ADDENDUM NO. 02

May 7, 2026

Kalamazoo Public Schools Woodward School Connector Addition & Renovation
606 Stuart Ave.
Kalamazoo, MI 49007

TO: ALL BIDDERS OF RECORD

This Addendum forms a part of and modifies the Bidding Requirements, Contract Forms, Contract Conditions, the Specifications and the Drawings da ted April 3, 2026, by TowerPinkster. Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of Pages ADD 2-3 through ADD 2-1, and TowerPinkster Addendum No. 02 dated May 6, 2026, consisting of 68 pages.

A. SPECIFICATION SECTION 00 43 50 - SUBCONTRACTORS AND PRODUCTS LIST

1. BID CATEGORY NO. 02 SITEWORK

Remove the following Specification

Section	32 14 00	Unit Paving
Section	32 31 13.53	High-Security Chain Link Fences and Gates
Section	32 39 00	Manufactured Site Specialties

Add the following Specification

Section	01 56 39	Temporary Tree and Plant Protection
Section	32 31 13	Chain Link Fences and Gates.

1. **BID CATEGORY NO. 0 MASONRY**

Add the following Specification

Section	07 27 26	Fluid Applied Membrane Air Barriers

B. SPECIFICATION SECTION 01 12 00 - MULTIPLE CONTRACT SUMMARY

Paragraph 3.03 BID CATEGORIES

A. BID CATEGORY NO 01 DEMOLITION

Add the following Clarifications:

2. **Bid Category No. 01 – Demolition** is responsible for all sitework demolition shown on sheet LD100.
3. **Bid Category No. 01 – Demolition** is responsible for the concrete demolition and removal at the existing front Office staircase, and shoring if required, as shown on AD101.
4. **Bid Category No. 01 – Demolition** is responsible for the concrete demolition and removal of the two 5'-8" x 5'-8" squares in the Gym floor for new volleyball poles, as shown on AD101. **Bid Category No. 03 – Concrete** will be responsible for setting the new volleyball pole inserts provided by KPS.
5. **Bid Category No. 01 – Demolition** is responsible for the concrete demolition and removal at the existing slab-on-grade concrete demolition and removal shown as shown on AD101A. **Bid Category No. 03 – Concrete** shall be responsible for excavation and compaction of the removed slab areas.

B. BID CATEGORY NO. 02 SITEWORK

Remove the following Specification

Section	32 14 00	Unit Paving
Section	32 31 13.53	High-Security Chain Link Fences and Gates
Section	32 39 00	Manufactured Site Specialties

Add the following Specification

Section	01 56 39	Temporary Tree and Plant Protection
Section	32 31 13	Chain Link Fences and Gates.

C. BID CATEGORY NO. 03 CONCRETE

Add the following Clarifications:

1. **Bid Category No. 01 – Demolition** is responsible for the concrete demolition and removal of the two 5'-8" x 5'-8" squares in the Gym floor for new volleyball poles, as shown on AD101. **Bid Category No. 03 – Concrete** will be responsible for setting the new volleyball pole inserts provided by KPS.
2. **Bid Category No. 01 – Demolition** is responsible for the concrete demolition and removal at the existing slab-on-grade concrete demolition and removal shown as shown on AD101A. Bid Category No. 03 – Concrete shall be responsible for excavation and compaction of the removed slab areas.

D. BID CATEGORY NO. 04 MASONRY

Add the following Specification

Section 07 27 26 Fluid Applied Membrane Air Barriers

C. SPECIFICATION SECTION 01 32 00 – SCHEDULES AND REPORTS

a. **1.03 GUIDELINE SCHEDULE**

Add:

1. See Guideline Schedule attached.
2. See Flooring Phasing Plan attached.

D. Refer to the attached Request For Information summary, Pre-Bid RFI No. 01 through 04 are included.

TowerPinkster
Architecture · Engineering · Interiors

ADDENDUM NO. 2

DATE OF ISSUANCE:	**May 6, 2026**
PROJECT:	**Woodward Elementary Connector** **606 Stuart Ave** **Kalamazoo, MI 49007**
OWNER:	**Kalamazoo Public Schools**
ARCHITECT'S PROJECT NO.:	**23-642.00**
ORIGINAL BID ISSUE DATE:	**April 3, 2026**

SCOPE OF WORK

This Addendum includes changes to, or clarifications of, the original Bidding Documents and any previously issued addenda, and shall be included in the Bid. All of these Addendum items form a part of the Contract Documents. The Bidder shall acknowledge receipt of this Addendum in the appropriate space provided on the Bid Form. Failure to do so may result in disqualification of the Bid.

DOCUMENTS INCLUDED IN THIS ADDENDUM

This Addendum includes **3** pages of text and the following documents:

- Bidding Documents: **None**
- Contract Conditions: **None**
- Specification Sections: 01 5639, 07 2726, 32 1313, 32 3113, 32 3300, 32 9113, 32 9300
- Drawings: IG 002, I 101A, I 101B, I 102A, I 204, I 421, LD 100, L 100, L 150, L 201, L 300

CHANGES TO PREVIOUSLY ISSUED ADDENDA

None.

CHANGES TO BIDDING REQUIREMENTS

None.

CHANGES TO CONTRACT CONDITIONS

None.

CHANGES TO SPECIFICATIONS

ADD-2 Item No. S-1 - Removed Site-Specific Specification Sections

Refer to Specification Section: 32 1400 Unit Paving, 32 3113.53 High-Security Chain Link Fences and Gates, and 32 3900 Manufactured Site Specialties.

The above specification sections were removed due to being not applicable to the project.

ADD-2 Item No. S-2 - Modified Site-Specific Specification Sections

Refer to Specification Section: 32 1313 Concrete Paving, 32 3300 Site Furnishings, 32 9113 Soil Preparation, and 32 9300 Plants.

The above specifications were modified for clarification.

ADD-2 Item No. S-3 - New Site-Specific Specification Sections

Refer to Specification Section: 01 5639 Temporary Tree and Plant Protection and 32 3113 Chain Link Fences and Gates.

The above specifications were added for clarification.

ADD-2 Item No. S-4 - 07 2726 Fluid Applied Membrane Air Barriers

Refer to Specification Section: 07 2726

Fluid applied membrane air barrier can be applied rather than a sheet applied product, but the Du Pont Ultra Air Barrier wall system is to be used as the primary system and is to be supplemented around openings and other conditions by a sheet or fluid applied AVB system.

CHANGES TO DRAWINGS

ADD-2 Item No. D-1 - Finish Updates

Refer to Sheet(s): IG 002, I 101A, I 101B, I 102A, I 204, I 421

Material Selection Schedule updated to reflect removal of unused ceramic tile and wall base. Finish plan and material selection schedule reflects updates of updated porcelain tile mosaic floor and rubber base. Resilient Athletic Flooring added to material selection schedule and gym striping plan.

ADD-2 Item No. D-2 - Tree Removal

Refer to Sheet(s): LD 100

One additional tree has been updated to be removed as part of the demo/removal plan. Plant protection detail updated.

ADD-2 Item No. D-3 - Site Layout Updates

Refer to Sheet(s): L 100, L 201, L 300

Site layout updated to reflect revised layout of seating and gathering areas, reduced quantity of site furniture, reduced planting areas, reduced concrete areas, and reduced crushed fines pathway. Planting schedule shows updated plant quantities. Adjusted grades to reflect updated site layout.

ADD-2 Item No. D-4 - Site Details Updates

Refer to Sheet(s): L 150

Refer to updated details 2, 5, 7, and 8 on sheet L 150 for site detail revisions.

END OF ADDENDUM.

SECTION 01 5639 - TEMPORARY TREE AND PLANT PROTECTION

PART 1 - GENERAL

1.1 SUMMARY

A. The Work of this Section Includes: General protection and pruning of existing trees and plants that are affected by execution of the Work, whether temporary or permanent construction.

B. Related Requirements:

1. Section 31 1000 "Site Clearing" for removing existing trees and shrubs and for temporary erosion- and sedimentation-control measures if not specified in Section 01 5000 "Temporary Facilities and Controls".

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1. Review methods and procedures related to temporary tree and plant protection including, but not limited to, the following:
   a. Tree-service firm's personnel and equipment needed to make progress and avoid delays.
   b. Arborist's responsibilities.
   c. Quality-control program.
   d. Coordination of Work and equipment movement with the locations of protection zones.
   e. Field quality control.

1.3 ACTION SUBMITTALS

A. Product Data:

1. General protection and pruning of existing trees and plants that are affected by execution of the Work, whether temporary or permanent construction

B. Shop Drawings:

1. Include plans, elevations, and sections showing trees and plants to be protected, locations of protection-zone fencing and signage, and the relationship between equipment-movement routes and material storage locations with protection zones.
2. Detail fabrication and assembly of protection-zone fencing and signage.
3. Indicate extent of utility boring and trenching by hand or with air spade within protection zones.
4. Include existing irrigation system that will be used to water plants.

C. Tree-Pruning Schedule: Written schedule detailing scope and extent of pruning of trees to remain that interfere with or are affected by construction.

1. Species and size of tree.

2. Location on site plan. Include unique identifier for each.
3. Reason for pruning.
4. Description of pruning to be performed.
5. Description of maintenance following pruning.

D. Maintenance Recommendations: From arborist, for care and protection of trees affected by construction during and after completing the Work.

E. Mitigation Requirements: As required by jurisdiction or as developed by arborist, for mitigation of damage to trees and other plantings. Include the following:

1. Local ordinances governing tree mitigation.
2. Standards established under the approved tree mitigation report developed by the arborist.
3. "Digital Guide for Plant Appraisal" by Council of Tree and Landscape Appraisers.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Statements: For arborist and tree service firm.

B. Certification: From arborist, certifying that trees indicated to remain have been protected during construction in accordance with recognized standards and that trees were promptly and properly treated and repaired when damaged.

C. Maintenance Recommendations: From arborist, for care and protection of trees affected by construction during and after completing the Work.

D. Existing Conditions: Documentation of existing trees and plantings indicated to remain, which establishes preconstruction conditions that might be misconstrued as damage caused by construction activities.

1. Use sufficiently detailed photographs or video recordings.
2. Include plans and notations to indicate specific wounds and damage conditions of each tree or other plants designated to remain.

E. Quality-control program.

1.5 QUALITY ASSURANCE

A. Arborist Qualifications: Certified Arborist as certified by ISA.

B. Tree-Service Firm Qualifications: An experienced tree-service firm that has successfully completed temporary tree- and plant-protection work similar to that required for this Project and that will assign an experienced, qualified arborist to Project site during execution of the Work.

C. Quality-Control Program: Prepare a written program to systematically demonstrate the ability of personnel to properly follow procedures and handle materials and equipment during the Work without damaging trees and plantings. Include dimensioned diagrams for placement of protection-zone fencing and signage, the arborist's and tree-service firm's responsibilities, instructions given to workers on the use and care of protection zones, and enforcement of requirements for protection zones.

1.6 FIELD CONDITIONS

A. The following practices are prohibited within protection zones:

1. Storage of construction materials, debris, or excavated material.
2. Moving or parking vehicles or equipment.
3. Foot traffic.
4. Erection of sheds or structures.
5. Impoundment of water.
6. Excavation or other digging unless otherwise indicated.
7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.

B. Do not direct vehicle or equipment exhaust toward protection zones.

C. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones and organic mulch.

D. Take precautions to protect plants from airborne contaminants, such as paint or fireproofing overspray.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Backfill Soil: Planting soil of suitable moisture content and granular texture for placing around tree; free of stones, roots, plants, sod, clods, clay lumps, pockets of coarse sand, concrete slurry, concrete layers or chunks, cement, plaster, building debris, and other extraneous materials harmful to plant growth.

1. Planting Soil: Planting soil as specified in Section 32 9113 "Soil Preparation"

B. Organic Mulch: Free from deleterious materials and suitable as a top dressing for trees and shrubs, consisting of one of the following:

1. Type: Shredded hardwood.
2. Size Range: 3 inches maximum, 1/2 inch minimum.
3. Color: Natural.

C. Protection-Zone Fencing: Fencing fixed in position and meeting one of the following requirements: Previously used materials may be used when approved by Architect.

1. Plastic Protection-Zone Fencing: Plastic construction fencing constructed of high-density extruded and stretched polyethylene fabric with **2-inch** maximum opening in pattern and weighing a minimum of **0.4 lb/ft.**; remaining flexible from **minus 60 to plus 200 deg F**; inert to most chemicals and acids; minimum tensile yield strength of **2000 psi** and ultimate tensile strength of **2680 psi**; secured with plastic bands or galvanized-steel or stainless steel wire ties; and supported by tubular or T-shape galvanized-steel posts spaced not more than **96 inches** apart.
   a. Height: 72 inches.
   b. Color: High-visibility orange, nonfading.

PART 3 - EXECUTION

3.1 FIELD QUALITY CONTROL

A. Inspections: Engage a qualified arborist to direct plant-protection measures in the vicinity of trees, shrubs, and other vegetation indicated to remain and to prepare inspection reports.

3.2 REPAIR AND REPLACEMENT

A. General: Repair or replace trees, shrubs, and other vegetation indicated to remain or to be relocated that are damaged by construction operations, in a manner approved by Architect.

1. Submit details of proposed pruning and repairs.
2. Perform repairs of damaged trunks, branches, and roots within 24 hours in accordance with arborist's written instructions.
3. Replace trees and other plants that cannot be repaired and restored to full-growth status, as determined by Architect.

END OF SECTION 01 5639

SECTION 07 2726 - FLUID-APPLIED MEMBRANE AIR BARRIERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Vapor-retarding, fluid-applied air barriers.
2. Vapor-permeable, fluid-applied air barriers.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For air-barrier assemblies.

1. Show locations and extent of air-barrier materials, accessories, and assemblies specific to Project conditions.
2. Include details for substrate joints and cracks, counterflashing strips, penetrations, inside and outside corners, terminations, and tie-ins with adjoining construction.
3. Include details of interfaces with other materials that form part of air barrier.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Product certificates.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Remove and replace liquid materials that cannot be applied within their stated shelf life.

B. Protect stored materials from direct sunlight.

1.7 FIELD CONDITIONS

A. Environmental Limitations: Apply air barrier within the range of ambient and substrate temperatures recommended in writing by air-barrier manufacturer.

1. Protect substrates from environmental conditions that affect air-barrier performance.
2. Do not apply air barrier to a damp or wet substrate or during snow, rain, fog, or mist.

B. Cover air barriers within time limit recommended by air barrier manufacturer.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Source Limitations: Obtain primary air-barrier materials and air-barrier accessories from single source from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

A. Air-Barrier Performance: Air-barrier assembly and seals with adjacent construction shall be capable of performing as a continuous air barrier and as a liquid-water drainage plane flashed to discharge to the exterior incidental condensation or water penetration. Air-barrier assemblies shall be capable of accommodating substrate movement and of sealing substrate expansion and control joints, construction material changes, penetrations, and transitions at perimeter conditions without deterioration and air leakage exceeding specified limits.

B. Air-Barrier Assembly Air Leakage: Maximum 0.04 cfm/sq. ft. of surface area at 1.57 lbf/sq. ft. (0.2 L/s x sq. m of surface area at 75 Pa), when tested according to ASTM E 2357.

2.3 HIGH-BUILD AIR BARRIERS, VAPOR RETARDING

A. High-Build, Vapor-Retarding Air Barrier: Synthetic polymer membrane with an installed dry film thickness, according to manufacturer's written instructions, of 35 mils (0.9 mm) or thicker over smooth, void-free substrates.

1. Synthetic Polymer Type:

a. Products: Subject to compliance with requirements, provide one of the following:

1) Prosoco; R-Guard VB

2) Carlisle Coatings & Waterproofing Inc; Fire Resist Barritech NP.
3) Grace Construction Products; W.R. Grace & Co. -- Conn.; Perm-A-Barrier Liquid.
4) Henry Company; Air-Bloc 32MR.
5) Rubber Polymer Corporation, Inc.; Rub-R-Wall Airtight.
6) Tremco Incorporated; ExoAir 130.

2. Physical and Performance Properties:

a. Air Permeance: Maximum 0.004 cfm/sq. ft. of surface area at 1.57-lbf/sq. ft. (0.02 L/s x sq. m of surface area at 75-Pa) pressure difference; ASTM E 2178.
b. Vapor Permeance: Maximum 0.1 perm (5.8 ng/Pa x s x sq. m); ASTM E 96/E 96M, Desiccant Method.
c. Ultimate Elongation: Minimum 300 percent; ASTM D 412, Die C.
d. Adhesion to Substrate: Minimum 16 lbf/sq. in. (110 kPa) when tested according to ASTM D 4541.
e. Fire Propagation Characteristics: Passes NFPA 285 testing as part of an approved assembly.
a. UV Resistance: Can be exposed to sunlight for 60 days according to manufacturer's written instructions.
b. Service Temperature Range: From -20 deg F(-29 deg C) to 160 deg F(71 deg C).

2.4 ACCESSORY MATERIALS

A. Requirement: Provide primers, transition strips, termination strips, joint reinforcing fabric and strips, joint sealants, counterflashing strips, flashing sheets and metal termination bars, termination mastic, substrate patching materials, adhesives, tapes, foam sealants, lap sealants, and other accessory materials that are recommended in writing by air-barrier manufacturer to produce a complete air-barrier assembly and that are compatible with primary air-barrier material and adjacent construction to which they may seal.

PART 3 - EXECUTION

3.1 SURFACE PREPARATION

A. Clean, prepare, treat, fill, and seal substrate and joints and cracks in substrate according to manufacturer's written instructions and details. Provide clean, dust-free, and dry substrate for air-barrier application.

B. Mask off adjoining surfaces not covered by air barrier to prevent spillage and overspray affecting other construction.

C. Remove fins, ridges, mortar, and other projections and fill honeycomb, aggregate pockets, holes, and other voids in concrete with substrate-patching material.

D. Remove excess mortar from masonry ties, shelf angles, and other obstructions.

E. At changes in substrate plane, apply sealant or termination mastic beads at sharp corners and edges to form a smooth transition from one plane to another.

F. Bridge isolation joints expansion joints and discontinuous wall-to-wall, deck-to-wall, and deck-to-deck joints with air-barrier accessory material that accommodates joint movement according to manufacturer's written instructions and details.

3.2 INSTALLATION

A. Install materials according to air-barrier manufacturer's written instructions and details to form a seal with adjacent construction and ensure continuity of air and water barrier.

1. Coordinate the installation of air barrier with installation of roofing membrane and base flashing to ensure continuity of air barrier with roofing membrane.
2. Install transition strip on roofing membrane or base flashing so that a minimum of 3 inches (75 mm) of coverage is achieved over each substrate.
3. Unless manufacturer recommends in writing against priming, apply primer to substrates at required rate and allow it to dry.
4. Apply primer to substrates at required rate and allow it to dry. Limit priming to areas that will be covered by air-barrier material on same day. Reprime areas exposed for more than 24 hours.

B. Connect and seal exterior wall air-barrier material continuously to roofing-membrane air barrier, concrete below-grade structures, floor-to-floor construction, exterior glazing and window systems, glazed curtain-wall systems, storefront systems, exterior louvers, exterior door framing, and other construction used in exterior wall openings, using accessory materials.

C. Wall Openings: Prime concealed, perimeter frame surfaces of windows, curtain walls, storefronts, and doors. Apply transition strip so that a minimum of 3 inches (75 mm) of coverage is achieved over each substrate. Maintain 3 inches (75 mm) of full contact over firm bearing to perimeter frames, with not less than 1 inch (25 mm) of full contact.

D. Repair punctures, voids, and deficient lapped seams in strips and transition strips. Slit and flatten fishmouths and blisters. Patch with transition strips extending 6 inches (150 mm) beyond repaired areas in strip direction.

E. Application: Apply continuous unbroken air-barrier material to substrates in thickness and number of coats recommended in writing by air barrier manufacturer. Apply air-barrier material in full contact around protrusions such as masonry ties.

F. Do not cover air barrier until it has been observed by Architect.

G. Correct deficiencies in or remove air barrier that does not comply with requirements; repair substrates and reapply air-barrier components.

3.3 CLEANING AND PROTECTION

A. Protect air-barrier system from damage during application and remainder of construction period, according to manufacturer's written instructions.

B. Remove masking materials after installation.

END OF SECTION 07 2726

SECTION 32 1313 - CONCRETE PAVING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes concrete paving.

1. Sidewalks.

B. Related Requirements:

1. Section 03 3000 "Cast-in-Place Concrete" for general building applications of concrete.
2. Section 32 1373 "Concrete Paving Joint Sealants" for joint sealants in expansion and contraction joints within concrete paving and in joints between concrete paving and adjacent construction.

1.2 DEFINITIONS

A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, fly ash, slag cement, and other pozzolans.

B. W/C Ratio: The ratio by weight of water to cementitious materials.

1.3 ACTION SUBMITTALS

A. Design Mixtures: For each concrete paving mixture. Include alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified ready-mix concrete manufacturer and testing agency.

1.5 QUALITY ASSURANCE

A. Ready-Mix-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.

1.6 PRECONSTRUCTION TESTING

A. Preconstruction Testing Service: Engage a qualified independent testing agency to perform preconstruction testing on concrete paving mixtures.

1.7 FIELD CONDITIONS

A. Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities.

B. Cold-Weather Concrete Placement: Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing, or low temperatures. Comply with ACI 306.1 and the following:

1. When air temperature has fallen to or is expected to fall below **40 deg F (4.4 deg C)**, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than **50 deg F (10 deg C)** and not more than **80 deg F (27 deg C)** at point of placement.
2. Do not use frozen materials or materials containing ice or snow.
3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in design mixtures.

C. Hot-Weather Concrete Placement: Comply with **ACI 301 (ACI 301M)** and as follows when hot-weather conditions exist:

1. Cool ingredients before mixing to maintain concrete temperature below **90 deg F (32 deg C)** at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated in total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
2. Cover steel reinforcement with water-soaked burlap, so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.
3. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade moisture uniform 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 otherwise indicated.

2.2 FORMS

A. Form Materials: Plywood, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, and smooth exposed surfaces.

1. Use flexible or uniformly curved forms for curves with a radius of **100 feet (30.5 m)** or less. Do not use notched and bent forms.

B. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and that will not impair subsequent treatments of concrete surfaces.

2.3 STEEL REINFORCEMENT

A. Deformed-Steel Welded-Wire Reinforcement: ASTM A1064/A1064M, flat sheet.

B. Galvanized Reinforcing Bars: ASTM A767/A767M, Class II zinc coated, hot-dip galvanized after fabrication and bending; with ASTM A615/A615M, **Grade 60 (Grade 420)** deformed bars.

C. Tie Bars: ASTM A615/A615M, **Grade 60 (Grade 420)**; deformed.

D. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded-wire reinforcement, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete specified, and as follows:

1. Equip wire bar supports with sand plates or horizontal runners where base material will not support chair legs.

2.4 CONCRETE MATERIALS

A. Cementitious Materials: Use the following cementitious materials, of same type, brand, and source throughout Project:

1. Portland Cement: ASTM C150/C150M, gray portland cement Type I.

B. Normal-Weight Aggregates: ASTM C33/C33M, Class 4S, uniformly graded. Provide aggregates from a single source.

1. Maximum Coarse-Aggregate Size: 3/4 inch (19 mm) nominal.
2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

C. Air-Entraining Admixture: ASTM C260/C260M.

D. Chemical Admixtures: Admixtures certified by manufacturer to be compatible with other admixtures and to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material.

1. High-Range, Water-Reducing and Retarding Admixture: ASTM C494/C494M, Type G.

E. Water: Potable and complying with ASTM C94/C94M.

2.5 CURING MATERIALS

A. Absorptive Cover: AASHTO M 182..

B. Moisture-Retaining Cover: ASTM C171, polyethylene film or white burlap-polyethylene sheet.

C. Water: Potable.

D. White, Waterborne, Membrane-Forming Curing Compound: ASTM C309, Type 2, Class B, dissipating.

2.6 RELATED MATERIALS

A. Joint Fillers: ASTM D1751, asphalt-saturated cellulosic fiber in preformed strips.

2.7 CONCRETE MIXTURES

A. Prepare design mixtures, proportioned according to **ACI 301 (ACI 301M)**, for each type and strength of normal-weight concrete, and as determined by either laboratory trial mixtures or field experience.

1. Use a qualified independent testing agency for preparing and reporting proposed concrete design mixtures for the trial batch method.

B. Add air-entraining admixture at manufacturer's prescribed rate to result in normal-weight concrete at point of placement having an air content as follows:

1. Air Content, **1-1/2-inch (38-mm)** Nominal Maximum Aggregate Size: 5-1/2 percent plus or minus 1-1/2 percent.
2. Air Content, **1-inch (25-mm)** Nominal Maximum Aggregate Size: 6 percent plus or minus 1-1/2 percent.
3. Air Content, **3/4-inch (19-mm)** Nominal Maximum Aggregate Size: 6 percent plus or minus 1-1/2 percent.

C. Limit water-soluble, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.

D. Concrete Mixtures: Normal-weight concrete.

1. Compressive Strength (28 Days): 4000 psi (27.6 MPa) 3000 psi (20.7 MPa).
2. Maximum W/C Ratio at Point of Placement: 0.45.
3. Slump Limit: 4 inches (100 mm), plus or minus **1 inch (25 mm)**.

2.8 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, and mix concrete materials and concrete according to ASTM C94/C94M and ASTM C1116/C1116M. Furnish batch certificates for each batch discharged and used in the Work.

1. When air temperature is between **85 and 90 deg F (30 and 32 deg C)**, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above **90 deg F (32 deg C)**, reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine exposed subgrades and subbase surfaces for compliance with requirements for dimensional, grading, and elevation tolerances.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Remove loose material from compacted subbase surface immediately before placing concrete.

3.3 EDGE FORMS AND SCREED CONSTRUCTION

A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.

B. Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage.

3.4 INSTALLATION OF STEEL REINFORCEMENT

A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

B. Clean reinforcement of loose rust and mill scale, earth, ice, or other bond-reducing materials.

C. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.

D. Install welded-wire reinforcement in lengths as long as practicable. Lap adjoining pieces at least one full mesh, and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.

3.5 JOINTS

A. General: Form construction, isolation, and contraction joints and tool edges true to line, with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline unless otherwise indicated.

1. When joining existing paving, place transverse joints to align with previously placed joints unless otherwise indicated.

B. Construction Joints: Set construction joints at side and end terminations of paving and at locations where paving operations are stopped for more than one-half hour unless paving terminates at isolation joints.

C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting driveways, buildings, concrete curbs, catch basins, manholes, inlets, structures, other fixed objects, and where indicated.

1. Locate expansion joints at intervals of [**50 feet (15.25 m)**]<**Insert dimension**> unless otherwise indicated.
2. Extend joint fillers full width and depth of joint.
3. Terminate joint filler not less than **1/2 inch (13 mm)** or more than **1 inch (25 mm)** below finished surface if joint sealant is indicated.
4. Place top of joint filler flush with finished concrete surface if joint sealant is not indicated.

5. Furnish joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together.
6. During concrete placement, protect top edge of joint filler with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.

D. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness, as shown on plans.

1. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut **1/8-inch- (3-mm-)** wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before developing random contraction cracks.
   a. Tolerance: Ensure that sawed joints are within 3 inches (75 mm) either way from centers of dowels.

E. Edging: After initial floating, tool edges of paving, gutters, curbs, and joints in concrete with an edging tool to a 1/4-inch (6-mm) radius. Repeat tooling of edges after applying surface finishes. Eliminate edging-tool marks on concrete surfaces.

3.6 CONCRETE PLACEMENT

A. Before placing concrete, inspect and complete formwork installation, steel reinforcement, and items to be embedded or cast-in.

B. Remove snow, ice, or frost from subbase surface and steel reinforcement before placing concrete. Do not place concrete on frozen surfaces.

C. Moisten subbase to provide a uniform dampened condition at time concrete is placed. Do not place concrete around manholes or other structures until they are at required finish elevation and alignment.

D. Comply with **ACI 301 (ACI 301M)** requirements for measuring, mixing, transporting, and placing concrete.

E. Do not add water to concrete during delivery or at Project site. Do not add water to fresh concrete after testing.

F. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.

G. Consolidate concrete according to **ACI 301 (ACI 301M)** by mechanical vibrating equipment supplemented by hand spading, rodding, or tamping.

1. Consolidate concrete along face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Use only square-faced shovels for hand spreading and consolidation. Consolidate with care to prevent dislocating reinforcement joint devices.

H. Screed paving surface with a straightedge and strike off.

I. Commence initial floating using bull floats or darbies to impart an open-textured and uniform surface plane before excess moisture or bleedwater appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.

3.7 FLOAT FINISHING

A. General: Do not add water to concrete surfaces during finishing operations.

B. Float Finish: Begin the second floating operation when bleedwater sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.

1. Burlap Finish: Drag a seamless strip of damp burlap across float-finished concrete, perpendicular to line of traffic, to provide a uniform, gritty texture.
2. Medium-to-Fine-Textured Broom Finish: Draw a soft-bristle broom across float-finished concrete surface, perpendicular to line of traffic, to provide a uniform, fine-line texture.
3. Medium-to-Coarse-Textured Broom Finish: Provide a coarse finish by striating float-finished concrete surface **1/16 to 1/8 inch (1.6 to 3 mm)** deep with a stiff-bristled broom, perpendicular to line of traffic.
4. ing.

3.8 CONCRETE PROTECTION AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.

B. Comply with ACI 306.1 for cold-weather protection.

C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching **0.2 lb/sq. ft. x h (1 kg/sq. m x h)** before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete but before float finishing.

D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.

E. Curing Methods: Cure concrete by moisture curing, moisture-retaining-cover curing, curing compound or a combination of these as follows:

1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
   a. Water.
   b. Continuous water-fog spray.
   c. Absorptive cover, water saturated and kept continuously wet. Cover concrete surfaces and edges with **12-inch (300-mm)** lap over adjacent absorptive covers.

2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover, placed in widest practicable width, with sides and ends lapped at least **12 inches (300 mm)**, and sealed by waterproof tape or adhesive. Immediately repair any holes or tears occurring during installation or curing period, using cover material and waterproof tape.

3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating, and repair damage during curing period.

