

ADDENDUM

Public Building Commission of Chicago | Richard J. Daley Center | 50 West Washington Street, Room 200 | Chicago, Illinois 60602 | (312) 744-3090 | pbcchicago.com

ADDENDUM NO.: 05

PROJECT NAME: Robert Nathaniel Dett Elementary School Annex and Renovations

PROJECT NO.: 05445

CONTRACT NO.: C1604

DATE OF ISSUE: June 9, 2023

NOTICE OF CHANGES, MODIFICATIONS, OR CLARIFICATIONS TO CONTRACT DOCUMENTS

The following changes, modifications, or clarifications are hereby incorporated and made an integral part of the Contract Documents. Unless clearly expressed otherwise by this Addendum, all terms and conditions defined in the original Contract Documents shall continue in full force and effect and shall have the same meaning in this Addendum. Issued Addenda represent responses/clarifications to various inquiries. Contractors shall be responsible for including all associated labor/material costs in its bid. Drawings/specifications corresponding to inquiry responses will be issued with the Issue for Construction Documents, upon issuance of building permit.

ITEM NO. 1: CHANGE TO KEY DATES

None.

ITEM NO. 2: REVISIONS TO BOOK 1 – PBC INSTRUCTIONS TO BIDDERS

None.

ITEM NO. 3: REVISIONS TO BOOK 2 – PBC STANDARD TERMS AND CONDITIONS

None.

ITEM NO. 4: REVISIONS TO BOOK 3 – TECHNICAL SPECIFICATIONS

Change 1 Book 3 - REVISE Section 00 00 01 Table of Contents - highlighted updated sections

Change 2 Book 3 - REVISE Section 05 31 00 Steel Decking - revised 2.02B to indicate a Basis-of- Design

manufacturer and update product information and characteristics.

Change 3 Book 3 - REVISE Section 07 52 16.12 Hot Applied Modified Bituminous Membrane Roofing -

revised 2.09E to clarify Insulation Cover Board requirements for HVAC equipment acoustical

isolation.

ITEM NO. 5: REVISIONS TO DRAWINGS

Change 1 REVISE Drawing no. COVER, updated title on sheet

Change 2 REVISE Drawing no. A-210, updated scope for removing and providing millwork

Change 3 REVISE Drawing no. A-221, updated KN. A.18 to refer to detail 1/A-703 instead of 6/A-703.

Contractor to note that this KN revision is applicable for all instances of KN A.18 in the entire

drawing set.

Change 4 REVISE Drawing no. A-300, revised KN AX.42 to AX.41 at solid surface locations

Change 5 REVISE Drawing no. A-301, revised KN AX.42 to AX.41 at solid surface locations

Change 6 REVISE Drawing no. A-301B, revised KN AX.42 to AX.41 at solid surface locations, clarified

blocking needed for roof access ladder.

Change 7 REVISE Drawing no. A-303A, revised KN AX.42 to AX.41 at solid surface locations

Change 8 REVISE Drawing no. A-502, updated general notes regarding acoustical decking, updated

finishes on finish schedule, removed general note

Change 9 REVISE Drawing no. A-703, updated details

Change 10 REVISE Drawing no. A-704, updated details

Change 11 REVISE Drawing no. E-000, change to abbreviation list

Change 12 REVISE Drawing no. E-010, clarified camera type and model

Change 13 REVISE Drawing no. E-201, clarified camera type and model

Change 14 REVISE Drawing no. E-202, clarified camera type and model

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Change 15 REVISE Drawing no. E-203, clarified camera type and model
 Change 16 REVISE Drawing no. E-204, clarified camera type and model
 Change 17 REVISE Drawing no. E-303, added daylight harvester and vacancy sensor

Change 18 REVISE Drawing no. P-201, revised annotations for toilet rooms 140, 143, 160 Change 19 REVISE Drawing no. P-202, revised annotations for toilet rooms 140, 143, 160

ITEM NO. 6: REQUESTS FOR INFORMATION

RFI-1.

Question: Are the Targeted Renovations identified on the Phasing Plan G-007 as Milestone #1 to include all

work shown on A-101A? If so, some commodity lead times will prevent the work from being

completed prior to school start in fall of 2023.

Response: Toilet rooms 153 & 154 are located on Drawing A-101A in the annex link only.

RFI-2.

Question: Per the addendum, cameras have been added on the electrical drawings, E-202, E-203 & E-204 but

no clarification of what type of cameras are in these new locations. Please clarify the type of new

cameras..

Response: Drawings E-010, E-202, E-203, E-204 have been revised and are included in this addendum.

RFI-3.

Question: Sheet A-210 detail 1. In Hallway 101 there are keynotes A.18 & A.19. There are no elevations, but

from these keynotes and the detail associated with KN A.18 (6/A-703), this is a new base cabinet with a solid surface top, which contradicts KN A.19 which states to replace with a plastic laminate

countertop. Please advise. Note: Same for Room 105, 107

Response: Drawings A-210 and A-221 have been revised and are included in this addendum.

RFI-4.

Question: Sheet A-210 detail 1. In Hallway 101 there is a KN A.34 which states provide a stainless-steel drop

sink in millwork. There is no elevation of this millwork. Is this a base cabinet? Does it receive a

plastic laminate top or solid surface top? Please advise.

Response: Key Note A.34 has been superseded by a text note. Drawing A-210 has been revised and is included in

this addendum.

RFI-5.

Question: Addendum 3 details on sheets A430, A433 and A445 now call for 3 layers of 1/2" glass mat gypsum

coverboard. Specification 075216.12, 1.01, A, e. and 2.09, E, 4., a-d has Blue Ridge Structodeck

HD Fiberboard listed as an acceptable product.

Response: Specification 07 56 12 has been revised and is included in this addendum.

RFI-6.

Question: Please clarify if we are to use one or the other or both and what roof sections would get the 3

layers.

Response: Refer to Drawings A-421, A-422, A-423, A-424 which were revised and issued in Addendum No. 3.

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RFI-7.

Question: In addendum #3 for PBC Robert Nathaniel Dett 3 pages contradict each other:

In the top left corner of page P-100A, there is an unlisted bathroom that says; EXISTING, NO WORK (pointing at 4 locations where fixtures would be if they were detailed) AND on page P-201 it follows suit but calls out the fixtures & rooms (staff toilet 140 & 143)

THEN

On page P-202, in detail 2 (level 1 CLRM Wing – plumb plan B) it says "connect new plumb fixture to ex san" calling out for 2 new WC-1 & L-1s

A schedule of all plumbing fixtures should be provided for most accurate plumbing quote. The addendums have changed scope so many times, someone is bound to miss something and cause problems come contract time.

Response: Drawings P-201 and P-202 have been revised and are included in this addendum.

RFI-8.

Question: Sheet A-301B of the drawings, elevations 1 & 3, show a keynote AX.42 pointing to joints between

the solid surface wall panels. The keynote AX.42 description is "Provide acoustically-sealed full height operable partition closure panel, per manufacturer". We are not sure how this keynote is applicable to the joints between certain solid surface wall panels. This keynote occurs throughout the elevation drawings. Please clarify what this note means and what manufacturer is being referenced for these joints.

Response: Drawings A-300, A-301, A-301B, A-303A have been revised and are included in this addendum.

RFI-9.

Question: Per addendum #3 Sheet A-502, Toilet Rooms 108B, 109A, 110B, 111A call for T-1 floor finish.

However, Sheet A-503 references T-1 finish as "Existing Wall Tile to Remain". Please confirm floor

finish for these toilet rooms as well as tile patterns for T-2.

Response: Per Addendum No. 03, Kindergarten Toilet Rooms 108B, 109A, 110B, 111A have existing wall tile to

remain.

RFI-10.

Question: Per addendum #3 Sheet A-502, Toilet Rooms 140, 143, and 160 call for T-2 6" ceramic cove base

finish and T-1 wall finishes existing to remain. Is the cove base to be installed over the existing tile and will there be any patch work associated with the existing wall tile? Please provide more

detail on installation of cove base and abutment to floor tile.

Response: Drawing A-502 has been revised and is included in this addendum.

RFI-11.

Question: Can a section detail be provided for the sprung dance floor assembly?

Response: Refer to Addendum No. 03, Detail 13 on Drawing A-702.

This Addendum includes the following attached Specifications and/or Documents:

- 1. Specification Section 00 00 01 TABLE OF CONTENTS
- 2. Specification Section 05 31 00 STEEL DECKING
- Specification Section 07 52 16.12 HOT APPLIED MODIFIED BITUMINOUS MEMBRANE ROOFING

This Addendum includes the following attached Drawings:

- 1. COVER, COVER SHEET, dated 06/05/2023
- A-210, CLRM WING ENLARGED OFFICE SUITE 103/101 PLAN & RCP, dated 06/05/2023
- 3. A-221, CLRM WING ENLARGED MULTIPURPOSE ROOM 105 & 107 PLAN & RCP, dated 06/05/2023
- 4. A-300, ANNEX CORRIDOR INTERIOR ELEVATIONS, dated 06/05/2023
- A-301, ANNEX COMMUNITY ROOM AND CORRIDOR INTERIOR ELEVATIONS, dated 06/05/2023
- A-301B, ANNEX HALLWAY LINK AND SERVICE CORRIDOR INTERIOR ELEVATIONS, dated 06/05/2023

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- 7. A-303A, ANNEX INTERIOR BATHROOM ELEVATIONS, dated 06/05/2023
- 8. A-502, FINISH NOTES AND SCHEDULE, dated 06/05/2023
- 9. A-703, MILLWORK DETAILS, dated 06/05/2023
- 10. A-704, MILLWORK DETAILS, dated 06/05/2023
- 11. E-000, ELECTRICAL LEGENDS, NOTES, AND ABBREVIATIONS
- 12. E-010, ELECTRICAL SITE PLAN, dated 06/05/2023
- 13. E-201, FIRST FLOOR POWER PLAN SERVICE WING, dated 06/05/2023
- 14. E-202, FIRST FLOOR POWER PLAN CLRM WING, dated 06/05/2023
- 15. E-203, SECOND FLOOR POWER PLAN CLRM WING, dated 06/05/2023
- 16. E-204, THIRD FLOOR POWER PLAN CLRM WING, dated 06/05/2023
- 17. E-303, SECOND FLOOR LIGHTING PLAN CLRM WING, dated 06/05/2023
- 18. P-201, FIRST FLOOR PLUMBING PLAN SERVICE WING NEW WORK, dated 06/05/2023
- 19. P-202, FIRST FLOOR PLUMBING PLAN CLRM WING NEW WORK, dated 06/05/2023

END OF ADDENDUM NO. 05

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SECTION 05 31 00

STEEL DECKING

PART 1 - GENERAL

- 1.01 SECTION INCLUDES
 - A. Acoustical roof deck.
 - B. Roof deck.
 - C. Stud shear connectors.
 - D. Acoustical insulation in roof deck flutes.
- 1.02 REFERENCE STANDARDS
 - A. AISC (MAN) Steel Construction Manual; 2017.
 - B. AISI S100-12 North American Specification for the Design of Cold-Formed Steel Structural Members; American Iron and Steel Institute; 2012.
 - C. ASTM A108 Standard Specification for Steel Bar, Carbon and Alloy, Cold Finished; 2013.
 - D. ASTM A653/A653M Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2017.
 - E. AWS D1.1/D1.1M Structural Welding Code Steel; 2015, with Errata (2016).
 - F. AWS D1.3/D1.3M Structural Welding Code Sheet Steel; 2018.
 - G. SDI (DM) Publication No.30, Design Manual for Composite Decks, Form Decks, and Roof Decks; 2007.
 - H. SSPC-Paint 20 Zinc-Rich Primers (Type I, "Inorganic," and Type II, "Organic"); 2002 (Ed. 2004).
 - I. UL (FRD) Fire Resistance Directory; current edition.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Convene a preinstallation meeting one week before starting work of this section; require attendance by all relevant installers.
 - 1. Ensure required submittals have been provided with sufficient time for review prior to scheduling the Preinstallation Meeting.
 - 2. Review the detailed requirements for the work of this section and to review the drawings and specifications for this work
 - a. Require attendance by all affected installers including but not limited to
 - 1) Contractor's Superintendent
 - 2) Installer
 - 3) Manufacturer/Fabricator Representative
 - 4) Other affected Subcontractors
 - 5) Architect/Engineer of Record

- 6) Board's Representative
- 3. Record minutes and distribute copies within 5 days after meeting to participants as well as Architect/Engineer of Record, Board and those affected by decisions made.

