photomechanically accurate reproduction of the typeface(s) specified as shown in the Graphic Standards section.
- 2. Text shown in drawings is for layout purposes only (unless message layouts are included in the Design Intent Package); final text for all signs is shown in the Copy List.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Inspection: All production materials, color samples and paints, fabricated or partially fabricated items shall be available for inspection, on-site or in the shop, by the Owner or Designer during the manufacturing process and until final delivery, installation and acceptance, to determine compliance with the requirements of these specifications.
- B. Shop inspection approvals do not guarantee final acceptance of installed work.

3.2 INSTALLATION

A. GENERAL

- 1. Fabricate signs to comply with the requirements indicated for materials, thicknesses, finishes, colors, designs, shapes, sizes and details of construction. Sign panel surfaces shall be smooth, even and fabricated to remain fat under installed conditions. Where specification calls for painted edges, they shall be routed and painted to match face color. For framed units, edges shall be painted or brushed to match finish of face of unit unless otherwise indicated on drawings.
- 2. This work may be produced by multiple contractors. Coordination with Designer and other contractors is required to provide for consistent signage across the entire project area, including color, material sizes and design intent.
- 3. Install sign units and components with concealed fasteners unless otherwise shown. Refer to drawings for general method of installation. Verify each surface in field to deter-mine appropriate mounting hardware. Fabricator is responsible for determining where below ground or in-wall structural tie-ins may be required.
- 4. All elements should be installed true and plumb in accordance with the design intent of this document.
- 5. Sign location drawings show approximate locations of signs. Fabricator, Designer and Owner shall conduct a pre-install markout walk through to confirm all locations and identify areas of conflict. Fabricator is responsible for determining the location of underground structures and utilities on ground-mounted signs. Any conflicts should be brought to the attention of the Owner and Designer.

3.3 REGULARTORY REQUIREMENTS

A. All installation work shall comply with applicable municipal, state and federal codes, sign ordinances and ADA guidelines for handicapped and fire/life safety signing.

- B. All OSHA safety requirements will be implemented during fabrication and installation as needed or required to comply with safety regulations.
- C. All field/site work shall be conducted in compliance with the Owner/Construction Manager's requirements/regulations for the site, particularly areas open and accessible to the public. Work area protection shall be required as needed and all site-specific rules should be reviewed and outlined during the project kick-of meeting.

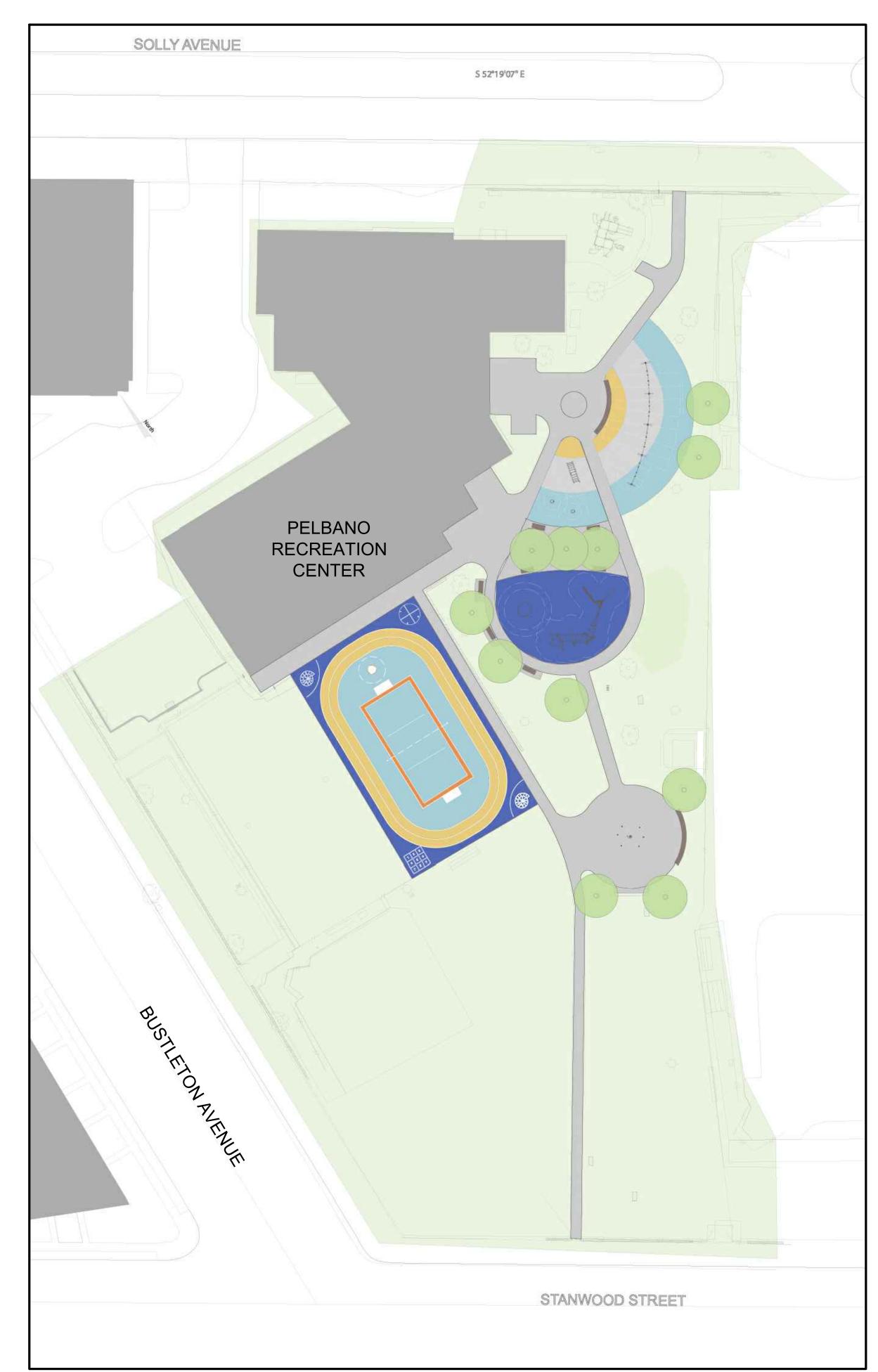
3.4 CLEANUP

A. Daily and upon completion of installation remove all waste, dirt, wrappings and excess materials, tools and equipment, and thoroughly clean all surfaces to the satisfaction of the Owner.

3.5 REORDERING

A. All items specified in this package shall be available to the Owner in additional quantities for a period of 10 years after completion of all work called for in this specification.

END OF SECTION 101110



ADDENDUM #1 - 6/23/2023

CITY OF PHILADELPHIA
PHILADELPHIA PARKS & RECREATION

MAYOR - JAMES F. KENNEY

MANAGING DIRECTOR - TUMAR ALEXANDER

COMMISSIONER - PHILADELPHIA PARKS AND RECREATION - KATHRYN OTT LOVELL

Sheet	Sheet Title	Addendum #
Number		
Genera		
L000	Cover Sheet	Revised
L020	Existing Conditions Plan	
Demolit	ion	
C200	Demolition Plan	
Grading]	
C300	Grading Plan - Area 1	
C301	Grading Plan - Area 2	
Erosion	Control	
C400	Erosion and Sediment Control Plan	
C401	Erosion and Sediment Control Details	
C402	Erosion and Sediment Control Notes	
C403	Erosion and Sediment Control Notes	
C404	Erosion and Sediment Control Notes	
Site Pla	ins	
L100	Site Plan	Revised
L100	Site Plan	Revised
L102	Site Plan - Area 2	Revised
Layout	Plans	
L200	Layout Key Plan	Revised
L201	Layout Plan - Area 1	Revised
L202	Layout Plan - Area 2	Revised
Materia	ls Plans	
L300	Materials Plan	Revised
L350	Paving Plan	Revised
L351	Paving Plan - Area 1	Revised
L352	Paving Plan - Area 2	Revised
Soils Pl		
L500	Soils Plan	
L540	Soils Profiles	
Plav Eq	uipment Plans	
L600	Play Equipment Plan	
L601	Play Equipment Plan - Area 1	
L602	Play Equipment Plan - Area 2	
Site Se		
L700	Site Sections	

Sheet Number	Sheet Title	Addendum #			
Details					
L830	Details - Paving	Revised			
L840	Details - Site Furnishings	Revised			
L841	Details - Site Furnishings	Revised			
L842	Details - Site Furnishings	Revised			
L843	Details - Site Furnishings	Added			
L844	Details - Site Furnishings	Added			
L845	Details - Site Furnishings	Added			
L846	Details - Site Furnishings	Added			
L847	Details - Site Furnishings	Added			
L848	Details - Site Furnishings	Added			
L850	Details - Court Layout	Revised			
L870	Play Equipment Details				
L871	Play Equipment Details				
L872	Play Equipment Details				
Planting Plan					
L900	Planting Key Plan	Revised			
L960	Planting Details				
Plumbing Plan					
SP100	Plumbing Plan	Revised			
	Plumbing Plan	Revised			

PELBANO PLAYGROUND

8101 BUSTLETON AVENUE

OLIN

ONE PENN CENTER

1617 JOHN F. KENNEDY BOULEVARD, SUITE 1900
PHILADELPHIA, PA 19103
TEL 215.440.0030 / FAX 215.440.0041
WWW.THEOLINSTUDIO.COM
OLIN PARTNERSHIP, LTD.

Playground Design: Studio Ludo 4800 Springfield Ave Philadelphia, PA 19143 (215) 454-6780

Civil Engineering:
Sci Tek
1880 John F Kennedy Blvd #600,
Philadelphia, PA 19103
(267) 314-5385

MEP: Mark Ulrick 30 N. 41ST SUITE 500 Philadelphia, PA 19104 (856) 320-8100

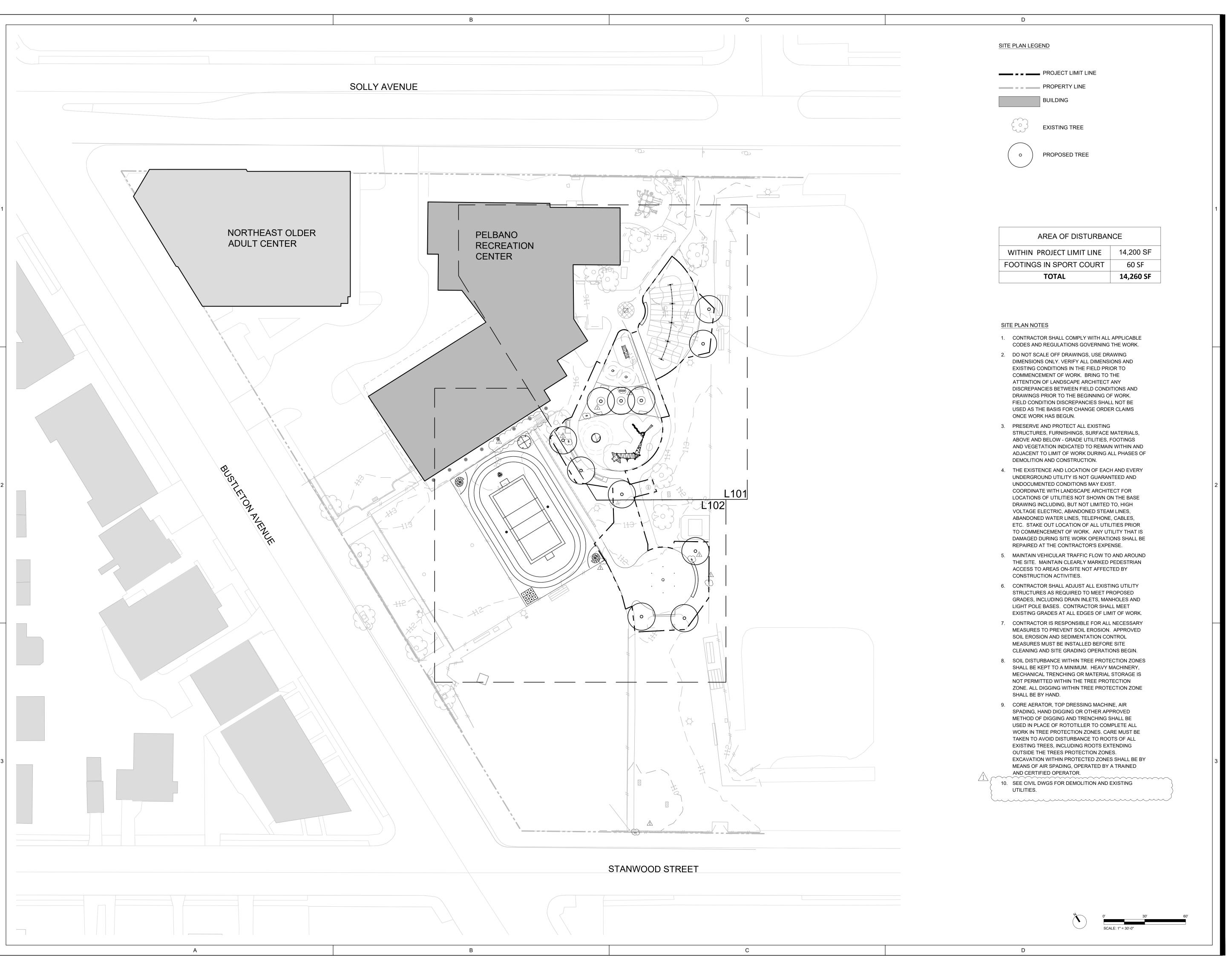
No. Date Description

1 10/12/2022 SD set
2 11/16/2022 SD set
3 2/21/2023 DD set
4 4/17/2023 75% CD set
5 5/31/2023 100% CD set