3.9 PAVING TOLERANCES

A. Comply with tolerances in **ACI 117 (ACI 117M)** and as follows:

1. Elevation: **3/4 inch (19 mm)**.
2. Thickness: Plus **3/8 inch (10 mm)**, minus **1/4 inch (6 mm)**.
3. Surface: Gap below **10-feet- (3-m-)** long; unleveled straightedge not to exceed **1/2 inch (13 mm)**.
4. Alignment of Tie-Bar End Relative to Line Perpendicular to Paving Edge: **1/2 inch per 12 inches (13 mm per 300 mm)** of tie bar.
5. Lateral Alignment and Spacing of Dowels: **1 inch (25 mm)**.
6. Vertical Alignment of Dowels: **1/4 inch (6 mm)**.
7. Alignment of Dowel-Bar End Relative to Line Perpendicular to Paving Edge: **1/4 inch per 12 inches (6 mm per 300 mm)** of dowel.
8. Joint Spacing: **3 inches (75 mm)**.
9. Contraction Joint Depth: Plus **1/4 inch (6 mm)**, no minus.
10. Joint Width: Plus **1/8 inch (3 mm)**, no minus.

3.10 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.

B. Testing Services: Testing and inspecting of composite samples of fresh concrete obtained according to ASTM C172/C172M will be performed according to the following requirements:

1. Testing Frequency: Obtain at least one composite sample for each 100 cu. yd. (76 cu. m) or fraction thereof of each concrete mixture placed each day.
   a. When frequency of testing will provide 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; 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. Perform additional tests when concrete consistency appears to change.
3. Air Content: ASTM C231/C231M, pressure method; 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; one test hourly when air temperature is **40 deg F (4.4 deg C)** and below and when it is **80 deg F (27 deg C)** and above, and one test for each composite sample.
5. Compression Test Specimens: ASTM C31/C31M; cast and laboratory cure one set of three standard cylinder specimens for each composite sample.
6. Compressive-Strength Tests: ASTM C39/C39M; test one specimen at seven days and two specimens at 28 days.
   a. A compressive-strength test to be the average compressive strength from two specimens obtained from same composite sample and tested at 28 days.

C. Strength of each concrete mixture will be satisfactory if 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)**.

D. Test results to be reported in writing to Architect, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests to contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.

E. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as sole basis for approval or rejection of concrete.

F. Additional Tests: Testing and inspecting agency will 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 Architect.

G. Concrete paving will be considered defective if it does not pass tests and inspections.

H. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

I. Prepare test and inspection reports.

3.11 REPAIR AND PROTECTION

A. Remove and replace concrete paving that is broken, damaged, or defective or that does not comply with requirements in this Section. Remove work in complete sections from joint to joint unless otherwise approved by Architect.

B. Protect concrete paving from damage. Exclude traffic from paving for at least 14 days after placement. When construction traffic is permitted, maintain paving as clean as possible by removing surface stains and spillage of materials as they occur.

C. Maintain concrete paving free of stains, discoloration, dirt, and other foreign material. Sweep paving not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION 32 1313

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SECTION 32 3113 - CHAIN LINK FENCES AND GATES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Chain-link fence framework.
2. Chain-link fence fabric.
3. Chain-link fittings.
4. Chain-link wires and ties.
5. Chain-link swing gates.

B. Related Requirements:

1. Section 03 3000 "Cast-in-Place Concrete" for cast-in-place concrete for post footings.

1.2 ACTION SUBMITTALS

A. Product Data:

1. For each type of product.
   a. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for the following:
   b. Fence and gate posts, rails, and fittings.
   c. Chain-link fabric, reinforcements, gate types, hardware, and attachments.
   d. Gates and hardware.

B. Shop Drawings: For each type of fence and gate assembly.

1. Include plans, elevations, sections, ground details, mounting, post spacing, and attachments to other work.
2. Include accessories, hardware, gate operation, and operational clearances.

C. Samples for Initial Selection: For each type of factory-applied finish.

D. Samples for Verification: For each type of component with factory-applied finish, prepared on Samples of size indicated below:

1. Polymer-Coated Components: In **6-inch (150-mm)** lengths for components and on full-sized units for accessories.

E. Delegated Design Submittal: For structural performance of chain-link fence and gate frameworks, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.3 INFORMATIONAL SUBMITTALS

A. Qualification Data: For professional engineer testing agency factory-authorized service representative.

B. Product Certificates: For each type of chain-link fence, and gate.

C. Product Test Reports: For framework strength in accordance with ASTM F1043, for tests performed by manufacturer and witnessed by a qualified testing agency.

D. Field quality-control reports.

E. Sample Warranty: For special warranty.

1.4 QUALITY ASSURANCE

A. Testing Agency Qualifications: For testing fence grounding; member company of NETA or an NRTL.

1. Testing Agency's Field Supervisor: Certified by NETA to supervise on-site testing.

1.5 FIELD CONDITIONS

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

1.6 WARRANTY

A. Special Warranty: Installer agrees to repair or replace components of fences and gates that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:
   a. Failure to comply with performance requirements.
   b. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
   c. Faulty operation of gate operators and controls.

2. Warranty Period: 15 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 01 4000 "Quality Requirements," to design chain-link fence and gate frameworks.

B. Structural Performance: Chain-link fence and gate frameworks are to withstand the design wind loads and stresses for fence height(s) and under exposure conditions indicated in accordance with ASCE/SEI 7.

1. Design Wind Load: 110 mph .
   a. Minimum Post Size: Determine in accordance with ASTM F1043 for post spacing not to exceed 10 feet (3 m) for Material Group IA, ASTM F1043, Schedule 40 steel pipe.
   b. Minimum Post Size and Maximum Spacing: Determine in accordance with CLFMI WLG 2445, based on mesh size and pattern specified.

C. Lightning Protection System: Maximum resistance-to-ground value of 25 ohms at each grounding location along fence under normal dry conditions.

D. Accessibility: Pedestrian gates to comply with the United States Access Board's ADA-ABA Accessibility Guidelines.

2.2 CHAIN-LINK FENCES, GENERAL

A. CLFMI Publications: Comply with the CLFMI Product Manual unless modified by requirements in the Contract Documents.

B. Chain-Link Fence and Gate Assemblies: Include materials applicable for a complete assembly of application types, consisting of commercial, industrial, and security chain-link fences and gates.

1. Source Limitations: Obtain chain-link fence and gate components from single source or manufacturer.

2.3 CHAIN-LINK FENCE FRAMEWORK

A. Posts and Rails: ASTM F1043 for framework, including rails, braces, and line; terminal; and corner posts. Provide members with minimum dimensions and wall thicknesses in accordance with ASTM F1043 or ASTM F1083 based on the following:

1. Fence Height: As indicated on Drawings.
2. Heavy-Industrial-Strength Material: Group IA, round steel pipe, Schedule 40.
   a. Line Post: 2.375 inches (60 mm) in diameter.
   b. End, Corner, and Pull Posts: 2.875 inches (73 mm) in diameter.

3. Horizontal Framework Members: top and bottom rails in accordance with ASTM F1043.
   a. Top Rail: 1.66 inches (42 mm) in diameter.

4. Metallic Coating for Steel Framework:
   a. Type A: Not less than minimum **2.0 oz./sq. ft. (0.61 kg/sq. m)** average zinc coating in accordance with ASTM A123/A123M or **4.0 oz./sq. ft. (1.22 kg/sq. m)** zinc coating in accordance with ASTM A653/A653M.
   b. Type B: Zinc with organic overcoat, consisting of a minimum of **0.9 oz./sq. ft. (0.27 kg/sq. m)** of zinc after welding, a chromate conversion coating, and a clear, verifiable polymer film.
   c. External, Type B: Zinc with organic overcoat, consisting of a minimum of **0.9 oz./sq. ft. (0.27 kg/sq. m)** of zinc after welding, a chromate conversion coating, and a clear, verifiable polymer film. Internal, Type D, consisting of 81 percent, not less than **0.3-mil-(0.0076-mm-)** thick, zinc-pigmented coating.

d. Type C: Zn-5-Al-MM alloy, consisting of not less than **1.8 oz./sq. ft. (0.55 kg/sq. m)** coating.
e. Coatings: Any coating above.

5. Polymer coating over metallic coating.
   a. Color: Black, in accordance with ASTM F934.

2.4 CHAIN-LINK FENCE FABRIC

A. General: Provide fabric in one-piece heights measured between top and bottom of outer edge of selvage knuckle or twist in accordance with "CLFMI Product Manual" and requirements indicated below:

1. Fabric Height: As indicated on Drawings.
2. Steel Wire for Fabric: Wire diameter of 0.192 inch (4.88 mm).
   a. Mesh Size: 2 inches (50 mm).
   b. Zinc-Coated Fabric: ASTM A392, Type II, Class 1, 1.2 oz./sq. ft. (366 g/sq. m) with zinc coating applied before weaving.
   c. Polymer-Coated Fabric: ASTM F668, Class 2a over zinc -coated steel wire.
      1) Color: Black, in accordance with ASTM F934.
   d. Coat selvage ends of metallic-coated fabric before the weaving process with manufacturer's standard clear protective coating.

3. Selvage: Knuckled at both selvages.

2.5 CHAIN-LINK FITTINGS

A. Provide fittings in accordance with ASTM F626.

B. Post Caps: Provide for each post.

1. Provide line post caps with loop to receive tension wire or top rail.

C. Rail and Brace Ends: For each gate, corner, pull, and end post.

D. Rail Fittings: Provide the following:

1. Top Rail Sleeves: Pressed-steel or round-steel tubing not less than **6 inches (152 mm)** long.
2. Rail Clamps: Line and corner boulevard clamps for connecting intermediate and bottom rails to posts.

E. Tension and Brace Bands: Pressed steel.

F. Tension Bars: Steel, length not less than **2 inches (50 mm)** shorter than full height of chain-link fabric. Provide one bar for each gate and end post, and two for each corner and pull post, unless fabric is integrally woven into post.

G. Truss Rod Assemblies: Steel, hot-dip galvanized after threading rod and turnbuckle or other means of adjustment.

H. Tie Wires, Clips, and Fasteners: In accordance with ASTM F626.

1. Standard Round Wire Ties: For attaching chain-link fabric to posts, rails, and frames, in accordance with the following:
   a. Hot-Dip Galvanized Steel: 0.106-inch- (2.69-mm-) diameter wire; galvanized coating thickness matching coating thickness of chain-link fence fabric.
   b. Aluminum: ASTM B211/B211M; Alloy 1350-H19; 0.192-inch- (4.88-mm-) diameter, mill-finished wire.

I. Finish:

1. Metallic Coating for Pressed Steel or Cast Iron: Not less than **1.2 oz./sq. ft. (366 g/sq. m)** of zinc.
   a. Polymer coating over metallic coating.

2. Aluminum: Mill finish.

2.6 CHAIN-LINK SWING GATES

A. General: ASTM F900 for gate posts and single and double swing gate types.

1. Gate Leaf Width: As indicated on drawings.
2. Framework Member Sizes and Strength: Based on gate fabric height as indicated on drawings.

B. Swing Gate Pipe and Tubing:

1. Swing Gate Posts: Round tubular steel.
2. Gate Frames and Bracing: Round tubular steel.
3. Zinc-Coated Steel: ASTM F1043 and ASTM F1083; protective coating and finish to match fence framework.
4. Aluminum: ASTM B429/B429M; manufacturer's standard finish.

C. Swing Frame Corner Construction: assembled with corner fittings.

D. Swing Gate Hardware:

1. Hinges: 180-degree outward swing.
2. Latch: Permitting operation from both sides of gate.
3. Panic bar kit: DAC Industries Deluxe Exit Bar Kit D-6040 or approved equal.
   a. 12” shield
   b. Black
   c. Keyed external lock box, black

4. Knox Padlock: provide long shackle exterior Knox Padlock marked for “Fire” model #3781
5. .

2.7 ACCESSORIES

A. Touch-up Paint: Liquid polymer for field coating with polymer coated fencing components as recommended by manufacturer.

2.8 GROUT AND ANCHORING CEMENT

A. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C1107/C1107M. Provide grout, recommended in writing by manufacturer, for exterior applications.

B. Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with water at Project site to create pourable anchoring, patching, and grouting compound. Provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating, and that is recommended in writing by manufacturer for exterior applications.

2.9 CONCRETE

A. Concrete Post Footings: Minimum 28-day compressive strength of **2500 psi (17.2 MPa)**.

2.10 GROUNDING MATERIALS

A. Comply with requirements in Section 26 0526 "Grounding and Bonding for Electrical Systems."

B. Connectors and Grounding Rods: Listed and labeled for complying with UL 467.

1. Connectors for Below-Grade Use: Exothermic welded type.
2. Grounding Rods: Copper-clad steel, **5/8 by 96 inches (16 by 2440 mm)**.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for a certified survey of property lines and legal boundaries, site clearing, earthwork, pavement work, and other conditions affecting performance of the Work.

1. Do not begin installation before final grading is completed unless otherwise permitted by Architect.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of **500 feet (152 m)** or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.

3.3 INSTALLATION OF CHAIN-LINK FENCES

A. Install chain-link fencing in accordance with ASTM F567 and more stringent requirements specified.

1. Install fencing on established boundary lines inside property line.

B. Post Excavation: Drill or hand-excavate holes for posts to diameters and spacings indicated, in firm, undisturbed soil.

C. Post Setting: Set posts in concrete at indicated spacing into firm, undisturbed soil.

1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.
2. Concrete Fill: Place concrete around posts to dimensions indicated and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.
   a. Concealed Concrete: Place top of concrete below grade as indicated on Drawingsto allow covering with surface material.

D. Terminal Posts: Install terminal end, corner, and gate posts in accordance with ASTM F567 and terminal pull posts at changes in horizontal or vertical alignment of 15 degrees or more. For runs exceeding **500 feet (152 m)**, space pull posts an equal distance between corner or end posts.

E. Line Posts: Space line posts uniformly at 96 inches (2440 mm) o.c.

F. Post Bracing and Intermediate Rails: Install in accordance with ASTM F567, maintaining plumb position and alignment of fence posts. Diagonally brace terminal posts to adjacent line posts with truss rods and turnbuckles. Install braces at end and gate posts and at both sides of corner and pull posts.

1. Locate horizontal braces at midheight of fabric **72 inches (1830 mm)** or higher, on fences with top rail, and at two-third fabric height on fences without top rail. Install so posts are plumb when diagonal rod is under proper tension.

G. Top Rail: Install in accordance with ASTM F567, maintaining plumb position and alignment of fence posts. Run rail continuously through line post caps, bending to radius for curved runs and terminating into rail end attached to posts or post caps fabricated to receive rail at terminal posts. Provide expansion couplings as recommended in writing by fencing manufacturer.

H. Intermediate and Bottom Rails: Secure to posts with fittings.

I. Chain-Link Fabric: Apply fabric to outside of enclosing framework. Leave 1-inch (25-mm) bottom clearance between finish grade or surface and bottom selvage unless otherwise indicated. Pull fabric taut and tie to posts, rails, and tension wires. Anchor to framework so fabric remains under tension after pulling force is released.

J. Tension or Stretcher Bars: Thread through fabric and secure to end, corner, pull, and gate posts, with tension bands spaced not more than **15 inches (380 mm)** o.c.

K. Tie Wires: Use wire of proper length to firmly secure fabric to line posts and rails. Attach wire at one end to chain-link fabric, wrap wire around post a minimum of 180 degrees, and attach other end to chain-link fabric in accordance with ASTM F626. Bend ends of wire to minimize hazard to individuals and clothing.

1. Maximum Spacing: Tie fabric to line posts at **12 inches (300 mm)** o.c. and to braces at **24 inches (610 mm)** o.c.

L. Fasteners: Install nuts for tension bands and carriage bolts on the side of fence opposite the fabric side. Peen ends of bolts or score threads to prevent removal of nuts.

3.4 INSTALLATION OF GATES

A. Install gates in accordance with manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach fabric as for fencing. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation.

3.5 GROUNDING AND BONDING

A. Comply with requirements in Section 26 0526 "Grounding and Bonding for Electrical Systems."

B. Fence and Gate Grounding:

1. Ground for fence and fence posts is to be a separate system from ground for gate and gate posts.
2. Install ground rods and connections at maximum intervals of 1500 feet (450 m).
3. Fences within 100 ft. (30 m) of Buildings, Structures, Walkways, and Roadways: Ground at maximum intervals of 750 ft. (225 m).
4. Ground fence on each side of gates and other fence openings.
   a. Bond metal gates to gate posts.
   b. Bond across openings, with and without gates, except openings indicated as intentional fence discontinuities. Use No. 2 AWG wire and bury it at least **18 inches (457 mm)** below finished grade.

C. Protection at Crossings of Overhead Electrical Power Lines: Ground fence at location of crossing and at a ground rod located a maximum distance of **150 feet (45 m)** on each side of crossing.

D. Fences Enclosing Electrical Power Distribution Equipment: Ground in accordance with IEEE C2 unless otherwise indicated.

E. Grounding Method: At each grounding location, drive a grounding rod vertically until the top is **6 inches (152 mm)** below finished grade. Connect rod to fence with No. 6 AWG conductor. Connect conductor to each fence component at grounding location.

1. Make grounding connections to each barbed wire strand with wire-to-wire connectors designed for this purpose.
2. Make grounding connections to each barbed tape coil with connectors designed for this purpose.

F. Connections:

1. Make connections with clean, bare metal at points of contact.
2. Make aluminum-to-steel connections with stainless steel separators and mechanical clamps.
3. Make aluminum-to-galvanized-steel connections with tin-plated copper jumpers and mechanical clamps.
4. Make above-grade ground connections with mechanical fasteners.
5. Make below-grade ground connections with exothermic welds.
6. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.

G. Bonding to Lightning Protection System: Ground fence and bond fence grounding conductor to lightning protection down conductor or lightning protection grounding conductor in accordance with NFPA 780.

3.6 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified testing agency to perform tests.

B. Prepare test reports.

3.7 ADJUSTING

A. Gates: Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.

B. Lubricate hardware and other moving parts.

3.8 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain chain-link fences and gates.

END OF SECTION 32 3113

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SECTION 32 3300 - SITE FURNISHINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Tables.
2. ADA Table.
3. Terraced Seating.
4. Trash Receptacles.
5. Stool Seat.

B. Related Requirements:

1. Section 31 2000 "Earth Moving" for excavation for installing concrete footings.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For each exposed product and for each color and texture specified.

C. Samples for Initial Selection: For units with factory-applied finishes.

1.3 CLOSEOUT SUBMITTALS

A. Maintenance Data: For site furnishings to include in maintenance manuals.

PART 2 - PRODUCTS

2.1 TABLES

A. Basis-of-Design Product: Subject to compliance with requirements, provide Landscape Forms; Mingle 4-Seat Table, Catena Table Top Style, Backed Seat, Without Umbrella Hole, Surface Mount or comparable product.

B. Finish and color: As selected by Architect from manufacturer's full range.

2.2 ADA TABLES

A. Basis-of-Design Product: Subject to compliance with requirements, provide Landscape Forms; Mingle 3-Seat Table, Catena Table Top Style, Backed Seat, Without Umbrella Hole, Surface Mount or comparable product.

B. Finish and color: As selected by Architect from manufacturer's full range.

2.3 TERRACED SEATING

A. Basis-of-Design Product: Subject to compliance with requirements, provide:

1. One (1) Landscape Forms; Parallel 42 Terraced Bench – 30 Degree Right, IPE Woodgrain, Backless, Without Arms, Without Illumination or Power Kit or comparable product.
2. One (1) Landscape Forms; Parallel 42 Terraced Bench – 30 Degree Narrow Front Wedge, IPE Woodgrain, Backless, Without Arms, Without Illumination or Power Kit or comparable product.
3. One (1) Landscape Forms; Parallel 42 Terraced Bench – 30 Degree Wide Front Wedge, IPE Woodgrain, Backless, Without Arms, Without Illumination or Power Kit or comparable product.

B. Finish and color: As selected by Architect from manufacturer's full range.

2.4 TRASH RECEPTACLES

A. Basis-of-Design Product: Subject to compliance with requirements, provide Landscape Forms; Chase Park Litter, Side Opening, No Logo Band or comparable product.

B. Finish and color: As selected by Architect from manufacturer's full range.

2.5 STOOL SEAT

A. Basis-of-Design Product: Subject to compliance with requirements, provide Landscape Forms; Soc Monobloc, Style 60, 60cm/23.5” Diameter, Grey Concrete Color or comparable product.

2.6 MATERIALS

A. Aluminum: Alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated; free of surface blemishes and complying with the following:

1. Rolled or Cold-Finished Bars, Rods, and Wire: **ASTM B211 (ASTM B211M)**.
2. Extruded Bars, Rods, Wire, Profiles, and Tubes: **ASTM B221 (ASTM B221M)**.
3. Structural Pipe and Tube: ASTM B429/B429M.
4. Sheet and Plate: **ASTM B209 (ASTM B209M)**.
5. Castings: ASTM B26/B26M.

B. Steel and Iron: Free of surface blemishes and complying with the following:

1. Plates, Shapes, and Bars: ASTM A36/A36M.

2. Steel Pipe: Standard-weight steel pipe complying with ASTM A53/A53M, or electric-resistance-welded pipe complying with ASTM A135/A135M.
3. Tubing: Cold-formed steel tubing complying with ASTM A500/A500M.
4. Mechanical Tubing: Cold-rolled, electric-resistance-welded carbon or alloy steel tubing complying with ASTM A513/A513M, or steel tubing fabricated from steel complying with ASTM A1011/A1011M and complying with dimensional tolerances in ASTM A500/A500M; zinc coated internally and externally.
5. Sheet: Commercial steel sheet complying with ASTM A1011/A1011M.
6. Expanded Metal: Carbon-steel sheets, deburred after expansion, and complying with ASTM F1267.
7. Malleable-Iron Castings: ASTM A47/A47M, grade as recommended by fabricator for type of use intended.
8. Gray-Iron Castings: ASTM A48/A48M, Class 200.

C. Stainless Steel: Free of surface blemishes and complying with the following:

1. Sheet, Strip, Plate, and Flat Bars: ASTM A240/A240M or ASTM A666.
2. Pipe: Schedule 40 steel pipe complying with ASTM A312/A312M.
3. Tubing: ASTM A554.

D. Plastic: Color impregnated, color and UV-light stabilized, and mold resistant.

1. Polyethylene: Fabricated from virgin plastic HDPE resin.

E. Anchors, Fasteners, Fittings, and Hardware: Stainless steel; commercial quality, tamperproof, vandal and theft resistant , concealed, recessed, and capped or plugged.

1. Angle Anchors: For inconspicuously bolting legs of site furnishings to on -grade substrate; one per leg.
2. Antitheft Hold-Down Brackets: For securing site furnishings to substrate; two per unit.

F. Nonshrink, Nonmetallic Grout: Premixed, factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C1107/C1107M; recommended in writing by manufacturer, for exterior applications.

G. Erosion-Resistant Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with potable water at Project site to create pourable anchoring, patching, and grouting compound; resistant to erosion from water exposure without needing protection by a sealer or waterproof coating; recommended in writing by manufacturer, for exterior applications.

H. Galvanizing: Where indicated for steel and iron components, provide the following protective zinc coating applied to components after fabrication:

1. Zinc-Coated Tubing: External, zinc with organic overcoat, consisting of a minimum of **0.9 oz./sq. ft. (0.27 kg/sq. m)** of zinc after welding, a chromate conversion coating, and a clear, polymer film. Internal, same as external or consisting of 81 percent zinc pigmented coating, not less than **0.3 mil (0.0076 mm)** thick.
2. Hot-Dip Galvanizing: According to ASTM A123/A123M, ASTM A153/A153M, or ASTM A924/A924M.

2.7 FABRICATION

A. Metal Components: Form to required shapes and sizes with true, consistent curves, lines, and angles. Separate metals from dissimilar materials to prevent electrolytic action.

B. Welded Connections: Weld connections continuously. Weld solid members with full-length, full-penetration welds and hollow members with full-circumference welds. At exposed connections, finish surfaces smooth and blended, so no roughness or unevenness shows after finishing and welded surface matches contours of adjoining surfaces.

C. Pipes and Tubes: Form simple and compound curves by bending members in jigs to produce uniform curvature for each repetitive configuration required; maintain cylindrical cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of handrail and railing components.

D. Exposed Surfaces: Polished, sanded, or otherwise finished; all surfaces smooth, free of burrs, barbs, splinters, and sharpness; all edges and ends rolled, rounded, or capped.

E. Factory Assembly: Factory assemble components to greatest extent possible to minimize field assembly. Clearly mark units for assembly in the field.

2.8 GENERAL FINISH REQUIREMENTS

A. Appearance of Finished Work: Noticeable variations in same piece are unacceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.9 ALUMINUM FINISHES

A. Powder-Coat Finish: Manufacturer's standard polyester powder-coat finish complying with finish manufacturer's written instructions for surface preparation, including pretreatment, application, baking, and minimum dry film thickness.

2.10 STEEL AND GALVANIZED-STEEL FINISHES

A. Powder-Coat Finish: Manufacturer's standard polyester, powder-coat finish complying with finish manufacturer's written instructions for surface preparation, including pretreatment, application, baking, and minimum dry film thickness.

B. PVC Finish: Manufacturer's standard, UV-light stabilized, mold-resistant, slip-resistant, matte-textured, dipped or sprayed-on, PVC-plastisol finish, with flame retardant added; complying with coating manufacturer's written instructions for pretreatment, application, and minimum dry film thickness.

2.11 IRON FINISHES

A. Powder-Coat Finish: Manufacturer's standard polyester powder-coat finish complying with finish manufacturer's written instructions for surface preparation, including pretreatment, application, baking, and minimum dry film thickness.

2.12 STAINLESS STEEL FINISHES

A. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.

B. Polished Finishes: Grind and polish surfaces to produce uniform finish, free of cross scratches.

1. Run directional finishes with long dimension of each piece.
2. Directional Satin Finish: ASTM A480/A480M, No 4.
3. Dull Satin Finish: ASTM A480/A480M, No. 6.

EXECUTION

2.13 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for correct and level finished grade, mounting surfaces, installation tolerances, and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

2.14 INSTALLATION

A. Comply with manufacturer's written installation instructions unless more stringent requirements are indicated. Complete field assembly of site furnishings where required.

B. Unless otherwise indicated, install site furnishings after landscaping and paving have been completed.

C. Install site furnishings level, plumb, true, and [**securely anchored**][**positioned**] at locations indicated on Drawings.

D. Post Setting: Set cast-in support posts in concrete footing with smooth top, shaped to shed water. Protect portion of posts above footing from concrete splatter. Verify that posts are set plumb or at correct angle and are aligned and at correct height and spacing. Hold posts in position during placement and finishing operations until concrete is sufficiently cured.

E. Posts Set into Voids in Concrete: Form or core-drill holes for installing posts in concrete to depth recommended in writing by manufacturer of site furnishings and **3/4 inch (19 mm)** larger than OD of post. Clean holes of loose material, insert posts, and fill annular space between post and concrete with nonshrink, nonmetallic grout, mixed and placed to comply with anchoring material manufacturer's written instructions, with top smoothed and shaped to shed water.

F. Pipe Sleeves: Use steel pipe sleeves preset and anchored into concrete for installing posts. After posts have been inserted into sleeves, fill annular space between post and sleeve with nonshrink, nonmetallic grout, mixed and placed to comply with anchoring material manufacturer's written instructions, with top smoothed and shaped to shed water.

END OF SECTION 32 3300

SECTION 32 9113 - SOIL PREPARATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes planting soils specified by composition of the mixes.

B. Related Requirements:

1. Section 31 1000 "Site Clearing" for topsoil stripping and stockpiling.
2. Section 32 9200 "Turf and Grasses" for placing planting soil for turf and grasses.
3. Section 32 9300 "Plants" for placing planting soil for plantings.

1.2 DEFINITIONS

A. AAPFCO: Association of American Plant Food Control Officials.

B. Backfill: The earth used to replace or the act of replacing earth in an excavation. This can be amended or unamended soil as indicated.

C. CEC: Cation exchange capacity.

D. Compost: The product resulting from the controlled biological decomposition of organic material that has been sanitized through the generation of heat and stabilized to the point that it is beneficial to plant growth.

E. Duff Layer: A surface layer of soil, typical of forested areas, that is composed of mostly decayed leaves, twigs, and detritus.

F. Imported Soil: Soil that is transported to Project site for use.

G. Layered Soil Assembly: A designed series of planting soils, layered on each other, that together produce an environment for plant growth.

H. Manufactured Soil: Soil produced by blending soils, sand, stabilized organic soil amendments, and other materials to produce planting soil.

I. NAPT: North American Proficiency Testing Program. An SSSA program to assist soil-, plant-, and water-testing laboratories through interlaboratory sample exchanges and statistical evaluation of analytical data.

J. Organic Matter: The total of organic materials in soil exclusive of undecayed plant and animal tissues, their partial decomposition products, and the soil biomass; also called "humus" or "soil organic matter."

K. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified as specified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.

L. RCRA Metals: Hazardous metals identified by the EPA under the Resource Conservation and Recovery Act.

M. SSSA: Soil Science Society of America.

N. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

O. Subsoil: Soil beneath the level of subgrade; soil beneath the topsoil layers of a naturally occurring soil profile, typified by less than 1 percent organic matter and few soil organisms.

P. Surface Soil: Soil that is present at the top layer of the existing soil profile. In undisturbed areas, surface soil is typically called "topsoil"; but in disturbed areas such as urban environments, the surface soil can be subsoil.

Q. USCC: U.S. Composting Council.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include recommendations for application and use.
2. Include test data substantiating that products comply with requirements.
3. Include sieve analyses for aggregate materials.
4. Material Certificates: For each type of imported soil and soil amendment and fertilizer before delivery to the site, according to the following:
    a. Manufacturer's qualified testing agency's certified analysis of standard products.
    b. Analysis of fertilizers, by a qualified testing agency, made according to AAPFCO methods for testing and labeling and according to AAPFCO's SUIP #25.
    c. Analysis of nonstandard materials, by a qualified testing agency, made according to SSSA methods, where applicable.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For each testing agency.

B. Field quality-control reports.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and compliance with state and Federal laws if applicable.

B. Bulk Materials:

1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.

2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
3. Do not move or handle materials when they are wet or frozen.
4. Accompany each delivery of bulk fertilizers and soil amendments with appropriate certificates.

PART 2 - PRODUCTS

2.1 PLANTING SOILS SPECIFIED BY COMPOSITION

A. General: Soil amendments, fertilizers, and rates of application specified in this article are guidelines that may need revision based on testing laboratory's recommendations after preconstruction soil analyses are performed.