1.04 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittals procedures.
- B. Shop Drawings: Indicate deck plan, support locations, projections, openings, reinforcement, pertinent details, and accessories.
- C. Product Data: Provide deck profile characteristics, dimensions, structural properties, and finishes.
- D. Calculations: Submit engineering calculations for the spans and loading conditions indicated for the deck proposed for use. Calculations to be stamped and signed by a Structural Engineer licensed in the state of Illinois and engaged by the fabricator.
- E. Certificates: Certify that products furnished meet or exceed specified requirements.

1.05 QUALITY ASSURANCE

- A. Design deck layout, spans, fastening, and joints under direct supervision of a Structural Engineer experienced in design of this work and licensed in Illinois. Structural Engineer to be engaged by the Fabricator.
- B. Welding Qualifications: Qualify procedures and personnel according to AWS D1.3/D1.3M
- 1.06 DELIVERY, STORAGE, AND HANDLING
 - A. Cut plastic wrap to encourage ventilation.
 - B. Separate sheets and store deck on dry wood sleepers; slope for positive drainage.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Steel: Comply with AISC (MAN) Specifications.
- B. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.
- C. Shop and Touch-Up Primer: Fabricator recommended, complying with VOC limitations of authorities having jurisdiction.

2.02 STEEL DECK

- A. All Deck Types: Select and design metal deck in accordance with SDI Design Manual and AISI S100-12.
 - 1. Calculate to structural limit stress design and structural properties specified.
 - 2. Maximum Vertical Deflection of Roof Deck: 1/240 of span.
 - 3. Install and anchor roof deck units to resist gross uplift loading of 30 pounds per square foot.
 - a. At overhangs, anchor to resist 45 pounds per square foot.

- B. Acoustical Roof Deck: Non-composite type, steel sheet with plain vertical flute faces perforated with 1/8 inch diameter holes staggered 3/8 inch on center:
 - Basis of Design: Epic Metals Toris A.
 - 2. Galvanized Steel Sheet: ASTM A653/A653M, Structural Steel (SS) Grade 40 or equal, with ASTM A924, G60 or G90 galvanized coating (hot dipped).
 - 3. Primer: Shop coat of manufacturer's standard primer paint over chemically cleaned substrate.
 - 4. Finish: Shop coat of manufacturer's standard finish paint (after application of primer).
 - a. Two colors as noted on the drawings.
 - 5. Structural Properties:
 - a. Section modulus: 0.58 in³/ft.
 - 6. Minimum Base Metal Thickness: 18 gage, 0.0474 inch.
 - 7. Nominal Height: 2.5 inches.
 - 8. Profile: Linear plank, continuous ribs six inches on center.
 - Formed Sheet Width: 24 inches.
 - 10. Side Joints: Lapped, welded.
 - 11. End Joints: Lapped, welded.
 - 12. NRC rating of 0.95
 - 13. For adjacent exterior locations, such as eaves and overhangs, provide non-perforated deck of same type, profile, and material, unless otherwise indicated.
- C. Roof Deck: Non-composite type, fluted steel sheet:
 - Galvanized Steel Sheet: ASTM A653/A653M, Structural Steel (SS) Grade 33/230, with G90/Z275 galvanized coating.
 - 2. Primer: Shop coat of manufacturer's standard primer paint over cleaned and phosphatized substrate.
 - 3. Structural Properties:
 - a. Section Modulus: 0.306 in³/ft.
 - b. Span Design: Double.
 - 4. Minimum Base Metal Thickness: 18 gage, 0.0306 inch.
 - 5. Nominal Height: 1-1/2 inch.
 - 6. Profile: Fluted; SDI NR.
 - 7. Formed Sheet Width: 36 inch.
 - 8. Side Joints: Lock seam.
 - 9. End Joints: Lapped, welded.
 - 10. Fire Resistance Classification: Comply with UL (FRD) Assembly Number indicated on design drawings.

2.03 ACCESSORY MATERIALS

- A. Stud Shear Connectors: Made from ASTM A108 Grade 1015 bars.
- B. Welding Materials: AWS D1.1/D1.1M.
- C. Fasteners: Galvanized hardened steel, self tapping.
- D. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, complying with VOC limitations of authorities having jurisdiction.
- E. Flute Closures: Closed cell, vulcanized, synthetic rubber, 1 inch thick; profiled to fit tight to the deck.
- F. Acoustical Insulation: Glass fiber type, minimum 1.1 lb/cu ft density; profiled to suit deck.

2.04 FABRICATED DECK ACCESSORIES

- A. Sheet Metal Deck Accessories: Metal closure strips, wet concrete stops, and cover plates, 20 gage, 0.0359 inch thick sheet steel; minimum yield strength of 33,000 psi; of profile and size as indicated; finished same as deck.
- B. Roof Sump Pans: Formed sheet steel, 14 gage, 0.0747 inch minimum thickness, flat bottom, sloped sides, recessed 1-1/2 inches below roof deck surface, bearing flange 3 inches wide, sealed watertight.
- C. Floor Drain Pans: Formed sheet steel, 14 gage, 0.0747 inch minimum thickness, flat bottom, sloped sides, recessed 1-1/2 inches below floor deck surface, bearing flange 3 inches wide, sealed watertight.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify existing conditions prior to beginning work.

3.02 INSTALLATION

- A. Erect metal deck in accordance with SDI Design Manual and manufacturer's instructions. Align and level.
- B. On concrete and masonry surfaces provide minimum 4 inch bearing.
- C. On steel supports provide minimum 1-1/2 inch bearing.
- D. Fasten deck to steel support members at ends and intermediate supports at 12 inches on center maximum, parallel with the deck flute and at each transverse flute using methods specified.
 - 1. Welding: Use fusion welds through weld washers.
- E. Clinch lock seam side laps.
- F. Weld deck in accordance with AWS D1.3/D1.3M.
- G. At floor edges, install concrete stops upturned to top surface of slab, to contain wet concrete. Provide stops of sufficient strength to remain stationary without distortion.
- H. Close openings above walls and partitions perpendicular to deck flutes with single row of foam cell closures.
- I. Position roof drain pans with flange bearing on top surface of deck. Fusion weld at each deck flute.
- J. Position floor drain pans with flange bearing on top surface of deck. Fusion weld at each deck flute
- K. Weld stud shear connectors through steel deck to structural members below.
- L. Immediately after welding deck and other metal components in position, coat welds, burned areas, and damaged surface coating, with touch-up primer.

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M. No permanent loading, other than the weight of supported concrete slabs shall be imposed on floor decking, until the concrete in such slabs has achieved 75 percent of its design strength.

3.03 FIELD QUALITY CONTROL

- A. Quality Control Testing During Construction:
 - 1. The Board's testing service will inspect deck, deck fastening, and sidelap fastening.
 - Correct deficiencies in the work that inspections and laboratory test reports have indicated to not be in compliance with requirements. The Board may have additional tests performed, at Contractor's expense, as may be necessary to reconfirm any noncompliance of the original Work, and as may be necessary to show compliance of corrected Work.
- B. Contractor's Responsibilities
 - Notify Agency sufficiently in advance of operations to allow for his assignment of personnel and scheduling of tests.
 - 2. Coordinate with Agencies' personnel, provide access to Work.
 - 3. Furnish casual labor and facilities to provide access to Work to be tested to facilitate inspections and tests.

3.04 CLEANING

- A. Shop Finish Touchup and Repair: Clean and touch-up field welds, bolted connections and abraded areas.
- B. Restore finishes damaged during installation and construction period.

3.05 PROTECTION

A. Protect installed products from damage during construction.

END OF SECTION 05 31 00

SECTION 07 52 16.12

HOT APPLIED MODIFIED BITUMINOUS MEMBRANE ROOFING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Configuration of a typical hot applied SBS modified bituminous membrane roofing system is to be assembled as follows:
 - 1. Roofing Field Area:
 - a. Field-applied reflective coating (as specified), over;
 - One layer of granulated modified bitumen cap sheet in hot asphalt OR in cold adhesive, in lieu of hot asphalt, (at roofing manufacturer's option and per roofing manufacturer's recommendation - FOR CAP SHEET ONLY), over;
 - c. One layer of reinforced base ply sheet in hot asphalt adhesive, over;
 - d. One layer of Type VI glass-fiber ply sheet in hot asphalt, over;
 - e. Gypsum fiber or coated wood fiber cover board in hot asphalt adhesive, over;
 - f. Flat and/or tapered polyisocyanurate insulation (as specified), in hot asphalt adhesive, over;
 - g. The underlying deck assemblies with associated preparations (including vapor barriers/temporary roofs), as specified in Sections 3.06 thru 3.08 of this Specification.
 - h. Base Flashing Areas:
 - 1) Field-applied reflective coating (as specified), over;
 - One layer of granulated modified bitumen cap sheet in hot asphalt OR in cold adhesive, in lieu of hot asphalt, (at roofing manufacturer's option and per roofing manufacturer's recommendation - FOR FLASHING CAP SHEET ONLY), over;
 - 3) One layer of Type VI glass-fiber ply sheet (backer sheet) in hot asphalt.

1.02 REFERENCE STANDARDS

- A. ANSI/SPRI/FM 4435/ES-1 Test Standard for Edge Systems Used with Low Slope Roofing Systems; 20
- B. ASCE 7-10 Minimum Design Loads and Associated Criteria for Buildings and Other Structures; 2010.
- C. ASTM C1278/C1278M Standard Specification for Fiber-Reinforced Gypsum Panel; 2017.
- D. ASTM C1289 Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2017.
- E. ASTM C208 Standard Specification for Cellulosic Fiber Insulating Board; 2012.
- F. ASTM C665 Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2017.
- G. ASTM D2178/D2178M Standard Specification for Asphalt Glass Felt Used in Roofing and Waterproofing; 2015a.
- H. ASTM D41/D41M Standard Specification for Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing; 2011 (Reapproved 2016).
- I. ASTM D312/D312M Standard Specification for Asphalt Used in Roofing; 2016a.
- J. ASTM D4263 Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method; 1983 (Reapproved 2012).
- K. ASTM D4586/D4586M Standard Specification for Asphalt Roof Cement, Asbestos-Free; 2007, with Editorial Revision (2012).
- L. ASTM D4601/D4601M Standard Specification for Asphalt-Coated Glass Fiber Base Sheet Used in Roofing; 2004, with Editorial Revision (2012).