1 6/23/2023 ADDENDUM #1

COVER SHEET

Scale: NA
Date: 6/23/2023
Drawn: KMP
Checked: TS



8101 BUSTLETON AVENUE

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1 6/23/2023 ADDENDUM #1

SITE PLAN

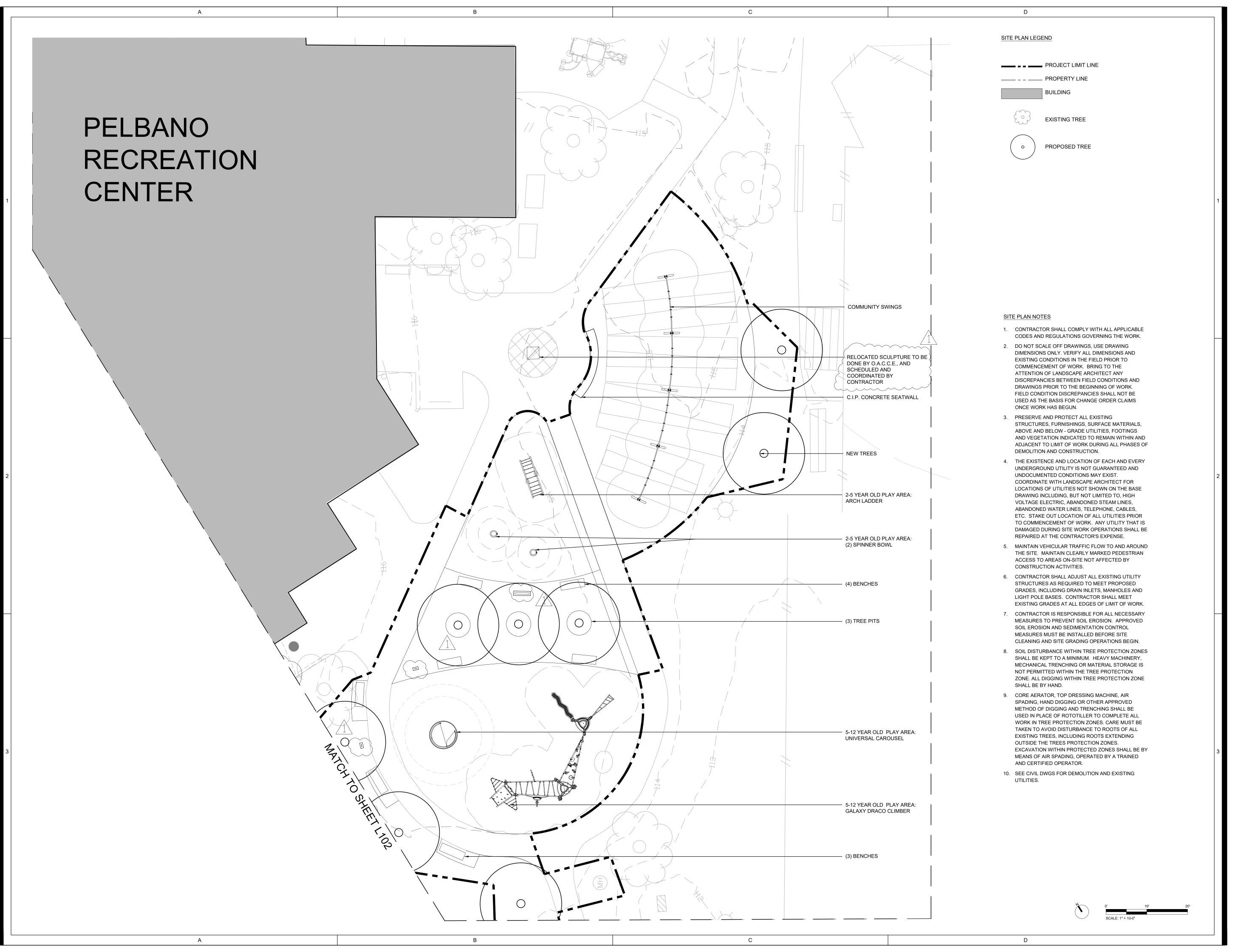
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 6/23/2023

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 Project No.:
 2224



8101 BUSTLETON AVENUE

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6/23/2023	ADDENDUM #1

SITE PLAN - AREA 1

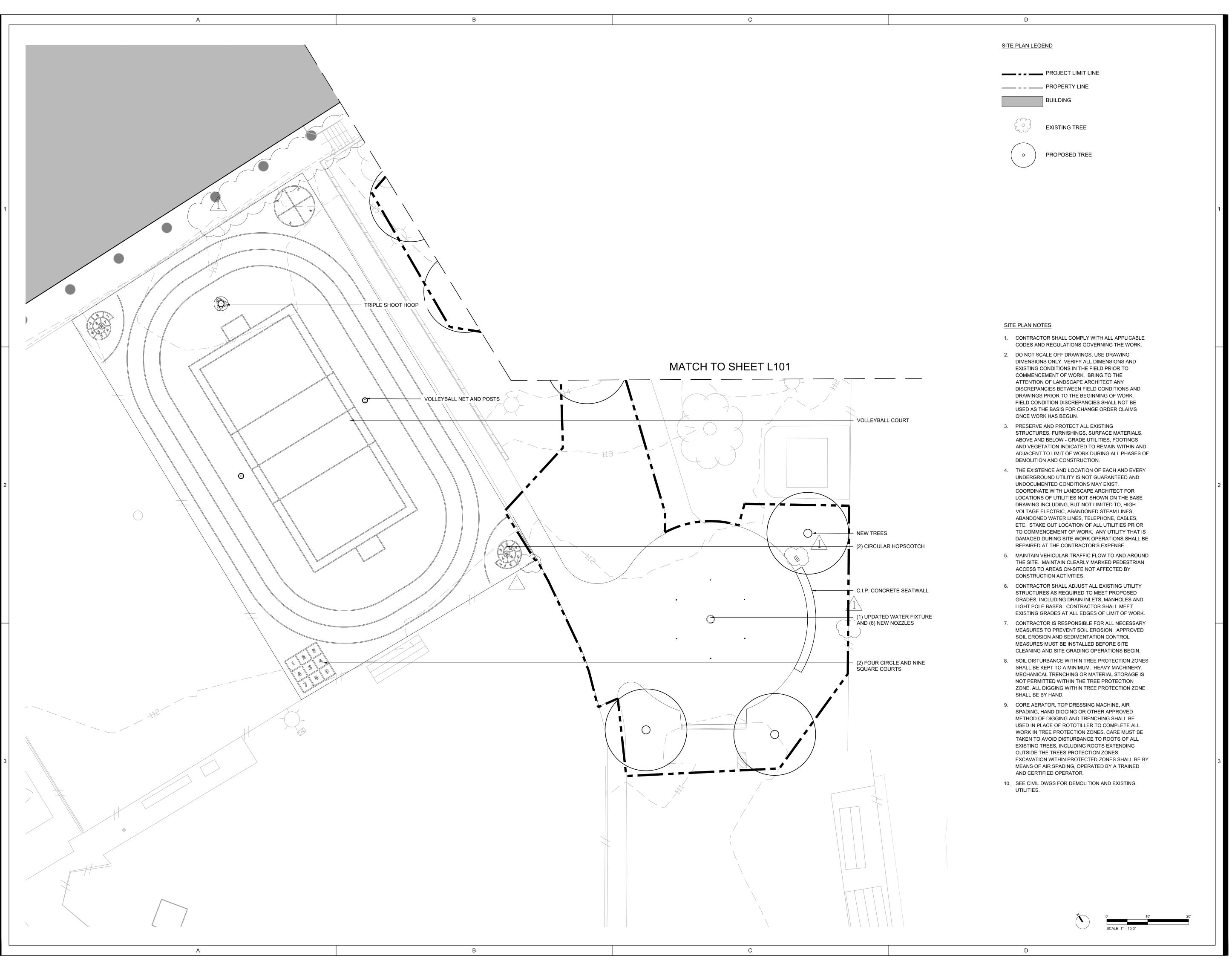
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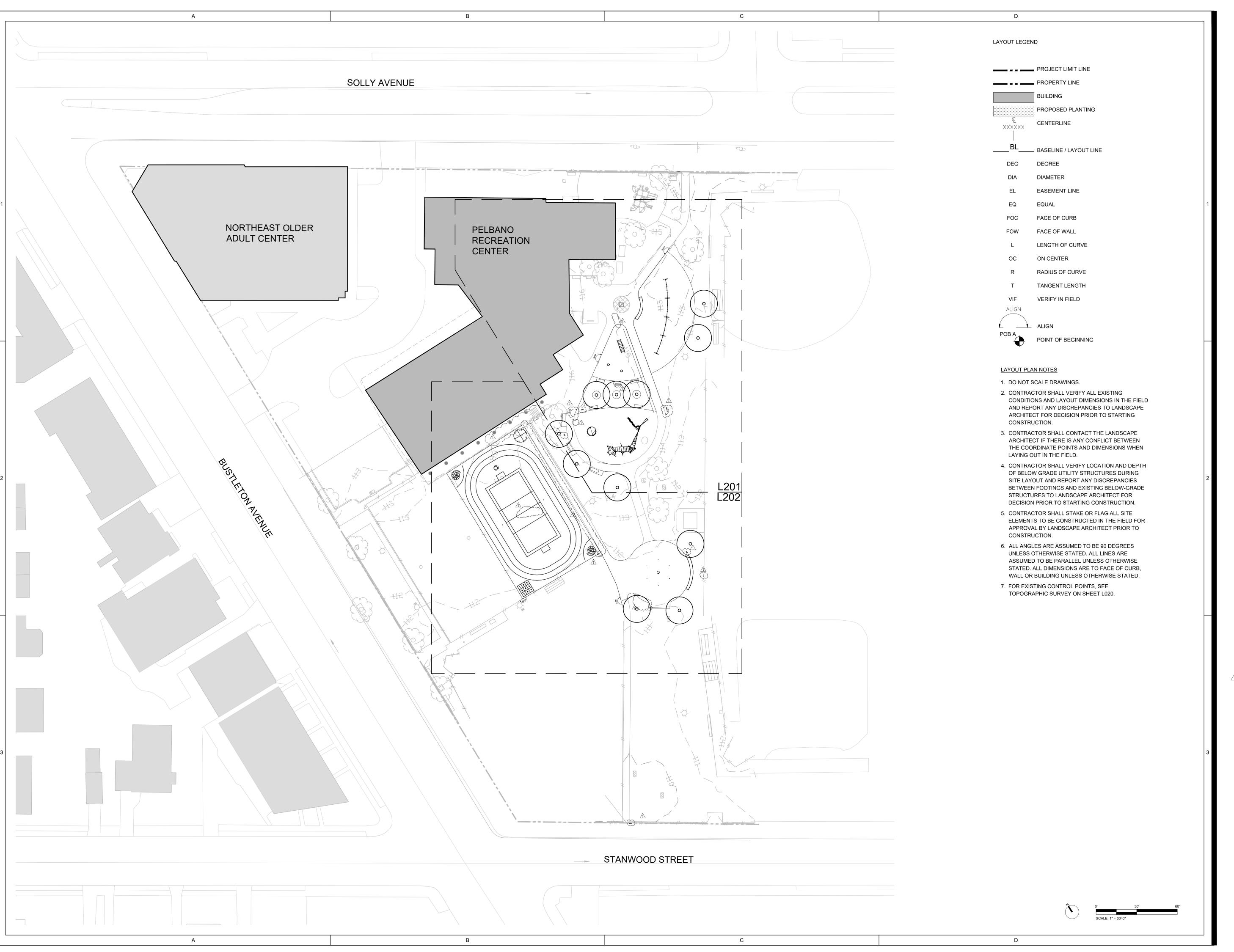
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7	6/23/2023	ADDENDUM #1