B. Planting-Soil: Existing, on-site surface soil, with the duff layer, if any, retained; and stockpiled on-site; modified to produce viable planting soil. Blend existing, on-site surface soil with the following soil amendments and fertilizers in the following quantities to produce planting soil:

1. Ratio of Loose Compost to Soil: 1:3 by volume.

2.2 ORGANIC SOIL AMENDMENTS

A. Compost: Well-composted, stable, and weed-free organic matter produced by composting feedstock, and bearing USCC's "Seal of Testing Assurance," and as follows:

1. Reaction: pH of 5.5 to 8.
2. Soluble-Salt Concentration: Less than 4 dS/m.
3. Moisture Content: 35 to 55 percent by weight.
4. Organic-Matter Content: 30 to 40 percent of dry weight.
5. Particle Size: Minimum of 98 percent passing through a 4-inch (100-mm) sieve.

2.3 FERTILIZERS

A. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:

1. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.
2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified testing agency.

PART 3 - EXECUTION

3.1 GENERAL

A. Place planting soil and fertilizers according to requirements in other Specification Sections.

B. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in planting soil.

C. Proceed with placement only after unsatisfactory conditions have been corrected.

3.2 PREPARATION OF UNAMENDED, ON-SITE SOIL BEFORE AMENDING

A. Excavation: Excavate soil from designated area(s) to a depth of 6 inches (150 mm) and stockpile until amended.

B. Unacceptable Materials: Clean soil of concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials that are harmful to plant growth.

C. Unsuitable Materials: Clean soil to contain a maximum of 8 percent by dry weight of stones, roots, plants, sod, clay lumps, and pockets of coarse sand.

3.3 PLACING AND MIXING PLANTING SOIL OVER EXPOSED SUBGRADE

A. General: Apply and mix unamended soil with amendments on-site to produce required planting soil. Do not apply materials or till if existing soil or subgrade is frozen, muddy, or excessively wet.

B. Subgrade Preparation: Till subgrade to a minimum depth of 6 inches (150 mm). Remove stones larger than 1-1/2 inches (38 mm) in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.

1. Apply, add soil amendments, and mix approximately half the thickness of unamended soil over prepared, loosened subgrade according to "Mixing" Paragraph below. Mix thoroughly into top 4 inches (100 mm) of subgrade. Spread remainder of planting soil.

C. Mixing: Spread unamended soil to total depth of 6 inches (150 mm), but not less than required to meet finish grades after mixing with amendments and natural settlement. Do not spread if soil or subgrade is frozen, muddy, or excessively wet.

1. Lifts: Apply and mix unamended soil and amendments in lifts not exceeding 8 inches (200 mm) in loose depth for material compacted by compaction equipment, and not more than 4 inches (100 mm) in loose depth for material compacted by hand-operated tampers.

D. Compaction: Compact each blended lift of planting soil to 75 to 82 percent of maximum Standard Proctor density according to ASTM D698 and tested in-place except where a different compaction value is indicated on Drawings.

E. Finish Grading: Grade planting soil to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

3.4 PLACING MANUFACTURED PLANTING SOIL OVER EXPOSED SUBGRADE

A. General: Apply manufactured soil on-site in its final, blended condition. Do not apply materials or till if existing soil or subgrade is frozen, muddy, or excessively wet.

B. Subgrade Preparation: Till subgrade to a minimum depth of 6 inches (150 mm). Remove stones larger than 1-1/2 inches (38 mm) in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.

1. Apply approximately half the thickness of planting soil over prepared, loosened subgrade. Mix thoroughly into top 2 inches (50 mm) of subgrade. Spread remainder of planting soil.

C. Application: Spread planting soil to total depth of 6 inches (150 mm), but not less than required to meet finish grades after natural settlement. Do not spread if soil or subgrade is frozen, muddy, or excessively wet.

1. Lifts: Apply planting soil in lifts not exceeding 8 inches (200 mm) in loose depth for material compacted by compaction equipment, and not more than 4 inches (100 mm) in loose depth for material compacted by hand-operated tampers.

D. Compaction: Compact each lift of planting soil to 75 to 82 percent of maximum Standard Proctor density according to ASTM D698 except where a different compaction value is indicated on Drawings.

E. Finish Grading: Grade planting soil to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

3.5 BLENDING PLANTING SOIL IN PLACE

A. General: Mix amendments with in-place, unamended soil to produce required planting soil. Do not apply materials or till if existing soil or subgrade is frozen, muddy, or excessively wet.

B. Preparation: Till unamended, existing soil in planting areas to a minimum depth of of 6 inches (150 mm). Remove stones larger than 1-1/2 inches (38 mm) in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.

C. Mixing: Apply soil amendments, except compost, and fertilizer, if required, evenly on surface, and thoroughly blend them into full depth of unamended, in-place soil to produce planting soil.

1. Mix fertilizer with planting soil no more than seven days before planting.

D. Compaction: Compact blended planting soil to 75 to 82 percent of maximum Standard Proctor density according to ASTM D698 except where a different compaction value is indicated on Drawings.

E. Finish Grading: Grade planting soil to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

3.6 APPLYING COMPOST TO SURFACE OF PLANTING SOIL

A. Application: Apply compost component of planting-soil mix to surface of in-place planting soil. Do not apply materials or till if existing soil or subgrade is frozen, muddy, or excessively wet.

B. Finish Grading: Grade surface to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

3.7 PROTECTION

A. Protect areas of in-place soil from additional compaction, disturbance, and contamination. Prohibit the following practices within these areas except as required to perform planting operations:

1. Storage of construction materials, debris, or excavated material.
2. Parking vehicles or equipment.
3. Vehicle traffic.
4. Foot traffic.
5. Erection of sheds or structures.
6. Impoundment of water.
7. Excavation or other digging unless otherwise indicated.

B. If planting soil or subgrade is overcompacted, disturbed, or contaminated by foreign or deleterious materials or liquids, remove the planting soil and contamination; restore the subgrade as directed by Architect and replace contaminated planting soil with new planting soil.

3.8 CLEANING

A. Protect areas adjacent to planting-soil preparation and placement areas from contamination. Keep adjacent paving and construction clean and work area in an orderly condition.

B. Remove surplus soil and waste material including excess subsoil, unsuitable materials, trash, and debris and legally dispose of them off Owner's property unless otherwise indicated.

1. Dispose of excess subsoil and unsuitable materials on-site where directed by Owner.

END OF SECTION 32 9113

SECTION 32 9300 - PLANTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Plant materials.
2. Fertilizers.
3. Mulches.
4. Herbicides and pesticides.
5. Tree-stabilization materials.
6. Landscape edgings.
7. Tree-watering devices.

B. Related Requirements:

1. Section 01 5639 "Temporary Tree and Plant Protection" for protecting, trimming, pruning, repairing, and replacing existing trees to remain that interfere with, or are affected by, execution of the Work.
2. Section 32 9200 "Turf and Grasses" for turf (lawn) and erosion-control materials.

1.2 ALLOWANCES

A. See Section 01 2100 "Allowances" for description of allowances affecting items specified in this Section.

1.3 UNIT PRICES

A. See Section 01 2200 "Unit Prices" for description of unit prices affecting items specified in this Section.

1.4 COORDINATION

A. Coordination with Turf Areas (Lawns): Plant trees, shrubs, and other plants after finish grades are established and before planting turf areas unless otherwise indicated.

1. When planting trees, shrubs, and other plants after planting turf areas, protect turf areas, and promptly repair damage caused by planting operations.

1.5 ACTION SUBMITTALS

A. Product Data:

1. Plant materials.
2. Fertilizers.
3. Mulches.

4. Herbicides and pesticides.
5. Tree-stabilization materials.
6. Landscape edgings.
7. Tree-watering devices.

B. Product Data Submittals: For each product.

1. Plant Materials: Include quantities, sizes, quality, and verified sources for plant materials.

1.6 INFORMATIONAL SUBMITTALS

A. Field Quality-Control Reports: Percolation tests for tree pits. Include the following:

1. Tree identification number matching the plans.
2. Date of test.
3. Time when water was added to tree pit to start percolation test.
4. Time with photo documentation showing increments of testing with water level in tree pit.
5. Identification of tester.

B. Qualification Statements: For landscape Installer. Include list of similar projects completed by Installer demonstrating Installer's capabilities and experience. Include project names, addresses, and year completed, and include names and addresses of owners' contact persons.

C. Product Certificates: For each type of manufactured product, from manufacturer, and complying with manufacturer's certified analysis of standard products.

D. Pesticides and Herbicides: Product label and manufacturer's written application instructions specific to Project.

E. Sample Warranty: For special warranty.

1.7 CLOSEOUT SUBMITTALS

A. Maintenance Data: Recommended procedures to be established by Owner for maintenance of plants during a calendar year. Submit before expiration of required maintenance periods.

1.8 QUALITY ASSURANCE

A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful establishment of plants.

1. Professional Membership: Member in good standing of either the National Association of Landscape Professionals or AmericanHort.
2. Experience: Five years' experience in landscape installation in addition to requirements in Section 01 4000 "Quality Requirements."
3. Installer's Field Supervision: Maintain an experienced full-time supervisor on Project site when work is in progress.
4. Pesticide Applicator: State licensed, commercial.

B. Provide quality, size, genus, species, and variety of plants indicated, complying with applicable requirements in ANSI Z60.1.

1. Selection of plants purchased under allowances is made by Architect, who tags plants at their place of growth before they are prepared for transplanting.

C. Measurements: Measure in accordance with ANSI Z60.1. Do not prune to obtain required sizes.

1. Trees and Shrubs: Measure with branches and trunks or canes in their normal position. Take height measurements from or near the top of the root flare for field-grown stock and container-grown stock. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip to tip. Take caliper measurements **6 inches (150 mm)** above the root flare for trees up to **4-inch (100-mm)** caliper size, and **12 inches (300 mm)** above the root flare for larger sizes.
2. Other Plants: Measure with stems, petioles, and foliage in their normal position.

D. Plant Material Observation: Architect may observe plant material either at place of growth or at site before planting for compliance with requirements for genus, species, variety, cultivar, size, and quality. Architect may also observe trees and shrubs further for size and condition of balls and root systems, pests, disease symptoms, injuries, and latent defects and may reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site.

1. Notify Architect of sources of planting materials seven days in advance of delivery to site.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws if applicable.

B. Bulk Materials:

1. Do not dump or store bulk materials near structures, utilities, or walkways and pavements; or on existing turf areas or plants.
2. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
3. Accompany each delivery of bulk materials with appropriate certificates.

C. Deliver bare-root stock plants within 24 hours of digging. Immediately after digging up bare-root stock, pack root system in wet straw, hay, or other suitable material to keep root system moist until planting. Transport in covered, temperature-controlled vehicles, and keep plants cool and protected from sun and wind at all times.

D. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, wind burn, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during shipping and delivery. Do not drop plants during delivery and handling.

E. Handle planting stock by root ball.

F. Apply antidesiccant to trees and shrubs using power spray to provide an adequate film over trunks (before wrapping), branches, stems, twigs, and foliage to protect during digging, handling, and transportation.

1. If deciduous trees or shrubs are moved in full leaf, spray with antidesiccant at nursery before moving and again two weeks after planting.

G. Wrap trees and shrubs with burlap fabric over trunks, branches, stems, twigs, and foliage to protect from wind and other damage during digging, handling, and transportation.

H. Deliver plants after preparations for planting have been completed, and install immediately. If planting is delayed more than six hours after delivery, set plants and trees in their appropriate aspect (sun, filtered sun, or shade), protect from weather and mechanical damage, and keep roots moist.

1. Heel-in bare-root stock. Soak roots that are in less than moist condition in water for two hours. Reject plants with dry roots.
2. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
3. Do not remove container-grown stock from containers before time of planting.
4. Water root systems of plants stored on-site deeply and thoroughly with a fine-mist spray. Water as often as necessary to maintain root systems in a moist, but not overly wet condition.

1.10 FIELD CONDITIONS

A. Field Measurements: Verify actual grade elevations, service and utility locations, irrigation system components, and dimensions of plantings and construction contiguous with new plantings by field measurements before proceeding with planting work.

B. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.

1. Spring Planting: April 15 – June 15.
2. Fall Planting: August 10 – October 10.

C. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions in accordance with manufacturer's written instructions and warranty requirements.

1.11 WARRANTY

A. Special Warranty: Installer agrees to repair or replace plantings and accessories that fail in materials, workmanship, or growth within specified warranty period.

1. Failures include, but are not limited to, the following:
   a. Death and unsatisfactory growth, except for defects resulting from abuse, lack of adequate maintenance, or neglect by Owner.
   b. Structural failures, including plantings falling or blowing over.
   c. Faulty performance of tree stabilization and edgings.
   d. Deterioration of metals, metal finishes, and other materials beyond normal weathering.

2. Warranty Periods: From date of planting completion.
   a. Trees, Shrubs, Vines, and Ornamental Grasses: 12 months.
   b. Ground Covers, Biennials, Perennials, and Other Plants: 12 months.

3. Include the following remedial actions as a minimum:
   a. Immediately remove dead plants and replace unless required to plant in the succeeding planting season.
   b. Replace plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period.
   c. A limit of one replacement of each plant is required except for losses or replacements due to failure to comply with requirements.
   d. Provide extended warranty for period equal to original warranty period, for replaced plant material.

PART 2 - PRODUCTS

2.1 PLANT MATERIALS

A. General: Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Plant List, Plant Schedule, or Plant Legend indicated on Drawings and complying with ANSI Z60.1; and with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and free of disease, pests, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.

1. Trees with damaged, crooked, or multiple leaders; with tight vertical branches where bark is squeezed between two branches or between branch and trunk ("included bark"); with crossing trunks; with cut-off limbs more than **3/4 inch (19 mm)** in diameter; or with stem girdling roots are unacceptable.
2. Collected Stock: Do not use plants harvested from the wild, from native stands, from an established landscape planting, or not grown in a nursery unless otherwise indicated.

B. Provide plants of sizes, grades, and ball or container sizes complying with ANSI Z60.1 for types and form of plants required. Plants of a larger size may be used if acceptable to Architect, with a proportionate increase in size of roots or balls.

C. Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which begins at root flare in accordance with ANSI Z60.1.

D. Labeling Shrubs, Ornamental Grasses and Perennials: Label at least one plant of each variety, size, and caliper with a securely attached, waterproof tag bearing legible designation of common name and full scientific name, including genus and species. Include nomenclature for hybrid, variety, or cultivar, if applicable for plant.

E. Labeling Trees: Label each plant of each variety, size, and caliper with a securely attached, waterproof tag bearing legible designation of common name and full scientific name, including genus and species. Include nomenclature for hybrid, variety, or cultivar, if applicable for plant.

F. If formal arrangements or consecutive order of plants is indicated on Drawings, select stock for uniform height and spread, and number the labels to ensure symmetry in planting.

2.2 FERTILIZERS

A. Granular Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:

1. Composition:
   a. 0.75 lb/1000 sq. ft. (0.34 kg/92.9 sq. m),) 3 percent of actual nitrogen, 4 percent phosphorous, and 3 percent potassium, by weight.

2.3 MULCHES

A. Organic Mulch: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of one of the following:

1. Type: Shredded hardwood.
2. Size Range: [3 inches (76 mm) maximum, 1/2 inch (13 mm) minimum].
3. Color: Natural.

2.4 HERBICIDES AND PESTICIDES

A. Pre-Emergent Herbicide (Selective and Nonselective): Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer.

B. Post-Emergent Herbicide (Selective and Nonselective): Effective for controlling weed growth that has already germinated.

C. Pesticides: Registered and approved by the EPA, acceptable to authorities having jurisdiction, and of type recommended in writing by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.

2.5 TREE-STABILIZATION MATERIALS

A. Trunk-Stabilization Materials:

1. Upright and Guy Stakes: Rough-sawn, sound, new hardwood, free of knots, holes, cross grain, and other defects, **2-by-2-inch nominal (38-by-38-mm actual)** by length indicated, pointed at one end.
2. Wood Deadmen: Timbers measuring **8 inches (200 mm)** in diameter and **48 inches (1200 mm)** long, treated with specified wood pressure-preservative treatment.
3. Guys and Tie Wires: ASTM A641/A641M, Class 1, galvanized-steel wire, two-strand, twisted, **0.106 inch (2.7 mm)** in diameter.
4. Tree-Tie Webbing: UV-resistant polypropylene or nylon webbing with brass grommets.
5. Flags: Standard surveyor's plastic flagging tape, white, **6 inches (150 mm)** long.

2.6 LANDSCAPE EDGINGS

A. Steel Edging: Standard commercial-steel edging, fabricated in sections of standard lengths, with loops stamped from or welded to face of sections to receive stakes.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   a. Border Concepts, Inc
   b. COLMET
   c. J. D. Russell Company (The)
   d. Sure-loc Edging Corporation.

2. Edging Size: 1/8 inch (3.2 mm) thick by 4 inches (100 mm) deep.
3. Stakes: Tapered steel, a minimum of 15 inches (380 mm) long.
4. Accessories: Standard tapered ends, corners, and splicers.
5. Finish: Manufacturer's standard paint.
   a. Paint Color: Black.

2.7 TREE-WATERING DEVICES

A. Watering Pipe: PVC pipe **4 inches (100 mm)** in diameter, site-cut to length as required, and with snug-fitting removable cap.

B. Slow-Release Watering Device: Standard product manufactured for drip irrigation of plants and emptying its water contents over an extended time period ; manufactured from UV-light-stabilized nylon-reinforced polyethylene sheet, PVC, or HDPE plastic.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   a. BIO-PLEX
   b. Engineered Watering Solutions; PQ Partners, LLC
   c. Spectrum Products, Inc.

2.8 MISCELLANEOUS PRODUCTS

A. Antidesiccant: Water-insoluble emulsion, permeable moisture retarder, film forming, for trees and shrubs. Deliver in original, sealed, and fully labeled containers and mix in accordance with manufacturer's written instructions.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to receive plants, with Installer present, for compliance with requirements and conditions affecting installation and performance of the Work.

1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
2. Verify that plants and vehicles loaded with plants can travel to planting locations with adequate overhead clearance.
3. Suspend planting operations during periods of excessive soil moisture until moisture content reaches acceptable levels to attain required results.
4. Uniformly moisten excessively dry soil that is not workable or which is dusty.

B. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove soil and contamination as directed by Architect and replace with new planting soil.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities and turf areas and existing plants from damage caused by planting operations.

B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

C. Lay out individual tree and shrub locations and areas for multiple plantings. Stake locations, outline areas, adjust locations when requested, and obtain Architect's acceptance of layout before excavating or planting. Make minor adjustments as required.

3.3 PLANTING AREA ESTABLISHMENT

A. General: Prepare planting area for soil placement and mix planting soil in accordance with Section 32 9113 "Soil Preparation."

B. Placing Planting Soil: Place manufactured planting soil over exposed subgrade .

C. Before planting, obtain Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

3.4 EXCAVATION FOR TREES AND SHRUBS

A. Planting Pits and Trenches: Excavate circular planting pits.

1. Excavate planting pits with sides sloping inward at a 45-degree angle. Excavations with vertical sides are unacceptable. Trim perimeter of bottom leaving center area of bottom raised slightly to support root ball and assist in drainage away from center. Do not further disturb base. Ensure that root ball will sit on undisturbed base soil to prevent settling. Scarify sides of planting pit smeared or smoothed during excavation.
2. Excavate approximately three times as wide as ball diameter for balled and burlapped stock.
3. Excavate at least **12 inches (300 mm)** wider than root spread and deep enough to accommodate vertical roots for bare-root stock.

4. Do not excavate deeper than depth of root ball, measured from the root flare to the bottom of root ball.
5. If area under the plant was initially dug too deep, add soil to raise it to correct level and thoroughly tamp the added soil to prevent settling.
6. Maintain angles of repose of adjacent materials to ensure stability. Do not excavate subgrades of adjacent paving, structures, hardscapes, or other new or existing improvements.
7. Maintain supervision of excavations during working hours.
8. Keep excavations covered or otherwise protected when unattended by Installer's personnel.
9. If drain tile is indicated on Drawings or required under planting areas, excavate to top of porous backfill over tile.

B. Backfill Soil: Subsoil and topsoil removed from excavations may be used as backfill soil unless otherwise indicated.

C. Obstructions: Notify Architect if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.

D. Drainage: Notify Architect if subsoil conditions evidence unexpected water seepage or retention in tree or shrub planting pits.

E. Fill excavations with water and allow to percolate away before positioning trees and shrubs.

3.5 TREE, SHRUB, AND VINE PLANTING

A. Inspection: At time of planting, verify that root flare is visible at top of root ball in accordance with ANSI Z60.1. If root flare is not visible, remove soil in a level manner from root ball to where the top-most root emerges from the trunk. After soil removal to expose root flare, verify that root ball still meets size requirements.

B. Roots: Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.

C. Balled and Burlapped Stock: Set each plant plumb and in center of planting pit or trench with root flare 2 inches (50 mm) above adjacent finish grades.

1. Backfill: Planting soil . For trees, use excavated soil for backfill.
2. After placing some backfill around root ball to stabilize plant, carefully cut and remove burlap, rope, and wire baskets from tops of root balls and from sides, but do not remove from under root balls. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.
3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
4. Distribute granular fertilizer around each planting pit when pit is approximately one-half filled. Do not place in bottom of the hole.
   a. Quantity: Per Manufacturer.

5. Continue backfilling process. Water again after placing and tamping final layer of soil.

D. Balled and Potted and Container-Grown Stock: Set each plant plumb and in center of planting pit or trench with root flare 2 inches (50 mm) above adjacent finish grades.

1. Backfill: Planting soil . For trees, use excavated soil for backfill.
2. Carefully remove root ball from container without damaging root ball or plant.
3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
4. Distribute granular fertilizer around each planting pit when pit is approximately one-half filled. Do not place in bottom of the hole.
5. Continue backfilling process. Water again after placing and tamping final layer of soil.

E. Slopes: When planting on slopes, set the plant so the root flare on the uphill side is flush with the surrounding soil on the slope; the edge of root ball on the downhill side will be above the surrounding soil. Apply enough soil to cover the downhill side of root ball.

3.6 TREE, SHRUB, AND VINE PRUNING

A. Remove only dead, dying, or broken branches. Do not prune for shape.

B. Prune, thin, and shape trees, shrubs, and vines as directed by Architect.

C. Prune, thin, and shape trees, shrubs, and vines in accordance with standard professional horticultural and arboricultural practices. Unless otherwise indicated by Architect, do not cut tree leaders; remove only injured, dying, or dead branches from trees and shrubs; and prune to retain natural character.

D. Do not apply pruning paint to wounds.

3.7 INSTALLATION OF TREE-STABILIZATION MATERIALS

A. Trunk Stabilization by Upright Staking and Tying: Install trunk stabilization as follows unless otherwise indicated:

1. Upright Staking and Tying:
   a. Stake trees of **2- through 5-inch (50- through 125-mm)** caliper. Stake trees of less than **2-inch (50-mm)** caliper only as required to prevent wind tip out. Use a minimum of two stakes of length required to penetrate at least **18 inches (450 mm)** below bottom of backfilled excavation and to extend one-third of trunk height above grade. Set vertical stakes and space to avoid penetrating root balls or root masses.
   b. Stake trees with two stakes for trees up to **12 ft. (3.6 m)** high and **2-1/2 inches (63 mm)** or less in caliper; three stakes for trees less than **14 ft. (4.2 m)** high and up to **4 inches (100 mm)** in caliper. Space stakes equally around trees.

2. Support trees with bands of flexible ties at contact points with tree trunk. Allow enough slack to avoid rigid restraint of tree.

B. Trunk Stabilization by Staking and Guying: Install trunk stabilization as follows unless otherwise indicated on Drawings. Stake and guy trees more than **14 ft. (4.2 m)** in height and more than **3 inches (75 mm)** in caliper unless otherwise indicated.

1. Site-Fabricated, Staking-and-Guying Method: Install no fewer than three guys spaced equally around tree.
   a. Securely attach guys to stakes **30 inches (760 mm)** long, driven to grade. Adjust spacing to avoid penetrating root balls or root masses. Provide compression spring for each guy wire and tighten securely.
   b. Support trees with bands of flexible ties at contact points with tree trunk and reaching to compression spring. Allow enough slack to avoid rigid restraint of tree.
   c. Attach flags to each guy wire, **30 inches (760 mm)** above finish grade.

2. Proprietary Staking and Guying Device: Install staking and guying system sized and positioned as recommended by manufacturer unless otherwise indicated and in accordance with manufacturer's written instructions.

3.8 GROUND COVER AND PLANT PLANTING

A. Set out and space ground cover and plants other than trees, shrubs, and vines as indicated on Drawings in even rows with triangular spacing.

B. Use planting soil for backfill.

C. Dig holes large enough to allow spreading of roots.

D. For rooted cutting plants supplied in flats, plant each in a manner that minimally disturbs the root system but to depth not less than two nodes.

E. Work soil around roots to eliminate air pockets and leave slight saucer indentation around plants to hold water.

F. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.

G. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

3.9 INSTALLATION OF MULCHES

A. Mulch backfilled surfaces of planting areas and other areas indicated.

1. Trees and Treelike Shrubs in Turf Areas: Apply organic mulch ring of 3-inch (75-mm) average thickness, with 36-inch (900-mm) radius around trunks or stems. Do not create a mulch cone or place mulch within 3 inches (75 mm) of trunks or stems.
2. Organic Mulch in Planting Areas: Apply 3-inch (75-mm) average thickness of organic mulch over whole surface of planting area, and finish level with adjacent finish grades. Do not place mulch within 3 inches (75 mm) of trunks or stems.

3.10 INSTALLATION OF LANDSCAPE EDGINGS

A. Steel Edging: Install steel edging where indicated in accordance with manufacturer's written instructions. Anchor with steel stakes spaced approximately **30 inches (760 mm)** apart, driven below top elevation of edging.

3.11 INSTALLATION OF TREE-WATERING DEVICES

A. Provide one device for each tree.

B. Place device on top of the mulch at base of tree stem and fill with water in accordance with manufacturer's written instructions.

3.12 APPLICATION OF HERBICIDES AND PESTICIDES

A. Pre-Emergent Herbicides (Selective and Nonselective): Apply to tree, shrub, and ground-cover areas in accordance with manufacturer's written instructions. Do not apply to seeded areas.

B. Post-Emergent Herbicides (Selective and Nonselective): Apply only as necessary to treat already-germinated weeds and in accordance with manufacturer's written instructions.

C. Apply pesticides and other chemical products and biological control agents according to authorities having jurisdiction and in accordance with manufacturer's written instructions. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.

3.13 PLANT MAINTENANCE

A. Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, adjusting and repairing tree-stabilization devices, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings.

B. Fill in, as necessary, soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.

C. Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated pest management practices when possible to minimize use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.

3.14 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.

B. Tests and Inspections:

1. Perform tree pit percolation tests.

2. Tree pit construction will be considered defective if it does not pass percolation tests and inspections.
3. Do not proceed with planting in tree pits until satisfactory percolation is demonstrated.

C. Prepare test and inspection reports.

3.15 REPAIR AND REPLACEMENT

A. Repair or replace existing or new trees and other plants that are damaged by construction operations, in a manner approved by Architect.

1. Submit details of proposed pruning and repairs.
2. Perform repairs of damaged trunks, branches, and roots within 24 hours, if approved.
3. Replace trees and other plants that cannot be repaired and restored to full-growth status, as determined by Architect.

B. Remove and replace trees that are more than 25 percent dead or in unhealthy condition before end of corrections period or are damaged during construction operations that Architect determines are incapable of restoring to normal growth pattern.

1. Provide new trees of same size as those being replaced for each tree of 6 inches (150 mm) or smaller in caliper size.
2. Provide one new tree(s) of 4-inch (100-mm) caliper size for each tree being replaced that measures more than 6 inches (150 mm) in caliper size.
3. Species of Replacement Trees: Same species being replaced .

3.16 CLEANING AND PROTECTION

A. During planting, keep adjacent paving and construction clean and work area in an orderly condition. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.

B. Remove surplus soil and waste material including excess subsoil, unsuitable soil, trash, and debris and legally dispose of them off Owner's property.

C. Protect plants from damage due to landscape operations and operations of other contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.

D. After installation and before project closeout, remove nursery tags, nursery stakes, tie tape, labels, wire, burlap, and other debris from plant material, planting areas, and Project site.

E. At time of Substantial Completion, verify that tree-watering devices are in good working order and leave them in place. Replace improperly functioning devices.