- M. ASTM D4897/D4897M Standard Specification for Asphalt-Coated Glass-Fiber Venting Base Sheet Used in Roofing: 2016.
- N. ASTM D6162/D6162M Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using a Combination of Polyester and Glass Fiber Reinforcements; 2016.
- O. ASTM D6163/D6163M Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Glass Fiber Reinforcements; 2016.
- P. ASTM E108 Standard Test Methods for Fire Tests of Roof Coverings; 2017.
- Q. ASTM E1980 Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces; 2011.
- R. FM 4470 Single-Ply, Polymer-Modified Bitumen Sheet, Built-up Roof (BUR), and Liquid Applied Roof Assemblies for Use in Class 1 and Noncombustible Roof Deck Construction; 2010.
- S. FM 4474 Evaluating the Simulated Wind Uplift Resistance of Roof Assemblies Using Static Positive and/or Negative Differential Pressures; 2004.
- T. FM DS 1-28 Wind Design; 2016.
- U. ITS (DIR) Directory of Listed Products; current edition.
- V. UL (DIR) Online Certifications Directory; current listings at database.ul.com.
- W. UL (FRD) Fire Resistance Directory; current edition.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Convene one week before starting work of this section.
 - Ensure required submittals have been provided with sufficient time for review prior to scheduling the Preinstallation Meeting.
 - Review the detailed requirements for the work of this section and to review the drawings and specifications for this work
 - Review methods and procedures related to roofing installation, including manufacturer's written instructions.
 - Review preparation and installation procedures and coordinating and scheduling required with related work.
 - 5. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
 - 6. Review structural loading limitations of roof deck during and after roofing.
 - 7. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
 - 8. Review governing regulations and requirements for insurance and certificates if applicable.
 - Review temporary protection requirements for roofing system during and after installation.
 - 10. Review roof observation and repair procedures after roofing installation.
 - 11. Require attendance by all affected installers including but not limited to
 - a. Contractor's Superintendent
 - b. Installer (roofer)
 - c. Installer of substrate construction (roof decks)
 - d. Manufacturer/Fabricator Representative
 - e. Other affected Subcontractors
 - f. Architect/Engineer of Record
 - g. Board's Representative
 - h. Board's Testing and Inspecting Agency
 - Other entities directly concerned with performance of roofing system including (as applicable) Board's insurers

 Record minutes and distribute copies within 5 days after meeting to participants as well as Architect/Engineer of Record, Board and those affected by decisions made.

1.04 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. See Section 01 33 29 LEED Sustainable Design Reporting, when required.
- C. Product Data: Provide manufacturer's catalog data for membrane and bitumen materials, base flashing materials, insulation, and vapor retarder.
- D. Shop Drawings: Indicate configuration and dimension of components, adjacent construction, required clearances and tolerances, and other affected work. Submit fully dimensioned layout drawings for:
 - 1. Joints, base flashings built-up termination condition and interface with other materials.
 - Indicate details that meet wind related requirements of NRCA and FMG as required by this Section.
 - 2. Tapered insulation layout, crickets, saddles, and tapered edge strips, including slopes and perimeter thicknesses.
 - 3. Insulation fastening patterns for corner, perimeter, and field-of-roof locations, where mechanical fastening of components is required.
 - 4. For pre-engineered systems provide drawings and calculations signed and sealed by an Illinois licensed structural engineer (including wind pressure testing results).
- E. Samples: Submit two samples 8 inches by 10 inches in size illustrating:
 - Vented base sheet.
 - Fastened base sheet.
 - 3. Reinforced field base ply sheet (Vapor Barrier/Temporary Roof).
 - 4. SBS-modified granulated cap sheet.
 - 5. Walkway pad.
 - 6. Roof insulation and cover board.
 - 7. Substrate board.
 - 8. Six base sheet and substrate board fasteners of each type, length and finish.
 - Sample of manufacturer's standard pre-engineered, factory fabricated, prefinished aluminum ANSI/SPRI/FM 4435/ES-1 Coping / Roof Edge Flashing Profile and related mounting accessories.
- F. Manufacturer's Certificate: Certify that products meet or exceed specified requirements, including the following:
 - Submit a letter on the letter head of the producer of the modified bitumen roofing system proposed for use, signed by a technical representative of the producer, stating the following:
 - a. The system meets the specification and warranty requirements.
 - b. The system will meet the initial and aged solar reflectance requirements.
 - c. Any topcoat proposed for use will not void the FM and UL requirements specified.
 - d. Any topcoat proposed for use will not delaminate or deteriorate to the point of requiring replacement for a period of five (5) years after application.
- G. Installer Certificates: Submit certificate signed by roofing system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install roofing system.
- H. Maintenance Data: Submit complete maintenance data for roofing system to include in maintenance manuals.
- I. Manufacturer's Field (Inspection) Reports: Indicate procedures followed, ambient temperatures, humidity, wind velocity during application, and supplementary instructions given. Provide weekly inspection reports.
- J. Warranty: Submit manufacturer warranty and ensure forms have been completed in Board's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

- A. Manufacturer's Roofing Inspector Qualifications: A full time Technical Representative of manufacturer (non-sales) experienced in the installation and maintenance of the specified roofing system, qualified to perform roofing observation and inspection as required to determine Installer's compliance with the requirements of this Project, and approved by the manufacturer to issue warranty certification.
 - The presence and activity of the manufacturer's Technical Representative, Independent Representative and/or Board's Representative shall in no way relieve the contractor of contract responsibilities or duties.
 - It is the sole responsibility of the installing Contractor to contact the roofing manufacturer's inspector by phone on the morning of each day that roofing materials are being installed.
 - 3. The Manufacturer's Roofing Inspector shall be one of the following:
 - An authorized full-time technical employee of the manufacturer with 10 years of experience in commercial roofing.
 - b. If manufacturer does not employ full time technical personnel, inspection personnel shall be certified as a Registered Roof Observer by the Roof Consultants Institute, and shall be experienced in the installation and maintenance of the specified roofing system and qualified to determine Installer's compliance with the requirements of this Project.
- B. Installer Qualifications: Company specializing in performing the work of this section with minimum three years documented experience, eligible to receive manufacturer's warranty, and approved by manufacturer.
- C. General Performance: Installed hybrid hot applied SBS modified bitumen membrane roofing and hot applied SBS modified bitumen base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Hybrid hot applied SBS modified bitumen membrane roofing and hot applied SBS modified bitumen base flashings shall remain watertight.
- D. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by membrane roofing manufacturer based on testing and field experience.
- E. No torch-down or self-adhering roofing products are acceptable on this project.
- F. Solar Reflectance Index (SRI): Provide a hybrid modified bitumen roofing system that meets or exceeds: An initial reflectance value of 0.72 or a three-year installed value of 0.5 as determined by the Cool Roof Rating Council or Energy Star. Any product that has been rated by the Cool Roof Rating Council or by Energy Star shall display a label verifying the rating of the product.
- G. Roofing System Design: Provide roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency to resist uplift pressures calculated according to ASCE 7-10. The Minimum Recommended Design Uplift-Resistance Capacities (Uplift Pressures) below include a safety factor of 2.0.
 - All Zones (Roof Area Field, Roof Area Perimeter and Roof Area Corners) Uplift Pressures: As indicated on Drawings and as identified below:
 - a. Zone 1 (Roof Area Field) Uplift Pressure: 31.1 lbf/sq. ft. (kPa).
 - b. Zone 2 (Roof Area Perimeter) Uplift Pressure: 52.2 lbf/sq. ft. (kPa), located within 9.7 feet (m) of roof perimeter edge.
 - c. Zone 3 (Roof Area Corners) Uplift Pressure: 78.5 lbf/sq. ft. (kPa), located within 9.7 feet (m) of roof corner edge.
- H. ANSI/SPRI Wind Design Standard: Manufacture and install pre-engineered perimeter aluminum coping and roof edge systems tested according to ANSI/SPRI/FM 4435/ES-1 and capable of resisting the following design pressures:
 - 1. No field fabricated metal copings or roof edge systems will be accepted.

- Minimum Recommended Design Wind-Resistance Loads, Roof Edge Gravel Stops or Fascias:
 - Zone 4 (Wall Edge Perimeter, Horizontal (Outward) Load Direction): 33.7 lbf/sq.ft. (kPa) Design Pressure.
 - b. Zone 5 (Wall Edge Corners, Horizontal (Outward) Load Direction: 41.6 lbf/sq.ft. (kPa) Design Pressure.
- 3. Minimum Recommended Design Wind-Resistance Loads, Roof Edge Copings:
 - Zone 4 (Wall Edge Perimeter, Horizontal (Outward) Load Direction: 33.7 lbf/sq.ft.
 (kPa) Design Pressure.
 - b. Zone 5 (Wall Edge Corners, Horizontal (Outward) Load Direction: 41.6 lbf/sq.ft. (kPa) Design Pressure.
 - Zone 2 (Roof Edge Perimeter, Vertical (Upward) Load Direction: 52.2 lbf/sq.ft. (kPa) Design Pressure.
 - Zone 3 (Roof Edge Corners, Vertical (Upward) Load Direction: 78.5 lbf/sq.ft. (kPa)
 Design Pressure.
- I. FMG Listing: Provide hybrid hot applied SBS modified bitumen roofing membrane, base flashings, and component materials that comply with requirements in FM 4474 as part of a roofing system and that are listed in FMG's "Approval Guide" for Class 1 or noncombustible construction, as applicable. Identify materials with FMG markings.
 - Windstorm Classification: FM Class 60
 - 2. Exterior Fire Classification: A
 - 3. Interior Fire Classification: NC
 - Hail Resistance: SH

1.06 MOCK-UP

- Provide Mock-Up of Metal Coping in accordance with 01 62 10 Pre-Construction Project Mockup.
- B. Mock-Up length: 36 Inches.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products in manufacturer's original containers, dry, undamaged, with seals and labels intact.
- B. Store products in weather protected environment, clear of ground and moisture; ballast materials may be stored outdoors.
- C. Protect foam insulation from direct exposure to sunlight, moisture, soiling, and other sources.
- Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.
- E. Store modified bitumen rolls on end with selvage ends up.
- F. Roll out the modified bitumen sheet and allow to relax for ten to fifteen minutes prior to installation.
 - Cut into appropriate lengths.
 - 2. Install sheets parallel to slope as much as possible.

1.08 FIELD CONDITIONS

- A. Do not apply roofing membrane when environmental conditions are outside the ranges recommended by manufacturer.
- B. Do not apply roofing membrane during unsuitable weather.
- C. Do not apply roofing membrane when ambient temperature is below 40 degrees F.
- D. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.
- E. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day.
- F. Consider effects of wind chill on adhesives, and ensure they will not prematurely set before proper adhesion takes place.

- G. Prevent all products from freezing. Store all materials prior to application at temperatures between 60 and 90 deg. F.
- H. Board will occupy portions of building immediately below roofing area. Conduct roofing so Board's operations will not be disrupted. Provide Board with not less than 72 hours' notice of activities that may affect Board's operations.
- Prevent dust, vapors, gases, and odors from entering into the building during roof installation. When shutting down or blocking air intakes, provide makeup air or additional intake air from sources away from the work area. Coordinate these procedures with Board's Representative.
- J. Daily Protection: Coordinate installation of roofing so insulation and other components of roofing system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
 - 1. Provide tie-offs at end of each day's work to cover exposed roofing and insulation with a course of coated roofing sheet set in urethane mastic with joints and edges sealed.
 - 2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing.
 - 3. Remove temporary plugs from roof drains at end of each day.
 - 4. Remove and discard temporary seals before beginning work on adjoining roofing.
 - Provide protection in roof-related traffic, staging and storage areas consisting of 45 mil EPDM, 1" extruded polystyrene insulation, and 3/4" plywood ballasted with sandbags. Remove protection materials upon completion of work.
 - Roofing Contractor to coordinate with General Contractor to provide protection for the installed vapor barrier/temporary roof and/or modified bituminous roofing system during all non-modified bituminous roofing system related construction activities.
- K. Provide thermostatic controls and visual thermometer on bitumen kettle, maintain in working order, and keep calibrated.