SITE PLAN - AREA 2

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LAYOUT KEY PLAN

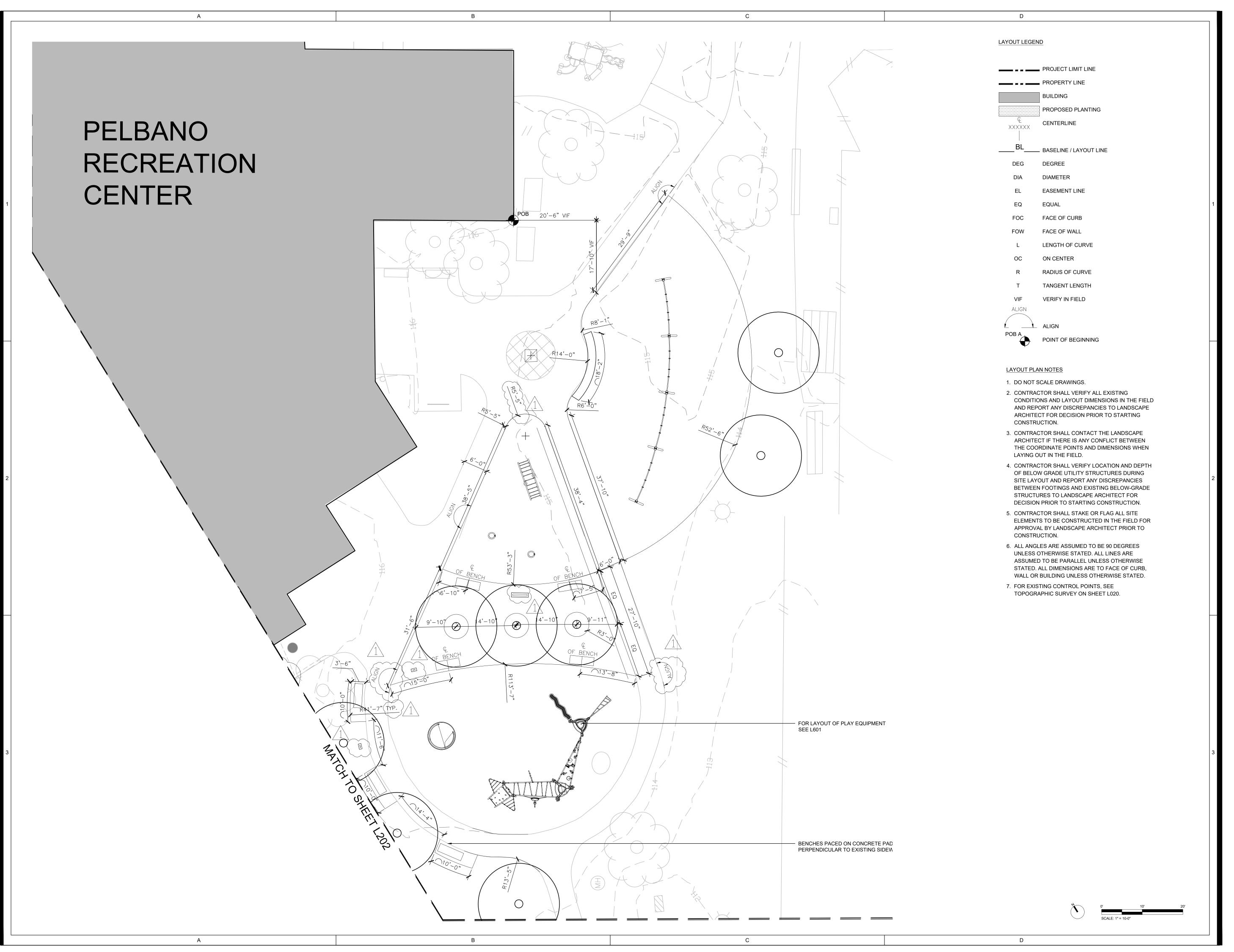
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LAYOUT PLAN - AREA 1

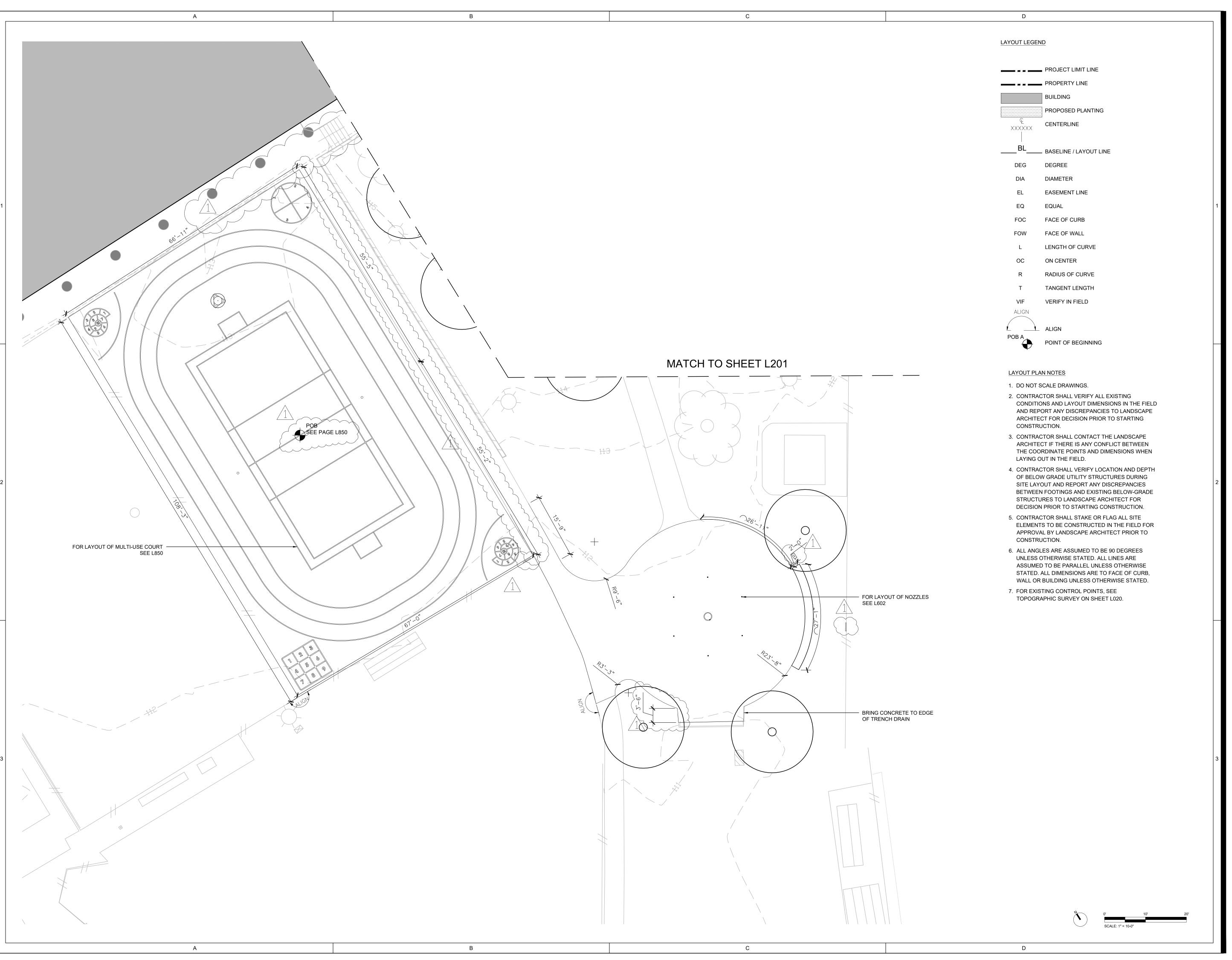
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1	6/23/2023	ADDENDUM #1	

LAYOUT PLAN - AREA 2

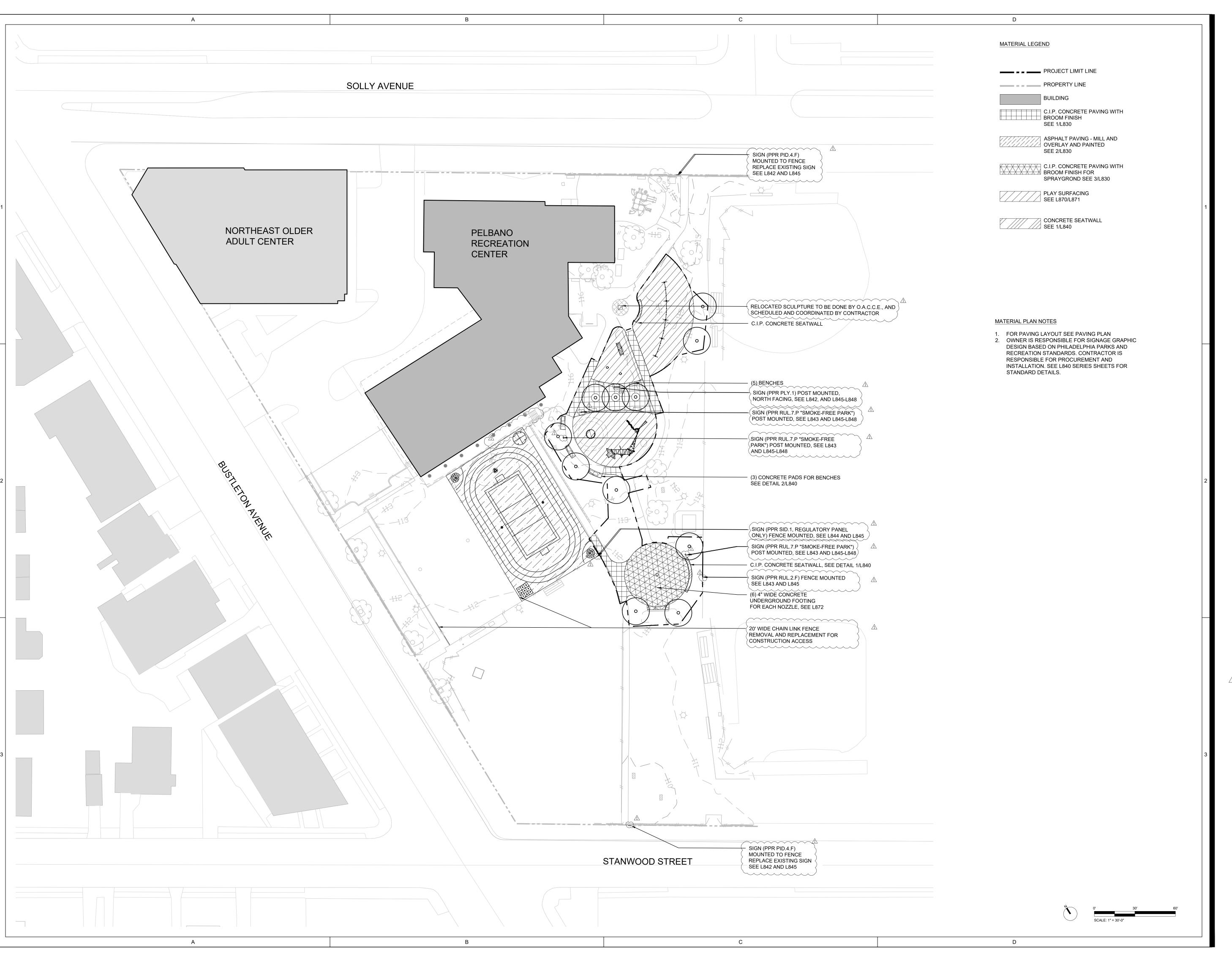
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 4/17/2023
 75% CD set

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 5/31/2023
 100% CD set

 1
 6/23/2023
 ADDENDUM #1

MATERIALS PLAN

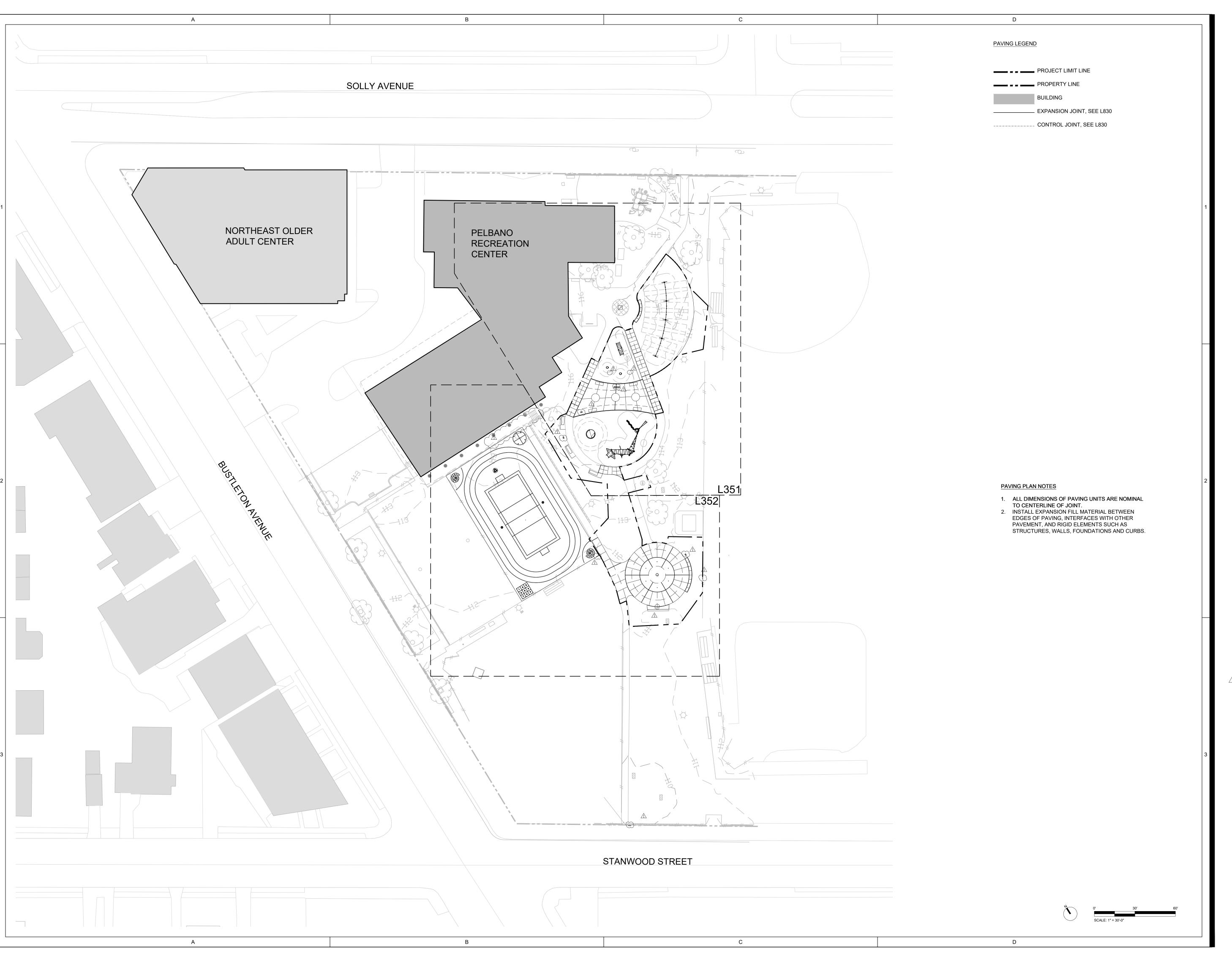
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PAVING PLAN