END OF SECTION 32 9300

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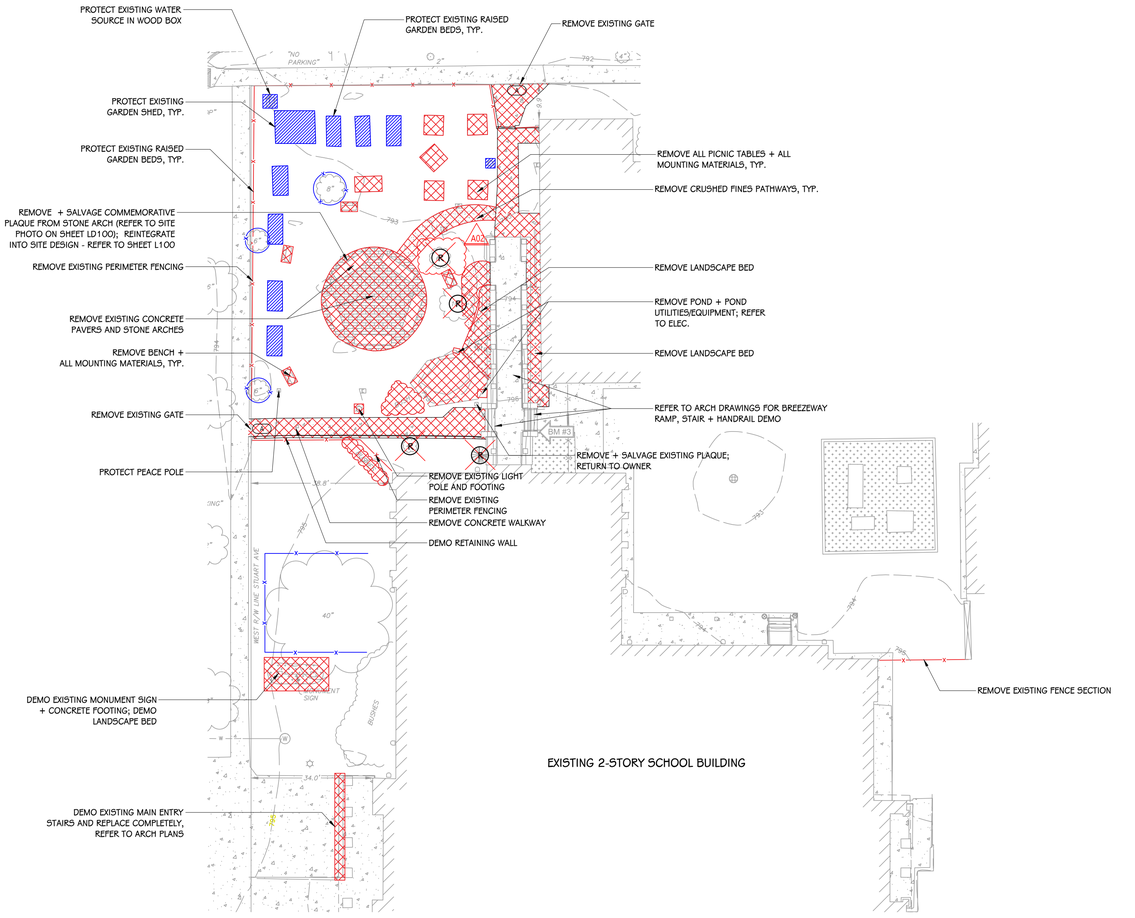


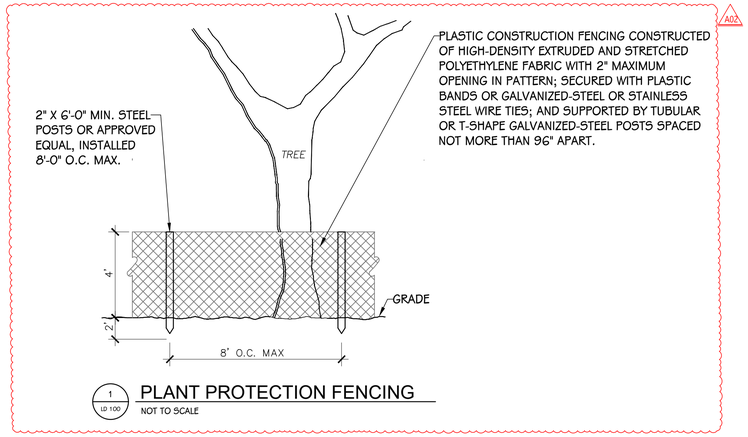
0' 10' 20' 40' 80'

SCALE: 1" =20'

SITE DEMOLITION PLAN

SCALE: 1"=20' @ 24" x 36" FULL SIZE PLOT

NOTE: REFERENCE PHOTO FROM SITE OF COMMEMORATIVE PLAQUE TO SALVAGE



1 / LD 100 PLANT PROTECTION FENCING

NOT TO SCALE

811 3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 FOR FREE LOCATION OF PUBLIC UTILITY LINES

PUBLIC UTILITIES OF ALL TYPES HAVE BEEN SHOWN ON THESE PLANS USING THE INFORMATION AVAILABLE, BUT ARE NOT GUARANTEED AS ACCURATE OR THAT UTILITIES OTHER THAN THOSE SHOWN ARE NOT PRESENT.
CONTRACTOR SHALL CONTACT MISS DIG AT 1-800-482-7171 FOR INFORMATION AND NOTIFY UTILITY COMPANIES THREE WORKING DAYS PRIOR TO COMMENCING WORK.

NOTES - SITE - DEMOLITION

1. THE CONTRACTOR IS CAUTIONED THAT THE LOCATION AND ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE DRAWINGS IS BASED ON AVAILABLE RECORD DRAWINGS AND FIELD SURVEYS AND MAY VARY IN THE RELATION TO ACTUAL EXISTING CONDITIONS; ADDITIONAL UTILITIES NOT SHOWN ON THE DRAWINGS MAY EXIST. THE INFORMATION IS NOT RELIED ON TO BE EXACT OR COMPLETE. VERIFY IN THE FIELD THE DATA SHOWN INCLUDING LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO EXCAVATION, AND CALL ANY DISCREPANCIES TO THE ATTENTION OF THE LANDSCAPE ARCHITECT BEFORE STARTING WORK.
2. CONTACT "MISS DIG" FOR UTILITY LOCATION AND IDENTIFICATION PRIOR TO DEMOLITION OR EXCAVATION. USE PRIVATE UTILITY LOCATOR SERVICE FOR ANY UTILITIES MISS DIG WILL NOT TRACE.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE CITY OF KALAMAZOO AND THE APPROPRIATE UTILITY COMPANY FOR ANY UTILITY SHUT OFF AND/OR DISCONNECTIONS.
4. ALL WORK WITHIN THE RIGHT OF WAY SHALL BE IN ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS OF THE KALAMAZOO COUNTY ROAD COMMISSION. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS.
5. VERIFY THE EXTENT AND LOCATION OF ITEMS TO REMAIN AND ITEMS TO BE REMOVED PRIOR TO THE COMMENCEMENT OF THE WORK.
6. PROTECT ALL BENCHMARKS DURING CONSTRUCTION. ANY BENCHMARKS DISTURBED OR DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.
7. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL EXISTING PAVEMENTS, STRUCTURES AND VEGETATION SCHEDULED TO REMAIN AND ANY DAMAGE SHALL BE REPAIRED BY CONTRACTOR AT NO EXPENSE TO THE OWNER.
8. ANY UTILITIES DISTURBED BY CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
9. REMOVE ITEMS SHOWN ON THE DRAWINGS TO BE REMOVED TO THE FULL DEPTH OF THEIR CONSTRUCTION UNLESS DESIGNATED TO REMAIN.
11. REMOVE AND DISPOSE OF DESIGNATED PAVEMENT IN ITS ENTIRETY, INCLUDING SUB-BASES.
12. ALL PAVEMENTS SHALL BE SAW CUT AT JOINT NEAREST TO PROPOSED IMPROVEMENTS.
13. ITEMS ENCOUNTERED BELOW GRADE THAT ARE NOT SHOWN THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR CLARIFICATION.
14. ALL DEMOLITION DEBRIS SHALL BE REMOVED FROM THE SITE AT THE CONTRACTOR'S EXPENSE.

REFERENCE NOTES - SITE - DEMOLITION

(A) PROTECT EXISTING PAVEMENT(S) DURING CONSTRUCTION. PAVEMENT TO BE MAINTAINED AND INTEGRATED WITH NEW CONSTRUCTION.

LEGEND - SITE - DEMOLITION + PROTECTION

GENERAL REMOVAL

EXISTING SITE ELEMENTS TO BE PROTECTED

NOTES - SITE - PLANT PROTECTION + REMOVAL

1. PLANT SYMBOLS AS INDICATED ON THE DRAWINGS DO NOT REPRESENT ACTUAL DRIP LINES. CONTRACTOR SHALL VERIFY IN FIELD PRIOR TO CONSTRUCTION. PROPOSED PLANT PROTECTION FENCING SHALL BE PLACED OUTSIDE OF EDGE OF ACTUAL DRIP LINES OR A DIRECTED BY LANDSCAPE ARCHITECT IN THE FIELD.
2. PROTECTION FENCING SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION UNLESS OTHERWISE DIRECTED BY LANDSCAPE ARCHITECT. CONTRACTOR SHALL OBTAIN PERMISSION TO ENTER FROM LANDSCAPE ARCHITECT PRIOR TO CONDUCTING WORK WITHIN PLANT PROTECTION ZONES.
3. COORDINATE WITH CITY FORESTER PRIOR TO CONDUCTING ANY TREE REMOVAL OR PRUNING.
4. TREES INDICATED TO BE REMOVED SHALL ALSO INCLUDE COMPLETE REMOVAL OF STUMP AND ROOTS AND FILLING IN DEPRESSION WITH SUITABLE SOIL FILL.

LEGEND - SITE - PLANT PROTECTION + REMOVAL

TREE REMOVAL

TREE PROTECTION - REFER TO DETAIL 1/LD100

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ADDENDUM 02 05/06/2026
ISSUED FOR DATE

PROJECT TITLE
WOODWARD ELEMENTARY CONNECTOR

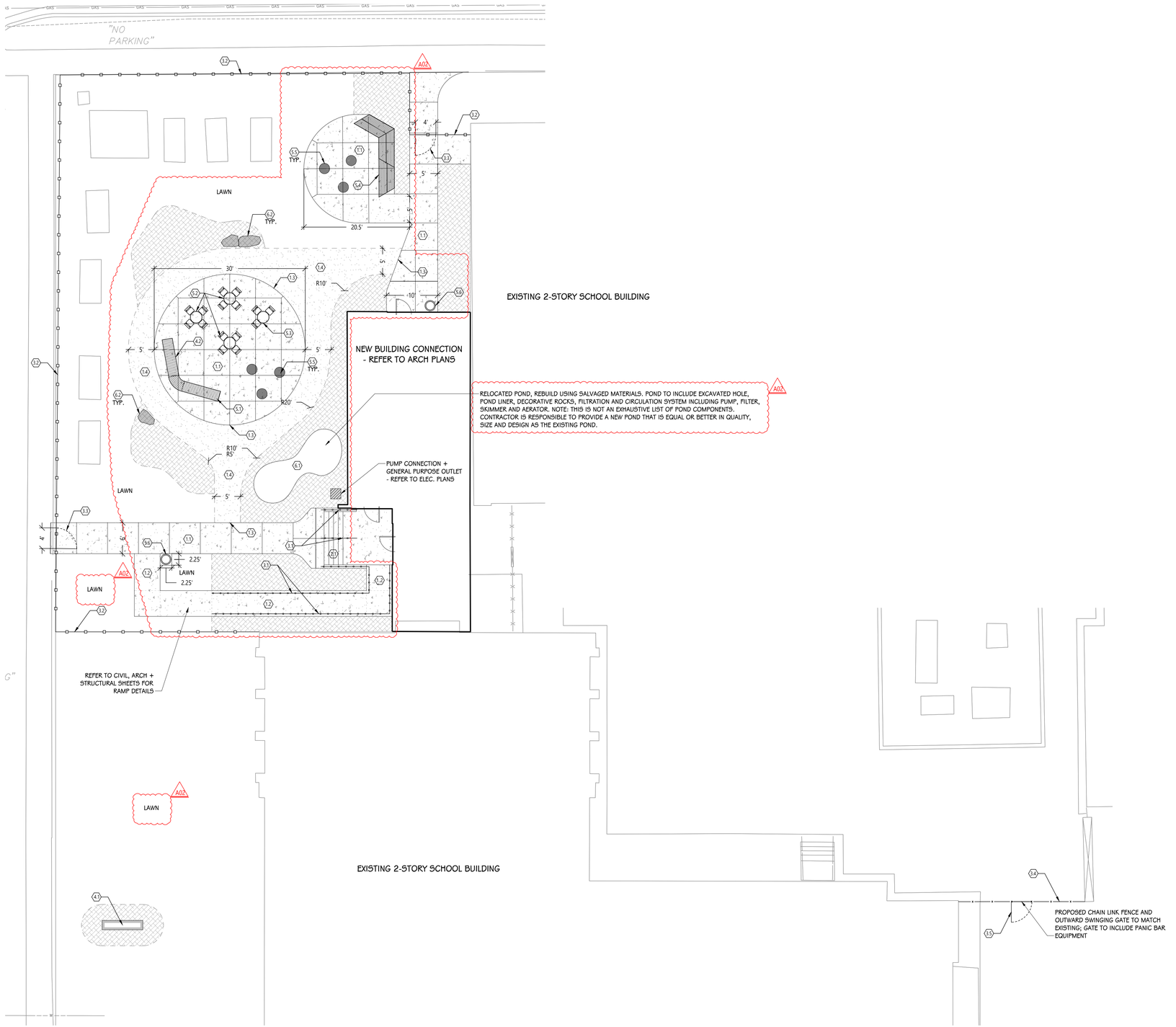
OWNER
KALAMAZOO PUBLIC SCHOOLS

606 STUART AVE
Kalamazoo, MI
49007

SHEET TITLE
SITE DEMOLITION PLAN

DATE
APRIL 3, 2026

SHEET NUMBER
LD 100
23-642.000



OVERALL SITE PLAN
SCALE: 1"=10' @ 24" x 36" FULL SIZE PLOT

NOTES - SITE - GENERAL

1. THE SURVEY FOR THIS PROJECT HAS BEEN REFORMATTED FOR USE IN AND FOR PREPARATION OF THESE DOCUMENTS. CONTRACTORS SHALL OBTAIN OFFICIAL SIGNED COPY AND BECOME FAMILIAR WITH IT, EXISTING CONDITIONS, AND SITE CONTEXT PRIOR TO CONSTRUCTION. SEE PROJECT MANUAL FOR SURVEY COMPANY CONTACT INFORMATION. ANY DISCREPANCIES SHOULD BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER FOR RESOLUTION IMMEDIATELY. THE LANDSCAPE ARCHITECT IS NOT RESPONSIBLE FOR INCONSISTENCIES ASSOCIATED WITH PREPARATION OR DOCUMENTATION OF THE SURVEY.
2. THE GEOTECHNICAL INVESTIGATION AND REPORT FOR THIS PROJECT HAS BEEN REFERENCED DURING PREPARATION OF THESE DOCUMENTS. CONTRACTORS SHALL OBTAIN OFFICIAL SIGNED COPY AND BECOME FAMILIAR WITH IT PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHOULD BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER FOR RESOLUTION IMMEDIATELY. THE LANDSCAPE ARCHITECT IS NOT RESPONSIBLE FOR INCONSISTENCIES WITH PREPARATION OR DOCUMENTATION OF THE REPORT.
3. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING MEANS AND METHODS FOR CONSTRUCTION. THESE DRAWINGS MAY INDICATE A LIMITS OF PROPOSED IMPROVEMENTS, LIMITS OF SITE DEMOLITIONS, ETC., FOR DELINEATION OF EXPECTED EXTENTS OF DISTURBANCE. HOWEVER, FINAL IMPACT SHALL BE DETERMINED IN THE FIELD. SHOULD LIMITS OF DISTURBANCE EXCEED BOUNDARIES DEFINED IN DRAWINGS, THE CONTRACTOR SHALL CONTACT THE THE LANDSCAPE ARCHITECT IMMEDIATELY FOR RESOLUTION.
4. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL WORK DISTURBED BY THE CONSTRUCTION OUTSIDE OF LIMIT LINES DEFINED ON DRAWINGS OR THOUGH HIS/HER MEANS AND METHODS TO CONDITION BETTER THAN OR EQUAL TO THE EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
5. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, OR FEDERAL REGULATIONS, REQUIREMENTS, ORDINANCES, AND CODES.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL NECESSARY PERMITS FOR WORK INCLUDING BUT NOT LIMITED TO THOSE REQUIRED FOR WORK IN ROW AND ON ANY UTILITY CONNECTIONS OR ABANDONMENT PRIOR TO THE START OF CONSTRUCTION.
7. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING ALL TRAFFIC CONTROL INCLUDING SIGNAGE, BARRIERS, FLAG PERSONNEL AND ANY ADDITIONAL REQUIREMENTS OF THE LOCAL ROAD COMMISSION OR MUNICIPALITY. CONTRACTOR SHALL FOLLOW MOST RECENT EDITION OF MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

NOTES - SITE - LAYOUT

1. LAYOUT AND VERIFY DIMENSIONS PRIOR TO CONSTRUCTION. BRING DISCREPANCIES TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR CLARIFICATION.
2. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALE.
3. WHERE DIMENSIONS ARE CALLED AS "EQUAL" SPACE REFERENCE ITEMS EQUALLY, MEASURED TO THEIR CENTER LINES.
4. MEASUREMENTS ARE TO BACK OF CURB, EDGE OR PAVEMENT, FACE OF BUILDING, WALL OR THE FIXED SITE IMPROVEMENT UNLESS OTHERWISE NOTED. DIMENSIONS TO CENTER LINES ARE INDICATED.
5. ALL RADII ARE 5' UNLESS OTHERWISE NOTED.
6. INSTALL INTERSECTING ELEMENTS AT 90 DEGREE ANGLES TO EACH OTHER UNLESS OTHERWISE NOTED.
7. PROVIDE EXPANSION JOINTS WHERE CONCRETE FLATWORK MEETS VERTICAL STRUCTURES SUCH AS WELLS, CURBS, STEPS AND BUILDING ELEMENTS AND AS INDICATED ON THE DRAWINGS AND SPECIFICATIONS.
8. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHOULD BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER FOR RESOLUTION IMMEDIATELY.
9. ALL TRAFFIC SIGNAGE MUST COMPLY WITH MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES STANDARD SHAPES AND SIZES.
10. ALL BARRIER FREE PARKING SIGNAGE SHALL BE PER MOST RECENT VERSION OF MICHIGAN BARRIER FREE CODE.

LEGEND - SITE - LAYOUT + MATERIALS

- CONCRETE PAVING
- CRUSHED FINES
- LANDSCAPE BED - REFER TO SHEET L300
- GATE
- HANDRAIL
- 4' DECORATIVE FENCE
- 7' CHAIN LINK FENCE
- CONTROL JOINT
- EXPANSION JOINT
- GRADE BREAK

(A02)

KEYNOTES - SITE - LAYOUT

(1.0) PAVEMENTS, RAMPS
- 1.1 CONCRETE PAVEMENT TYPE 1 (STANDARD DUTY) - REFER TO DETAIL 8/L150
- 1.2 CONCRETE RAMP - REFER TO STRUC AND ARCH DRAWINGS
- 1.3 CONCRETE SLAB WITH THICKEND EDGE - REFER TO DETAIL 1/L150
- 1.4 CRUSHED FINES PATHWAY - REFER TO DETAIL 2/L150

(2.0) SITE WALLS, STEPS
- 2.1 CONCRETE STAIRS - REFER TO STRUC AND ARCH DRAWINGS

(3.0) RAILINGS, FENCING, BARRIERS
- 3.1 HAND RAIL TYPE 1 (HANDRAIL ATTACHED TO CONCRETE WALL) - REFER TO ARCH
- 3.2 FENCE (4' HT., DECORATIVE) - REFER TO DETAIL 3/L150
- 3.3 GATE (4' WIDE, DECORATIVE) - REFER TO DETAIL 3/L150
- 3.4 FENCE (7' HT., CHAIN LINK) - REFER TO DETAIL 4/L150
- 3.5 GATE (4' WIDE, CHAIN LINK) - REFER TO DETAIL 4/L150

(4.0) SIGNAGE
- 4.1 MONUMENT SIGN - REFER TO ARCH DRAWINGS
- 4.2 COMMEMORATIVE PLAQUE - SALVAGED + RELOCATED - REFER TO DETAIL 6/L150

(5.0) SITE FURNITURE
- 5.1 GABION SEAT FEATURE - REFER TO DETAIL 5/L150
- 5.2 PICNIC TABLE - REFER TO SPECS
- 5.3 PICNIC TABLE, ADA - REFER TO SPECS
- 5.4 TERRACED SEATING - REFER TO SPECS
- 5.5 STOOL SEAT - REFER TO SPECS
- 5.6 TRASH RECEPTACLE - REFER TO SPECS

(6.0) MISCELLANEOUS SITE FEATURES
- 6.1 POND
- 6.2 LANDSCAPE OUTCROPPING - REFER TO DETAIL 7/L150

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PUBLIC UTILITIES OF ALL TYPES HAVE BEEN SHOWN ON THESE PLANS USING THE INFORMATION AVAILABLE, BUT ARE NOT GUARANTEED AS ACCURATE OR THAT UTILITIES OTHER THAN THOSE SHOWN ARE NOT PRESENT. CONTRACTOR SHALL CONTACT MISS DIG AT 1-800-482-7171 FOR INFORMATION AND NOTIFY UTILITY COMPANIES THREE WORKING DAYS PRIOR TO COMMENCING WORK.

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ADDENDUM 02 05/06/20206
ISSUED FOR DATE

PROJECT TITLE
WOODWARD ELEMENTARY CONNECTOR

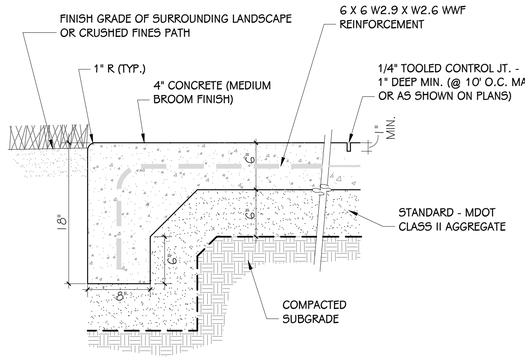
OWNER
KALAMAZOO PUBLIC SCHOOLS

606 STUART AVE
Kalamazoo, MI
49007

SHEET TITLE
OVERALL SITE PLAN

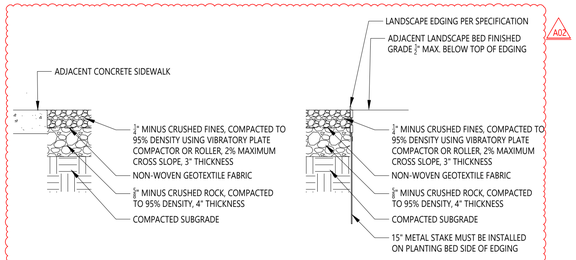
DATE
APRIL 3, 2026

SHEET NUMBER
L100
23-642.000



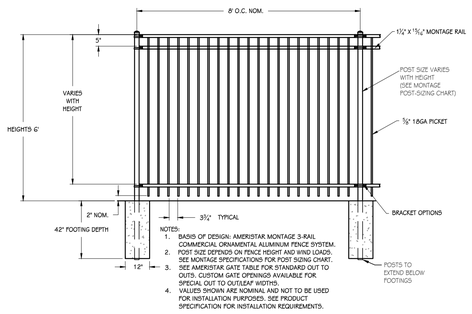
1 L150 CONCRETE SLAB WITH THICKENED EDGE DETAIL

NOT TO SCALE



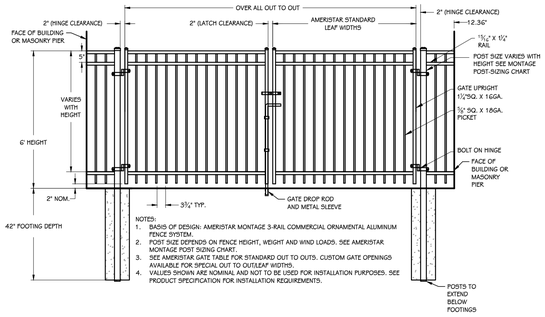
2 L150 CRUSHED FINES PATHWAY DETAIL

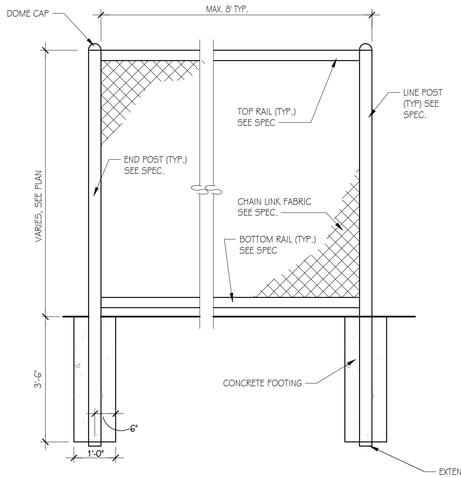
NOT TO SCALE

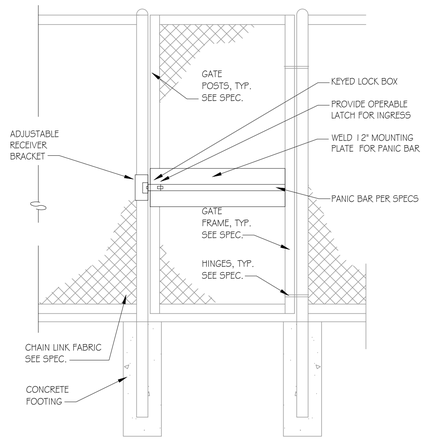


5 L150 DECORATIVE METAL FENCE + GATE DETAIL

NOT TO SCALE



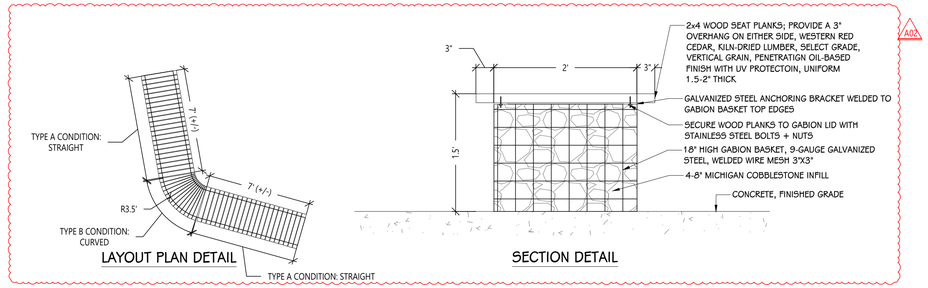


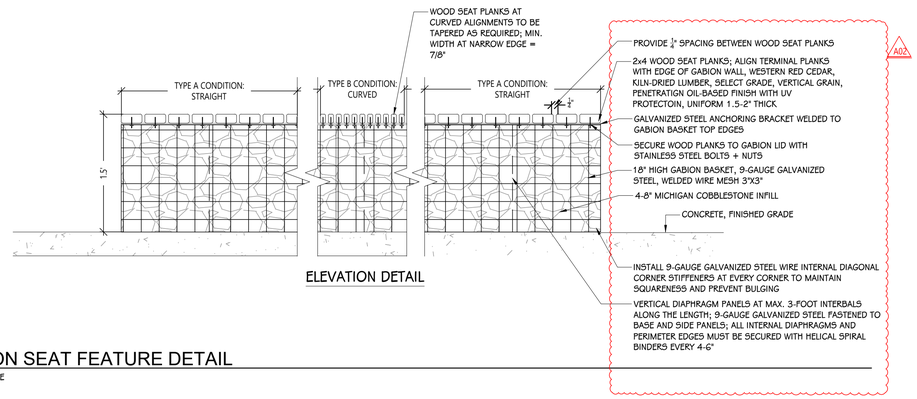


NOTES:
1. ALL FENCING FABRIC, POSTS, CAPS AND ALL ASSOCIATED COMPONENTS SHALL BE "BLACK" VINYL COATED.
2. PROVIDE PANIC BAR KIT WITH KEYED LOCK BOX ACCESS. INCLUDE OPERABLE LATCH TO ALLOW ACCESS FROM OUTSIDE GATE.

4 L150 CHAIN LINK FENCE + GATE WITH PANIC BAR

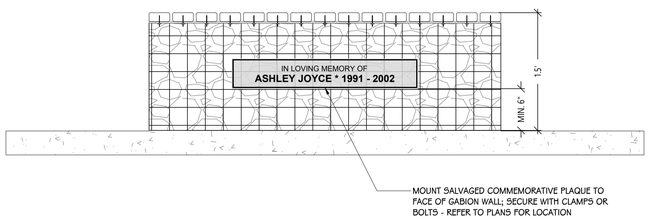
NOT TO SCALE





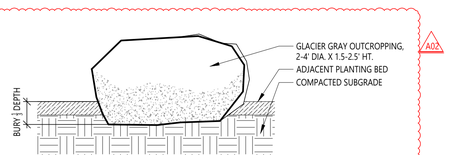
5 L150 GABION SEAT FEATURE DETAIL

NOT TO SCALE



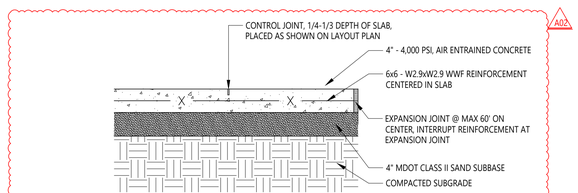
6 L150 COMMEMORATIVE PLAQUE ON GABION SEAT FEATURE DETAIL

NOT TO SCALE



7 L150 LANDSCAPE OUTCROPPING DETAIL

NOT TO SCALE



8 L150 CONCRETE PAVEMENT - STANDARD DUTY

NOT TO SCALE

ADDENDUM 02	05/06/2026
ISSUED FOR	DATE

PROJECT TITLE
WOODWARD ELEMENTARY CONNECTOR

OWNER
KALAMAZOO PUBLIC SCHOOLS

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Kalamazoo, MI
49007

DATE
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SHEET TITLE
SITE DETAILS

SHEET NUMBER
L 150
23-642.000

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SOIL EROSION & SEDIMENT CONTROL NOTES

1. ALL CONSTRUCTION METHODS SHALL BE DONE IN COMPLIANCE WITH MDOT-EGLE. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING A "SOIL EROSION PERMIT" FROM THE GOVERNING AUTHORITY AND A "PERMIT BY RULE/NOTICE OF COVERAGE" FROM THE GOVERNING AUTHORITY, IF APPLICABLE, PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL REQUIREMENTS OF THE "SOIL EROSION PERMIT" AND FOR ALL CERTIFIED STORM WATER INSPECTION SERVICE REQUIRED BY THE "PERMIT BY RULE." EROSION CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS AND SHALL NOT RELIEVE THE CONTRACTOR'S RESPONSIBILITY FOR PROVIDING ALL REQUIRED EROSION CONTROL MEASURES.
2. AVOID UNNECESSARY DISTURBING OR REMOVING OF EXISTING VEGETATED TOPSOIL OR EARTH COVER, THESE COVER AREAS ACT AS SEDIMENT FILTERS.
3. ALL TEMPORARY SOIL EROSION PROTECTION SHALL REMAIN IN PLACE UNTIL REMOVAL IS REQUIRED FOR FINAL CLEAN UP AND APPROVAL.
4. GEOTEXTILE SILT FENCE SHALL BE INSTALLED AS REQUIRED WHEN CROSSING CREEKS OR WHEN ADJACENT TO WETLANDS OR SURFACE WATER BODIES TO PREVENT SILTATION AND ELSEWHERE AS DIRECTED BY THE ENGINEER. SEEDING AND/OR SODDING SHALL BE INSTALLED ON CREEK BANKS IMMEDIATELY AFTER CONSTRUCTION TO PREVENT EROSION.
5. MAINTENANCE, CLEANING, AND REMOVAL OF THE VARIOUS SEDIMENT CONTROL MEASURES SHALL BE INCLUDED IN THE VARIOUS EROSION CONTROL ITEMS.