1.09 WARRANTY

- A. See Section 01 78 00 Closeout Submittals, for additional warranty requirements.
- B. Manufacturer's Warranty: Provide warranty, without monetary limitation, in which manufacturer agrees to repair or replace components of roofing system, including but not limited to, vapor retarder roofing plies, modified membrane, adhesives, roof insulation, cover board, substrate board, wood components, fasteners, walkway products and all roof system metal caps and counter flashing, that fail in materials or workmanship within specified warranty period . Failure includes roof leaks.
 - 1. Warranty Period: 20 years from date of Preliminary Acceptance.
 - 2. Indicate a wind speed warranty of up to 74 M.P.H., as reported by the certified weather reporting station nearest to the site for the Chicago IL region.
 - Contractor to provide a sample copy of standard roofing manufacturer's warranty, stating obligations, remedies, limitations, and exclusions of warranty as specified, with bid
 - Warranty shall run for a continuous 20 years.
 - a. Warranty will not be accepted that contains any requirement(s) for Board to renew the warranty at any time during the 20 year period.
 - b. In year(s) number 2, 5, 10 and 15 of this warranty, manufacturer shall provide roof inspections with a written report, and limited housekeeping services, at no later additional charge to the Board.
 - Lack of a written record that Board performed regularly scheduled maintenance shall not void the warranty.
- C. Installer's Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering Work of this Section, and all components of roofing system, including but not limited to, vapor retarder roofing plies, modified membrane, base flashings, adhesives, roof insulation, cover board, substrate board, wood components,

fasteners, walkway products and all roof system metal caps and counterflashing, for the following warranty:

1. Warranty Period: Two years from date of Preliminary Acceptance.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Listed Manufacturers: The manufacturers listed below have demonstrated an ability to comply with the specified performance attributes for hybrid hot applied SBS modified bituminous membrane roofing assemblies. If one of the listed manufacturers chooses to use an acceptable product from another manufacturer, as listed in Sections 2.02 thru 2.12 of this Specification, the listed manufacturer must confirm in writing that the product is part of a RoofNav approved assembly and will be warrantied by the manufacturer. Subject to compliance with requirements, provide a hybrid hot applied SBS modified bituminous membrane roofing system warrantied by one of the following:
 - Garland.
 - 2. Johns Manville.
 - 3. Siplast.
 - 4. Soprema.
 - Tremco.

2.02 SBS-MODIFIED ASPHALT SHEET MATERIALS (FOR ROOFING FIELD)

- A. Granulated Cap Sheet: Meeting or exceeding ASTM D6163/D6163M, Grade G, Type II glass-fiber- reinforced, containing SBS-modified granulated surface (manufacturer's standard ceramic granules) with field-applied reflective roof coating as specified OR meeting or exceeding ASTM D6162/D6162M, Grade G, Type II composite of polyester and glass reinforcement containing SBS modified granulated surface (manufacturer's standard ceramic granules) with field-applied reflective roof coating as specified.
 - Acceptable glass-fiber reinforced SBS modified products, meeting or exceeding ASTM D6163/D6163M, Grade G, Type II:
 - a. Garland StressPly FR Mineral
 - b. Garland VersiPly Mineral
 - c. Johns Manville DynaGlas FR XT
 - d. Siplast Paradiene 30 HT FR
 - e. Soprema Elastophene HR FR GR
 - f. Soprema Elastophene HR FR GR WH
 - g. Tremco Powerply Plus HT FR
 - Acceptable composite polyester and glass reinforced SBS modified products, meeting or exceeding ASTM D6162/D6162M, Grade G, Type II:
 - a. Siplast Parafor 30
 - b. Soprema Elastophene HS FR GR

2.03 BASE-PLY SHEET MATERIALS (FOR ROOFING FIELD)

- A. Reinforced Base Ply Sheet: Composite of polyester and glass reinforcement coated with waterproofing asphalt, dusted with fine mineral surfacing on both sides, meeting or exceeding ASTM D4601/D4601M Type II OR glass reinforced SBS modified, meeting or exceeding ASTM D6163/D6163M, Grade S, Type II smooth, min. thickness 115 mils.
 - 1. Acceptable composite polyester and glass reinforced asphalt coated products, meeting or exceeding ASTM D4601/D4601M, Type II:
 - a. Johns Manville Glastite Flexible
 - b. Tremco Composite Ply HT
 - Acceptable glass reinforced SBS modified products, meeting or exceeding ASTM D6163/D6163M, Grade S, Type II, with a minimum sheet thickness of 115 mils:
 - a. Garland StressBase 120
 - b. Johns Manville DynaBase XT-134 mil
 - c. Siplast Paradiene 20 EG

- d. Soprema Elastophene HR sanded 3.0 (118 mils)
- B. Fastened Base Sheet: Glass ply sheet, meeting or exceeding ASTM D4601/D4601M, Type I, as described in Section 3.06 of this specification.
 - Acceptable glass base sheet products, meeting or exceeding ASTM D4601/D4601M, Type I:
 - a. GAF Glas #75 Base, (Only if identified to be included in the system warranty by one of the Listed Manufacturers)
 - b. Johns Manville Perma Ply 28
 - c. Siplast Parabase
 - d. Soprema Modified Sopra G
 - e. Tremco BURmastic Glass Ply
- C. Vented Base Sheet: Meeting or exceeding ASTM D4897/D4897M, Type II, as described in Section 3.06 of this specification.
 - Acceptable vented base sheet products, meeting or exceeding ASTM D4897/D4897M,
 Type II:
 - a. GAF Glas Stratavent, (Only if identified to be included in the system warranty by one of the Listed Manufacturers)
 - b. Johns Manville Ventsulation Felt
 - c. Soprema Sopra 4897
- D. Reinforced Field Base Ply Sheet (Vapor Barrier/Temporary Roof): Composite of polyester and glass reinforcement coated with waterproofing asphalt, dusted with fine mineral surfacing on both sides, meeting or exceeding ASTM D4601/D4601M Type II OR glass reinforced SBS modified, meeting or exceeding ASTM D6163/D6163M, Grade S, Type II smooth, with a minimum sheet thickness of 115 mils, as described in Section 3.08 of this specification.
 - Acceptable composite polyester and glass reinforced asphalt coated products, meeting or exceeding ASTM D4601/D4601M, Type II:
 - a. Johns Manville Glastite Flexible
 - b. Tremco Composite Ply HT
 - 2. Acceptable glass reinforced SBS modified products, meeting or exceeding ASTM D6163/D6163M, Grade S, Type II, with a minimum sheet thickness of 115 mils:
 - a. Garland StressBase 120
 - b. Johns Manville DynaBase XT-134 mil
 - c. Siplast Paradiene 20 EG
 - d. Soprema Elastophene HR sanded 3.0 (118 mils)

2.04 PLY SHEET MATERIALS (FOR ROOFING FIELD)

- A. Glass-Fiber Base-Ply Sheet: Meeting or exceeding ASTM D2178/D2178M, Type VI, asphalt-impregnated, glass-fiber felt.
 - Acceptable asphalt-impregnated glass-fiber ply sheet products meeting or exceeding ASTM D2178/D2178M, Type VI:
 - GAF FlexPly 6, (Only if identified to be included in the system warranty by one of the Listed Manufacturers)
 - b. Garland HPR Premium Glasfelt (Type VI)
 - c. Johns Manville Glas Ply Premier VI
 - d. Soprema Sopra VI
 - e. Tremco Thermaglass Premium VI

2.05 BASE FLASHINGS (FOR ROOF FLASHING AREAS)

- Glass-Fiber Ply Sheet (Backer Sheet): Meeting or exceeding ASTM D2178/D2178M, Type VI, asphalt- impregnated, glass-fiber felt.
 - Acceptable asphalt-impregnated, glass-fiber felt products meeting or exceeding ASTM D2178/D2178M, Type VI.

- GAF FlexPly 6, Only if identified to be included in the system warranty by one of the Listed Manufacturers)
- b. Garland HPR Premium Glasfelt (Type VI)
- c. Johns Manville Glas Ply Premier VI
- d. Soprema Sopra VI
- e. Tremco Thermaglass Premium VI
- B. Granulated Flashing Cap Sheet: Meeting or exceeding ASTM D6163/D6163M, Grade G, Type II glass- fiber-reinforced, containing SBS-modified granulated surface (manufacturer's standard ceramic granules) with field-applied reflective roof coating as specified OR meeting or exceeding ASTM D6162/D6162M, Grade G, Type II composite of polyester and glass reinforcement containing SBS modified granulated surface (manufacturer's standard ceramic granules) with field-applied reflective roof coating as specified.
 - Acceptable glass-fiber reinforced SBS modified products, meeting or exceeding ASTM D6163/D6163M, Grade G, Type II:
 - a. Garland StressPly FR Mineral
 - b. Garland VersiPly Mineral
 - c. Johns Manville DynaGlas FR XT
 - d. Siplast Paradiene 30 HT FR
 - e. Soprema Elastophene HR FR GR
 - f. Soprema Elastophene HR FR GR WH
 - g. Tremco Powerply Plus HT FR
 - Acceptable composite polyester and glass reinforced SBS modified products, meeting or exceeding ASTM D6162/D6162M, Grade G, Type II:
 - a. Siplast Parafor 30
 - b. Soprema Elastophene HS FR GR

2.06 AUXILIARY ROOFING MEMBRANE MATERIALS

- A. Primer: ASTM D41/D41M, asphalt type.
 - Acceptable asphalt primer products:
 - a. Garland Garlaprime VOC
 - b. Johns Manville Asphalt Primer
 - c. Siplast PA1125 Asphalt Primer
 - d. Soprema Elastacol 500
 - e. Tremco Tremprime LV
- B. Asphalt Mastic: ASTM D4586/D4586M, Type I, Class I or Type II, Class I.
 - Acceptable asphalt mastic products:
 - a. Garland Flashing Bond
 - b. Johns Manville MBR Utility Cement
 - c. Siplast PA 1021 for Flat/Low Slope Application
 - d. Siplast PA 828 for Vertical Application
 - e. Soprema Sopramastic SBS Elastic Cement
 - f. Tremco ELS Mastic
- C. Fluid-Applied Liquid Flashing: Roofing system manufacturer's standard single component, two-coat, cold, fluid-applied, moisture triggered, aliphatic polyurethane reinforced flashing membrane OR two-coat, reinforced PMMA (polyurethane methyl methacrylate) fluid applied products.
 - 1. Acceptable aliphatic polyurethane products:
 - Tremco Alphaguard MT BC Polyurethane Base Coat / Tremco Alphaguard MT TC Polyurethane Top Coat
 - 2. Acceptable PMMA (polyurethane methyl methacrylate) products:
 - Johns Manville SeamFree PMMA Flashing Resin (with Johns Manville SeamFree PMMA Catalyst & Johns Manville SeamFree PMMA Scrim)
 - b. Siplast Parapro 123 Liquid Flashing System