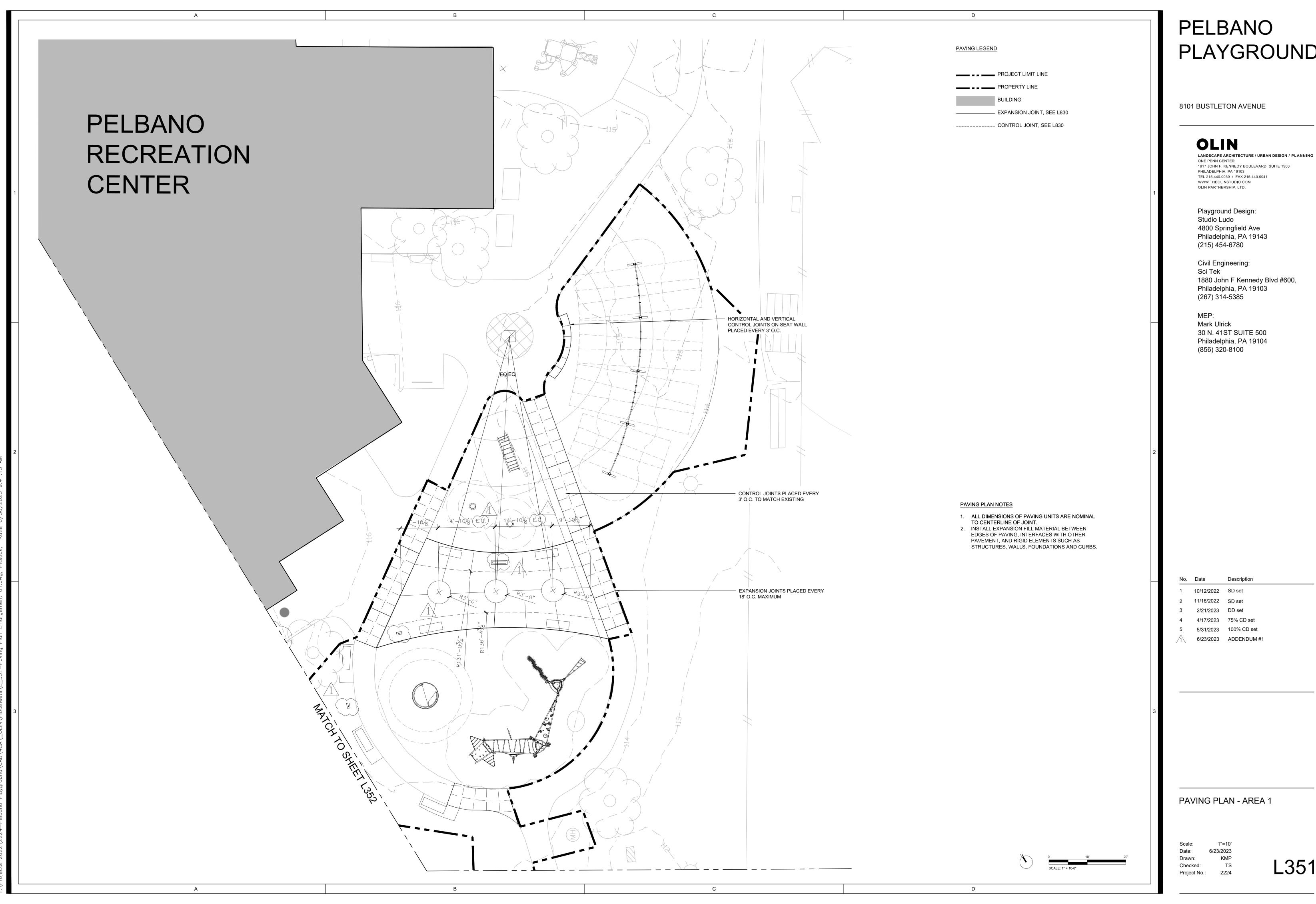
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 Date:
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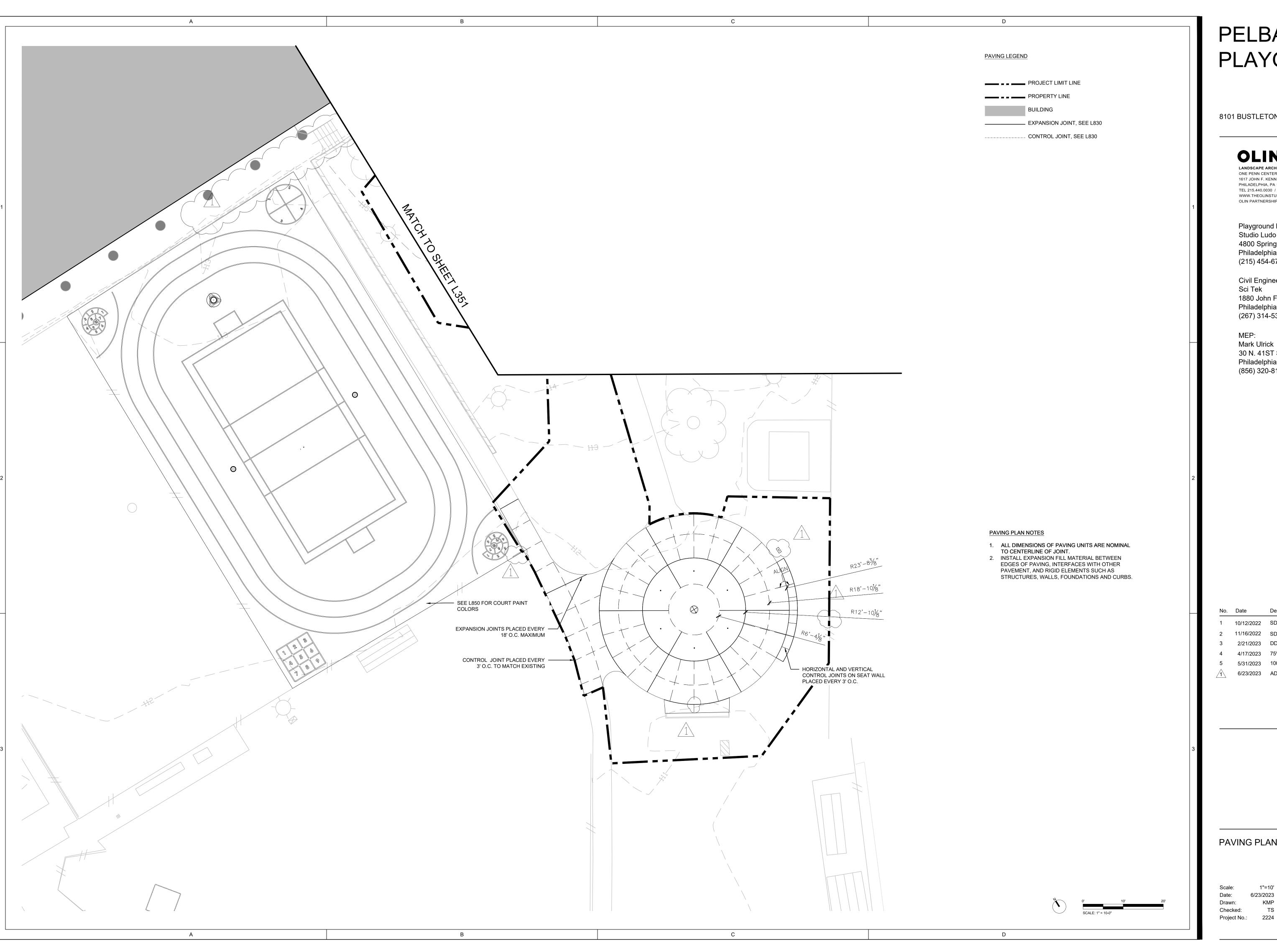
 Project No.:
 2224



PLAYGROUND

1617 JOHN F. KENNEDY BOULEVARD, SUITE 1900

1880 John F Kennedy Blvd #600,



8101 BUSTLETON AVENUE

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LANDSCAPE ARCHITECTURE / URBAN DESIGN / PLANNING ONE PENN CENTER 1617 JOHN F. KENNEDY BOULEVARD, SUITE 1900 PHILADELPHIA, PA 19103 TEL 215.440.0030 / FAX 215.440.0041 WWW.THEOLINSTUDIO.COM

Playground Design: Studio Ludo 4800 Springfield Ave Philadelphia, PA 19143 (215) 454-6780

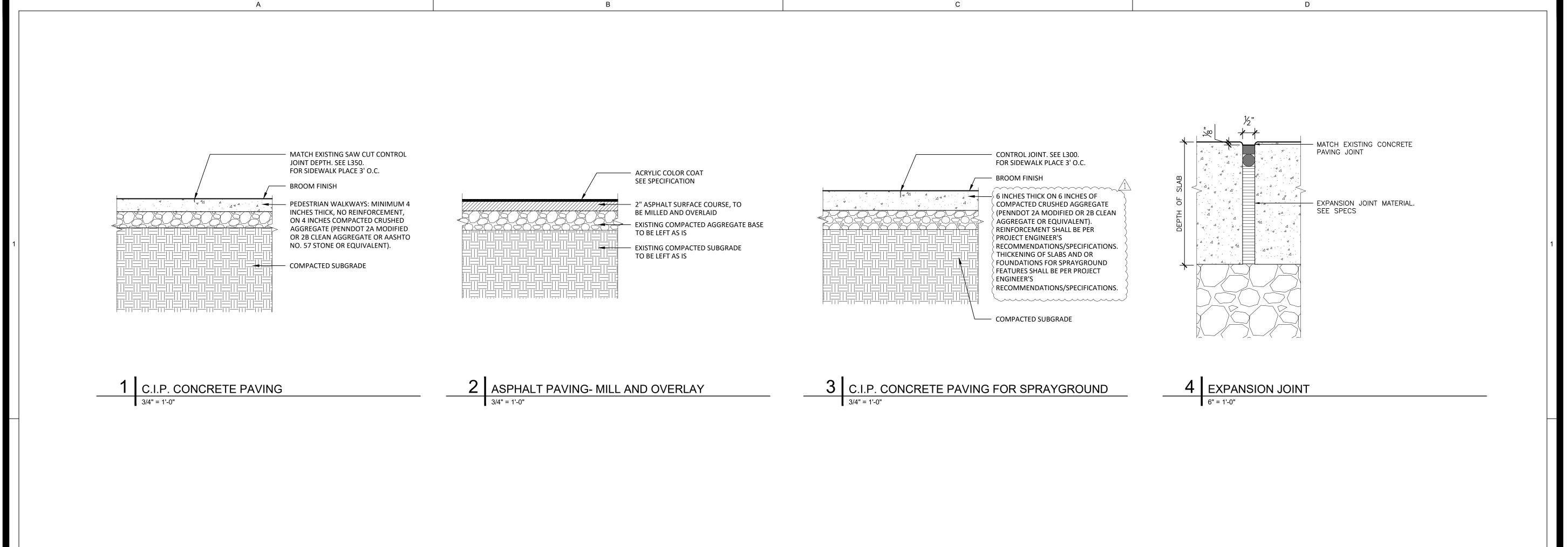
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	5/31/2023	100% CD set
	6/23/2023	ADDENDUM #1