(##) ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE PER MDOT STANDARD DETAILS. "P" DENOTES PERMANENT MEASURE AND "T" DENOTES TEMPORARY MEASURE. SOIL EROSION CONTROL PLANS DENOTE MINIMUM EROSION MEASURES REQUIRED AS DESCRIBED BELOW.

(3P) DENOTES PERMANENT SEEDING. ALL DISTURBED AREAS NOT PAVED OR GRAVELED SHALL BE RESTORED. PLACE TOPSOIL SURFACE, SALV, 3 INCH, MDOT SEEDING, MIXTURE TUF APPLIED AT A RATE OF 220 LB/ACRE, FERTILIZER, CHEMICAL NUTRIENT, CL A APPLIED AT A RATE OF 228 LB/ACRE; MULCH AT A RATE OF 2 TON/ACRE AND MULCH ANCHORING. (APPLIES TO ENTIRE PROJECT)

(4T) DENOTES DUST CONTROL. DUST CONTROL MAY BE REQUIRED ON THE SUBGRADE CONSTRUCTION AND WILL INCLUDE APPLYING FRESH WATER TO BE INCLUDED IN THE ITEM OF EMBANKMENT. DUST CONTROL ON THE AGGREGATE BASE COURSE WILL BE ACCOMPLISHED BY APPLYING FRESH WATER (INCLUDED IN THE ITEM OF AGGREGATE BASE, 6 INCH) AND APPLYING DUST PALLIATIVE, APPLIED, $CACL_2$ (TON) AS DIRECTED BY THE PROJECT ENGINEER.

(8P) DENOTES AGGREGATE COVER/PERMANENT PAVEMENT RESTORATION

(26T) DENOTES TEMPORARY SILT FENCE. SILT FENCE SHALL BE INSTALLED AT CREEK CROSSINGS, ADJACENT TO ALL WETLANDS AND SURFACE WATERS, AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER. EACH SILT FENCE SHALL BE INSTALLED GENERALLY ALONG THE SAME CONTOUR ELEVATION.

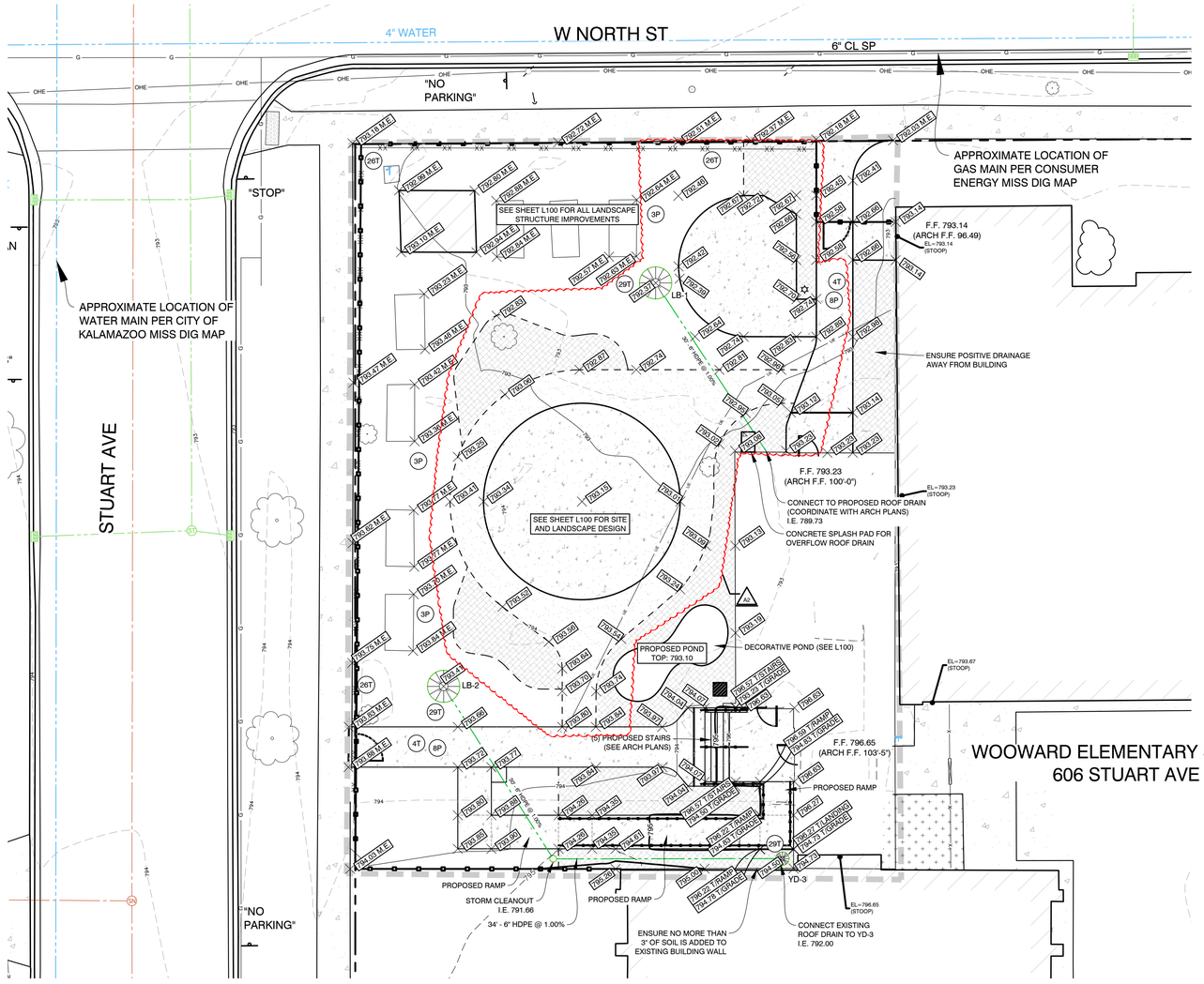
(29T) DENOTES INLET PROTECTION FABRIC DROP. SHALL BE INSTALLED AT EXISTING AND PROPOSED STORM SEWER INLETS TO PROVIDE SETTLING AND FILTERING OF SILT LADEN WATER PRIOR TO ENTRY INTO THE DRAINAGE SYSTEM.

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL LAWS, RULES AND REGULATIONS IN FORCE AT TIME OF CONSTRUCTION.
2. ELECTRICAL WORK SHALL BE PERFORMED BY A STATE OF MICHIGAN LICENSED ELECTRICIAN ACCORDING TO THE N.F.P.A. NATIONAL ELECTRICAL CODE AS MODIFIED BY THE STATE OF MICHIGAN. FURNISH AND INSTALL ALL MATERIALS AND LABOR TO PROVIDE A COMPLETE WORKING SYSTEM.
3. ALL PLUMBING WORK SHALL BE PERFORMED BY A STATE OF MICHIGAN LICENSED PLUMBER ACCORDING TO THE INTERNATIONAL PLUMBING CODE AS MODIFIED BY THE STATE OF MICHIGAN AND LOCAL HEALTH DEPARTMENT. FURNISH AND INSTALL ALL MATERIALS AND LABOR TO PROVIDE A FULL WORKING SYSTEM.
4. ALL MECHANICAL WORK SHALL BE PERFORMED ACCORDING TO THE INTERNATIONAL MECHANICAL CODE AS MODIFIED BY THE STATE OF MICHIGAN AND THE MICHIGAN ENERGY CODE. FURNISH AND INSTALL ALL MATERIALS AND LABOR TO PROVIDE A FULL WORKING SYSTEM.
5. ALL WORK SHALL CONFORM TO THE MICHIGAN HANDICAPPED ACCESSIBILITY CODE AND THE AMERICANS WITH DISABILITIES ACT.
6. ALL REGULATORY SIGNAGE (IF SPECIFIED) SHALL BE PER THE MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT).
7. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, PERMIT COSTS, BONDS, AND OTHER FEES REQUIRED FOR PROPOSED WORK.
8. CONTACT "MISS DIG 811" AT 1-800-482-7171 FOR LOCATION OF UNDERGROUND UTILITIES A MINIMUM OF 48 HOURS BEFORE COMMENCING EXCAVATION WORK. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO ARE NOT PART OF THE "MISS DIG" ALERT SYSTEM. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.
9. REFER TO ELECTRICAL DRAWINGS FOR UNDERGROUND ELECTRICAL REQUIREMENTS FOR SITE LIGHTING & SITE DETAILS SHEETS FOR THE FIXTURE AND & POLE SPECIFICATIONS.
10. MANHOLE AND CATCH BASIN STRUCTURES SHALL BE PRECAST AND HAVE A MAXIMUM OF 2 ADJUSTING RINGS FOR FINISH GRADE ADJUSTMENT. STORM STRUCTURES MUST ALL HAVE A SUMP OF TWO FEET.
11. DEMOLISH & REMOVE ALL EXISTING SITE FEATURES AS REQUIRED.
12. THE CONTRACTOR SHALL REVIEW THE GEOTECHNICAL REPORT PREPARED BY DRIESENGA & ASSOCIATES, INC.

GRADING NOTES

1. ALL WORK SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL LAWS, RULES AND REGULATIONS IN FORCE AT TIME OF CONSTRUCTION.
2. CONTACT MISS DIG "811" FOR LOCATION OF UNDERGROUND UTILITIES A MINIMUM OF 48 HOURS BEFORE COMMENCING EXCAVATION WORK. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO ARE NOT PART OF THE "MISS DIG" ALERT SYSTEM. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.
3. DEMOLISH & REMOVE ALL EXISTING SITE FEATURES AS REQUIRED.
4. MATCH EXISTING GRADES AROUND PERIMETER WITH SLOPES AS SHOWN.
5. ALL SPOT ELEVATIONS ARE TOP OF PAVEMENT GRADES AT EDGE OF METAL (EOM) UNLESS OTHERWISE NOTED.
6. ALL SOIL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO MASS GRADING.
7. ALL EARTHWORK SHALL BE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND GEOTECHNICAL REPORT.
8. ALL EXISTING ELEVATIONS ARE TO BE VERIFIED AND ACCEPTED AS SHOWN PRIOR TO COMMENCEMENT OF WORK.
9. CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID TRACKING SOIL ONTO ADJACENT ROADWAYS. CONTRACTOR SHALL SWEEP IMMEDIATELY IF OCCURS.
10. ANY DISTURBED AREA WHICH WILL BE LEFT UNWORKED 15 DAYS OR LONGER MUST BE SEEDED TO ESTABLISH VEGETATION FOR TEMPORARY STABILIZATION. BASINS TO BE SEEDED AND MULCH BLANKETS APPLIED IMMEDIATELY TO PROVIDE A STABLE BASE AND AVOID EXCESSIVE EROSION.



LEGEND

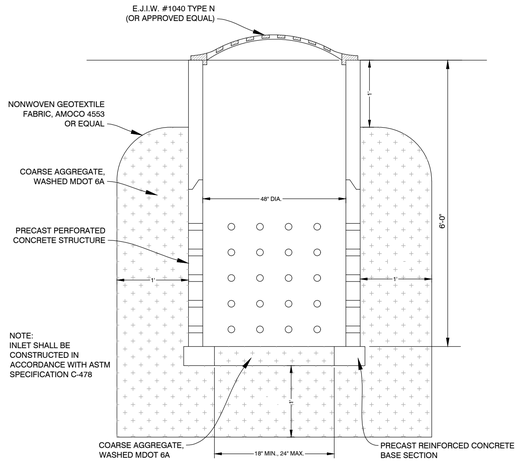
- LIMITS OF CONSTRUCTION
- SILT FENCE
- LANDSCAPE BED
- GRAVEL
- CONCRETE

STORM STRUCTURE

LB#1, 4' DIA., EJIW 6517
RIM = 792.37
6" HDPE SE = 789.43
BTM = 786.37

LB#2, 4' DIA., EJIW 6517
RIM = 793.41
6" HDPE SE = 791.60
BTM = 787.41

YD-3, 2' NYLOPLAST STRUCTURE
RIM = 794.50
6" HDPE W = 792.00
6" HDPE S = 792.00



LEACHING BASIN DETAIL 06012 — NOT TO SCALE

811 Know what's below. Call before you dig.

ALL UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THE AREA. FIELD WORK PERFORMED BY: DRIESENGA & ASSOCIATES, INC.

AR ENGINEERING
CIVIL ENGINEERING & SURVEYING
MICHIGAN | INDIANA | ILLINOIS | OHIO
269.250.5991 PHONE | 866.569.0604 FAX
www.arengineeringllc.com

0 10 15 20
1 inch = 10 ft.

BENCHMARK INFORMATION

NAVD '88 AS DERIVED FROM GPS OBSERVATIONS UTILIZING M.D.O.T. CORS GEOID 18

BM #1 EL= 796.18' (NAVD 88)
SET MAG NAIL ON EAST SIDE OF POWER POLE, LOCATED 17'± WEST OF THE CENTERLINE OF STUART AVENUE AND 183'± SOUTH OF THE CENTERLINE OF WEST NORTH STREET.

BM #2 EL= 795.11' (NAVD 88)
CUT "X" ON UPPER SOUTHWEST FLANGE BOLT ON HYDRANT, LOCATED 18'± WEST OF THE CENTERLINE OF STUART AVENUE AND 39'± SOUTH OF THE CENTERLINE OF WEST NORTH STREET.

BM #3 EL= 796.94' (NAVD 88)
TOP NORTHEAST CONCRETE CAP CORNER ON STAIR CHEEK WALL, LOCATED 12'± NORTH NORTHEAST OF THE NORTHERLY MOST ENTRANCE OF WOODWORD ELEMENTARY AND 13'± SOUTH OF THE SOUTHWEST BUILDING CORNER OF NORTHERLY MOST WOODWARD ELEMENTARY BUILDING AND 113'± EAST OF THE CENTERLINE OF STUART AVENUE.

ADDENDUM NO. 02 **5.6.26**
ISSUED FOR **DATE**

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PROJECT TITLE
WOODWARD ELEMENTARY CONNECTOR

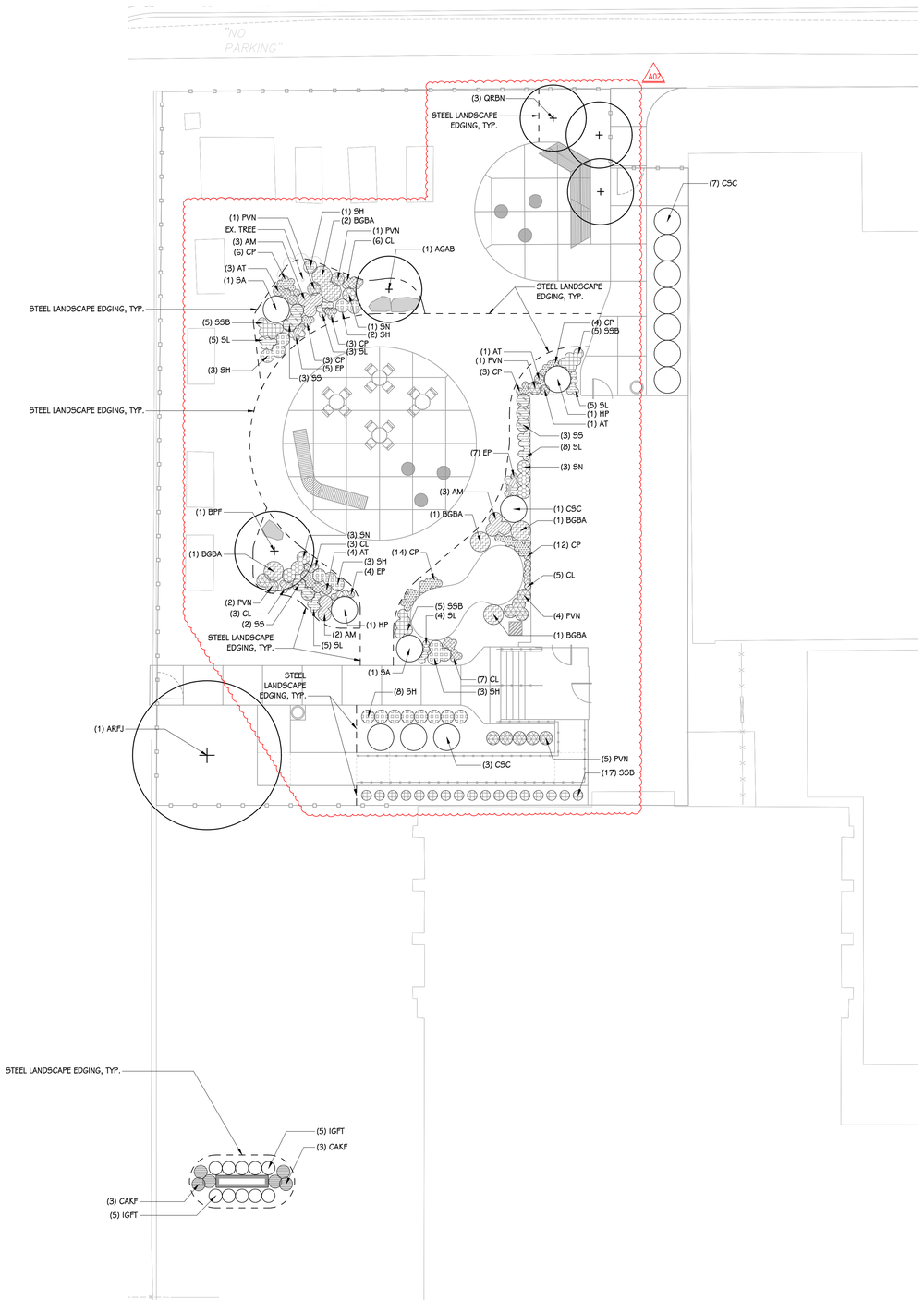
OWNER
KALAMAZOO PUBLIC SCHOOLS

606 STUART AVE.
KALAMAZOO, MI

SHEET TITLE
GRADING AND UTILITY PLAN

DATE
MAY 06, 2026

SHEET NUMBER
L201
23-622.000



0' 5' 10' 20' 40'

SCALE: 1" =10'

LANDSCAPE PLAN

SCALE: 1"=10' @ 24" x 36" FULL SIZE PLOT

NOTES - SITE - PLANTING

1. CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING OF ALL RELATED EXISTING CONDITIONS, PIPES AND STRUCTURES, ETC. PRIOR TO BIDDING AND CONSTRUCTION.
2. SEE SPECIFICATIONS AND DETAILS FOR PLANTING METHODS, REQUIREMENTS, SOIL TESTING, MATERIALS, EXECUTION AND PLANT PROTECTION, AND SEED MIXES.
3. PLANT NAMES MAY BE ABBREVIATED ON DRAWINGS. REFER TO PLANT LIST AND LEGENDS FOR SYMBOLS, ABBREVIATIONS, BOTANICAL AND COMMON NAMES, SIZES, ESTIMATED QUANTITIES AND OTHER REMARKS.
4. WHERE PROVIDED , AREA TAKEOFFS AND PLANT QUANTITY ESTIMATES IN PLANT LIST ARE FOR INFORMATION ONLY. CONTRACTOR IS RESPONSIBLE TO DO THEIR OWN QUANTITY TAKEOFFS FOR ALL PLANT MATERIAL AND SIZES SHOWN THE DRAWINGS. IN CASE OF DISCREPANCIES, BRING TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR CLARIFICATION.
6. EDGING TO BE PLACED BETWEEN ALL LANDSCAPE BEDS AND LAWN AREAS.
7. HARDWOOD SHREDDED MULCH SHALL BE PLACED AT A 3" DEPTH AROUND ALL TREES IN IN ALL LANDSCAPE BEDS.
8. ALL UNPAVED AREAS OF THE SITE AND ADJACENT AREAS DISTURBED BY CONSTRUCTION SHALL RECIVE 6" TOPSOIL. SUPPLEMENT WITH IMPORTED TOPSOIL AS REQUIRED TO PROVIDE 6" DEPTH.

LEGEND - SITE - PLANTING

A02

TREE

SHRUB

GRASSES + PERENNIALS

STEEL LANDSCAPE EDGING - REFER TO DETIAL 4/L350

PLANTING SCHEDULE

A02

CODE	BOTANICAL NAME	COMMON NAME	QTY.	CAL.	HT.	ROOT/CONT.	REMARKS
DECIDUOUS TREES							
ARFJ	ACER RUBRUM 'FRANK JR.'	REDPOINTE MAPLE	1	2"		B+B	SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY
BPF	BETULA PLATPHYLLA 'FARGO'	DAKOTA PINNACLE BIRCH	1	2"		B+B	SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY
QRBN	QUERCUS ROBUR x BICOLOR 'NADLER'	KINDRED SPIRIT OAK	3	2"		B+B	SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY
ORNAMENTAL TREES							
AGAB	AMELANCHIER x GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	1		10'-12'	B+B	MULTI-STEM, 4-5 STEMS MINIMUM
SHURBS							
CSC	CORNUS SANGUINEA 'CATO'	ARTIC SUN DOGWOOD	11			#3	4'-0" O.C.
HP	HYPERICUM PROLIFICUM	SHRUBBY ST. JOHN'S WORT	2			#3	4'-0" O.C.
IGFT	ILEX GLABRA 'ILEXFARROWTRACEY'	STRONGBOX INKBERRY HOLLY	10			#3	2'-0" O.C.
SA	SPIREA ALBA	WHITE MEADOWSWEET	2			#3	4'-0" O.C.
GRASSES							
BGBA	BOUTELOUA GRACILIS 'BLONDE AMBITION'	BLONDE AMBITION GRAMA GRASS	6			#3	3'-0" O.C.
CAKF	CALAMAGROSTIS x ACUTIFLORA 'KARL FOERSTER'	BLONDE AMBITION GRAMA GRASS	6			#3	3'-0" O.C.
CP	CAREX PENSYLVANICA	PENNSYLVANIA SEDGE	45			#3	0'-6" O.C.
PVN	PANICUM VIRGATUM 'NORTHWIND'	NORTHWIND SWITCHGRASS	14			#3	1'-6" O.C.
SSB	SCHIZACHYRIUM SCOPARIUM 'BLAZE'	BLAZE LITTLE BLUESTEM GRASS	32			#3	0'-6" O.C.
SN	SORGHASTRUM NUTANS	INDIAN GRASS	7			#3	1'-6" O.C.
SH	SPOROBOLUS HETEROLEPIS	PRAIRIE DROPSEED	20			#3	1'-6" O.C.
PERENNIALS							
AM	ACHILLEA MILLEFOLIUM	COMMON YARROW	8			#1	2'-0" O.C.
AT	ASCLEPIAS TUBEROSA	BUTTERFLY WEED	9			#1	1'-6" O.C.
CL	COREOPSIS LANCEOLATA	LANCELEAF COREOPSIS	24			#1	1'-0" O.C.
EP	ECHINACEA PURPUREA	PURPLE CONEFLOWER	16			#1	1'-0" O.C.
SL	SYMPHYOTRICHUM LAEVE	SMOOTH BLUE ASTER	31			#1	1'-0" O.C.
SS	SOLIDAGO SPECIOSA	SHOWY GOLDENROD	8			#1	2'-0" O.C.

NOTE: QUANTITIES ON THE PLANT LIST ARE PROVIDED FOR INFORMATION ONLY. PLANT QUANTITIES UNDER THE CONTRACT ARE INDICATED ON THE PLANS. IN THE EVENT OF ANY DISCREPANCIES, THE CONTRACT SHALL BE BASED ON THE QUANTITIES SHOWN ON THE PLANS.

811

3 WORKING DAYS
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SHEET TITLE
LANDSCAPE PLAN

DATE
APRIL 3, 2026

SHEET NUMBER
L 300
23-642.000

MATERIAL SELECTION SCHEDULE

ABBREV	ITEM	MANUFACTURER	PATTERN	COLOR	PRODUCT NO.	SIZE	SINGLE SOURCE	BASIS OF DESIGN	ADDITIONAL MANUFACTURERS	PERFORMANCE	REMARKS
ACP-1	ACOUSTIC CEILING PANEL	ARMSTRONG	CORTEGA	WHITE	704	24" X 24"	X		--		TEGULAR EDGE. 15/16" GRID
CT-1	CERAMIC TILE	DALTILE	COLOR WHEEL CLASSIC	WHITE	0100	4" X 4"	X		--		
CTB-1	CERAMIC TILE BASE	DALTILE	COLOR WHEEL CLASSIC	BLACK	A3401	4" X 4"	X		--		TO MATCH EXISTING TILE PATTERN
ECPTL-1	ENTRANCE CARPET TILE	MILLIKEN	OBEX CUTX/STIPPLE	TAUPE	STX174-133	50CM X 50CM	X		--		WELLBAC COMFORT PLUS | ASHLAR INSTALLATION
P-1	PAINT	SHERWIN WILLIAMS	--	"KPS CITY LIGHTS"	--	--		X			FIELD PAINT
P-2	PAINT	SHERWIN WILLIAMS	--	TO MATCH EXISTING	--	--		X			TO MATCH EXISTING
P-3	PAINT	SHERWIN WILLIAMS	--	CEILING BRIGHT WHITE	SW 7007			X			
P-4	PAINT	SHERWIN WILLIAMS	--	TO MATCH EXISTING	--			X			DOOR FRAME PAINT
PL-1	PLASTIC LAMINATE	WILSONART	--	KENSINGTON MAPLE	10776	--	X		--		
PL-2	PLASTIC LAMINATE	WILSONART	--	HANDSPUN CHESNUT	5036-38	--	X		--		
PTM-1	PORCELAIN TILE MOSAIC	VITL	CUSTOM	CUSTOM	--	1" X 1" MOSAIC	X		--		OP NUMBER 216502 | CASE #05887225
QZT-1	QUARTZ TILE	KAHRS	MOSAIC	HOWLITE WHITE	8301	12" X 12"	X		--		
A2 QZT-2	QUARTZ TILE	KAHRS	MOSAIC	HYDROSTHENE ASH	8824	12" X 12"	X		--		
RAF-1	RESILIENT ATHLETIC FLOORING	TARKETT	OMNISPORTS MULTI-USE	GOLDEN MAPLE	--	6.56' ROLL		X	GERFLOR		
RAF-2	RESILIENT ATHLETIC FLOORING	TARKETT	OMNISPORTS MULTI-USE	TONIC GREEN	--	6.56' ROLL		X	GERFLOR		
RB-1	RUBBER BASE	TARKETT/ JOHNSONITE	TRADITIONAL VINYL	GANACHE	284	6"H		X			--
RB-2	RUBBER BASE	TARKETT/JOHNSONITE	TRADITIONAL VINYL	GANACH	284	4"H		X			
RBST-1	RUBBER STAIR TREAD	JOHNSONITE	ANGLEFIT RUBBER STAIR TREADS WITH INTEGRATED RISER	GANACHE	S103516-284-TR_SQ-RD	7"W	X				RAISED ROUND STAIR TREAD WITH INSERT
SSM-1	SOLID SURFACE MATERIAL	LX HAUSYS	HI-MACS	GHOST WHITE	ST907	30" X 145"	X				WINDOW SILLS
VCT-1	VINYL COMPOSITION TILE	ARMSTRONG	STANDARD EXCELON IMPERIAL TEXTURE	TO MATCH EXISTING	--	12" X 12"	X		--		TO MATCH EXISTING

NOTES:

1 NO COMPARABLE PRODUCTS WILL BE REVIEWED FOR PRODUCTS DESIGNATED AS SINGLE SOURCE

2 COMPARABLE PRODUCTS WILL BE REVIEWED FOR ITEMS LISTED AS BASIS OF DESIGN. COMPARABLE PRODUCTS ARE REQUIRED TO MEET ANY MINIMUM PERFORMANCE REQUIREMENTS LISTED IN REMARKS AND DESIGN ATTRIBUTES OF SPECIFIED PRODUCT.