- c. Soprema Alsan RS 230 Flash
- D. Hot Applied Roofing Asphalt: ASTM D312/D312M, Type III, or IV as recommended by roofing system manufacturer for application.
 - Acceptable hot-applied roofing asphalt products:
 - a. Owens Corning Trumbull Asphalt, Trulo Odor 3
 - b. Owens Corning Trumbull Asphalt, Trulo Odor 4
 - c. Tremco Premium III
 - d. Tremco Premium IV
- E. Cold Adhesive Option: At the roofing manufacturer's option, ONLY the granulated modified bitumen cap sheets in the roofing field or in the base flashing areas can be adhered in cold adhesive, in lieu of hot asphalt, per the roofing manufacturer's recommendations.
 - Roofing system manufacturer's standard asphalt-based, one- or two-part, cold applied adhesive specially formulated for compatibility and use with roofing membrane and base flashings.
 - 2. Acceptable cold-applied adhesive products:
 - a. Garland Weatherking Flashing Adhesive
 - b. Johns Manville MBR Cold Application Adhesive
 - c. Siplast PA-311 R
 - d. Soprema Colply Adhesive
 - e. Soprema Colply Modified Adhesive
 - f. Tremco POWERply Cold Adhesive
- F. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FM 4470, designed for fastening roofing membrane components to substrate, tested by manufacturer for required pullout strength, and acceptable to roofing system manufacturer. Use stainless steel fasteners where there is fastener contact with treated wood.
- G. Field-Applied Reflective Roof Coating: White semi-gloss reflective coating acceptable to roofing system producer as required to produce the Solar Reflectance Index (SRI) specified under "QUALITY ASSURANCE" requirements and certified as required under "SUBMITTALS".
 - 1. Acceptable field-applied reflective roof coating products:
 - a. Garland Pyramic
 - b. Garland White Knight
 - c. Johns Manville Topquard 5000
 - d. Siplast PC227 Elastomeric Coating
 - e. Soprema R Nova Plus
 - f. Tremco T-24 Coating
- H. Drain Flashing Metal: 4 lb. (min.) lead sheet.
- Miscellaneous Accessories: Provide miscellaneous accessories recommended by roofing system manufacturer.

2.07 SUBSTRATE BOARDS

- A. Substrate Board (Wood Decks, Metal Decks and Clay Tile / Book Tile Decks (without Concrete Topping)): A product recommended by the roofing system manufacturer, that is part of the manufacturer's tested assembly, and that is acceptable to the City of Chicago as providing a 15 minute thermal barrier between the interior of the building and the insulation.
 - 1. Board: 1/2" thick reinforced gypsum fiber substrate board, ASTM C1278/C1278M.
 - 2. Must be compatible with hot asphalt systems.
 - 3. Acceptable substrate board products meeting ASTM C1278/C1278M:
 - a. Johns Manville Securock Gypsum Fiber Board
 - b. Siplast / USG Securock Gypsum Fiber Board
 - c. USG Securock Gypsum Fiber Roof Board

- Tremco / USG Securock Fiber Reinforced, Moisture Resistant Gypsum Roof Board
- B. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FM 4470, designed for fastening substrate panel to roof deck. Use stainless steel fasteners where there is fastener contact with treated wood.

2.08 ROOF INSULATION

- A. Polyisocyanurate Board Insulation: ASTM C1289, Type II, Class I, Grade 2, 20 psi, felt or glass- fiber mat facer on both major surfaces. Continuous R-45 flat stock insulation, specified tapered layout, or other flat stock R value as indicated on drawings. 2.6" maximum flat board thickness. Filler insulation for tapered insulation systems may be greater than 2.6" thickness, where required. 48" x 48" maximum board size.
 - 1. Where 1/2" thick reinforced gypsum fiber board is used for an insulation cover board within a hot applied modified bitumen roofing system:
 - The insulation field is to be comprised of 2 layers of 2.6" thickness insulation board
 - 2. Where 1/2" thick wood fiber board is used for an insulation cover board within a hot applied modified bitumen roofing system:
 - The insulation field is to be comprised of 2 layers of 2.5" thickness insulation board.
 - 3. At drain locations with a drainage slope of 1/4" per foot:
 - The tapered insulation shall meet the R-45 minimum thickness at a distance of 4'-0" away from the drain.
 - 4. At drain locations with a drainage slope of 1/8" per foot:
 - a. The tapered insulation shall meet the R-45 minimum thickness at a distance of 8'-0" away from the drain.
 - 5. Acceptable polyicocyanurate board insulation products:
 - a. GAF Energy Guard Poly Iso Insulation
 - b. Hunter H-Shield
 - Johns Manville Energy 3 Polyisocyanurate
 - d. Siplast Paratherm
 - e. Soprema Sopra ISO
 - f. Tremco Trisotech

2.09 INSULATION ACCESSORIES

- A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatible with membrane roofing.
- B. Hot Roofing Asphalt Insulation Adhesive: ASTM D312/D312M, Type III, or IV as recommended by roofing system manufacturer for application.
 - 1. Acceptable hot roofing asphalt insulation adhesive products:
 - a. Owens Corning Trumbull Asphalt, Trulo Odor 3
 - b. Owens Corning Trumbull Asphalt, Trulo Odor 4
 - c. Tremco Premium III
 - d. Tremco Premium IV
- C. Low Rise Foam Insulation Adhesive: Manufacturer's recommended low rise foam insulation adhesive. Two component (1:1 ratio), solvent free, asbestos free, elastomeric urethane adhesive.
 - 1. Acceptable low rise foam insulation adhesive products:
 - a. GAF OlyBond 500 Adhesive Fastener
 - b. Garland Insulock II
 - c. Johns Manville MBR Cold Application Adhesive
 - d. Siplast Parafast Insulation Adhesive (Large Areas)
 - e. Siplast Parafast C (Small Areas)
 - f. Soprema Duotack 365

- g. Tremco Low Rise Foam Insulation Adhesive Green
- D. Insulation Cant Strip: Fiberboard, asphalt coated, ASTM C208, Type II, Grade I, Cellulosic-Fiber Insulation Board, 48 inches. Thickness: 2 inches Face: 4 inches.
- E. Insulation Cover Board: 1/2" thick reinforced gypsum fiber roof board, ASTM C1278/C1278M OR 1/2" thick coated wood fiber board ASTM C208, Type II, Grade I or Grade II:
 - 1. A product recommended by the roofing system manufacturer.
 - a. Product must be 2.0 lb/sf minimum.
 - 2. Must be compatible with hot asphalt and cold adhesive systems.
 - Acceptable insulation cover board products meeting ASTM C1278/C1278M:
 - a. Johns Manville Securock Gypsum Fiber Board
 - b. Siplast / USG Securock Gypsum Fiber Board
 - c. USG Securock Gypsum Fiber Roof Board
 - Tremco / USG Securock Fiber Reinforced, Moisture Resistant Gypsum Roof Board
 - Acceptable insulation cover board products meeting ASTM C208, Type II, Grade I or Grade II:
 - a. Blue Ridge Structodek HD Fiberboard
 - b. Celotex / Blue Ridge Structodek HD Fiberboard
 - c. Siplast / Blue Ridge Structodek HD Fiberboard
 - d. Tremco / Blue Ridge Structodek HD Fiberboard
- F. Batt Insulation: ASTM C665, Type I, preformed glass fiber batt.
 - 1. For filling acoustical steel deck flutes: 1.5 pcf inert, non-organic fiberglass batts, supplied by acoustical deck manufacturer.

2.10 PERIMETER METAL COPING AND ROOF EDGE SYSTEM

- A. Custom bent, Manufactured Perimeter Metal Coping and Roof Edge Flashing System: Tested and certified to meet ANSI/SPRI/FM 4435/ES-1 Wind Design Standards for Edge Systems.
 - Parapet copings and roof edge profiles (including fascia / gravel stop profiles) shall be heavy gauge material, manufactured from 0.125" (minimum thickness) clear anodized aluminum in 12'-0" maximum lengths.
 - Provide factory mitered and welded corners, transitions and end caps. Coping profiles to be precision saw cut and continuously welded to produce a watertight joint.
 - 1) Inside and outside corners. No joints within 18 inches of corners. Maximum leg length is 30 inches.
 - 2) Transition miters.
 - 3) Offset miters.
 - End caps. No joints within 18 inches of ends. Maximum leg length is 30 inches
 - Clear Anodized Finish: AAMA 611 AA-M12C22A41 Class I clear anodic coating not less than 0.7 mils thick.
 - 2. Concealed coping splice plates to be installed at all coping joints.
 - a. Coping splice plates shall be manufactured from 0.050" (minimum thickness) aluminum, 6 inch lengths, formed to fit the inside of the coping profile.
 - b. Splice plates to be sealed factory applied, dual, non-hardening sealant strips.
 - c. Splice plate finish to match coping or roof edge profile finish.
 - 3. Coping profiles to be snapped onto compression cleats manufactured from galvanized steel, 12 inch widths, with factory mounted stainless steel spring clips.
 - Cleats to be fastened with stainless steel fasteners, sized per manufacturer's recommendation.
 - No exposed fasteners permitted.

- B. Miscellaneous metal components and ancillary accessories to interface with the Preengineered, Manufactured Perimeter Metal Coping and Roof Edge Flashing System: Including, but not limited to, gutters, scuppers, counterflashings, expansion joint covers, etc.
 - All miscellaneous metal components and ancillary accessories not requiring welding shall be manufactured from 0.040" (minimum thickness) mill finished aluminum in 12'-0" maximum lengths.
 - Finished to match the Pre-engineered, Manufactured Perimeter Metal Coping and Roof Edge Flashing System.
 - 2. All slip metal components to be manufactured from 0.040" (minimum thickness) mill finished aluminum in 12'-0" maximum lengths.
 - Finished to match the Pre-engineered, Manufactured Perimeter Metal Coping and Roof Edge Flashing System.
 - ONLY where new slip metal is to be used at existing non-aluminum metal flashing components to remain in place, the new slip metal component is to match the metal type of the existing metal component. If galvanized steel is used, provide 24 ga. Minimum thickness.
 - Finished to match the Pre-engineered, Manufactured Perimeter Metal Coping and Roof Edge Flashing System.
 - 4. Acceptable Pre-engineered, Manufactured Perimeter Metal Coping and Roof Edge Flashing System products:
 - a. Garland R-Mer Edge
 - b. Hickman
 - c. Johns Manville Presto Lock Coping System
 - d. Johns Manville Presto Tite Fascia System
 - e. Metal Era
 - f. Siplast Paraguard
 - g. Soprema Sopraedge
 - h. Soprema Sopraguard
 - i. Soprema Sopracap
 - j. Soprema Soprabond
 - k. Tremco Tremlock

2.11 WALKWAYS

- A. Walkway Pads: Mineral-granule-surfaced, reinforced asphaltic composition, slip-resisting pads, manufactured as a traffic pad for foot traffic and acceptable to roofing system manufacturer, minimum 1/3" thick, 30" x 30" pad size.
 - 1. Acceptable walkway products;
 - a. Johns Manville Dynatred Plus
 - b. Tremco Tremtred

2.12 CONCRETE SPLASH BLOCKS

- A. Precast Concrete Splash Blocks: Install one reinforced, precast concrete splash block at all downspouts terminating at bituminous membrane roofing areas, 12" x 24" x 3" block size.
 - 1. Install one 30" x 30" walkway pad beneath each precast concrete splash block.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine substrates, areas, and conditions with installer present for compliance with the following requirements and other conditions affecting performance of roofing system:
 - Verify that roof openings and penetrations are in place and set and braced and that roof drains are securely clamped in place.
 - a. Check roof drains prior to starting the roofing in each drainage area to determine if the drain is plugged, or if the drain bowl, clamping ring, dome, etc. are damaged. These items shall be brought to the attention of the Board or

Architect/Engineer of Record prior to starting work, and will be the Board's responsibility for correction. Plugged or damaged drains brought to the attention of the Board or Architect/Engineer of Record after work has begun shall be the responsibility of the Contractor to correct.