PAVING PLAN - AREA 2

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8101 BUSTLETON AVENUE

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LANDSCAPE ARCHITECTURE / URBAN DESIGN / PLANNING
ONE PENN CENTER
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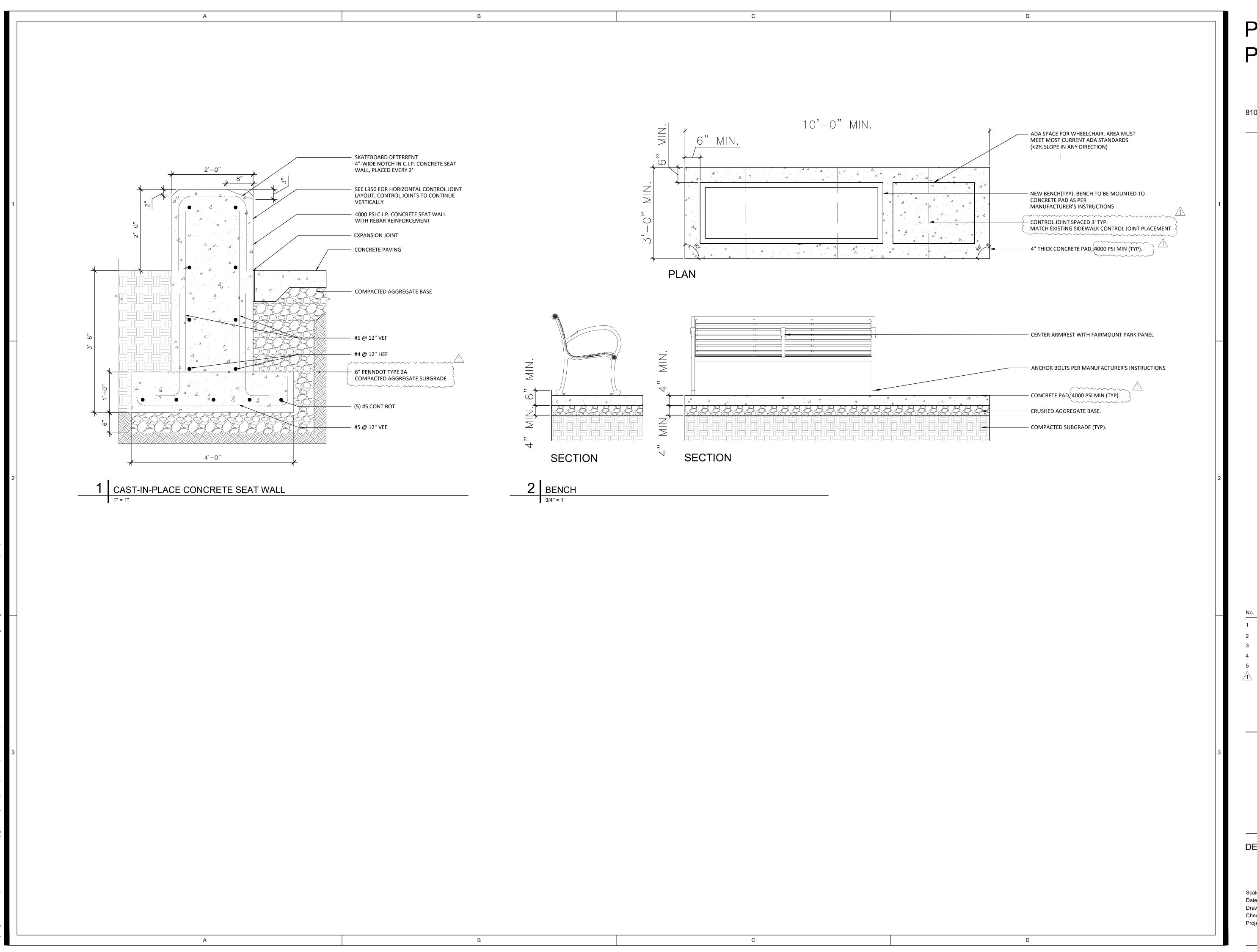
Civil Engineering:
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1880 John F Kennedy Blvd #600,
Philadelphia, PA 19103
(267) 314-5385

MEP: Mark Ulrick 30 N. 41ST SUITE 500 Philadelphia, PA 19104 (856) 320-8100

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DETAILS - PAVING

Scale: NA
Date: 6/23/2023
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8101 BUSTLETON AVENUE

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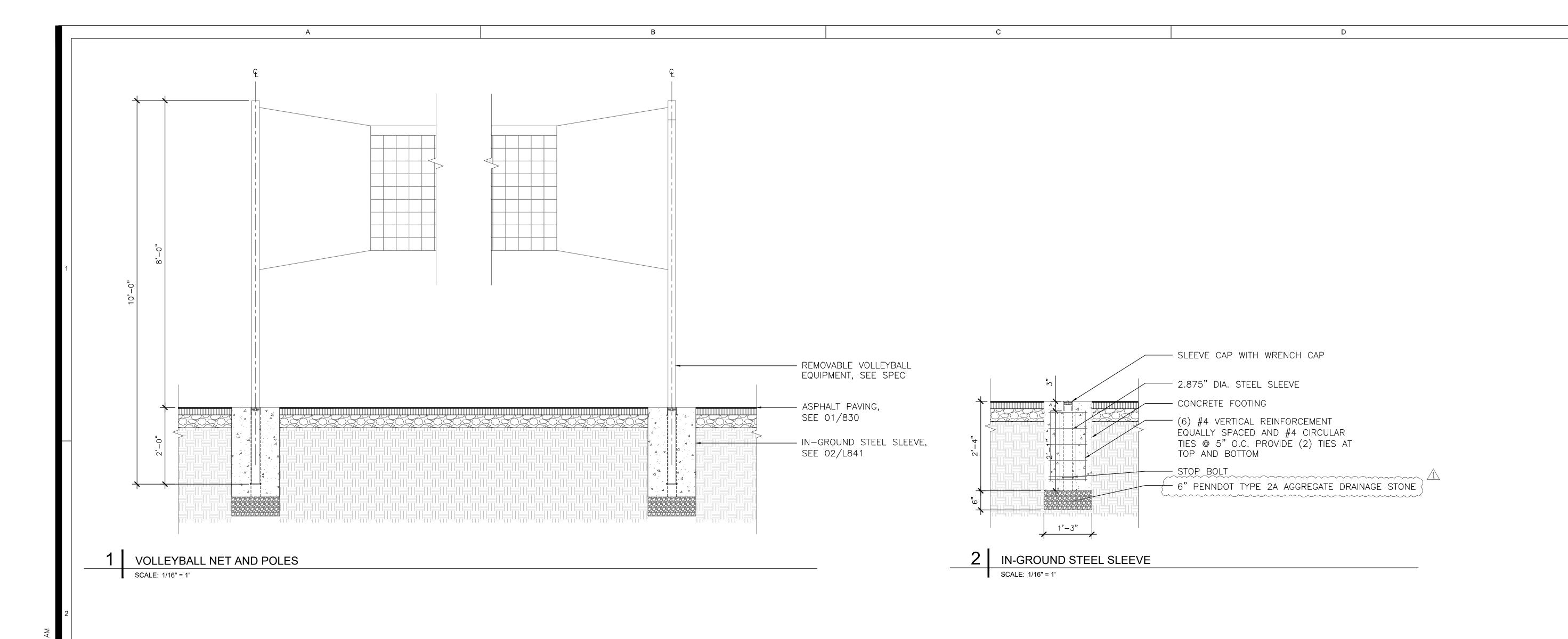
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DETAILS - SITE FURNISHINGS

Scale:	NA
Date:	6/23/2023
Drawn:	KMP
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TRIPLE SHOOT HOOP 1" THICK OUTDOOR POLE SAFETY PADDING ACRYLIC COLOR COAT 2" ASPHALT SUBFACE COURSE A SAPHALT SUBFACE COURSE EXISTING COMPACTED AGGREGATE BASE CONCRETE FOOTHOO WITH 4 VERTICAL REINFORCEMENT EQUALLY SPACED AND #4 CIRCULAR TIES @ 6" O.C. PROVIDE (2) TIES AT TOP AND BOTTOM EXISTING COMPACTED SUBGRADE

TRIPLE SHOOT HOOP

SCALE: 3/4"=1'