3 REFER TO TYPICAL DETAILS AND PRODUCT SPECIFICATION FOR ADDITIONAL TRIMS AND ACCESSORIES ASSOCIATED WITH SPECIFIED PRODUCTS ABOVE

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ISSUED FOR DATE

PROJECT TITLE
WOODWARD
ELEMENTARY
CONNECTOR

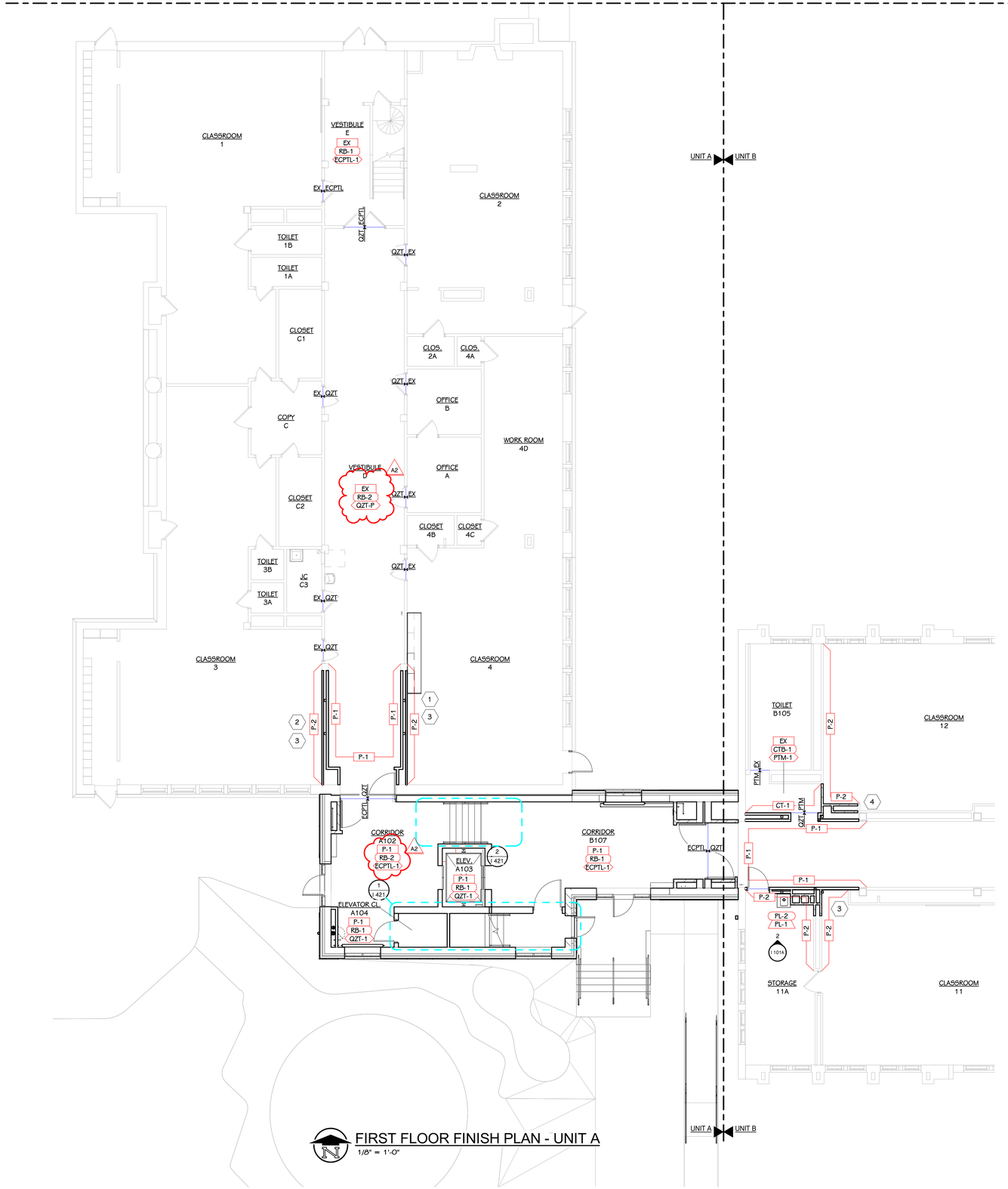
OWNER
KALAMAZOO PUBLIC
SCHOOLS

606 STUART AVE
KALAMAZOO, MICHIGAN
49007

SHEET TITLE
MATERIAL SELECTION SCHEDULE

DATE
APRIL 3, 2026

SHEET NUMBER
IG 002
23-642.000



FIRST FLOOR FINISH PLAN - UNIT A

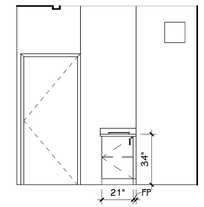
1/8" = 1'-0"

NOTES - FINISH PLANS

1. FINISH TAGS APPLY TO LIKE MATERIALS IN ENTIRE ROOM. I.E. CASEWORK TAG MAY ONLY CALLOUT ONE RUN OF CASEWORK, BUT ALL CASEWORK IN ROOM RECEIVE THE SAME FINISHES, UNLESS TAGGED DIFFERENTLY.
2. CASEWORK FINISH TAGS DO NOT APPLY TO CUSTOM MILLWORK PIECES. REFER TO ENLARGED MILLWORK DETAILS FOR FINISH MATERIALS.
3. REFER TO ENLARGED FINISH PLANS AND PATTERN PLANS FOR ADDITIONAL FINISH DETAILS.
4. DASHED LINE INDICATES LINE OF CEILING ABOVE, REFER TO REFLECTED CEILING PLANS.
5. WHERE NO FINISH TAG IS SHOWN ALL EXISTING FINISHES ARE TO REMAIN, UNLESS OTHERWISE NOTED.

KEYED NOTES - INTERIOR - FINISH PLAN

1. REINSTALL SALVAGED CASEWORK
2. REINSTALL SALVAGED WHITEBOARD
3. PATCH FLOOR TO MATCH EXISTING VCT
4. PATCH FLOOR TO MATCH EXISTING CARPET
5. ONLY LANDING TO RECEIVE NEW FLOOR FINISH
6. PAINT EXISTING BASE TO MATCH ADJACENT WALL



2 / 1 1101A STORAGE 11A - NORTH

1/4" = 1'-0"

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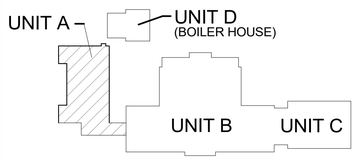
WOODWARD SCHOOL



KEY PLAN

SCALE: NO SCALE

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PROJECT TITLE
WOODWARD ELEMENTARY CONNECTOR

OWNER
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606 STUART AVE
KALAMAZOO, MICHIGAN
49007

SHEET TITLE
FIRST FLOOR FINISH PLAN - UNIT A AND ELEVATIONS

DATE
APRIL 3, 2026

SHEET NUMBER
I 1101A
23-642.000

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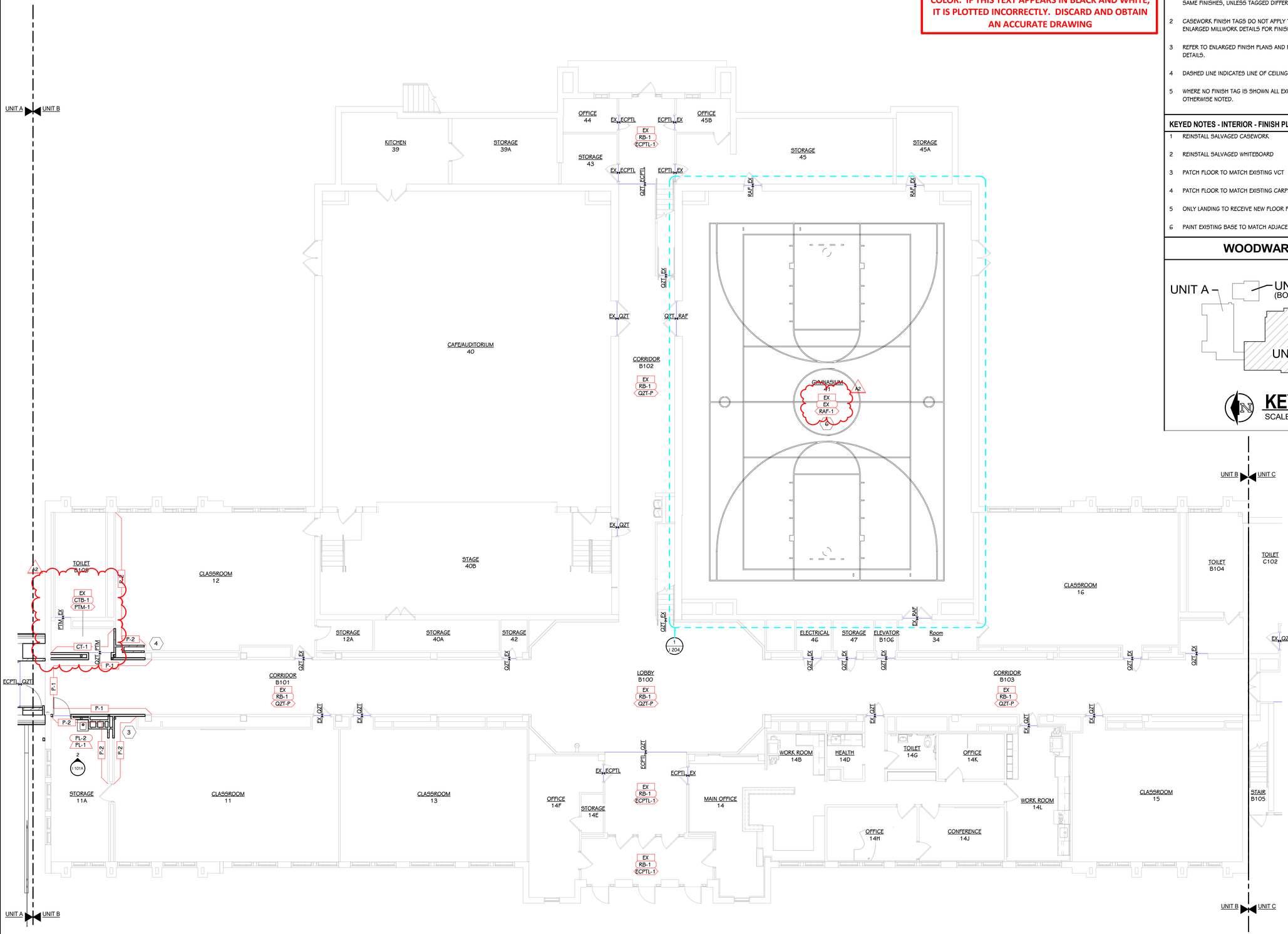

FIRST FLOOR FINISH PLAN - UNIT B

1/8" = 1'-0"

NOTES - FINISH PLANS

1. FINISH TAGS APPLY TO LIKE MATERIALS IN ENTIRE ROOM. I.E. CASEWORK TAG MAY ONLY CALLOUT ONE RUN OF CASEWORK, BUT ALL CASEWORK IN ROOM RECEIVE THE SAME FINISHES, UNLESS TAGGED DIFFERENTLY.
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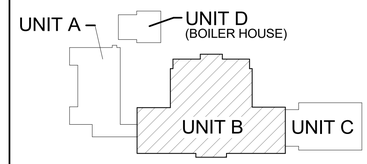
3. REFER TO ENLARGED FINISH PLANS AND PATTERN PLANS FOR ADDITIONAL FINISH DETAILS.
4. DASHED LINE INDICATES LINE OF CEILING ABOVE, REFER TO REFLECTED CEILING PLANS.
5. WHERE NO FINISH TAG IS SHOWN ALL EXISTING FINISHES ARE TO REMAIN, UNLESS OTHERWISE NOTED.

KEYED NOTES - INTERIOR - FINISH PLAN

1. REINSTALL SALVAGED CASEWORK
2. REINSTALL SALVAGED WHITEBOARD
3. PATCH FLOOR TO MATCH EXISTING VCT
4. PATCH FLOOR TO MATCH EXISTING CARPET
5. ONLY LANDING TO RECEIVE NEW FLOOR FINISH
6. PAINT EXISTING BASE TO MATCH ADJACENT WALL

WOODWARD SCHOOL



KEY PLAN

SCALE: NO SCALE

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PROJECT TITLE
WOODWARD ELEMENTARY CONNECTOR

OWNER
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606 STUART AVE
KALAMAZOO, MICHIGAN
49007

SHEET TITLE
FIRST FLOOR FINISH PLAN - UNIT B

DATE
APRIL 3, 2026

SHEET NUMBER
A1101B
23-642.000

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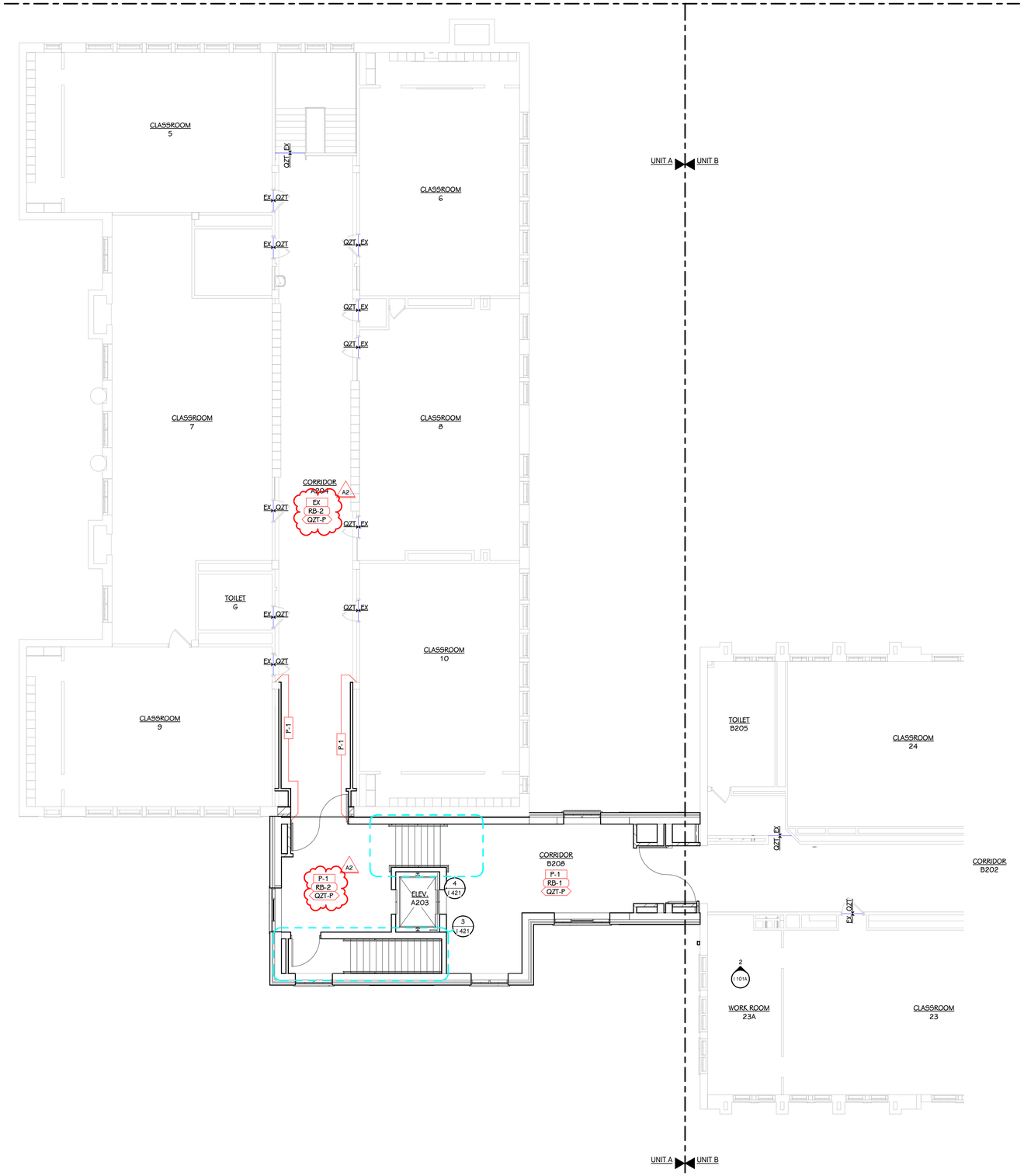

SECOND FLOOR FINISH PLAN - UNIT A
1/8" = 1'-0"

NOTES - FINISH PLANS

1. FINISH TAGS APPLY TO LIKE MATERIALS IN ENTIRE ROOM. I.E. CASEWORK TAG MAY ONLY CALLOUT ONE RUN OF CASEWORK, BUT ALL CASEWORK IN ROOM RECEIVE THE SAME FINISHES, UNLESS TAGGED DIFFERENTLY.
2. CASEWORK FINISH TAGS DO NOT APPLY TO CUSTOM MILLWORK PIECES. REFER TO ENLARGED MILLWORK DETAILS FOR FINISH MATERIALS.
3. REFER TO ENLARGED FINISH PLANS AND PATTERN PLANS FOR ADDITIONAL FINISH DETAILS.
4. DASHED LINE INDICATES LINE OF CEILING ABOVE, REFER TO REFLECTED CEILING PLANS.
5. WHERE NO FINISH TAG IS SHOWN ALL EXISTING FINISHES ARE TO REMAIN, UNLESS OTHERWISE NOTED.

KEYED NOTES - INTERIOR - FINISH PLAN

1. REINSTALL SALVAGED CASEWORK
2. REINSTALL SALVAGED WHITEBOARD
3. PATCH FLOOR TO MATCH EXISTING VCT
4. PATCH FLOOR TO MATCH EXISTING CARPET
5. ONLY LANDING TO RECEIVE NEW FLOOR FINISH
6. PAINT EXISTING BASE TO MATCH ADJACENT WALL

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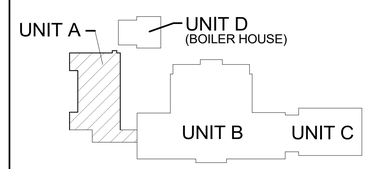
WOODWARD SCHOOL



KEY PLAN
SCALE: NO SCALE

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SHEET TITLE
SECOND FLOOR FINISH PLAN - UNIT A

DATE
APRIL 3, 2026

SHEET NUMBER
1102A
23-642.000

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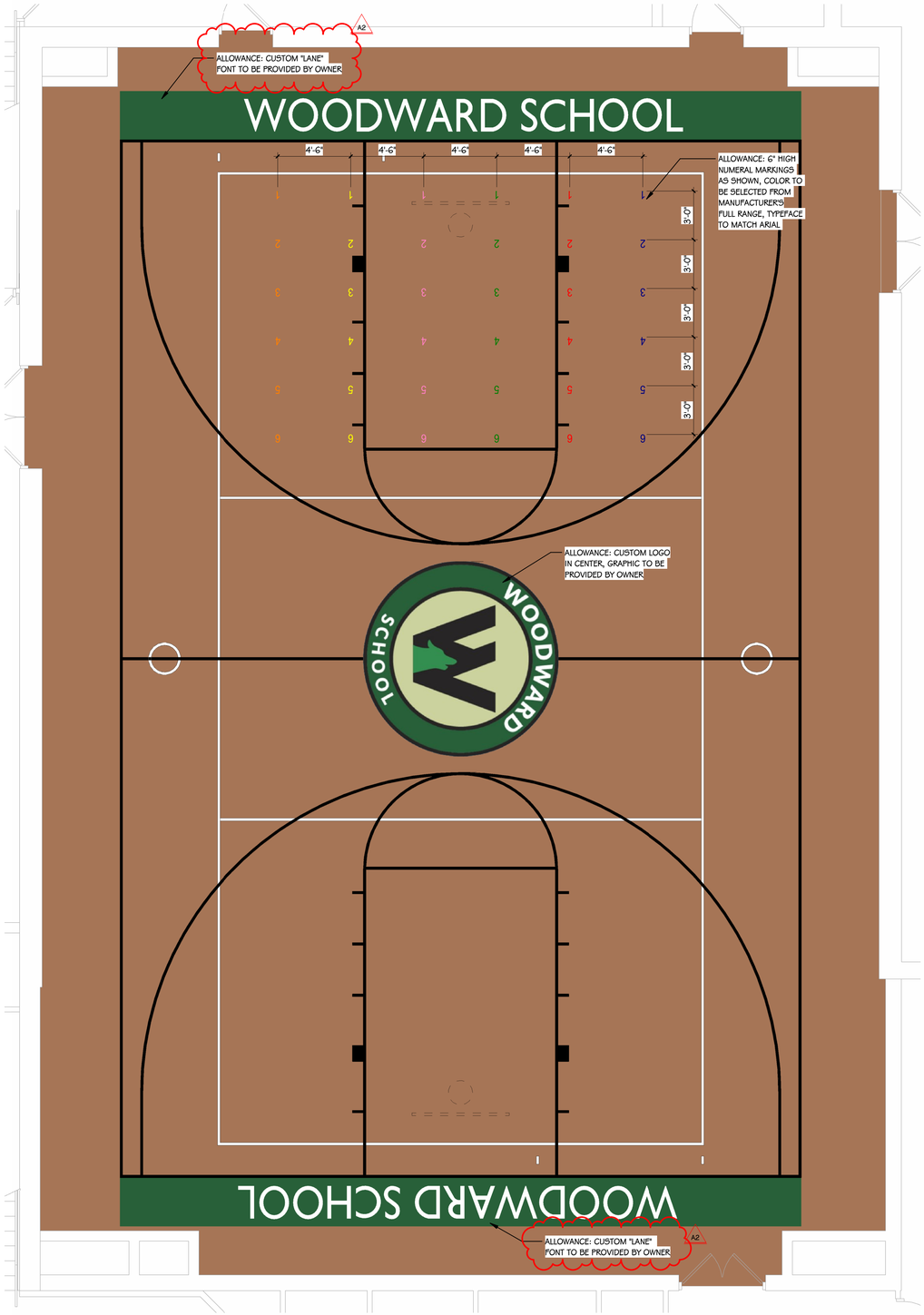

GYM STRIPING PLAN
1/4" = 1'-0"

GYM FLOOR FINISH

- RAF-1
- RAF-2 (A2)
- BASKETBALL COURT
- VOLLEYBALL COURT

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PROJECT TITLE
WOODWARD ELEMENTARY CONNECTOR

OWNER
KALAMAZOO PUBLIC SCHOOLS

606 STUART AVE
KALAMAZOO, MICHIGAN
49007

SHEET TITLE
GYM STRIPING AND FLOOR MARKING PLAN

DATE
APRIL 3, 2026

SHEET NUMBER
I 204
23-642.000

1 / I 421 CONNECTOR STAIR - FIRST FLOOR

1/4" = 1'-0"

2 / I 421 CONNECTOR SMALL STAIR - FIRST FLOOR

1/4" = 1'-0"

3 / I 421 CONNECTOR STAIR - SECOND FLOOR

1/4" = 1'-0"

4 / I 421 CONNECTOR SMALL STAIR - SECOND FLOOR

1/4" = 1'-0"

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ISSUED FOR DATE

PROJECT TITLE
WOODWARD ELEMENTARY CONNECTOR

OWNER
KALAMAZOO PUBLIC SCHOOLS

606 STUART AVE
KALAMAZOO, MICHIGAN
49007

SHEET TITLE
ENLARGED STAIR FINISH PLANS AND DETAILS

DATE
APRIL 3, 2026

SHEET NUMBER
I 421
23-642.000

SECTION 00 43 50 - SUBCONTRACTORS AND PRODUCTS LIST

PART 1 - GENERAL

1.01 DESCRIPTION

A. The two (2) low responsive Bidders in each Bid Category shall furnish electronically, the following Subcontractors and Products List to the Construction Manager within **one (1) working day (24 hrs.)** of bid opening, unless submitted with Bid. . The blanks appropriate to the Bid Category(ies) on which they bid shall be completed.

1. The Owner and Architect shall have the right to select any material or equipment named in the Specifications for any particular item where the Bidder either fails to list same or lists more than one name for the item in question.
2. It is intended that this list will show the manufacturer and supplier of major items of work that will be subcontracted and to whom.

1.02 INSTRUCTIONS FOR SUBCONTRACTORS AND PRODUCTS LISTS

A. Each Bidder shall submit a copy of his list of subcontractors and manufacturers of products and equipment proposed for work indicated as required above.

B. The list shall be submitted on forms provided and shall be completely executed. "As Specified" or "With Equipment" type of terminology will not be accepted.

C. Under "Subcontractor", insert the name of the firm which the Bidder proposes to have perform the respective work. If work will be done by the Prime Bidder and no subcontract will be awarded, state "By Own Forces".

D. Submission does not constitute acceptance for use of listed manufacturers' products. Materials and subcontractors are subject to the provisions of the General Conditions and "Standard of Product Acceptability" and must be formally reviewed and adjudged acceptable by the Architect/Engineer.

E. Engineer, Architect and Owner reserve the right to reject submissions of materials, work, or subcontractors that do not, in their opinion, meet the requirements of Drawings, Specifications or job conditions.

F. Materials and subcontractors used for work on the Project shall be in accordance with accepted material list.

1. The list is intended to assure use of materials and vendors acceptably equivalent to those specified and is not a substitution sheet or complete listing of required materials or services.

2. Substitutions for listed items will not be allowed, except when termed acceptable, in writing by the Architect/Engineer, provided that substitution will result in a cost savings to the Owner , determined by the Owner to be a better product,or is made necessary due to unavailability of listed item. Unavailability shall be confirmed in writing by manufacturer named on accepted list.

1.03 CIVIL AND ARCHITECTURAL WORK SUBCONTRACTORS AND PRODUCTS LIST

BID CATEGORY NO. 01 - DEMOLITION

NAME OF BIDDER_____

The undersigned hereby submits the following Subcontractors and Products List which becomes a part of the undersigned Contract proposal. Subcontractor purchased material, equipment, and labor shall be under the direct management and control of the Prime Contractor. If a dual listing of manufacturers and subcontractors is herein made, it is understood the Architect/Engineer (not the Contractor) will select the manufacturer or subcontractor of his choice. State the XBE Designation.

CIVIL AND ARCHITECTURAL WORK

Section	**Description**	**$$$**	**Subcontractor**	**Manufacturer**
01 21 00	Allowances			
01 72 00	Field Engineering			
02 41 19	Selective Structure Demolition			

Name of Bidder:	Date:
Address:	
City/State/Zip:	
Telephone:	
By:	

CIVIL AND ARCHITECTURAL WORK SUBCONTRACTORS AND PRODUCTS LIST

BID CATEGORY NO. 02 - SITEWORK

NAME OF BIDDER_____

The undersigned hereby submits the following Subcontractors and Products List which becomes a part of the undersigned Contract proposal. Subcontractor purchased material, equipment, and labor shall be under the direct management and control of the Prime Contractor. If a dual listing of manufacturers and subcontractors is herein made, it is understood the Architect/Engineer (not the Contractor) will select the manufacturer or subcontractor of his choice. State the XBE Designation.

CIVIL AND ARCHITECTURAL WORK

Section	**Description**	**$$$**	**Subcontractor**	**Manufacturer**
01 21 00	Allowances			
01 55 00	*Access Roads and Parking Areas*			
01 56 20	Dust Control			
01 56 39	*Temporary Tree and Plant Protection*			
01 56 80	Erosion Control			
01 72 00	Field Engineering			
02 41 19	Selective Structure Demolition			
31 19 00	Soil Erosion Controls			
31 20 00	Earth Moving			
~~32 14 00~~	~~Unit Paving~~			
~~32 31 13.53~~	~~High-Security Chain Link Fences and Gates~~			
32 31 13	*Chain Link Fences and Gates*			
32 31 19	Decorative Metal Fences and Gates			
32 33 00	Site Furnishings			

Section	Description	$$$	Subcontractor	Manufacturer
~~32 39 00~~	~~Manufactured Site Specialties~~			
32 91 13	Soil Preparation			
32 92 00	Turf and Grasses			
32 93 00	Plants			
33 40 00	Storm Sewer Utilities			

Name of Bidder:	Date:
Address:	
City/State/Zip:	
Telephone:	
By:	

CIVIL AND ARCHITECTURAL WORK SUBCONTRACTORS AND PRODUCTS LIST

BID CATEGORY NO. 03 - CONCRETE

NAME OF BIDDER_____

The undersigned hereby submits the following Subcontractors and Products List which becomes a part of the undersigned Contract proposal. Subcontractor purchased material, equipment, and labor shall be under the direct management and control of the Prime Contractor. If a dual listing of manufacturers and subcontractors is herein made, it is understood the Architect/Engineer (not the Contractor) will select the manufacturer or subcontractor of his choice. State the XBE Designation.

CIVIL AND ARCHITECTURAL WORK

Section	**Description**	**$$$**	**Subcontractor**	**Manufacturer**
01 21 00	Allowances			
01 72 00	Field Engineering			
03 30 00	Cast-In-Place Concrete			
03 60 00	Post Installed Anchors			
32 13 13	Concrete Paving			
32 13 73	Concrete Paving Joint Sealants			

Name of Bidder:	Date:
Address:	
City/State/Zip:	
Telephone:	
By:	

CIVIL AND ARCHITECTURAL WORK SUBCONTRACTORS AND PRODUCTS LIST

BID CATEGORY NO. 04 - MASONRY

NAME OF BIDDER_____

The undersigned hereby submits the following Subcontractors and Products List which becomes a part of the undersigned Contract proposal. Subcontractor purchased material, equipment, and labor shall be under the direct management and control of the Prime Contractor. If a dual listing of manufacturers and subcontractors is herein made, it is understood the Architect/Engineer (not the Contractor) will select the manufacturer or subcontractor of his choice. State the XBE Designation.

CIVIL AND ARCHITECTURAL WORK

Section	Description	$$$	Subcontractor	Manufacturer
01 21 00	Allowances			
01 72 00	Field Engineering			
04 20 00	Unit Masonry			
04 72 00	Cast Stone Masonry			
07 13 26	Self-Adhering Sheet Waterproofing			
07 21 00	Thermal Insulation			
07 25 00	Weather Barriers			
07 27 15	Nonbituminous Self-Adhering Sheet Air Barriers			
07 27 26	*Fluid Applied Membrane Air Barriers*			
07 62 00	Sheet Metal Flashing and Trim			
07 84 13	Penetration Firestopping			
07 91 00	Preformed Joint Seals			
07 92 00	Joint Sealants			

Name of Bidder:	Date:
Address:	
City/State/Zip:	
Telephone:	
By:	

CIVIL AND ARCHITECTURAL WORK SUBCONTRACTORS AND PRODUCTS LIST

BID CATEGORY NO. 05 - STRUCTURAL STEEL

NAME OF BIDDER_____

The undersigned hereby submits the following Subcontractors and Products List which becomes a part of the undersigned Contract proposal. Subcontractor purchased material, equipment, and labor shall be under the direct management and control of the Prime Contractor. If a dual listing of manufacturers and subcontractors is herein made, it is understood the Architect/Engineer (not the Contractor) will select the manufacturer or subcontractor of his choice. State the XBE Designation.

CIVIL AND ARCHITECTURAL WORK

Section	**Description**	**$$$**	**Subcontractor**	**Manufacturer**
01 21 00	Allowances			
01 72 00	Field Engineering			
05 12 00	Structural Steel Framing			
05 31 00	Steel Decking			
05 51 13	Metal Pan Stairs			
05 52 13	Pipe and Tube Railings			

Name of Bidder:	Date:
Address:	
City/State/Zip:	
Telephone:	
By:	

CIVIL AND ARCHITECTURAL WORK SUBCONTRACTORS AND PRODUCTS LIST

BID CATEGORY NO. 06 - GENERAL TRADES

NAME OF BIDDER_____

The undersigned hereby submits the following Subcontractors and Products List which becomes a part of the undersigned Contract proposal. Subcontractor purchased material, equipment, and labor shall be under the direct management and control of the Prime Contractor. If a dual listing of manufacturers and subcontractors is herein made, it is understood the Architect/Engineer (not the Contractor) will select the manufacturer or subcontractor of his choice. State the XBE Designation.