- 2. Verify that wood cants, blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
- 3. At Concrete Decks and Concrete Topped Clay Tile / Book Tile Decks:
 - Verify that concrete curing compounds that will impair adhesion of roofing components to roof deck have been removed.
 - Verify that concrete substrate is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D4263.
 - Test for moisture by pouring 1 pint of hot roofing asphalt on deck at start of each day's work and at start of each roof area or plane. Do not proceed with roofing work if test sample foams or can be easily and cleanly stripped after cooling.
- 4. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 REMOVAL OF EXISTING EQUIPMENT

- A. Examine substrate at location of removal/relocation/modification of mechanical units and mechanical lines (i.e. conduit and piping):
 - 1. Verify with Architect/Engineer of Record before temporary removal of mechanical units. Perform a test run to ensure equipment is working properly before disconnection and temporary removal. Document all test results in writing.
 - Remove and reset rooftop units as required. Coordinate downtime of the unit with the Board. Provide work in stages or phases to accommodate the Board's occupancy requirements. Keep existing mechanical equipment and services in operation as much as possible during construction.
 - 3. Reconnect mechanical equipment (on a daily basis if required), even when the disconnection of the equipment, or any portion thereof, is inadvertent.
 - 4. Electrical and/or mechanical extensions/connections found necessary shall be the Contractor's responsibility. Proper mechanical/electrical and ductwork extensions shall be provided where necessary by a licensed contractor to meet all state and local code requirements and to meet licensing requirements regarding the handling of chlorofluorocarbons (CFC's).
 - Obtain and pay for all licenses and permits. Coordinate and request all inspections
 from authority having jurisdiction and submit certificates of inspection and final
 approval of the local inspection authority to the Architect/Engineer of Record.
 - Verify with Architect/Engineer of Record before permanent reinstallation of mechanical units. Perform a test run to ensure equipment is working properly after reinstallation. Document all test results in writing.

3.03 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. At Concrete Decks and Concrete Topped Clay Tile / Book Tile Decks:
 - 1. Prime surface of concrete deck with asphalt primer at a rate of 3/4 gal. I 100 sq. ft. and allow primer to dry.

3.04 ROOF DECK REPLACEMENT

A. Gypsum Plank Deck Replacement:

- 1. Remove sufficient gypsum plank deck in the area of deteriorated deck to allow ends of new decking to bear on existing joists.
- 2. Fabricate deck panels by nailing gypsum board to both sides of 3/4" plywood.
- 3. Install deck panel with ends bearing at joists and face grain of plywood running perpendicular to joists.
- 4. Fasten panel with self-drilling fasteners at 6" on-center at end and intermediate joists. Use two ply clips between supports for unsupported edges.
- B. Poured Gypsum Deck Replacement:
 - Remove sufficient gypsum deck in the area of deteriorated deck to allow ends of new decking to bear on existing bulb tees.
 - 2. Install deck and grout materials in accordance with deck manufacturer's recommendations.
- C. Metal Deck Replacement:
 - 1. For openings less than 12" x 12", lap 12-gauge steel plate minimum 6" onto existing deck and screw fasten at 6" on-center.
 - 2. For openings greater than 12" x 12":
 - a. When replacement decking matches ex1stmg decking, place new decking over existing with section long enough to bear on minimum two steel joists. Provide minimum 6" side laps screw fastened at 6" on-center.
 - b. When replacement decking to match existing is not available, weld steel angles to joists with minimum two intermediate supports. Screw new decking to steel angles at 6" on-center. Provide new 20-gauge steel plate centered over intersection of new and existing decking with 6" side laps, fastened on both sides at 6" on-center.
- D. Concrete Deck Replacement: Provide steel angles at concrete deck openings to support new steel deck replacement, as shown on the Drawings.

3.05 ROOF INSPECTION AND TESTING.

- A. The Board will employ the services of a roofing consultant to perform the following services:
 - 1. Attend the roofing preinstallation conference.
 - Provide full time observation of the Work and enforcement of the Contract Documents in accordance with good construction practice the first two days of installation and periodically thereafter.
 - 3. Direct the roofing installer to cut and patch one foot square samples as the installed roofing system minus the coating system and perform tests to determine such items as bitumen weight, interply mopping and moisture encapsulated within the roofing system at the site while Work is in progress one for 5,000 square foot of roof.
 - If the test indicates failure to comply with Contract Documents, direct the roofing installer to make additional cut and conduct additional tests.
 - 5. Direct corrective action to obtain acceptance including removal and replacement if necessary.
 - 6. Insert the completed roofing system after application of coating system.
- B. The roofing installer shall, as part of the Contract Work, perform the following:
 - 1. Make all cuts as directed.
 - 2. Immediately patch all cuts as required to obtain the specified warranty.
 - 3. Perform all corrective work as directed.
 - 4. Extend full cooperation.
- 3.06 SUBSTRATE BOARD INSTALLATION (AT WOOD DECKS, METAL DECKS AND CLAY TILE / BOOK TILE DECKS (WITHOUT CONCRETE TOPPING))
 - A. At Wood Decks and Metal Decks:
 - Install substrate board with long joints in continuous straight lines, perpendicular to roof slopes with end joints staggered between rows. Tightly butt substrate boards together.

Fasten substrate board to top flutes of steel deck per manufacturer's required
fastening pattern to meet the calculated wind uplift values provided in Section 1.05 G.
of this Specification and as shown on the Drawings.

3.07 VAPOR-BARRIER/TEMPORARY ROOF INSTALLATION

- A. At Wood Decks, Metal Decks and Clay Tile / Book Tile Decks (without Concrete Topping):
 - Over fastened substrate board, install one reinforced base ply sheet vapor barrier lapping each sheet minimum 4 inches over preceding sheet in shingle fashion. Embed each sheet in a solid mopping of hot roofing asphalt, applied within plus or minus 25 deg F of equiviscous temperature.
- B. At Concrete Decks and Concrete Topped Clay Tile / Book Tile Decks:
 - 1. Prime concrete deck with asphalt primer and allow primer to dry. Install one reinforced base ply sheet vapor barrier lapping each sheet minimum 4 inches over preceding sheet in shingle fashion. Embed base ply sheet in a solid mopping of hot roofing asphalt, applied within plus or minus 25 deg F of equiviscous temperature.
 - a. Roll ply into adhesive with a 4 inch side lap and a 6 inch end lap, minimum.
 - b. Broom ply into adhesive from the dry side of the installation.
 - c. Turn ply up at penetrations, walls and curbed units a minimum of eight inches (8") and seal with asphalt mastic.
 - d. Use roofing system manufacturer's standard asphalt-based mastic for vapor barrier seal where roofing system manufacturer 's standard asphalt-based adhesive is used at steel and wood decks.
- C. Completely seal vapor barrier at terminations, obstructions, and penetrations to prevent air and moisture movement into roofing system.

3.08 INSULATION INSTALLATION

- A. Comply with roofing system manufacturer's written instructions for installing roof insulation.
- B. Coordinate installing roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.
- C. Install tapered or flat stock insulation as shown on drawings to provide positive drainage.
- D. At areas where flat stock insulation is specified, provide a continuous R-Value of 45 unless the roof is an existing roof that has been granted a special exception by the City of Chicago for a lower R-Value.
- E. Nailer Strips: Mechanically fasten 4-inch nominal- width wood nailer strips of same thickness as insulation perpendicular to sloped roof deck at the following spacing:
 - 1. 20 feet apart for roof slopes greater than 2 inch per 12 inches (2:12) but less than 3 inches per 12 inches (3:12).
 - a. Backnail 3 inches o.c. from the back edge of each ply along nailer to ensure that the nails are covered by a minimum of two plies of sheet. The nails shall be staggered.
 - 2. 48 inches apart for roof slopes greater 3 inches per 12 inches (3:12).
 - 3. Backnail 3 inches o.c. from the back edge of each ply along nailer to ensure that the nails are covered by a minimum of two plies of sheet. The nails shall be staggered.
- F. Insulation Cant Strips: Install and secure preformed 45-degree insulation cant strips in hot asphalt at junctures of roofing membrane system with vertical surfaces or angle changes greater than 45 degrees.
- G. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch with insulation.
 - 1. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
- H. Install one or more layers of insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2 inches or greater, install 2 or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches in each direction.

- Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.
- J. Sump insulation at roof drains and scuppers to provide a 48 inch by 48 inch sump.
- K. Install adhered crickets between drains, at walls and perimeters between drains, and at other locations indicated on drawings.
- L. Adhered Insulation: Install each layer of insulation and adhere as follows unless roofing system manufacturer requires otherwise. Comply with such requirements:
 - Set each layer of insulation in solid mopping of hot roofing asphalt.
- M. Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Stagger joints from joints in insulation below a minimum of 6 inches in each direction. Loosely butt cover boards together and fasten to roof deck. Tape joints if required by roofing system manufacturer.
 - Apply in hot roofing asphalt.
- N. Install adhered tapered edge strips (heights vary) at perimeter edges of roof to ensure no 90 degree bends exist in roofing.

3.09 ROOFING MEMBRANE INSTALLATION, GENERAL

- A. Install roofing membrane system according to roofing system manufacturer's written instructions and applicable recommendations of ARMA/NRCA's "Quality Control Guidelines for the Application of Polymer Modified Bitumen Roofing."
- B. Start installation of roofing membrane in presence of roofing system manufacturer's technical personnel.
- C. Cooperate with testing and inspecting agencies engaged or required to perform services for installing roofing system.
- D. Coordinate installing roofing system so insulation and other components of the roofing membrane system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
 - Provide tie-offs at end of each day's work to cover exposed roofing membrane sheets and insulation with a course of coated felt set in roofing cement or hot roofing asphalt with joints and edges sealed.
 - 2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system.
 - 3. Remove and discard temporary seals before beginning work on adjoining roofing.
- E. Asphalt Heating: Heat asphalt to its equiviscous temperature, measured at the mop cart or mechanical spreader immediately before application. Circulate asphalt during heating. Do not raise asphalt temperature above equiviscous temperature range more than one hour before time of application. Do not exceed asphalt manufacturer's recommended temperature limits during asphalt heating. Do not heat asphalt within 25 deg F of flash point. Discard asphalt maintained at a temperature exceeding finished blowing temperature for more than four hours.
 - 1. Apply hot roofing asphalt within plus or minus 25 deg F of equiviscous temperature and adhere components to asphalt heated to not less than 425 deg F.
- F. Substrate-Joint Penetrations: Prevent roofing asphalt from penetrating substrate joints, entering building, or damaging roofing system components or adjacent building construction.

3.10 BASE-PLY SHEET AND PLY SHEET INSTALLATION

- A. Install one layer of reinforced base ply sheet over one layer of Type VI glass-fiber ply sheet according to roofing system manufacturer's written instructions starting at low point of roofing system. Align reinforced base ply sheets and glass-fiber base-ply sheets without stretching. Extend base ply sheet and ply sheet over and terminate beyond cants.
 - 1. Shingle side laps of glass-fiber base-ply sheets uniformly to ensure required base sheet and ply sheets covers substrate at any point. Shingle in direction to shed water.