PELBANO PLAYGROUND

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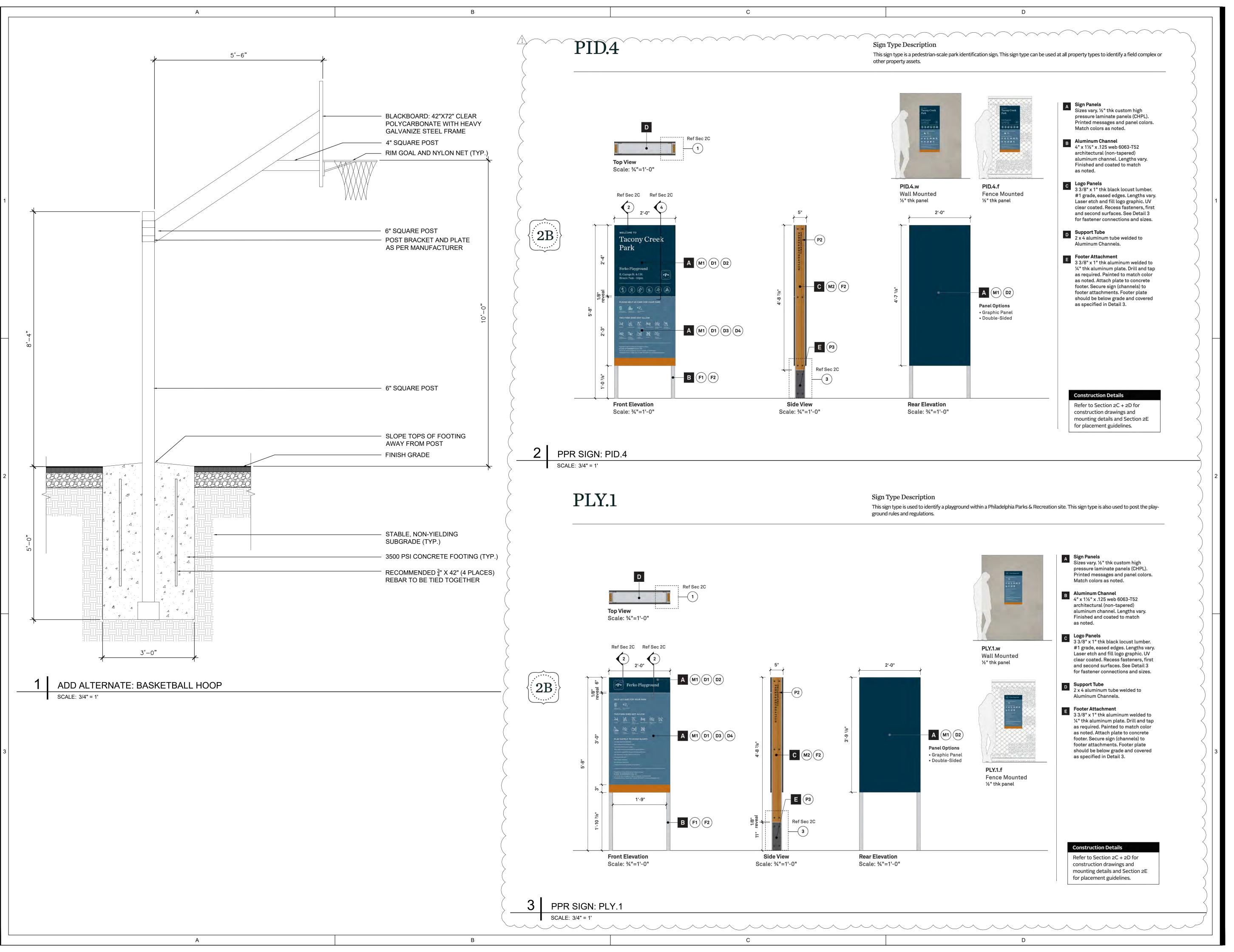
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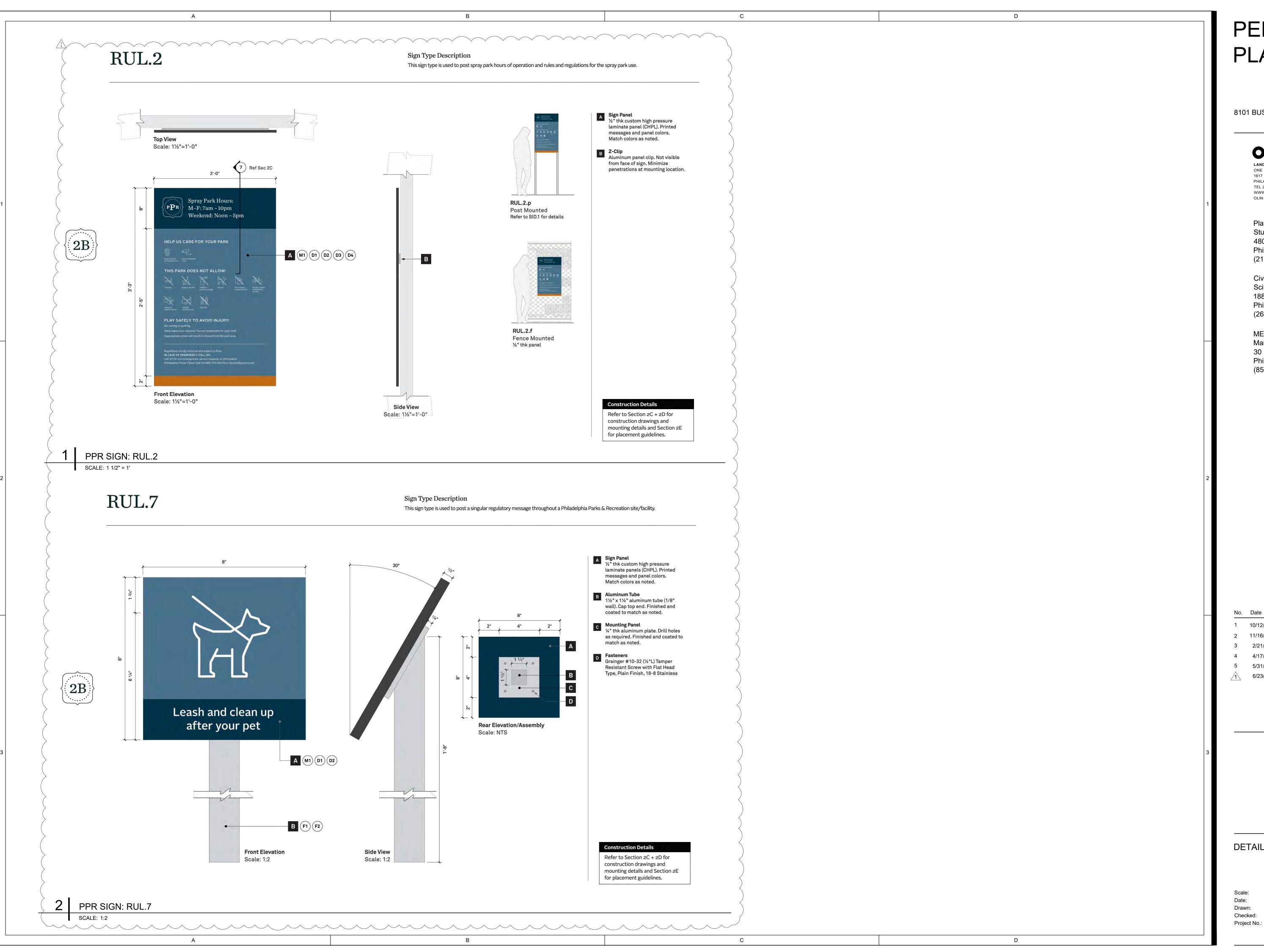
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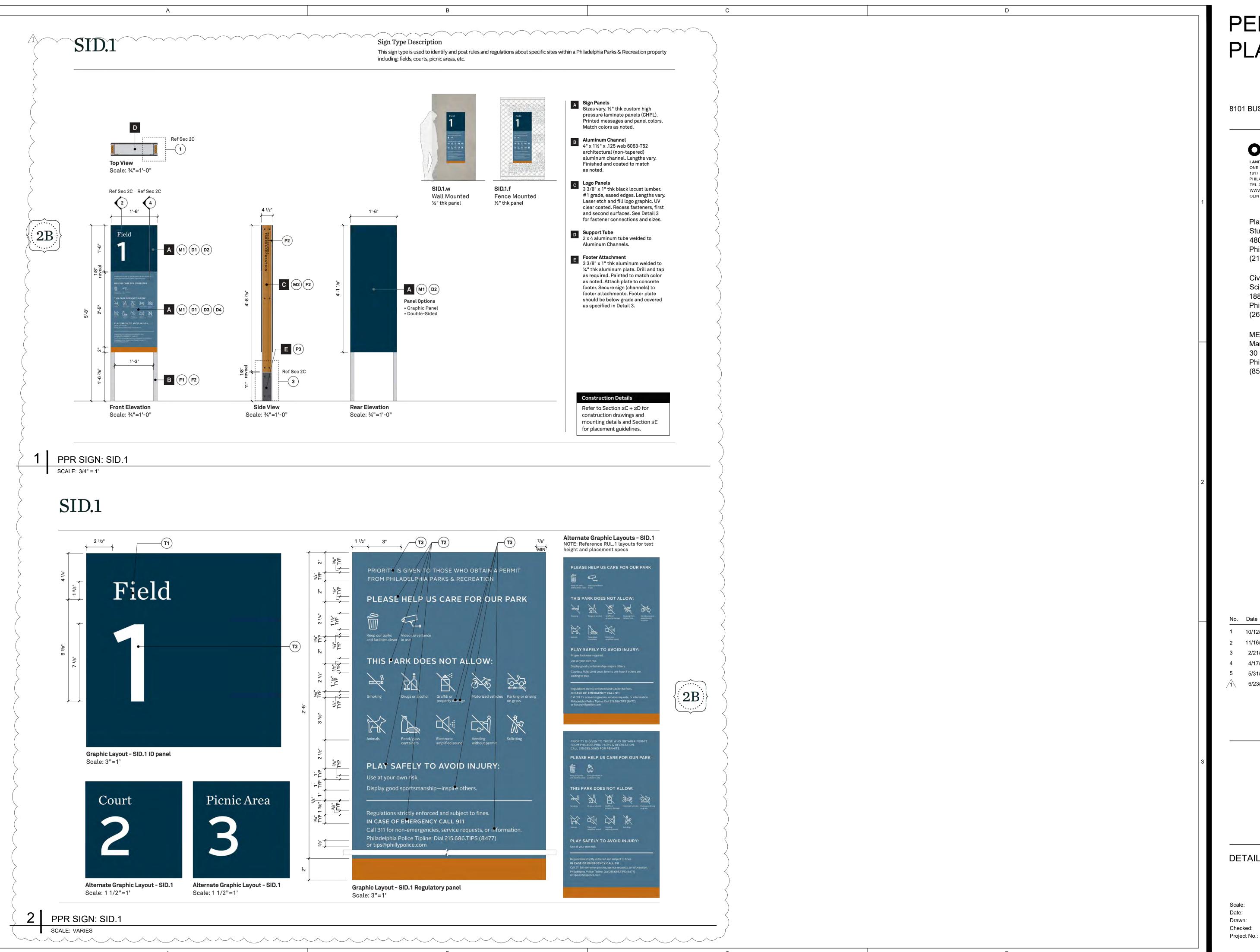
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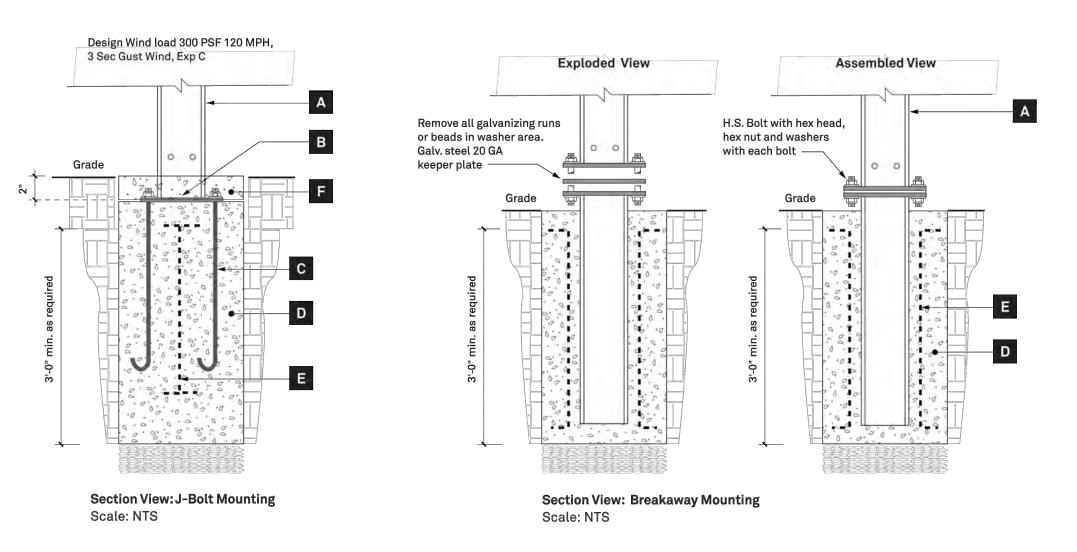
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DETAILS - SITE FURNISHINGS

Date: 6/23/2023 Drawn: Checked: TS



Aluminum Channel 4" x 1½" x .125 web 6063-T52 architectural (non-tapered) aluminum channel. Lengths vary.

Aluminum Plate ¼" thk aluminum plate. Drill and tap as required. Attach plate to concrete footer. Secure sign (channels) to footer attachments.

J-Bolts
1" diameter steel J-Bolts.

Concrete Footer
Poured in place concrete footer 5,400 psi at 28 Days. Provide weather seal sand and gravel at footing. Compacted crushed stone as required.

Rebar
Typical vertical rebar as required.

Finished Concrete
Minimum 2" thick concrete: poured, formed, brush finished,

NOTE: When locating a footer within a single pavement block (max. 5'-0" x 5'-0"), adjacent to at least 2 expansion joints, the entire block of pavement shall be removed and replaced with the same materials and finish of adjacent sidewalk areas.

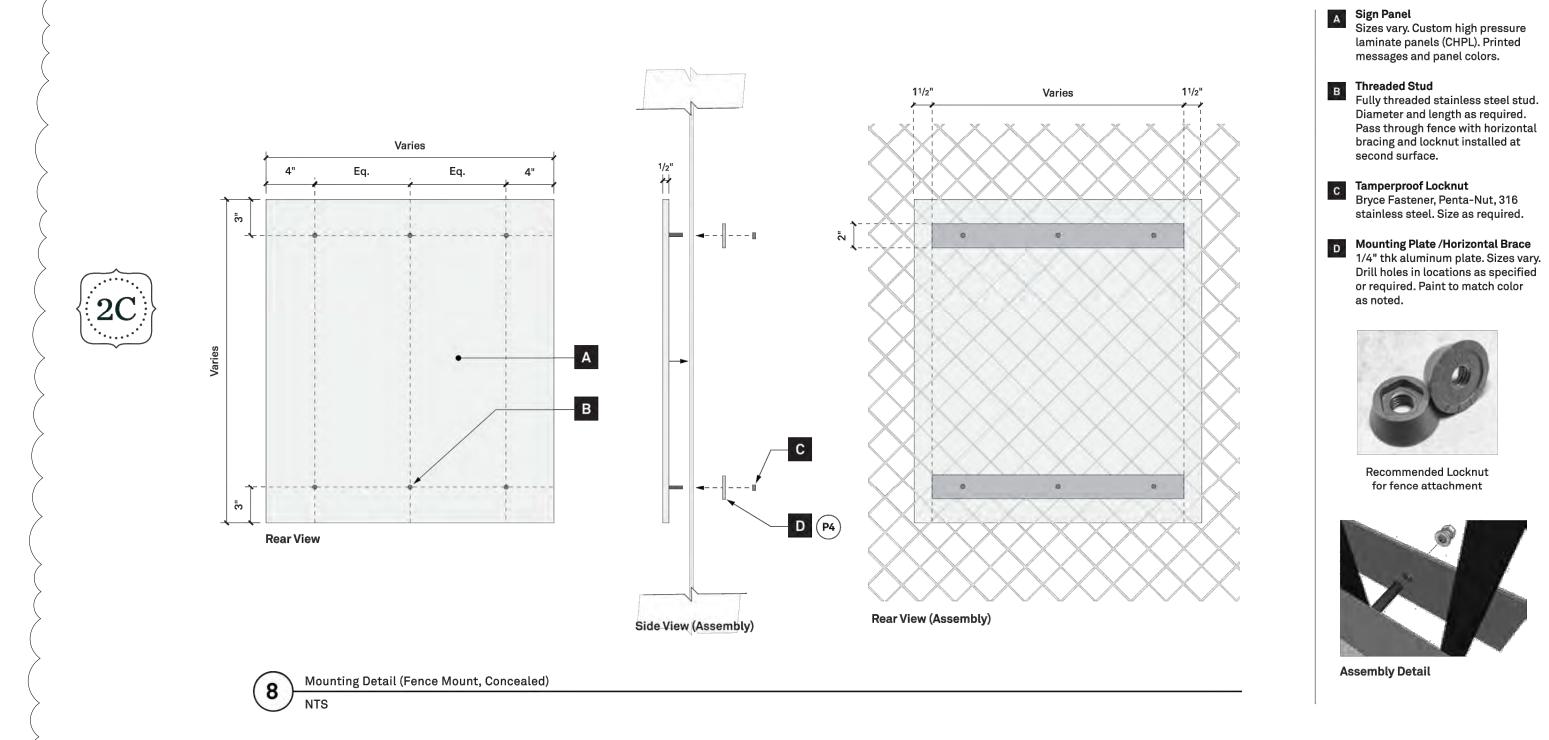
messages and panel colors.

for fence attachment

PPR SIGN: CONCRETE FOOTING DETAIL SCALE: NTS

PPR SIGN: WALL MOUNT DETAILS

CONSTRUCTION DETAILS | fence mount details



1. ASSUME PPR STANDARD PID.4.F PARK IDENTIFICATION SIGNAGE.
DESIGN SHALL BE PROVIDED BY PPR. CONTRACTOR IS RESPONSIBLE FOR PROCUREMENT AND INSTALLATION.

2. SIGNAGE SHALL BE 1/2" THICK CUSTOM HIGH PRESSURE LAMINATE (CHPL) PANEL, MOUNTED ON EXISTING CHAINLINK FENCE. ATTACHMENT SHALL NOT BE VISIBLE FROM FACE OF SIGN.