CIVIL AND ARCHITECTURAL WORK

Section	**Description**	**$$$**	**Subcontractor**	**Manufacturer**
01 21 00	Allowances			
01 51 30	Temporary Heating, Ventilation, and Cooling			
01 51 50	Temporary Water			
01 51 80	Temporary Fire Protection			
01 52 10	Construction Aids and Temporary Enclosures			
01 52 60	Rubbish Container			
01 53 10	Fences (Temporary Security)			
01 53 20	Tree and Plant Protection			
01 53 30	Barricades			
~~01 55 00~~	~~Access Roads and Parking Areas~~			
01 57 60	Project Signs			
01 91 13	General Commissioning Requirements V&T			

Section	Description	$$$	Subcontractor	Manufacturer
02 41 19	Selective Structure Demolition			
05 40 00	Cold-Formed Metal Framing			
05 50 00	Metal Fabrications			
06 10 00	Rough Carpentry			
06 61 16	Solid Surfacing Fabrications			
07 13 26	Self-Adhering Sheet Waterproofing			
07 21 00	Thermal Insulation			
07 25 00	Weather Barriers			
07 27 15	Nonbituminous Self-Adhering Sheet Air Barriers			
07 53 23	Ethylene-Propylene-Diene-Monomer (EPDM) Roofing			
07 62 00	Sheet Metal Flashing and Trim			
07 71 00	Roof Specialties			
07 71 29	Manufactured Roof Expansion Joints			
07 72 00	Roof Accessories			
07 84 13	Penetration Firestopping			
07 91 00	Preformed Joint Seals			
07 92 00	Joint Sealants			
07 95 13.13	Interior Expansion Joint Cover Assemblies			
07 95 13.16	Exterior Expansion Joint Cover Assemblies			
08 06 71	Door Hardware Schedule			

Section	Description	$$$	Subcontractor	Manufacturer
08 11 13	Hollow Metal Doors and Frames			
08 14 16	Flush Wood Doors			
08 17 00	Integrated Door Opening Assemblies			
08 31 13	Access Doors and Frames			
08 41 13	Aluminum-Framed Entrances and Storefronts			
08 71 00	Door Hardware			
08 80 00	Glazing			
08 90 00	Louvers and Vents			
09 21 16.23	Gypsum Board Shaft Wall Assemblies			
09 22 16	Non-Structural Metal Framing			
09 26 13	Gypsum Veneer Plastering			
09 29 00	Gypsum Board			
09 51 13	Acoustical Panel Ceilings			
09 91 13	Exterior Painting			
09 91 23	Interior Painting			
10 14 26	Post and Panel Pylon Signage			
10 44 13	Fire Extinguisher Cabinets			
10 44 16	Fire Extinguishers			
12 32 16	Manufactured Plastic-Laminate-Clad Casework			
12 36 23.13	Plastic-Laminate-Clad Countertops			
22 05 00	Common Work Results for Plumbing			

Section	Description	$$$	Subcontractor	Manufacturer
22 05 13	Common Motor Requirements for Plumbing Equipment			
22 05 23	General Duty Valves for Plumbing Piping			
22 05 29	Hangers and Supports for Plumbing Piping and Equipment			
22 07 00	Plumbing Insulation			
22 08 00	Minimum Commissioning of Plumbing			
22 11 16	Domestic Water Piping			
22 11 19	Domestic Water Piping Specialties			
22 13 16	Sanitary Waste and Vent Piping			
22 13 19	Sanitary Waste Piping Specialties			
22 14 13	Facility Storm Drainage Piping			
22 14 23	Storm Drainage Piping Specialties			
22 14 29	Sump Pumps			
22 40 00	Plumbing Fixtures			
23 05 00	Common Work Results for HVAC			
23 05 13	Common Motor Requirements for HVAC Equipment			
23 05 16	Expansion Fittings and Loops for HVAC Piping			
23 05 19	Meters and Gages for HVAC Piping			
23 05 23	General-Duty Valves for HVAC Piping			

Section	Description	$$$	Subcontractor	Manufacturer
23 05 29	Hangers and Supports for HVAC Piping and Equipment			
23 05 53	Identification for HVAC Piping and Equipment			
23 05 93	Testing, Adjusting, and Balancing for HVAC			
23 07 00	HVAC Insulation			
23 08 00	Commissioning of HVAC			
23 09 00	Instrumentation and Control for HVAC			
23 21 13	Hydronic Piping			
23 25 00	HVAC Water Treatment			
23 31 13	Metal Ducts			
23 33 00	Air Duct Accessories			
23 34 23	HVAC Power Ventilators			
23 37 13	Diffusers, Registers, and Grilles			
23 37 23	HVAC Gravity Ventilators			
23 62 00	Packaged Compressor and Condenser Units			
23 73 16	Blower Coil Air Handling Units			
23 82 33	Convectors			
23 82 39	Unit Heaters			

Name of Bidder:	Date:
Address:	
City/State/Zip:	
Telephone:	
By:	

CIVIL AND ARCHITECTURAL WORK SUBCONTRACTORS AND PRODUCTS LIST

BID CATEGORY NO. 07 - FLOORING

NAME OF BIDDER_____

The undersigned hereby submits the following Subcontractors and Products List which becomes a part of the undersigned Contract proposal. Subcontractor purchased material, equipment, and labor shall be under the direct management and control of the Prime Contractor. If a dual listing of manufacturers and subcontractors is herein made, it is understood the Architect/Engineer (not the Contractor) will select the manufacturer or subcontractor of his choice. State the XBE Designation.

CIVIL AND ARCHITECTURAL WORK

Section	**Description**	**$$$**	**Subcontractor**	**Manufacturer**
01 21 00	Allowances			
01 72 00	Field Engineering			
04 21 19	*Selective Structural Demolition*			
07 92 00	Joint Sealants			
09 30 00	Tiling			
09 65 00	Resilient Flooring			
09 65 13	Resilient Base and Accessories			
09 65 66	Resilient Athletic Flooring			
09 68 13	Tile Carpeting			

Name of Bidder:	Date:
Address:	
City/State/Zip:	
Telephone:	
By:	

1.05 ELECTRICAL WORK SUBCONTRACTORS AND PRODUCTS LIST

BID CATEGORY NO. 8 - ELECTRICAL

NAME OF BIDDER_____

The undersigned hereby submits the following Subcontractors and Products List which becomes a part of the undersigned Contract proposal. Subcontractor purchased material, equipment, and labor shall be under the direct management and control of the Prime Contractor. If dual listing of manufacturers or subcontractors is herein made, it is understood the Architect/Engineer (not the Contractor) will select the manufacturer or subcontractor of his choice.

ELECTRICAL WORK

Section	Description	$$$	Subcontractor	Manufacturer
01 21 00	Allowances			
01 51 10	Temporary Electricity, Lighting, and Warning Systems			
01 72 00	Field Engineering			
01 91 13	General Commissioning Requirements - V&T			
02 41 19	Selective Structure Demolition			
07 84 13	Penetration Firestopping			
07 92 00	Joint Sealants			
10 14 63	Electronic Message Signage			
26 05 00	Common Work Results for Electrical			
26 05 19	Low-Voltage Electrical Power Conductors and Cables			
26 05 26	Grounding and Bonding for Electrical Systems			

26 05 29	Hangers and Supports for Electrical Systems			
26 05 33	Raceways and Boxes for Electrical Systems			
26 05 44	Sleeves and Sleeve Seals for Electrical Raceways and Cabling			
26 05 53	Identification for Electrical Systems			
26 08 00	Minimum Commissioning of Electrical Systems			
26 09 23	Lighting Control Devices			
26 09 43.23	Lighting Control System			
26 27 26	Wiring Devices			
26 28 13	Fuses			
26 28 16	Enclosed Switches and Circuit Breakers			
26 29 13	Enclosed Controllers			
26 51 00	Interior Lighting			
27 05 00	Common Work Results for Communications			
27 05 26	Grounding and Bonding for Communications Systems			
27 05 28	Pathways for Communications Systems			
27 05 53	Identification for Communications Systems			
27 15 13	Communications Copper Horizontal Cabling			
27 17 00	Testing, ID and Admin of Balanced Twisted Pair Infrastructure			

27 26 26	IP Address Request Form			
27 41 16	Technology Equipment			
27 51 23.20	Commercial Intercommunications and Program Systems (ATLASIED)			
27 53 13.20	Clock Systems (PRIMEX)			
28 05 13	Conductors and Cables for Electronic Safety and Security			
28 14 00	Access Control System Hardware			
28 15 00	Access Control Hardware Devices			
28 15 23	Intercom Entry Systems			
28 20 00	Video Surveillance			
28 31 00	Fire Detection and Alarm			

Name of Bidder:	Date:
Address:	
City/State/Zip:	
Telephone:	
By:	

ELECTRICAL WORK SUBCONTRACTORS AND PRODUCTS LIST

BID CATEGORY NO. 9 - ELEVATORS

NAME OF BIDDER_____

The undersigned hereby submits the following Subcontractors and Products List which becomes a part of the undersigned Contract proposal. Subcontractor purchased material, equipment, and labor shall be under the direct management and control of the Prime Contractor. If dual listing of manufacturers or subcontractors is herein made, it is understood the Architect/Engineer (not the Contractor) will select the manufacturer or subcontractor of his choice.

ELECTRICAL WORK

Section	**Description**	**$$$**	**Subcontractor**	**Manufacturer**
01 21 00	Allowances			
01 72 00	Field Engineering			
07 84 13	Penetration Firestopping			
07 92 00	Joint Sealants			
14 21 23	Machine-Room-Less Electric Traction Passenger Elevators			

Name of Bidder:	Date:
Address:	
City/State/Zip:	
Telephone:	
By:	

END OF SECTION 00 43 50

SECTION 01 12 00 - MULTIPLE CONTRACT SUMMARY

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and General Provisions of the Prime Contract, including amended General Conditions and other Division 1 Specification Sections, apply to Work of this Section.

1.02 SUMMARY

A. The intent of this Section is to indicate the Work required by the Contractors and to provide information regarding the duties, responsibilities, and cooperation required by the Contractors, with similar requirements for the subcontractors and suppliers.

B. Owners right to maintain current operations

C. Occupancy requirements

D. Work by Owner

E. Permits, fees, and notices

F. Labor and materials

G. Verifications of existing dimensions

H. Project security

I. Coordination of work

J. Time of commencement and completion

K. Schedule of contract responsibilities

1.03 WORK UNDER SEPARATE CONTRACTS

A. Prime Contracts are defined to include the following contracts described in the Schedule of Contract Responsibilities included hereinafter; and each is recognized to be a major part of the project, with Work to be performed concurrently and in close coordination with Work of other Prime Contracts.

B. The "Contract Documents," as defined in the General Conditions, include "the Drawings." Although Drawings are grouped and identified by classification of the Work, Contractors shall be responsible for their Work as specified herein and as

indicated on the Drawings. Although the majority of the Drawings are "to scale," Contractors are directed to use indicated dimensions for determining material quantities and for other reasons. No additional monies will be allowed due to Contractors using "scaling instruments" to determine material quantities or for other reasons.

C. Separate prime contracts will be awarded as per the **"Schedule of Contract Responsibilities"** (see Part 3 – Execution). Contractors shall include Work required by the Specifications and Drawings for each contract area defined in the Schedule.

D. Work for the complete construction of the Project will be under multiple prime contracts with the Owner. The Construction Manager will manage the construction of the Project.

E. Each Contractor shall be responsible for demolition and disposal of existing items relative to his Contract.

1.04 ADMINISTRATIVE RESPONSIBILITIES OF PRIME CONTRACTORS AND CM

A. The Construction Manager shall be responsible for the maintenance of the Construction Schedule and management of every phase of the Work.
   1. Each Contractor shall read the Specifications and Drawings for other separate Contracts for fixed equipment and the like to be incorporated or attached or built in to the Work; and familiarize himself with the requirements and responsibilities of other Contracts to enable the required coordination and supervision.
   2. Each Contractor shall also familiarize himself with other items to be incorporated into the Work including equipment and Work by the Owner.
   3. Each Contractor shall cooperate with the Construction Manager in notifying him when the Work is at a stage to require the services of other Contractors and shall notify the Construction Manager in the event that such other Contractors do not carry out their responsibilities in connection with such notification.

B. Contractors shall cooperate with and assist the Construction Manager in the preparation of construction progress and procedures, schedule of product deliveries, and their effect on the overall project progress and completion. Other Contractors shall cooperate in getting their Work and the Work of their subcontractors completed according to the schedule as prepared and maintained by the Construction Manager. Each Contractor shall immediately notify the Construction Manager of a delay in delivery of products or the scheduled date of completion that may affect the total progress of construction.

C. The Owner will furnish the topographical survey, either as a part of these Drawings or separately, giving the general topographical lines existing at the site and the property lines.

D. Contractors required to make connections to existing utilities, especially sewerage where gravity flow occurs, shall verify grades and locations at points of such connections and shall notify the Construction Manager of circumstances which would adversely affect the proper flow or connection to such facilities.

1.05 PRIME CONTRACTORS USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.
   1. Owner Occupancy: Allow for Owner occupancy and use by the public.
   2. Driveways and Entrances: Keep driveways and entrances serving the premises clear and available to the Owner, the Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site.

B. Use of the Existing Building: Maintain the existing building in a weathertight condition throughout the construction period. Repair damage caused by construction operations. Take all precautions necessary to protect the building and its occupants during the construction period.

C. The use of drones on the property is restricted without prior written permission. Operators must be licensed and have insurance specific to the operation of aerial drones.

D. Photographs or other imagery of the work in progress or renderings of the project shall not include any personal identifiable information of the project, the property, the Owner, or any occupants.

1.06 OWNERS RIGHT TO MAINTAIN OPERATIONS

A. During the course of this Project, normal and customary functions and operations must be maintained. The Contract Documents are intended to define a strict separation between the school activities of students and staff from the activities of the construction project.

B. The Construction Manager, Architect, and Owner will not tolerate any visible or audible actions initiated or responded to by any employees of Contractors on this Project toward any students, teachers, or staff members at the school system. Violators shall be promptly removed from the site.

C. The Owner intends to instruct students, teachers, and staff to refrain from communications with Contractor's personnel working on this Project. All communication with Owner and staff shall be through the Construction Manager.

D. Contractors must expend their best effort toward protection of the health, safety, and welfare of occupants on the Owner's property during the course of Work on this Project.

E. Contractors and Subcontractors shall be subject to such rules and regulations for the conduct of the Work as the Owner may establish. Employees shall be properly and completely clothed while working. Bare torsos, legs and feet will not be allowed. Possession or consumption of alcoholic beverages or drugs, tobacco or other noxious behavior on the site is strictly prohibited. Violators shall be promptly removed from the site. Smoking is not permitted on school property or within school buildings.

1.07 OCCUPANCY REQUIREMENTS

A. Full Owner Occupancy: The Owner will occupy the site and existing building during the entire construction period. Cooperate with the Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with the Owner's operations.

B. Partial Owner Occupancy: The Owner reserves the right to occupy and to place and install equipment in completed areas of the building prior to Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placing of equipment and partial occupancy shall not constitute acceptance of the total Work.

1. The Construction Manager will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied prior to Owner occupancy.
2. Party which obtained general building permit shall obtain a Certificate of Occupancy from local building officials prior to Owner occupancy.
3. Prior to partial Owner occupancy, mechanical and electrical systems shall be fully operational. Required inspections and tests shall have been successfully completed. Upon occupancy, the Owner will operate and maintain mechanical and electrical systems serving occupied portions of the building.
4. Upon occupancy, the Owner will assume responsibility for maintenance and custodial service for occupied portions of the building.

1.08 WORK BY OWNER

A. The Owner intends to complete the following items of Work outside the provisions of these Contract Documents. Contractors shall not restrict or interfere with the Owner's right to the Project to accomplish this Work.
   1. Equipment and furniture except as scheduled and specified under Divisions 11 and 12 and shown on the Drawings.
   2. Items which may be deleted from Contracts for Work as required by the Contract Documents.
   3. Existing school maintenance work.
   4. The purchase and supplying of certain materials as noted in the Project Manual.
   5. The Owner, under separate contract, shall provide removal of identified asbestos containing materials from the existing structure. The asbestos report is available through the Construction Manager upon request.
   6. (List other items as may be applicable).

1.09 PERMITS, FEES, AND NOTICES

A. As the Construction Manager, The Skillman Corporation will secure the general building permit for the Owner. Each Contractor shall secure and pay for other permits, governmental fees, and licenses necessary for the proper execution and completion of the Contractors Work. Fees to relocate utilities on Owner's property shall be included in the bid of the Contractor doing the relocation.
   1. The Owner shall pay for the cost of the Building Permit.
   2. State filing fees for plan approval are the responsibility of the Owner and will be paid by the Owner.

B. Utility Tie-Ins: Shall be arranged with local utility company and other involved parties for minimum interruption of service.

C. Shutdowns of existing systems shall be limited to minimum time required and scheduled with other involved parties. Provide 2 days written notice of shutdown to Construction Manager and Owner.

D. Inspections of installed work shall be performed by the governing authority as arranged for by the Contractor. Work shall not be covered until approved.

E. Each Contractor shall give notices and comply with laws, ordinances, rules, regulations, and orders of public authorities bearing on the performance of his Work. If a Contractor observes that the Contract Documents are at variance therewith, he shall promptly notify the Construction Manager in writing, and necessary changes shall be adjusted by appropriate notification. If a Contractor performs Work knowing it to be contrary to such laws, ordinances, rules, and regulations, and without such notice to the Construction Manager, he shall assume full responsibility therefore and shall bear the costs attributable thereto.

1.10 LABOR AND MATERIALS

A. Unless otherwise specifically noted, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of his Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

B. Each Contractor shall enforce strict discipline and good order among his employees or other persons carrying out Work of his Contract and shall not permit employment of unfit person or persons or anyone not skilled in the task assigned to them.

C. Prime Contractors must furnish a letter to the Construction Manager, stating that Contractor shall not assign any of its employees, agents or other individuals to perform any services in the District's facilities or program sites if that individual:

1. Is listed on the Michigan Sex Offender Registry, www.mipsor.state.mi.us.
2. Is listed on the Federal Sex Offender Registry www.nsopw.gov.
3. Has not passed a 5-50 drug screen, testing negative for the following drugs:
    a. Amphetamines
    b. Methamphetamines
    c. Cocaine
    d. Codeine
    e. Methadone
    f. Morphine
    g. Phencyclidine (PCP)
    h. Marijuana

D. ID Stickers will be issued by The Skillman Corporation upon receipt of verification from the Contractor that the employee/subcontractor employee or independent contractor has a satisfactory record to work on the Project. Stickers will be numbered and numbers assigned to each worker to be worn on their hardhat. It is the Contractor's responsibility to maintain a record of contractor's name assigned each number and provide to The Construction Manager upon request.

E. Consistent with Michigan law, possession or consumption of drugs on school property will promptly be reported to the local police. Consumption of alcoholic beverages or tobacco or other noxious behavior on school owned property is strictly prohibited. Violators shall be promptly removed from the site. Smoking is not permitted on school property or within school buildings.

1.11 CUTTING AND PATCHING

A. Refer to Section 01 73 10 – Cutting and Patching, for provisions on this subject.

1.12 VERIFICATIONS OF EXISTING DIMENSIONS

A. When verification of existing dimensions is required, the Contractor requiring said verification for the construction or fabrication of his material shall be the Contractor responsible for the procurement of the field information.

1.13 PROJECT SECURITY

A. Each Prime Contractor shall take all reasonable precautions to prevent injury, damage or loss to people and property in, on and adjacent to the project. This shall include not only their own work or property but that of other contractors and the Owner.

B. If deemed necessary by The Construction Manager a project wide security program may be developed for the purpose of preventing damage or loss at the project site or property adjacent thereto. Once accepted by the Owner, contractors shall comply.

1.14 SCHEDULE OF CONTRACT RESPONSIBILITIES - SCOPE

A. Contractors shall submit their proposals based on the work included under each contract area as listed herein. Include Work necessary for a complete project, as shown on the Drawings and called for in the Specifications.

B. Questions concerning the phasing or "Schedule of Contract Responsibilities" should be directed to the Construction Manager, who will be the interpreter and be responsible for this Schedule of Contract Responsibilities and Contract Breakdown, prior to submitting proposals and during construction.

C. The requirements of Division 1 are a part of the Work of each and every contract area. The Contractor for any one contract area shall be familiar with the Work and requirements of all other contract areas.

D. Certain Specification Sections describe Work to be performed under several contract areas. (Example: 06 10 00 - Rough Carpentry.) Provide Work of this nature as required for each contract area whether or not enumerated in the Schedule of Contract Responsibilities.

E. The following contract areas are broken down by Specifications Section conforming basically to the CSI format.

F. The Drawings and Specifications as furnished for each of the Contracts is for the convenience of the Contractor in preparing a proposal for this Project. However, each Contractor is responsible to review the complete set of Drawings and Specifications to assure that Work required to be installed to complete his phase of the Work is included in his proposal. This "Schedule of Contract Responsibilities" is a definition of the work as it is to be bid in separate contracts. Where a specific item of Work is not defined, but is normally inherent to a trade, or is included in

the scope of the applicable technical revision, it will be the responsibility of that Contractor to include the Work in his proposal.

G. This "Schedule of Contract Responsibilities" is to aid each Contractor in defining the Scope of Work to be included in his proposal. However, omissions from this "Schedule of Responsibilities" do not relieve the Contractor from including in his proposal that Work which will be required to complete his Contract. Each Contractor should read the "Schedule of Contract Responsibilities" completely to familiarize himself with the Work of other Contractors that may have Work in adjacent areas and to coordinate the interfacing problems that may occur as the work is assembled and constructed.

H. Where specific Work is to be completed under a particular phase of the Project and the Work is wholly or partially completed by other trades because of the type of work involved or jurisdictional trade agreements, the Contractor will be responsible to subcontract the Work as necessary to complete the Work included in his Contract. No delay in the Work will be allowed due to the failure of the Contractor to subcontract related work required by jurisdictional trade agreements.

1.15 COORDINATION OF WORK

A. Each Contractor is responsible to coordinate his Work with the Work of other trades and other Contractors and requirements of the school system. The Contractor must make space allowances for Work of other Contractors, provide necessary openings where indicated or implied by the Drawings and Specifications. Each Contractor is responsible to protect his own Work.

1.16 TIME OF COMMENCEMENT AND COMPLETION

A. The Contractor shall commence work within ten (10) days after being notified in writing to proceed and shall complete the Work within the time limitations established in the Form of Agreement.
   1. It is anticipated that construction will start within **(45)** calendar days after receipt of bids.
   2. Construction shall be complete within **(223)** consecutive calendar days, or earlier, after Notice to Proceed.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.01 SCHEDULE OF CONTRACT RESPONSIBILITIES

3.02 GENERAL REQUIREMENTS

A. PROVIDED BY OWNER THROUGH THE CONSTRUCTION MANAGER

Section	01 32 00	Schedules and Reports
Section	01 45 00S	Masonry Inspection Report
Section	01 45 10	Testing Laboratory Services
Section	01 51 60	Temporary Sanitary Facilities
Section	01 59 10	Project Office
Section	01 71 50	Final Cleaning

B. PROVIDED BY ALL CONTRACTORS AS APPLICABLE

Section	01 12 00	Multiple Contract Summary
Section	01 23 00	Alternates
Section	01 25 00	Contract Modification Procedures
Section	01 28 00	Schedule of Values
Section	01 29 00	Applications for Payment
Section	01 31 00	Project Meetings
Section	01 32 00	Schedules and Reports
Section	01 33 00	Submittal Procedures
Section	01 45 10	Testing Laboratory Services (Paragraph 1.05)
Section	01 50 50	Temporary Facilities and Controls
Section	01 54 60	Environment Protection
Section	01 54 80	Utility Protection
Section	01 56 30	Water Control
Section	01 56 90	Housekeeping & Safety
Section	01 59 20	Offices and Sheds
Section	01 60 00	Product Requirements
Section	01 72 50	Work Layout
Section	01 73 10	Cutting and Patching
Section	01 77 00	Contract Closeout

All Contractors shall provide their Superintendents with devices capable of communicating with the Construction Manager.

Autodesk Build is replacing **PlanGrid**. **Autodesk Build** does not require users to purchase a license. **Contractors** will be invited to the project and required to use this tool. **Autodesk Build** will be used as the **Current Set** and **As-Built Record Drawings.** Additionally, it will be used to track **Issues** for **Safety**, **QA/QC**, **Non-Compliance Issues**, **Work Completion List** and **Punch List**.

C. PROVIDED BY DESIGNATED CONTRACTORS

Section	01 21 00	Allowances

Section	01 51 10	Temporary Electricity, Lighting and Warning Systems
Section	01 51 30	Temporary Heating, Ventilation and Cooling
Section	01 51 50	Temporary Water
Section	01 51 80	Temporary Fire Protection
Section	01 52 10	Construction Aids and Temporary Enclosures
Section	01 52 60	Rubbish Container
Section	01 53 10	Fences (Temporary Security)
Section	01 53 20	Tree and Plant Protection
Section	01 53 30	Barricades
Section	01 55 00	Access Roads and Parking Areas
Section	01 56 20	Dust Control
Section	01 56 80	Erosion Control
Section	01 57 60	Project Signs
Section	01 72 00	Field Engineering

3.03 BID CATEGORIES

A. BID CATEGORY NO. 1 - DEMOLITION

General Requirements in Paragraph 3.02.B above.

Section	01 21 00	Allowances
Section	01 72 00	Field Engineering
Section	02 41 19	Selective Structure Demolition

B. BID CATEGORY NO. 2 - SITEWORK

General Requirements in Paragraph 3.02.B above.

Section	01 21 00	Allowances
Section	*01 55 00*	*Access Roads and Parking Areas*
Section	01 56 20	Dust Control
Section	*01 56 39*	*Temporary Tree and Plant Protection*
Section	01 56 80	Erosion Control
Section	01 72 00	Field Engineering
Section	02 41 19	Selective Structure Demolition
Section	31 19 00	Soil Erosion Controls
Section	31 20 00	Earth Moving
~~Section~~	~~32 14 00~~	~~Unit Paving~~
~~Section~~	~~32 31 13.53~~	~~High-Security Chain Link Fences and Gates~~
Section	*32 31 13*	*Chain Link Fences and Gates*
Section	32 31 19	Decorative Metal Fences and Gates
Section	32 33 00	Site Furnishings
~~Section~~	~~32 39 00~~	~~Manufactured Site Specialties~~
Section	32 91 13	Soil Preparation
Section	32 92 00	Turf and Grasses
Section	32 93 00	Plants
Section	33 40 00	Storm Sewer Utilities

C. BID CATEGORY NO. 3 - CONCRETE

General Requirements in Paragraph 3.02.B above.

Section	01 21 00	Allowances
Section	01 72 00	Field Engineering
Section	03 30 00	Cast-In-Place Concrete
Section	03 60 00	Post Installed Anchors
Section	32 13 13	Concrete Paving
Section	32 13 73	Concrete Paving Joint Sealants

D. BID CATEGORY NO. 4 - MASONRY

General Requirements in Paragraph 3.02.B above.

Section	01 21 00	Allowances
Section	01 72 00	Field Engineering
Section	04 20 00	Unit Masonry
Section	04 72 00	Cast Stone Masonry
Section	07 13 26	Self-Adhering Sheet Waterproofing
Section	07 21 00	Thermal Insulation
Section	07 25 00	Weather Barriers
Section	07 27 15	Nonbituminous Self-Adhering Sheet Air Barriers
Section	*07 27 26*	*Fluid Applied Membrane Air Barriers*
Section	07 62 00	Sheet Metal Flashing and Trim
Section	07 84 13	Penetration Firestopping
Section	07 91 00	Preformed Joint Seals
Section	07 92 00	Joint Sealants

E. BID CATEGORY NO. 5 - STRUCTURAL STEEL

General requirements in Paragraph 3.02.B above.

Section	01 21 00	Allowances
Section	01 72 00	Field Engineering
Section	05 12 00	Structural Steel Framing
Section	05 31 00	Steel Decking
Section	05 51 13	Metal Pan Stairs
Section	05 52 13	Pipe and Tube Railings

F. BID CATEGORY NO. 6 - GENERAL TRADES

General Requirements in Paragraph 3.02.B above.

Section	01 21 00	Allowances
Section	01 51 30	Temporary Heating, Ventilation, and Cooling
Section	01 51 50	Temporary Water
Section	01 51 80	Temporary Fire Protection
Section	01 52 10	Construction Aids and Temporary Enclosures
Section	01 52 60	Rubbish Container
Section	01 53 10	Fences (Temporary Security)
Section	01 53 20	Tree and Plant Protection

Section	01 53 30	Barricades
~~Section~~	~~01 55 00~~	~~Access Roads and Parking Areas~~
Section	01 57 60	Project Signs
Section	01 72 00	Field Engineering
Section	01 91 13	General Commissioning Requirements V&T
Section	02 41 19	Selective Structure Demolition
Section	05 40 00	Cold-Formed Metal Framing
Section	05 50 00	Metal Fabrications
Section	06 10 00	Rough Carpentry
Section	06 61 16	Solid Surfacing Fabrications
Section	07 13 26	Self-Adhering Sheet Waterproofing
Section	07 21 00	Thermal Insulation
Section	07 25 00	Weather Barriers
Section	07 27 15	Nonbituminous Self-Adhering Sheet Air Barriers
Section	07 53 23	Ethylene-Propylene-Diene-Monomer (EPDM) Roofing
Section	07 62 00	Sheet Metal Flashing and Trim
Section	07 71 00	Roof Specialties
Section	07 71 29	Manufactured Roof Expansion Joints
Section	07 72 00	Roof Accessories
Section	07 84 13	Penetration Firestopping
Section	07 91 00	Preformed Joint Seals
Section	07 92 00	Joint Sealants
Section	07 95 13.13	Interior Expansion Joint Cover Assemblies
Section	07 95 13.16	Exterior Expansion Joint Cover Assemblies
Section	08 06 71	Door Hardware Schedule
Section	08 11 13	Hollow Metal Doors and Frames
Section	08 14 16	Flush Wood Doors
Section	08 17 00	Integrated Door Opening Assemblies
Section	08 31 13	Access Doors and Frames
Section	08 41 13	Aluminum-Framed Entrances and Storefronts
Section	08 71 00	Door Hardware
Section	08 80 00	Glazing
Section	08 90 00	Louvers and Vents
Section	09 21 16.23	Gypsum Board Shaft Wall Assemblies
Section	09 22 16	Non-Structural Metal Framing
Section	09 26 13	Gypsum Veneer Plastering
Section	09 29 00	Gypsum Board
Section	09 51 13	Acoustical Panel Ceilings
Section	09 91 13	Exterior Paint
Section	09 91 23	Interior Painting
Section	10 14 26	Post and Panel Pylon Signage
Section	10 44 13	Fire Extinguisher Cabinets
Section	10 44 16	Fire Extinguishers
Section	12 32 16	Manufactured Plastic-Laminate-Clad Casework
Section	12 36 23.13	Plastic-Laminate-Clad Countertops
Section	22 05 00	Common Work Results for Plumbing
Section	22 05 13	Common Motor Requirements for Plumbing Equipment

Section	22 05 23	General Duty Valves for Plumbing Piping
Section	22 05 29	Hangers and Supports for Plumbing Piping and Equipment
Section	22 07 00	Plumbing Insulation
Section	22 08 00	Minimum Commissioning of Plumbing
Section	22 11 16	Domestic Water Piping
Section	22 11 19	Domestic Water Piping Specialties
Section	22 13 16	Sanitary Waste and Vent Piping
Section	22 13 19	Sanitary Waste Piping Specialties
Section	22 14 13	Facility Storm Drainage Piping
Section	22 14 23	Storm Drainage Piping Specialties
Section	22 14 29	Sump Pumps
Section	22 40 00	Plumbing Fixtures
Section	23 05 00	Common Work Results for HVAC
Section	23 05 13	Common Motor Requirements for HVAC Equipment
Section	23 05 16	Expansion Fittings and Loops for HVAC Piping
Section	23 05 19	Meters and Gages for HVAC Piping
Section	23 05 23	General-Duty Valves for HVAC Piping
Section	23 05 29	Hangers and Supports for HVAC Piping and Equipment
Section	23 05 53	Identification for HVAC Piping and Equipment
Section	23 05 93	Testing, Adjusting, and Balancing for HVAC
Section	23 07 00	HVAC Insulation
Section	23 08 00	Commissioning of HVAC
Section	23 09 00	Instrumentation and Control for HVAC
Section	23 21 13	Hydronic Piping
Section	23 25 00	HVAC Water Treatment
Section	23 31 13	Metal Ducts
Section	23 33 00	Air Duct Accessories
Section	23 34 23	HVAC Power Ventilators
Section	23 37 13	Diffusers, Registers, and Grilles
Section	23 37 23	HVAC Gravity Ventilators
Section	23 62 00	Packaged Compressor and Condenser Units
Section	23 73 16	Blower Coil Air Handling Units
Section	23 82 33	Convectors
Section	23 82 39	Unit Heaters

G. BID CATEGORY NO. 7 - FLOORING

General Requirements in Paragraph 3.02.B above.