2. Embed ply sheet and base ply sheet in a continuous mopping of hot roofing asphalt, to form a uniform membrane.

3.11 SBS-MODIFIED BITUMINOUS MEMBRANE INSTALLATION

- A. Install granulated SBS modified bituminous roofing membrane cap sheet over reinforced base ply sheet and Type VI glass-fiber ply sheet according to roofing manufacturer's written instructions, sta1iing at low point of roofing system. Extend roofing membrane sheets over and terminate beyond cants, installing as follows:
 - Adhere to substrate in a solid mopping of hot roofing asphalt applied at not less than 425 deg F OR at the roofing manufacturer's option, ONLY the modified bitumen cap sheet can be adhered in cold adhesive, in lieu of hot asphalt, per the roofing manufacturer's recommendations.
 - 2. Unroll roofing membrane sheets and allow them to relax for minimum time period required by manufacturer.
- B. Laps: Accurately align roofing membrane sheets, without stretching, and maintain uniform side and end laps. Stagger end laps. Install roofing membrane sheets so side and end laps shed water. Completely bond and seal laps, leaving no voids.
 - 1. Repair tears and voids in laps and lapped seams not completely sealed.
 - 2. Allow membrane a minimum 30 day cure before applying reflective white surface coating.
- C. Immediately after installation of cap sheet, to ensure complete and continuous seal and contact between adhesive and base ply and ply sheets, including ends, edges and all laps without wrinkles, fish-mouths, or blisters:
 - Minimum 75-pound weighted roller shall be applied over entire adhered base ply and ply sheets at all areas including field of base ply and ply sheets, side laps and end laps.
- D. Install modified bituminous membranes with side laps shingled with slope of roof deck. Nail off all roof plies into wood cants with 1" nails fastened 12" on center.
 - Seal all edges of new roofing at top of cants with asphalt mastic.

3.12 FLASHING AND STRIPPING INSTALLATION

- A. Install base flashing over cant strips and other sloping and vertical surfaces, at roof edges, and at penetrations through roof, and secure to substrates according to roofing system manufacturer's written instructions and as follows:
 - 1. Prime substrates if required by roofing system manufacturer.
 - a. Backer Sheet Application: Install backer sheet and adhere to substrate in a solid mopping of hot roofing asphalt.
 - b. Flashing Sheet Application: Adhere flashing sheet to substrate in a solid mopping of hot roofing asphalt applied at not less than 425 deg F OR at the roofing manufacturer's option, ONLY the modified bitumen flashing cap sheet can be adhered in cold adhesive, in lieu of hot asphalt, per the roofing manufacturer's recommendations. Apply hot roofing asphalt to back of flashing sheet if recommended by roofing system manufacturer OR at the roofing manufacturer's option, apply cold adhesive to the backside of ONLY the modified bitumen flashing cap sheet, in lieu of hot asphalt, per the roofing manufacturer's recommendations.
- B. Extend base flashing up walls or parapets a minimum of 8 inches above built-up roofing and 6 inches onto field of built-up roofing.
- C. Mechanically fasten top of base flashing securely at terminations and perimeter of roofing.
 - 1. Seal top termination of base flashing with a strip of glass-fiber fabric set in asphalt roofing cement.
- D. Install roofing membrane cap-sheet stripping where metal flanges and edgings are set on membrane roofing according to roofing system manufacturer's written instructions.

- E. Roof Drains: Set 30-by-30-inch lead sheet drain flashing in bed of asphalt roofing mastic on completed roofing membrane. Cover lead sheet drain flashing with roofing membrane capsheet stripping and extend a minimum of 4 inches beyond edge of lead sheet drain flashing onto field of roofing membrane. Clamp roofing membrane, lead sheet drain flashing, and cap sheet stripping into roof-drain clamping ring. Retap existing clamping ring bolt holes and provide new bolts at all existing drain bowl locations.
- F. Install cap sheet stripping according to roofing system manufacturer's written instructions.

3.13 WALKWAY INSTALLATION

- A. Walkway Pads: Install walkway pads using units of size indicated (30" x 30" pad size minimum) to surround rooftop units, door entrances, and hatches, to form a walkway path between serviceable units, beneath all conduit or cable runs, beneath all sleeper supports, at ladder access points, and where additionally indicated on drawings, according to walkway pad manufacturer's written instructions.
 - Set walkway pads in asphalt mastic or manufacturer's recommended cold-applied adhesive.

3.14 REFLECTIVE ROOF COATING

- A. For a hot applied modified bitumen membrane roofing system with hot applied cap sheets and hot applied flashing sheets: After entire roof system and flashing details are completed, and roof system/laps/flashings have cured per manufacturer's recommended period, apply a uniform coating of the white semi-gloss reflective roof coating to roof membrane, base flashings and walkway pads according to manufacturer's written instructions by roller or other suitable application method.
 - 1. Apply two coats to roofing field and flashings in a neat and uniform manner.
- B. For a hot applied modified bitumen membrane roofing system with cold applied cap sheets and cold applied flashing sheets (Cold Adhesive Option): After entire roof system and flashing details are completed and roof system/laps/flashings have cured for 30 days, apply a uniform coating of the white semi-gloss reflective roof coating to roofing membrane, base flashings and walkway pads according to manufacturer's written instructions by roller or other suitable application method.
 - 1. Apply two coats to roofing field and flashings in a neat and uniform manner.

3.15 FINAL FIELD INSPECTION

- A. Manufacturer must provide a photo summary report, showing installation methods and conditions, to the Board's Representative at the completion of the project.
- B. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion and submit report to Architect/Engineer of Record.
 - 1. Notify Architect/Engineer of Record or Board 48 hours in advance of date and time of final inspection.
 - a. Results will be made available to Board's Representative in written form. Any defects or entrapped moisture found within the new roofing system installation will be removed and replaced at the installing contractor's expense.
- C. Repair or remove and replace components of roofing system where test results or inspections indicate that they do not comply with specified requirements.
- D. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements
- E. Contractor to repair or remove and replace components of roofing system where test results or inspections indicate that they do not comply with specified requirements.

3.16 PROTECTING AND CLEANING

A. Protect roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Architect/Engineer of Record and Board.

- B. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Preliminary Acceptance and according to warranty requirements.
- C. Sequence operations to avoid excessive or concentrated foot traffic and storage over roof areas while they cure.
- D. Clean all overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.
- E. Contractor shall rod all drains to ensure that a free-flowing condition exists and all drains are functioning properly.

3.17 ROOFING INSTALLER'S WARRANTY

- A. WHEREAS 'NAME of COMPANY,' herein called the "Roofing Installer," has performed roofing and associated work ("work") on the following project:
 - 1. Owner: Chicago Public Schools
 - 2. Address: 42 West Madison Street, Chicago, IL 60602
 - 3. Building Name/Type:
 - 4. Address:
 - 5. Area of Work:
 - Acceptance Date:
 - 7. Warranty Period:
 - 8. Expiration Date:
- B. AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,
- C. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period he will, at his own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.
- D. This Warranty is made subject to the following terms and conditions:
 - 1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:
 - a. Lightning;
 - b. Peak gust wind speed exceeding 90 mph;
 - c. Fire:
 - d. Failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
 - e. Faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;
 - f. Vapor condensation on bottom of roofing; and
 - g. Activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.
 - When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.
 - Roofing Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.
 - 4. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this

CPS Control: 04_12/30/2021 AOR Project Issue: H 06/09/23

Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void unless Roofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.

- 5. During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray-cooled surface, flooded basin, or other use or service more severe than originally specified, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.
- 6. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.
- 7. This Warranty is recognized to be the only warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.
- E. IN WITNESS THEREOF, this instrument has been duly executed this XX day of XXXXXXX, 20XX.
 - 1. Authorized Signature:
 - 2. Name:
 - 3. Title:

END OF SECTION 07 52 16.12

ROBERT NATHANIEL DETT ELEMENTARY SCHOOL ANNEX AND RENOVATION

2131 W. MONROE ST. CHICAGO IL, 60612 PBC PROJECT NUMBER 05445

ISSUE FOR ADDENDUM 05 06.09.23

COVER COVER SHEET

PHASING PLAN

SMP-1 SOIL MANAGEMENT PLAN

SITE DEMOLITION PLAN

SITE DIMENSION PLAN

SITE GRADING PLAN **EROSION CONTROL PLAN**

SITE DETAILS

SITE DETAILS

C5-05 UTILITY DETAILS

1-00 LANDSCAPE PLAN

MOT1-00 MOT PLAN 004 - LANDSCAPE

UTILITY DETAILS UTILITY DETAILS

L0-00 TREE PRESERVATION PLAN

LANDSCAPE DETAILS

ORNAMENTAL FENCE DETAILS

STRUCTURAL - GENERAL NOTES AND LOADING CRI

DEEP FOUNDATION SCHEDULES, SECTIONS AND DETA

SERVICE WING ENLARGED FRAMING PLAN AND DETAI

STEEL CONNECTION DETAILS - DELEGATED DESIGN

ANNEX FOUNDATION AND GROUND FLOOR PLAN

SLAB ON GRADE SECTIONS AND DETAILS

CODE INFORMATION & EGRESS PLANS

FIXTURE COUNT ANALYSIS FLOOR 2&3

G-010 EXISTING CONDITIONS FOR REFERENCE

CODE INFORMATION & EGRESS PLANS - FLOORS 2 AND



PUBLIC BUILDING COMMISSION OF CHICAGO

LORI E. LIGHTFOOT, MAYOR CARINA E. SÁNCHEZ, EXECUTIVE DIRECTOR

CHICAGO PUBLIC SCHOOLS

PEDRO MARTINEZ, CHIEF EXECUTIVE OFFICER MIGUEL DEL VALLE, CHICAGO BOARD OF EDUCATION PRESIDENT IVAN HANSEN, CHIEF FACILITIES OFFICER

ARCHITECT OF RECORD

KOO LLC 55 W Wacker Dr, Suite 600C Chicago, IL 60601 312.235.0920

STRUCTURAL ENGINEER

Milhouse Engineering & Construction 333 South Wabash Avenue Chicago, IL 60604 312.987.0061

ENVIRONMENTAL

ENVIRONMENTAL ENGINEERING Environmental Design International 33 W Monroe ST #1825 Chicago, IL 60603 312-345-1400

ENVIRONMENTAL RENO/DEMO Specialty Consulating, Inc (SPC) 2942 W Van Buren St Chicago, IL 66012 312-319-7575