3. ASSUME W2'-0" X H4'-7 1/8" SIGNAGE FOR PRICING

4. SIGNAGE SHALL BE PROVIDED AT EACH ENTRANCE TO PLAYGROUND; TOTAL TWO LOCATIONS.

5. SEE SIGNAGE SPEC FOR DETAILS.

6. FIELD VERIFY SIGNAGE MOUNT LOCATION WITH LANDSCAPE ARCHITECT.

WALL MOUNT SIGN PLACEMENT SCALE: 3/4" = 1'

PELBANO PLAYGROUND

8101 BUSTLETON AVENUE

LANDSCAPE ARCHITECTURE / URBAN DESIGN / PLANNING ONE PENN CENTER 1617 JOHN F. KENNEDY BOULEVARD, SUITE 1900 PHILADELPHIA, PA 19103 TEL 215.440.0030 / FAX 215.440.0041 WWW.THEOLINSTUDIO.COM OLIN PARTNERSHIP, LTD.

Playground Design: Studio Ludo 4800 Springfield Ave Philadelphia, PA 19143 (215) 454-6780

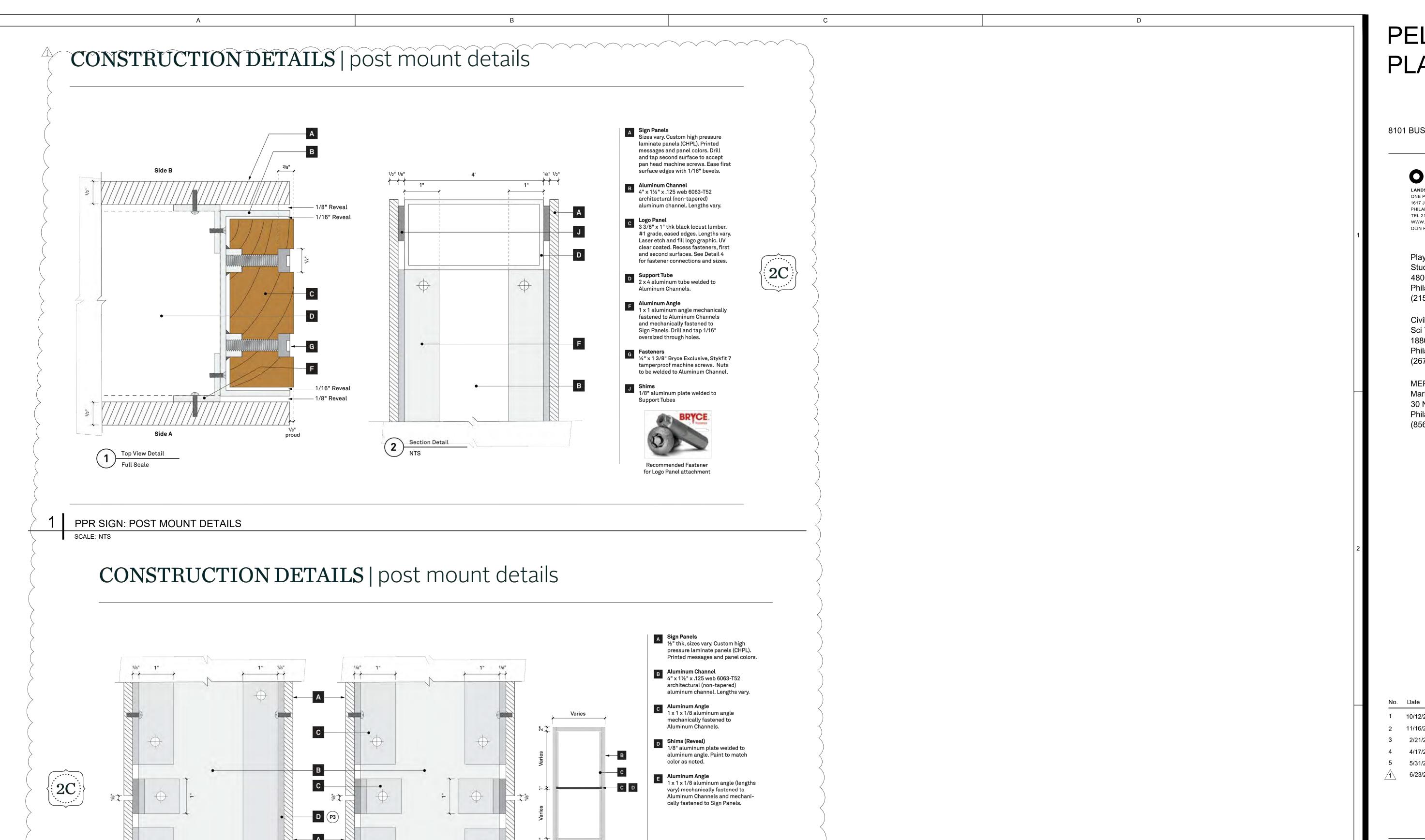
Civil Engineering: 1880 John F Kennedy Blvd #600, Philadelphia, PA 19103 (267) 314-5385

Mark Ulrick 30 N. 41ST SUITE 500 Philadelphia, PA 19104 (856) 320-8100

No.	Date	Description
1	10/12/2022	SD set
2	11/16/2022	SD set
3	2/21/2023	DD set
4	4/17/2023	75% CD set
5	5/31/2023	100% CD set
1	6/23/2023	ADDENDUM #1

DETAILS - SITE FURNISHINGS

Scale:	
Date:	6/23/2
Drawn:	K
Checked:	
Project No.:	2



Typical Interior Frame

Single-Sided, with Graphic Backer

PPR SIGN: POST MOUNT DETAILS

Double-Sided, Mirrored

PELBANO PLAYGROUND

8101 BUSTLETON AVENUE

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Mark Ulrick 30 N. 41ST SUITE 500 Philadelphia, PA 19104 (856) 320-8100

Description 1 10/12/2022 SD set 2 11/16/2022 SD set 4/17/2023 75% CD set 5/31/2023 100% CD set 6/23/2023 ADDENDUM #1

DETAILS - SITE FURNISHINGS

Checked:

6/23/2023 Project No.:

INSTALLATION DETAILS | post mount / footing details B Aluminum Channel 4" x 1½" x .125 web 6063-T52 architectural (non-tapered) aluminum channel. Lengths vary. C Logo Panel 3 3/8" x 1" thk black locust lumber. #1 grade, eased edges. Lengths vary. Laser etch and fill logo graphic. UV clear coated. Recess fasteners, first and second surfaces. Footer Attachment 3 3/8" x 1" thk aluminum welded to 1/4" thk aluminum plate. Drill and tap as required. Attach plate to concrete footer. Secure sign (channels) to footer attachments. Concrete Footer 1" above grade, poured in place concrete footer 5,400 psi at 28 Days. 1" diameter Steel J-Bolts. Typical vertical rebar as required. Provide weather seal sand and gravel at footing. Compacted crushed stone as Fasteners ½" x 1 3/8" Bryce Exclusive, Stykfit 7 tamperproof machine screws. Nuts to be welded to Aluminum Channel. H Finished Concrete Minimum 2" thick concrete: aluminum poured, formed, brush finished, flush at grade. Exploded Detail (1) Exploded Detail (2) Assembled Detail (3) PPR SIGN: POST MOUNT DETAILS SCALE: NTS INSTALLATION DETAILS | post mount / footing details C Logo Panel 3 3/8" x 1" thk black locust lumber. #1 grade, eased edges. Lengths vary. Laser etch and fill logo graphic. UV clear coated. Recess fasteners, first and second surfaces. Footer Attachment 3 3/8" x 1" thk aluminum welded to ¼" thk aluminum plate. Drill and tap as required. Attach plate to concrete footer. Secure sign (channels) to footer attachments. Fasteners ½" x 1 3/8" Bryce Exclusive, Stykfit 7 tamperproof machine screws. Nuts to be welded to Aluminum Channel. Н Top View (Typical Finished Concrete Pad Footprint) H Finished Concrete Minimum 2" thick concrete: poured, formed, brush finished, Mounting/Footprint Detail NTS flush at grade.

Footer Attachment Detail

Scale: 1½"=1'-0"

PPR SIGN: POST MOUNT DETAILS

Logo Panel Detail

Scale: 1½"=1'-0"

PELBANO PLAYGROUND

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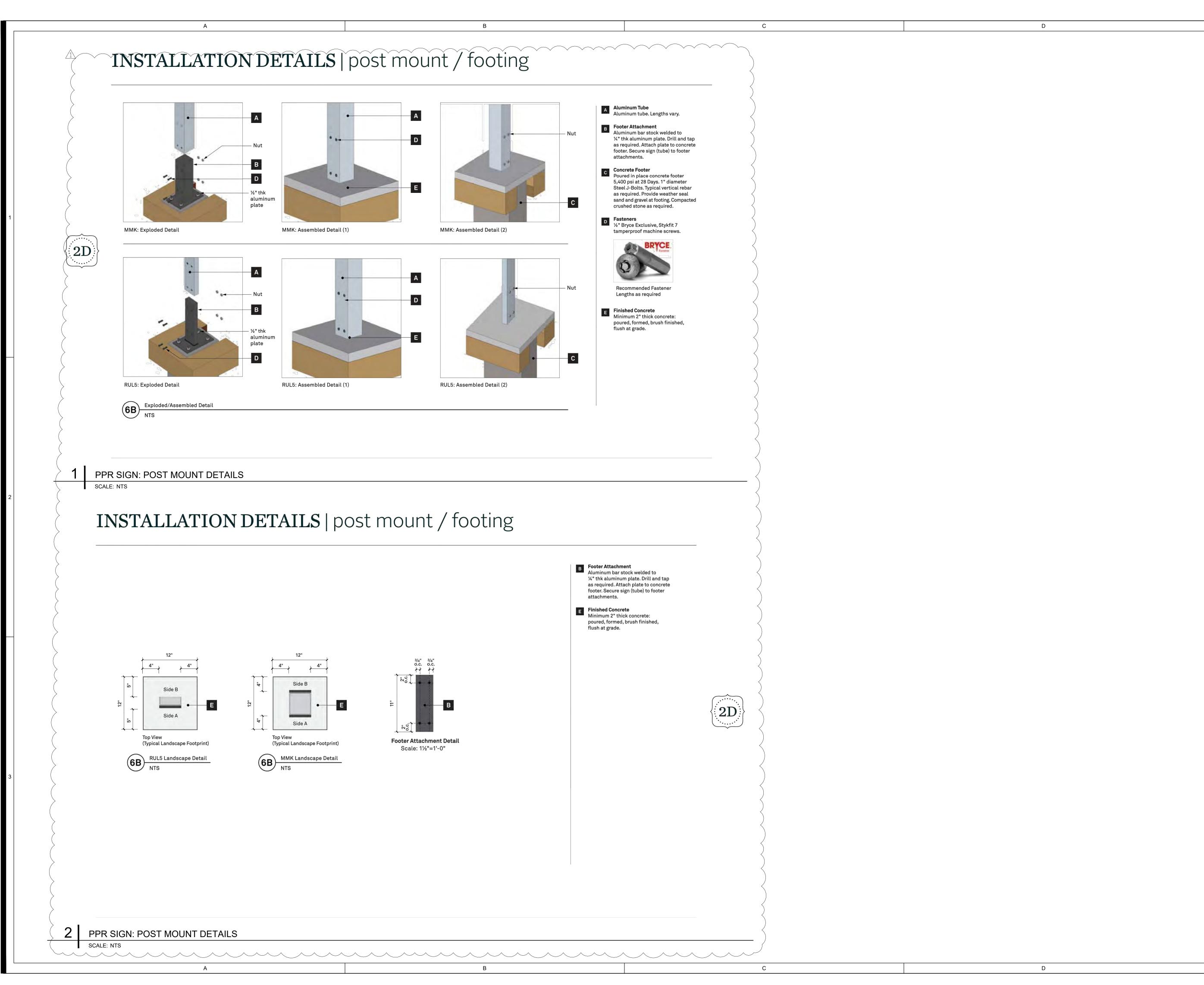
Mark Ulrick 30 N. 41ST SUITE 500 Philadelphia, PA 19104 (856) 320-8100

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DETAILS - SITE FURNISHINGS

Date: Drawn: Checked:

6/23/2023 TS Project No.:



8101 BUSTLETON AVENUE

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LANDSCAPE ARCHITECTURE / URBAN DESIGN / PLANNING
ONE PENN CENTER
1617 JOHN F. KENNEDY BOULEVARD, SUITE 1900
PHILADELPHIA, PA 19103
TEL 215.440.0030 / FAX 215.440.0041
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OLIN PARTNERSHIP, LTD.