Section	01 21 00	Allowances
Section	01 72 00	Field Engineering
Section	*04 21 19*	*Selective Structural Demolition*
Section	07 92 00	Joint Sealants
Section	09 30 00	Tiling
Section	09 65 00	Resilient Flooring
Section	09 65 13	Resilient Base and Accessories
Section	09 65 66	Resilient Athletic Flooring
Section	09 68 13	Tile Carpeting

H. BID CATEGORY NO. 8 - ELECTRICAL

General Requirements in Paragraph 3.02.B above.

Section	01 21 00	Allowances
Section	01 51 10	Temporary Electricity, Lighting, and Warning Systems
Section	01 72 00	Field Engineering
Section	01 91 13	General Commissioning Requirements - V&T
Section	02 41 19	Selective Structure Demolition
Section	07 84 13	Penetration Firestopping
Section	07 92 00	Joint Sealants
Section	10 14 63	Electronic Message Signage
Section	26 05 00	Common Work Results for Electrical
Section	26 05 19	Low-Voltage Electrical Power Conductors and Cables
Section	26 05 26	Grounding and Bonding for Electrical Systems
Section	26 05 29	Hangers and Supports for Electrical Systems
Section	26 05 33	Raceways and Boxes for Electrical Systems
Section	26 05 44	Sleeves and Sleeve Seals for Electrical Raceways and Cabling
Section	26 05 53	Identification for Electrical Systems
Section	26 08 00	Minimum Commissioning of Electrical Systems
Section	26 09 23	Lighting Control Devices
Section	26 09 43.23	Lighting Control System
Section	26 27 26	Wiring Devices
Section	26 28 13	Fuses
Section	26 28 16	Enclosed Switches and Circuit Breakers
Section	26 29 13	Enclosed Controllers
Section	26 51 00	Interior Lighting
Section	27 05 00	Common Work Results for Communications
Section	27 05 26	Grounding and Bonding for Communications Systems
Section	27 05 28	Pathways for Communications Systems
Section	27 05 53	Identification for Communications Systems
Section	27 15 13	Communications Copper Horizontal Cabling
Section	27 17 00	Testing, ID and Admin of Balanced Twisted Pair Infrastructure
Section	27 26 26	IP Address Request Form
Section	27 41 16	Technology Equipment
Section	27 51 23.20	Commercial Intercommunications and Program Systems (ATLASIED)
Section	27 53 13.20	Clock Systems (PRIMEX)
Section	28 05 13	Conductors and Cables for Electronic Safety and Security
Section	28 14 00	Access Control System Hardware
Section	28 15 00	Access Control Hardware Devices
Section	28 15 23	Intercom Entry Systems
Section	28 20 00	Video Surveillance
Section	28 31 00	Fire Detection and Alarm

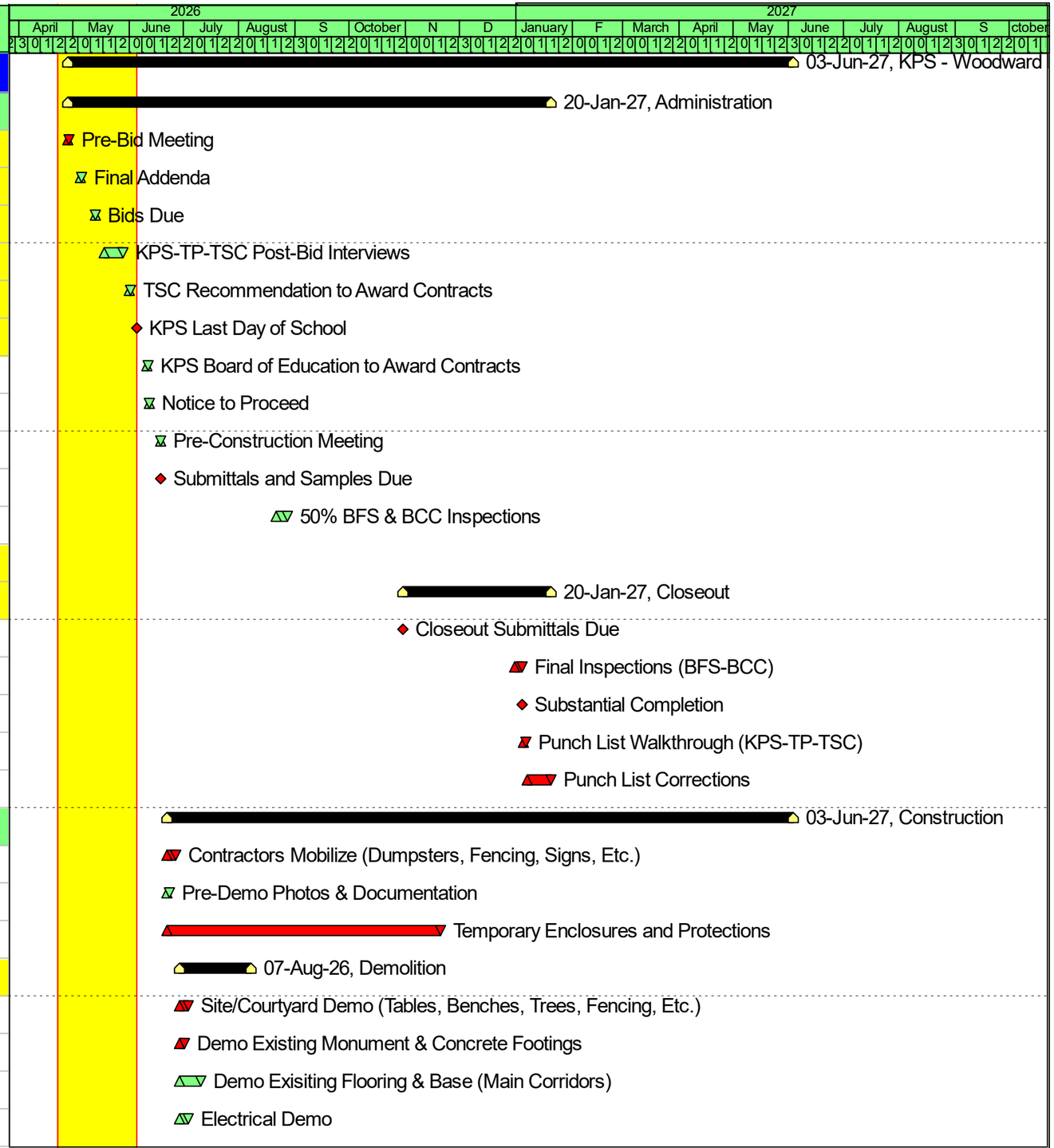
I. BID CATEGORY NO. 9 - ELEVATORS

General Requirements in Paragraph 3.02.B above.

Section	01 21 00	Allowances
Section	01 72 00	Field Engineering
Section	07 84 13	Penetration Firestopping
Section	07 92 00	Joint Sealants
Section	14 21 23	Machine-Room-Less Electric Traction Passenger Elevators

END OF SECTION 01 12 00

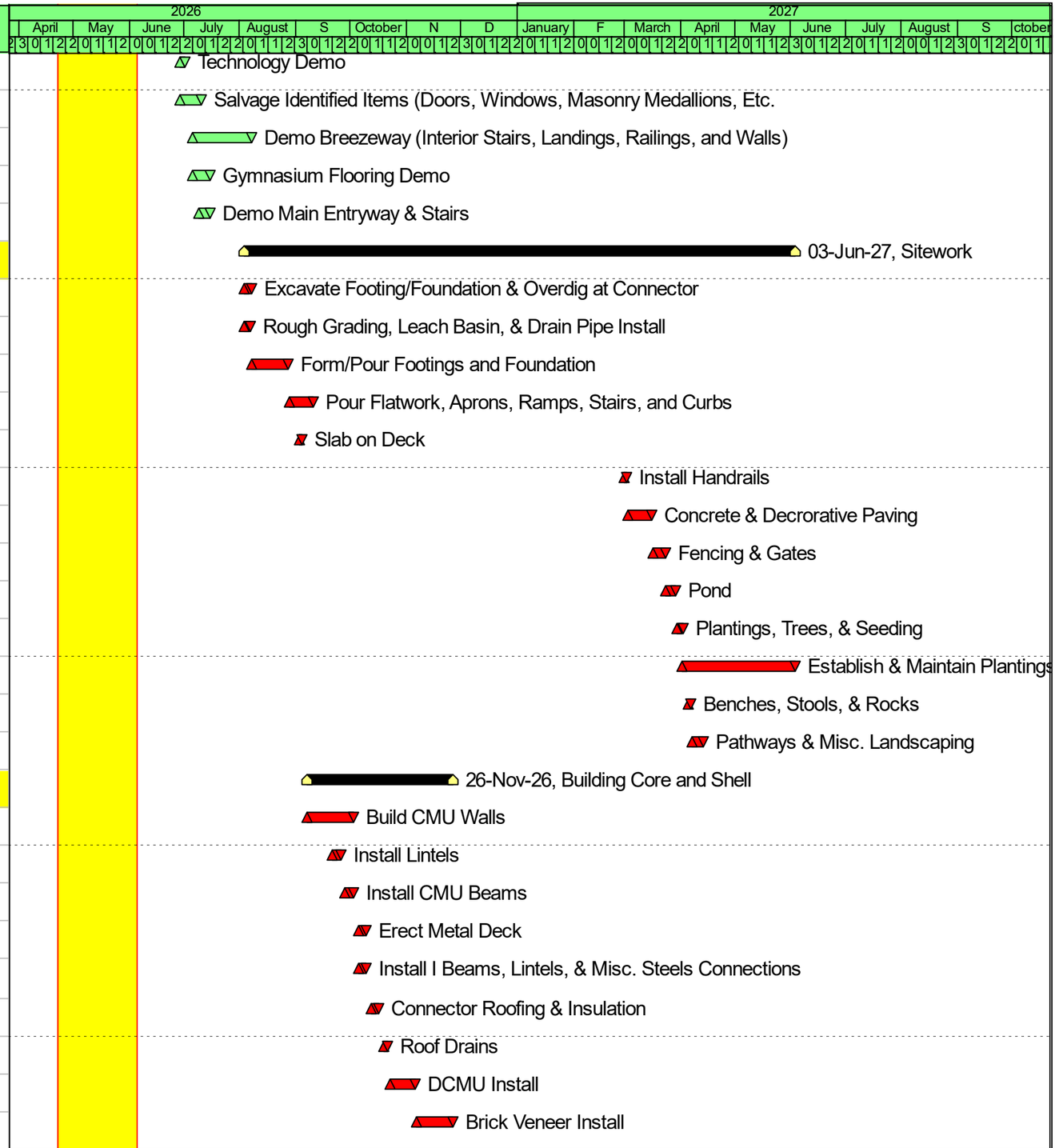
Activity Name	Original Duration	Start	Finish
KPS - Woodward Elementary Connector	288	28-Apr-26	03-Jun-27
Administration	192	28-Apr-26	20-Jan-27
Pre-Bid Meeting	1	28-Apr-26*	28-Apr-26
Final Addenda	1	05-May-26	05-May-26
Bids Due	1	13-May-26	13-May-26
KPS-TP-TSC Post-Bid Interviews	9	18-May-26	28-May-26
TSC Recommendation to Award Contracts	1	01-Jun-26	01-Jun-26
KPS Last Day of School	0	05-Jun-26*	
KPS Board of Education to Award Contracts	1	11-Jun-26	11-Jun-26
Notice to Proceed	1	12-Jun-26	12-Jun-26
Pre-Construction Meeting	1	18-Jun-26	18-Jun-26
Submittals and Samples Due	0		18-Jun-26
50% BFS & BCC Inspections	5	21-Aug-26	27-Aug-26
Pre-Installation Meetings	0		
Closeout	59	30-Oct-26	20-Jan-27
Closeout Submittals Due	0		30-Oct-26*
Final Inspections (BFS-BCC)	3	31-Dec-26	04-Jan-27
Substantial Completion	0		04-Jan-27
Punch List Walkthrough (KPS-TP-TSC)	2	05-Jan-27	06-Jan-27
Punch List Corrections	10	07-Jan-27	20-Jan-27
Construction	249	22-Jun-26	03-Jun-27
Contractors Mobilize (Dumpsters, Fencing, Signs, Etc.)	5	22-Jun-26*	26-Jun-26
Pre-Demo Photos & Documentation	2	22-Jun-26	23-Jun-26
Temporary Enclosures and Protections	110	22-Jun-26	20-Nov-26
Demolition	30	29-Jun-26	07-Aug-26
Site/Courtyard Demo (Tables, Benches, Trees, Fencing, Etc.)	5	29-Jun-26	03-Jul-26
Demo Existing Monument & Concrete Footings	3	29-Jun-26	01-Jul-26
Demo Exisiting Flooring & Base (Main Corridors)	10	29-Jun-26	10-Jul-26
Electrical Demo	5	29-Jun-26	03-Jul-26



Actual Work
Remaining Work
Critical Remaining Work
Milestone
Summary

SKILLMAN

Activity Name	Original Duration	Start	Finish
Technology Demo	3	29-Jun-26	01-Jul-26
Salvage Identified Items (Doors, Windows, Masonry Medallions, Etc	10	29-Jun-26	10-Jul-26
Demo Breezeway (Interior Stairs, Landings, Railings, and Walls)	25	06-Jul-26	07-Aug-26
Gymnasium Flooring Demo	8	06-Jul-26	15-Jul-26
Demo Main Entryway & Stairs	5	09-Jul-26	15-Jul-26
Sitework	219	03-Aug-26	03-Jun-27
Excavate Footing/Foundation & Overdig at Connector	5	03-Aug-26	07-Aug-26
Rough Grading, Leach Basin, & Drain Pipe Install	4	03-Aug-26	06-Aug-26
Form/Pour Footings and Foundation	15	07-Aug-26	27-Aug-26
Pour Flatwork, Aprons, Ramps, Stairs, and Curbs	10	28-Aug-26	10-Sep-26
Slab on Deck	2	03-Sep-26	04-Sep-26
Install Handrails	2	01-Mar-27	02-Mar-27
Concrete & Decrorative Paving	10	03-Mar-27	16-Mar-27
Fencing & Gates	5	17-Mar-27	23-Mar-27
Pond	4	24-Mar-27	29-Mar-27
Plantings, Trees, & Seeding	4	30-Mar-27	02-Apr-27
Establish & Maintain Plantings & Seeding	45	02-Apr-27	03-Jun-27
Benches, Stools, & Rocks	2	05-Apr-27	06-Apr-27
Pathways & Misc. Landscaping	5	07-Apr-27	13-Apr-27
Building Core and Shell	59	07-Sep-26	26-Nov-26
Build CMU Walls	20	07-Sep-26	02-Oct-26
Install Lintels	5	21-Sep-26	25-Sep-26
Install CMU Beams	5	28-Sep-26	02-Oct-26
Erect Metal Deck	5	05-Oct-26	09-Oct-26
Install I Beams, Lintels, & Misc. Steels Connections	5	05-Oct-26	09-Oct-26
Connector Roofing & Insulation	5	12-Oct-26	16-Oct-26
Roof Drains	3	19-Oct-26	21-Oct-26
DCMU Install	10	23-Oct-26	05-Nov-26
Brick Veneer Install	15	06-Nov-26	26-Nov-26

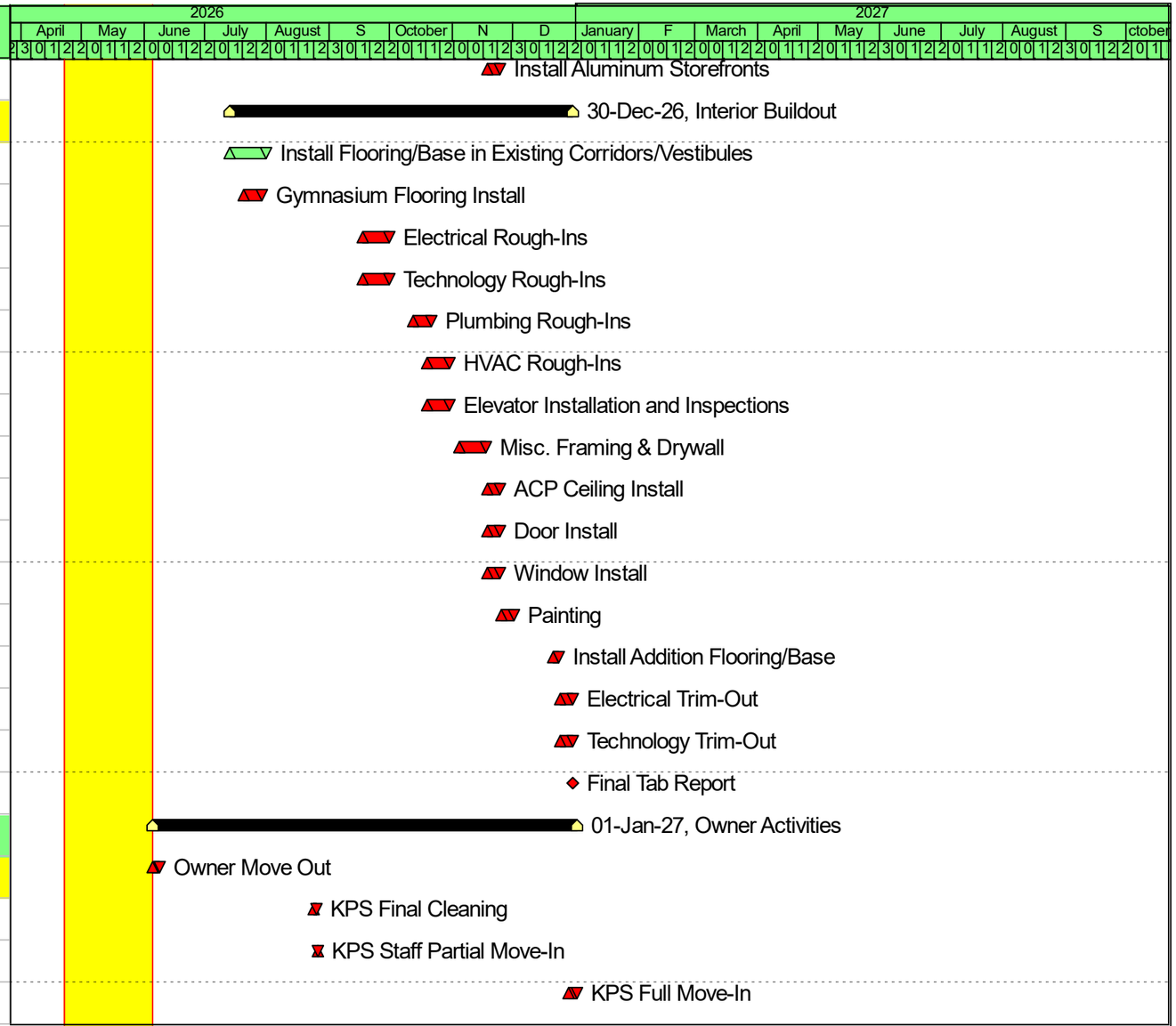


Actual Work
Remaining Work
Critical Remaining Work
Milestone
Summary

224010.14 - KPS - Woodward Elementary Connector
Guideline Schedule - 05-May-26

SKILLMAN

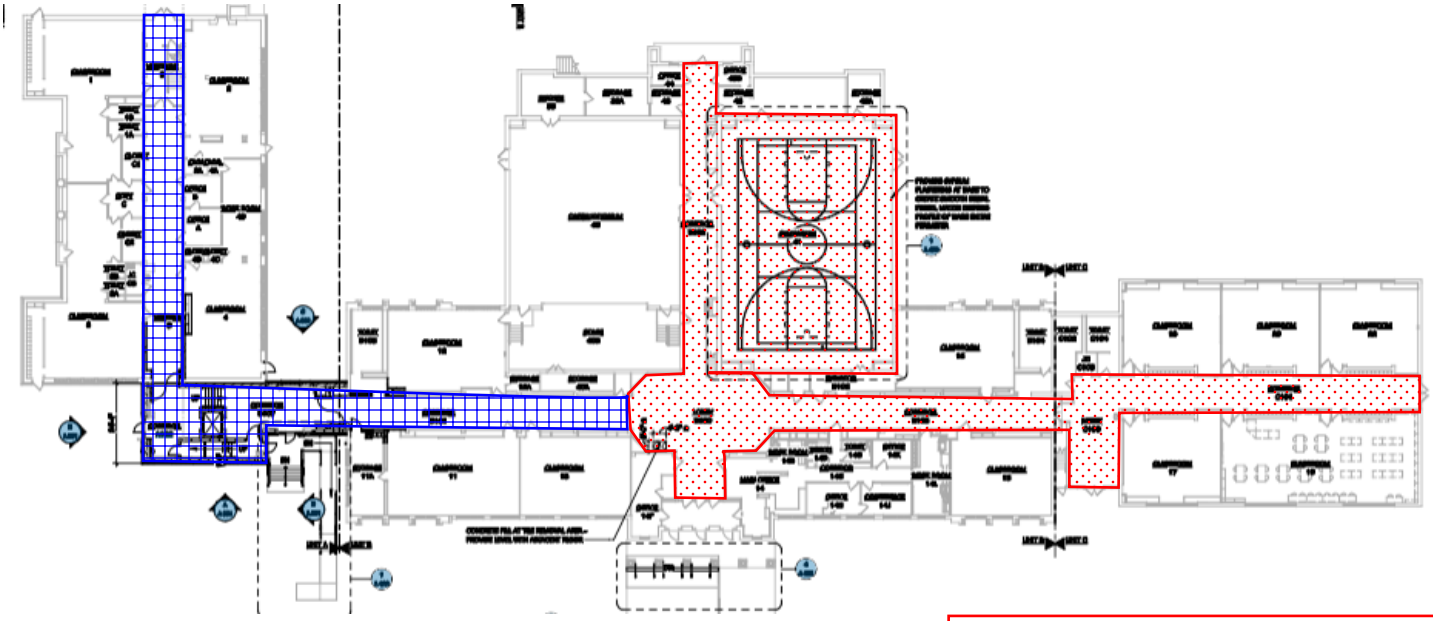
Activity Name	Original Duration	Start	Finish
Install Aluminum Storefronts	5	18-Nov-26	24-Nov-26
Interior Buildout	123	13-Jul-26	30-Dec-26
Install Flooring/Base in Existing Corridors/Vestibules	15	13-Jul-26	31-Jul-26
Gymnasium Flooring Install	8	20-Jul-26*	29-Jul-26
Electrical Rough-Ins	10	17-Sep-26	30-Sep-26
Technology Rough-Ins	10	17-Sep-26	30-Sep-26
Plumbing Rough-Ins	8	12-Oct-26	21-Oct-26
HVAC Rough-Ins	10	19-Oct-26	30-Oct-26
Elevator Installation and Inspections	10	19-Oct-26	30-Oct-26
Misc. Framing & Drywall	10	04-Nov-26	17-Nov-26
ACP Ceiling Install	5	18-Nov-26	24-Nov-26
Door Install	5	18-Nov-26	24-Nov-26
Window Install	5	18-Nov-26	24-Nov-26
Painting	5	25-Nov-26	01-Dec-26
Install Addition Flooring/Base	3	21-Dec-26	23-Dec-26
Electrical Trim-Out	5	24-Dec-26	30-Dec-26
Technology Trim-Out	5	24-Dec-26	30-Dec-26
Final Tab Report	0		30-Dec-26
Owner Activities	151	05-Jun-26	01-Jan-27
Owner Move Out	2	05-Jun-26*	08-Jun-26
KPS Final Cleaning	2	24-Aug-26*	25-Aug-26
KPS Staff Partial Move-In	1	26-Aug-26*	26-Aug-26
KPS Full Move-In	5	28-Dec-26*	01-Jan-27



Actual Work
Remaining Work
Critical Remaining Work
Milestone
Summary

SKILLMAN

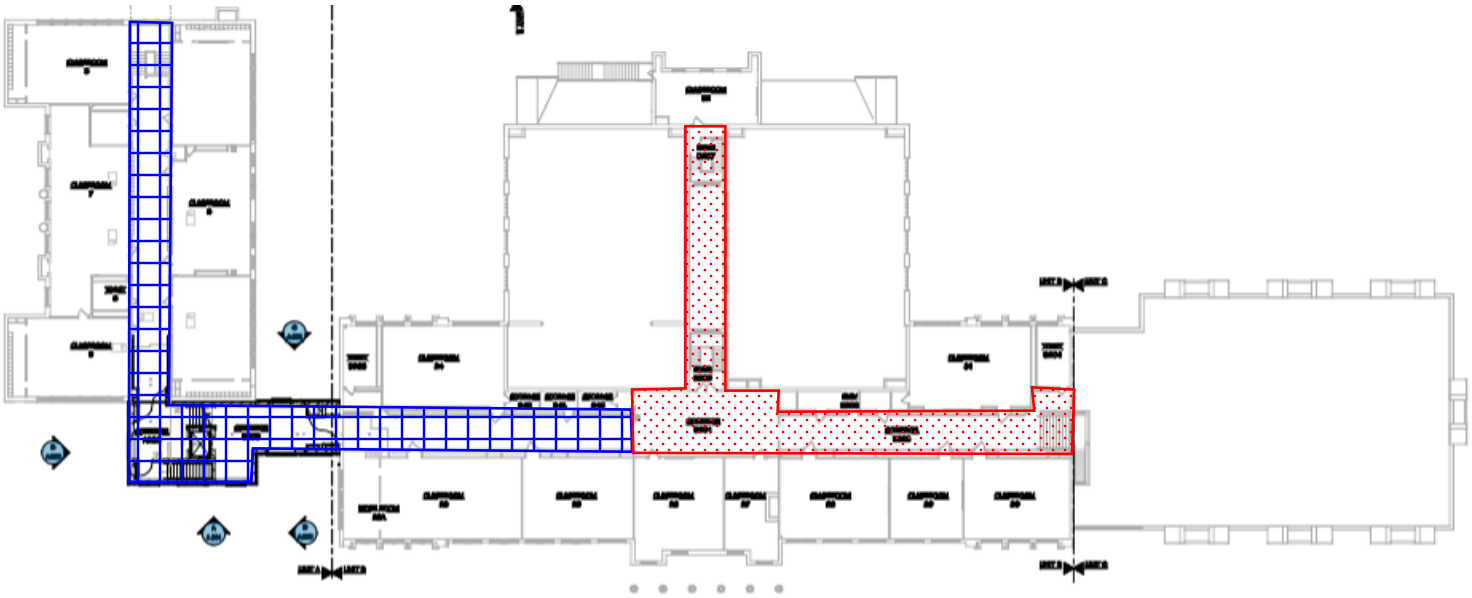
Flooring Phasing Plan



Legend:

June - August 2026

August - December 2026



KPS Woodward Connector Addition Project - Pre-Bid RFI Log

Date - 4/26/2026

RFI #	Company Submitting RFI	Date Received	RFI Description	RFI Response - PLEASE DATE YOUR RESPONSE
1	Greenscape	4/24/2026	For the grass Carex Pensylvanica my count is over the 80 that is on the plant schedule, do I go by the print or the plant schedule?	TP: An addendum with updated planting quantities is forthcoming. - 04/24/2026 LF
2	Van Dellen Steel, Inc.	4/28/2026	Please identify the heights of the requested Fero Fast Brackets/brick relief as shown on detail 5/S303. The detail seems to show ~3/8" interference between concrete and CMU. On detail 10/A324 , most start at 103'-8". There are no other clearly defined elevations in reference to keyed note #5 to accurately estimate the quantity/spacing required per schedule shown on detail 6/S403. Please advise.	TP: The top of the cast stone band at grade is at 103'-8", the L4x4x1/4 in the Fero bracket should start at 103'-8" to support the brick above this cast stone band. A second line of Fero brackets is required per note 2 of detail 6/S403, locate this second line midway up the wall elevation. Both lines of Fero brackets with L4x4 angle are continuous along the entire exterior perimeter. Additionally, Fero brackets with L4x4 angle are required at all transitions from cast stone to brick, such as at the parapet and above the decorative cast stone rectangles. Refer to exterior elevations for these locations. - 05/05/2026 - DK / MD
3	Earley Concrete	4/27/2026	The spec in concrete paving (2.4.A.1) is calling for WHITE PORTLAND CEMENT. Is this correct? Please confirm.	TP: concrete paving to be: " Portland Cement: ASTM C150/C150M, gray portland cement Type I." Updated spec to be provided in upcoming addendum. - 05/05/2026 LF
4	Division 5 Metalworks	5/5/2026	Specs for 05-1200, structural steel, call for steel fabricator & steel erector to both be AISC certified. Will this requirement be waived for this project? Division 5 Metalworks is not currently AISC certified, and cannot bid this project if not waived. Please advise. thank you.	TP: The requirement will not be waived for this project. - 05/05/2026 MD