Playground Design: Studio Ludo 4800 Springfield Ave Philadelphia, PA 19143 (215) 454-6780

Civil Engineering: Sci Tek 1880 John F Kennedy Blvd #600, Philadelphia, PA 19103 (267) 314-5385

MEP: Mark Ulrick 30 N. 41ST SUITE 500 Philadelphia, PA 19104 (856) 320-8100

 No.
 Date
 Description

 1
 10/12/2022
 SD set

 2
 11/16/2022
 SD set

 3
 2/21/2023
 DD set

 4
 4/17/2023
 75% CD set

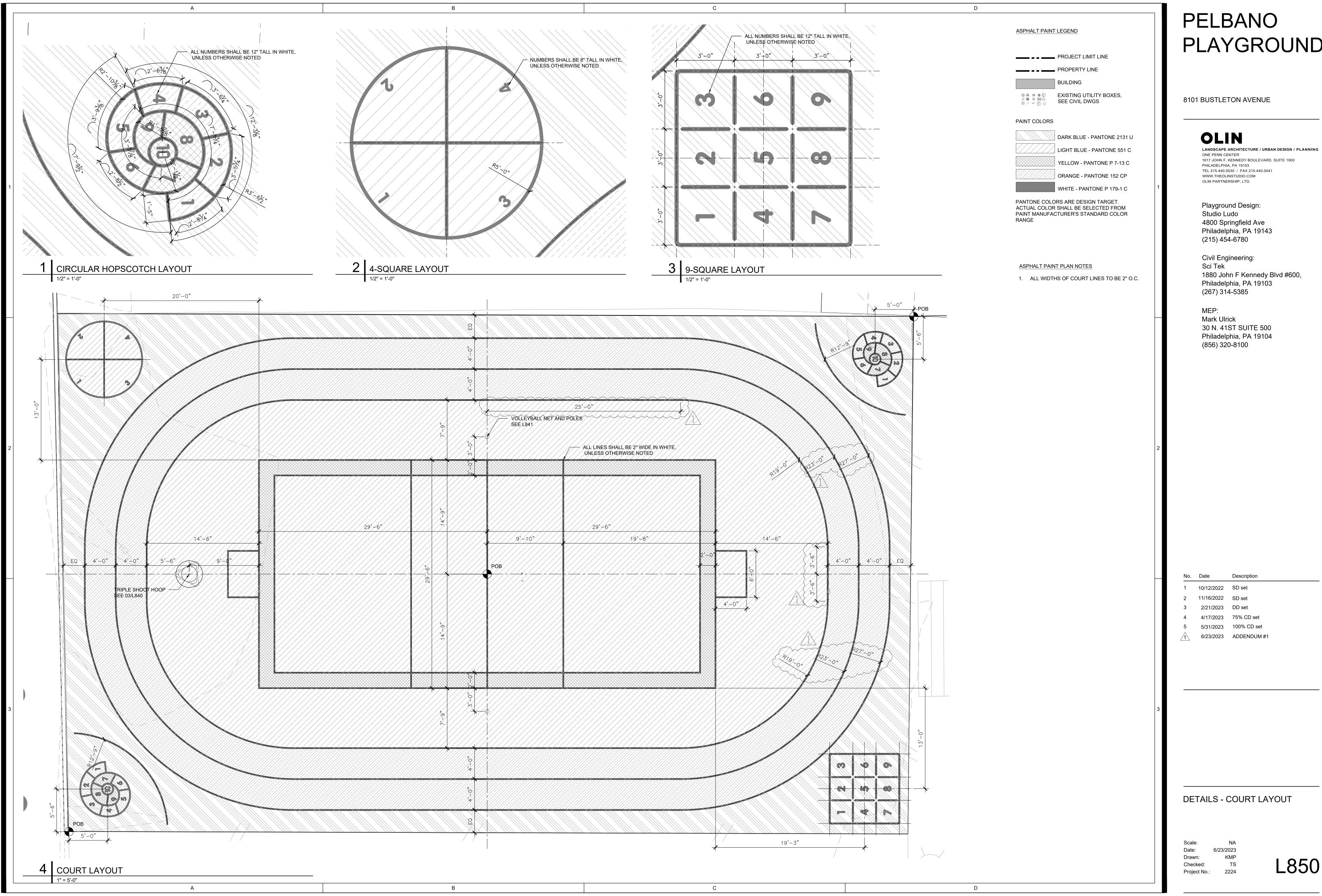
 5
 5/31/2023
 100% CD set

 1
 6/23/2023
 ADDENDUM #1

DETAILS - SITE FURNISHINGS

Scale:
Date: 6/23/2
Drawn: k
Checked:

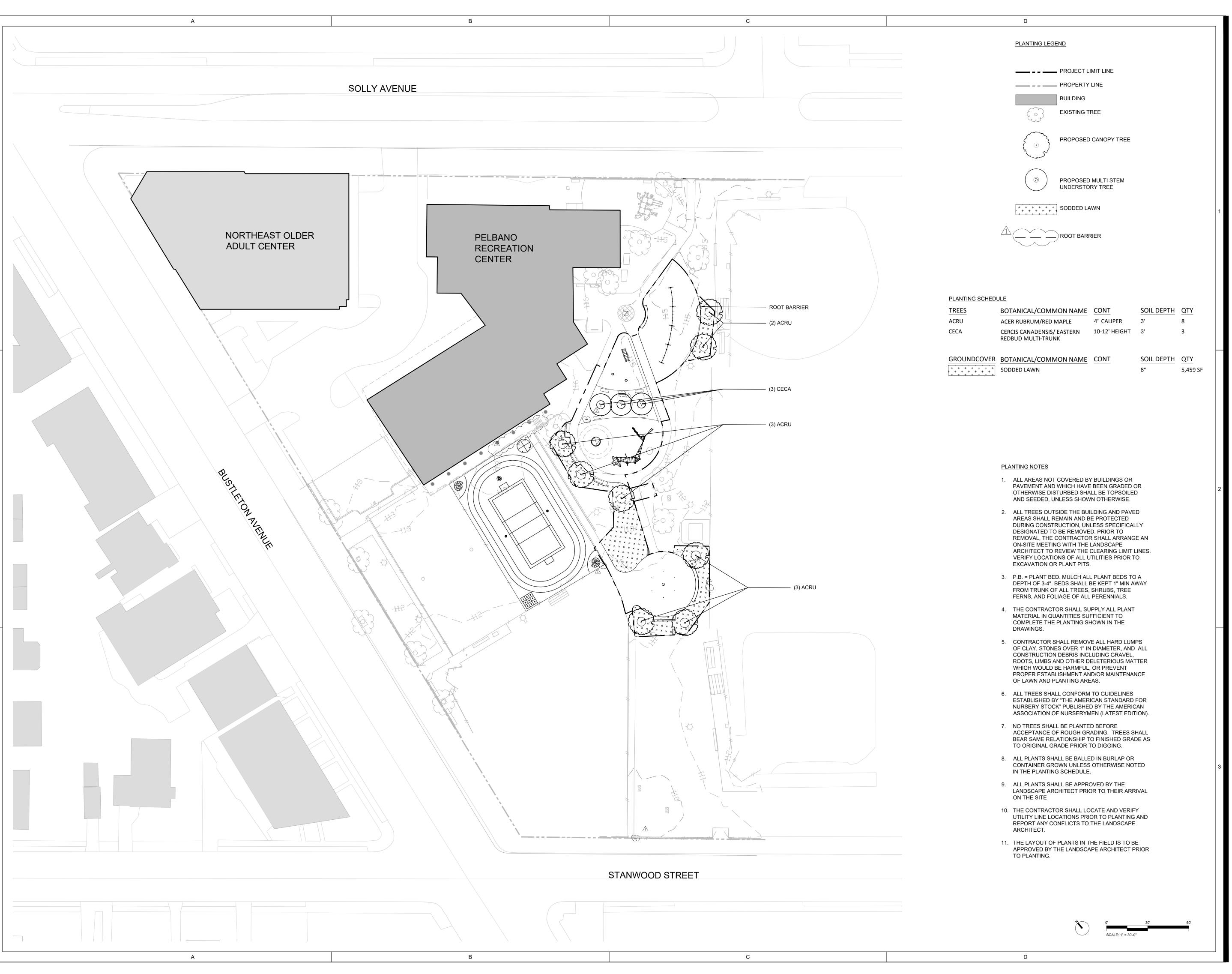
6/23/2023 : KMP ed: TS



PLAYGROUND

1617 JOHN F. KENNEDY BOULEVARD, SUITE 1900

Date	Description
10/12/2022	SD set
11/16/2022	SD set
2/21/2023	DD set
4/17/2023	75% CD set
5/31/2023	100% CD set
6/23/2023	ADDENDLIM #1



8101 BUSTLETON AVENUE

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MEP: Mark Ulrick 30 N. 41ST SUITE 500 Philadelphia, PA 19104 (856) 320-8100

(267) 314-5385

No. Date Description

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3 2/21/2023 DD set
4 4/17/2023 75% CD set
5 5/31/2023 100% CD set

1 6/23/2023 ADDENDUM #1

PLANTING KEY PLAN

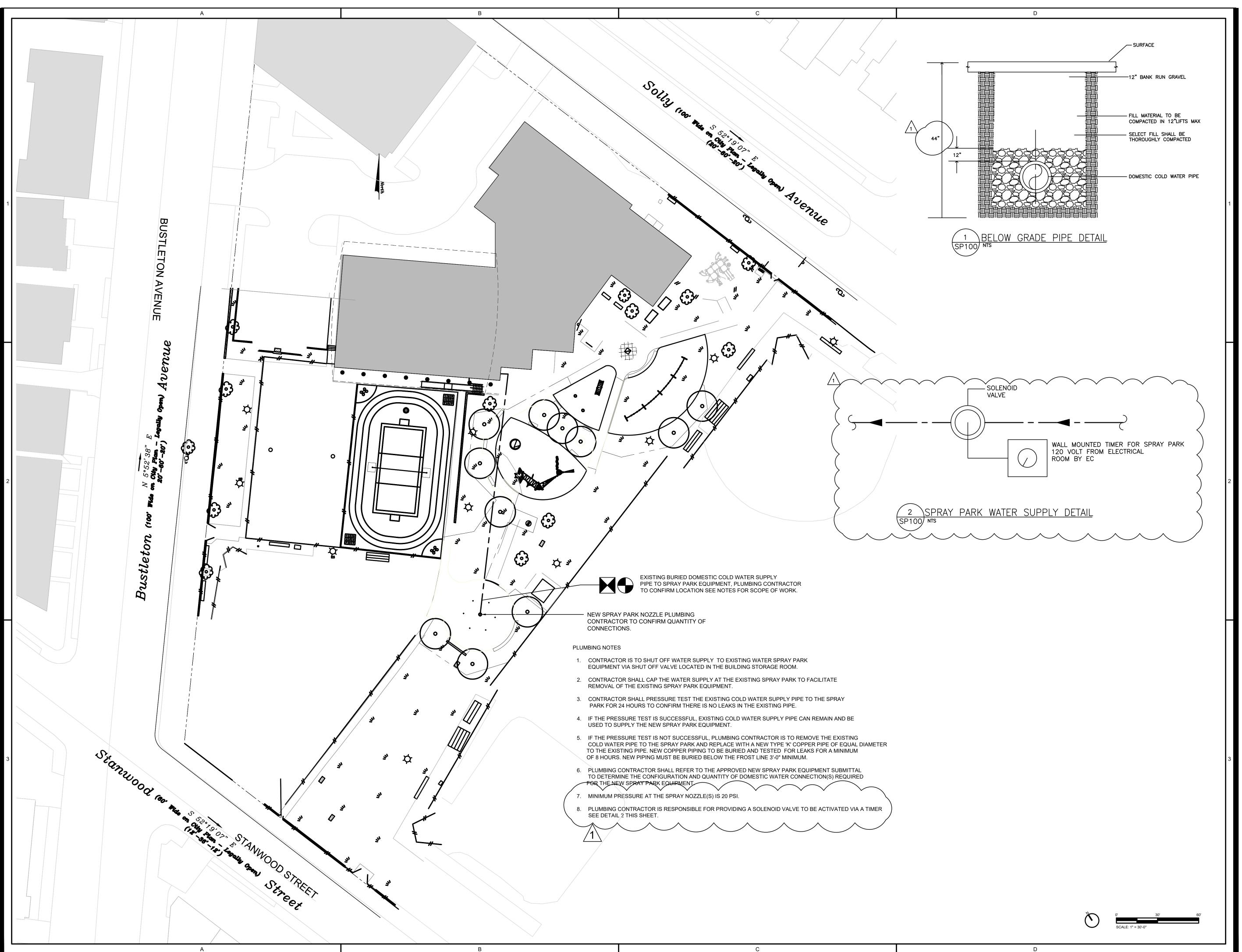
 Scale:
 1"=30'

 Date:
 6/23/2023

 Drawn:
 KMP

 Checked:
 TS

 Project No.:
 2224



8101 BUSTLETON AVENUE

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Playground Design:

Studio Ludo 1313 S 33rd St Unit A, Philadelphia, PA 19146 (215) 454-6780

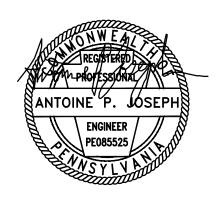
Civil Engineering: Sci Tek

1880 John F Kennedy Blvd #600, Philadelphia, PA 19103 (267) 314-5385

Mark Ulrick

30 N. 41ST SUITE 500 Philadelphia, PA 19104 (856) 320-8100

No. Date Description 10/12/2022 SD set 2 11/16/2022 SD set 2/21/2023 DD set 4/17/2023 CD set 5/31/2023 100% CD set 6/23/2023 ADDENDUM #1



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