CIVIL ENGINEER

TERRA Engineering, LTD. 225 W Ohio St, 4th Floor Chicago, IL 60654 312.467.0123

MEP/FP/AV/IT ENGINEER

WSP 30 N LaSalle St, Ste 4200 Chicago, IL 60602 312.782.8150

LANDSCAPE ARCHITECT

TERRA Engineering, LTD. 225 W Ohio St, 4th Floor Chicago, IL 60654 312.467.0123



		A-010A	DEMO SITE PLAN
		A-010B	SITE PLAN
		A-100A	ANNEX FLOOR PLAN - LEVEL 1
		A-100B	ANNEX RCP - LEVEL 1
		A-101A	SERVICE WING DEMOLITION PLAN - LEVEL 1
		A-101B	SERVICE WING FLOOR PLAN - LEVEL 1
		A-101C	SERVICE WING DEMO RCP - LEVEL 1
4		A-101D	SERVICE WING RCP - LEVEL 1
		A-102A	CLRM WING DEMOLITION PLAN & RCP- LEVEL 1
		A-102B	CLRM WING FLOOR PLAN & RCP - LEVEL 1
		A-103A	CLRM WING DEMOLITION PLAN & RCP - LEVEL 2
		A-103B	CLRM WING FLOOR PLAN & RCP - LEVEL 2
		A-104A	CLRM WING DEMOLITION PLAN & RCP - LEVEL 3
		A-104B	CLRM WING FLOOR PLAN & RCP - LEVEL 3
		A-105	ROOF PLAN ANNEX
S		A-106A	DEMOLITION ROOF PLAN SERVICE WING
		A-106B	ROOF PLAN SERVICE WING
		A-107	ROOF PLANS CLRM WING
		A-200	ANNEX ENLARGED CORRIDOR DI AN & DCD
		A-201 A-202	ANNEX ENLARGED CORRIDOR PLAN & RCP
		A-202 A-203A	ANNEX ENLARGED HALLWAY LINK PLAN & RCP ANNEX ENLARGED GYMNASIUM PLAN
		A-203A A-203B	ANNEX ENLARGED GYMNASIUM RCP
		A-203b A-204	ANNEX ENLARGED COMMUNITY ROOM PLAN & RCP
		A-205	ANNEX ENLARGED BATHROOM PLAN AND RCP
		A-206	SERVICE WING ENLARGED TOILET ROOM PLAN AND RCP
		A-207	SERVICE WING ENLARGED ADMIN SUITE PLAN & RCP
-		A-208	CLRM WING ENLARGED TOILET ROOM PLANS
	^	A-208A	CLRM WING ENLARGED TOILET ROOM PLANS
LE RO	/7\	A-208B	CLRM WING ENLARGED TOILET ROOM PLANS
20		A-209	CLRM WING ENLARGED TOILET ROOM PLANS
জী		A-209A	CLRM WING ENLARGED TOILET ROOM PLANS
CE		A-210	CLRM WING ENLARGED OFFICE SUITE 103/101 PLAN & RCP
2		A-220	CLRM WING ENLARGED OFFICE SUITE 102/104 PLAN & RCP
-	$\sqrt{7}$	A-221	CLRM WING ENLARGED MULTIPURPOSE ROOM 105 & 107
1 7	<u> </u>	1.000	PLAN & RCP
1		A-222	CLRM WING ENLARGED COMPUTER ROOM 201 PLAN & RCP
		A-223	CLRM WING ENLARGED MULTI-PURPOSE 202 PLAN & RCP
-		A-224	CLRM WING ENLARGED SENSORIAL SPACE 211 PLAN & RCP
0 44		A-225	CLRM WING ENLARGED DANCE ROOM 213 PLAN & RCP
		A-226	CLRM WING ENLARGED ROOMS 302 & 304 PLAN & RCP
		A-227	CLRM WING ENLARGED CLRM 306 & PULL OUT RM PLAN &
-			RCP
11		A-228	CLRM WING ENLARGED SCIENCE LAB 309/STORAGE 307 PLAN & RCP
		A-229	CLRM WING ENLARGED RESOURCE ROOM 310 & GAME
A COLO			ROOM 312 PLAN & RCP
t		A-230	CLRM WING ENLARGED MUSIC ROOM 311 PLAN & RCP
		A-231	CLRM WING ENLARGED VISUAL ARTS ROOM 313 PLAN & RCP
		A-232	CLRM WING ENLARGED TYPICAL SOUTH CLRM PLAN & RCP
		A-233	CLRM WING ENLARGED STAIR PLAN & RCP
		A-300	ANNEX CORRIDOR INTERIOR ELEVATIONS
, 1		A-301	ANNEX COMMUNITY ROOM AND CORRIDOR INTERIOR ELEVATIONS
-		A-301B	ANNEX HALLWAY LINK AND SERVICE CORRIDOR INTERIOR ELEVATIONS
eckso		A-302	ANNEX GYMNASIUM INTERIOR ELEVATIONS
1		A-303	ANNEX GYMNASIUM INTERIOR ELEVATIONS

A-303A ANNEX INTERIOR BATHROOM ELEVATIONS

STEEL SECTIONS AND DETAILS

STEEL BRACED FRAME DETAILS

ADA.03 PERMANENT ROOM IDENTIFICATION SIGNS DETAILS

ADA.10 ACCESSIBLE MOUNTING HEIGHTS AND SCHEDULE

ADA.12 ACCESSIBLE SHOWER PLANS AND ELEVATIONS

ADA.11.1 ACCESSIBLE ES, HS AND ADULT TOILET ROOM PLANS AN

ADA.17.1 (FRONT DOOR ONLY) HYDRAULIC PASSENGER ELEVATOR

ADA.10.1 ACCESSIBLE STALL AND URINAL LAYOUTS

ADA.17.9 TYPICAL ELEVATOR CONTROL DETAILS

ADA.18.2 VERTICAL PLATFORM LIFT DETAILS

STEEL TRUSS DETAILS

MASONRY DETAILS

MASONRY DETAILS

ADA.02 INTERIOR SIGN DETAILS

ADA.09 CASEWORK DETAILS

ADA.04 ACCESSIBLE PARKING DETAILS

ADA.9.1 SCIENCE LAB CASEWORK DETAILS

ADA.13 ACCESSIBLE SHOWER DETAILS

ADA.15 DRINKING FOUNTAIN DETAILS

ADA.08 DOOR AND LOCKER DETAILS

	SHEET MATRIX	SHEET MATRIX			
CC	0-01 GENERAL NOTES	C0-01	GENERAL NOTES		
A-30	3B ANNEX GYMNASIUM OFFICE INTERIOR ELEVATIONS	M-906	BAS - MAU S-3		
A-30		M-907	BAS - RTU-4		
A-30		M-908	BAS - RTU-3 & RTU-5		
A-30 A-30		010 - ELE E-000	ELECTRICAL LEGENDS, NOTES & ABBREVIATIONS		
A-30		E-001	LIGHTING CONTROL DIAGRAM AND NOTES		
A-30		E-010	ELECTRICAL SITE PLAN		
A-30 A-30		E-201 E-201A	FIRST FLOOR POWER PLAN - SERVICE WING FIRST FLOOR MECHANICAL POWER PLAN - SERVICE WING		
A-30		E-201A	FIRST FLOOR POWER PLAN - CLRM WING		
A-30		E-202A	FIRST FLOOR MECHANICAL POWER PLAN - CLRM WING		
A-30		E-203	SECOND FLOOR MECHANICAL POWER PLAN. CLRM WING		
A-30 A-40		E-203A E-204	SECOND FLOOR MECHANICAL POWER PLAN - CLRM WING THIRD FLOOR POWER PLAN - CLRM WING		
A-40		E-204A	THIRD FLOOR MECHANICAL POWER PLAN - CLRM WING		
A-40		E-205	ROOF LEVEL MECHANICAL POWER PLAN		
A-40 A-40		E-206 E-301	ROOF LEVEL MECHANICAL POWER PLAN FIRST FLOOR LIGHTING PLAN SERVICE WING		
A-40		E-302	FIRST FLOOR LIGHTING PLAN - CLRM WING		
A-40		E-303	SECOND FLOOR LIGHTING PLAN - CLRM WING		
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A-42 A-42	3 WALL SECTIONS	E-701	ELECTRICAL DETAILS ELECTRICAL DETAILS		
A-42	4 WALL SECTIONS 8	E-703	ELECTRICAL DETAILS		
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A-44		LD 201	WING		
A-44		ED-202	FIRST FLOOR ELECTRICAL DEMOLITION PLAN - CLRM WING		
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A-50		ED-204	THIRD FLOOR ELECTRICAL DEMOLITION PLAN - CLRM WING		
A-50		ED-301 ED-302	FIRST FLOOR LIGHTING DEMOLITION PLAN - SERVICE WING FIRST FLOOR LIGHTING DEMOLITION PLAN - CLRM WING		
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A-50		ED-304	THIRD FLOOR LIGHTING DEMOLITION PLAN - CLRM WING		
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A-60 A-70		PV-000 PV-205	PHOTOVOLTAIC COVER SHEET ANNEX - PV ROOF LAYOUT PLAN		
8 A-70		PV-205.1	STRINGING AND CONDUIT PLAN		
A-70	2 INTERIOR DETAILS	PV-500	ENLARGED ELECTRICAL PLAN		
A-70 A-70		PV-600 PV-601	SINGLE LINE DIAGRAM PV SIGNAGE		
A-70		PV-700	CONSTRUCTION DETAILS		
ID-0		PV-701	GROUNDING DETAILS		
ID-0		PV-800 PV-801	EQUIPMENT DATA SHEETS (1 OF 2) EQUIPMENT DATA SHEETS (2 OF 2)		
ID-0		012 - PLU	,		
ID-0		P-000	PLUMBING LEGENDS, NOTES & ABBREVIATIONS		
ID-0		PD-100 PD-201	PLUMBING DEMOLITION PLAN - SERVICE WING FIRST FLOOR PLUMBING DEMOLITION PLAN - SERVICE		
ID-0			WING		
ID-0		PD-202 PD-203	FIRST FLOOR PLUMBING DEMOLITION PLAN - CLRM WING SECOND FLOOR PLUMBING DEMOLITION PLAN - CLRM		
ID-0		PD-203	WING		
009 M-00	- MECHANICAL 00 MECHANICAL LEGENDS, NOTES & ABBREVIATIONS	PD-204	THIRD FLOOR PLUMBING DEMOLITION PLAN - CLRM WING		
M-00	·	PD-205 P-100A	ROOF LEVEL PLUMBING DEMOLITION PLAN PLUMBING UNDERFLOOR PLAN - SERVICE WING - NEW		
MD-		1 - 100A	WORK		
MD-		P-100B	PLUMBING UNDERFLOOR PLAN - CLRM WING		
MD-		P-201	FIRST FLOOR PLUMBING PLAN - SERVICE WING - NEW WORK		
MD-		P-202	FIRST FLOOR PLUMBING PLAN - CLRM WING - NEW WORK		
MD-20		P-203	SECOND FLOOR PLUMBING PLAN - CLRM WING - NEW WORK		
M-20		P-204	THIRD FLOOR PLUMBING PLAN - CLRM WING - NEW WORK		
M-20	01 SERVICE WING LEVEL 1 - HVAC FLOOR PLAN	P-205	ROOF LEVEL PLUMBING PLAN - NEW WORK		
M-20		P-300 P-500	PLUMBING 3D RISER DIAGRAM - CLRM WING PLUMBING ENLARGED VIEWS		
M-20		P-500 P-700	PLUMBING DETAILS		
M-20	05 ANNEX - HVAC ROOF PLAN	P-701	PLUMBING DETAILS		
M-20		P-800	PLUMBING SCHEDULES		
M-20 M-30		013 - FIRE FP-000	E PROTECTION FIRE PROTECTION LEGENDS, NOTES & ABBREVIATIONS		
M-60		FP-101	FIRST FLOOR FIRE PROTECTION PLAN - SERVICE WING		
M-70		FP-200	FIRE PROTECTION DETAILS AND SCHEDULES		
M-70 M-80			P COORDINATION ANNEX LEVEL 1 - MEP COORDINATION		
M-80			SERVICE WING LEVEL 1 - MEP COORDINATION		
M-90	00 BAS - GENERAL SYMBOLS & ABBREVIATIONS		CLRM WING LEVEL 1 - MEP COORDINATION		
M-90			CLRM WING LEVEL 2 - MEP COORDINATION CLRM WING LEVEL 3 - MEP COORDINATION		
M-90 M-90			ANNEX ROOF PLAN - MEP COORDINATION		
M-90	·		SERVICE WING ROOF PLAN - MEP COORDINATION		

M-904 BAS - VAV AND CAV BOXES

M-905 BAS - VRF CONTROLS



SCHOOL FIONS

MEPFP ENGINEER 30 N LaSalle Street Suite 4200

STRUCTURAL ENGINEER Milhouse Engineering & Construction

TERRA Engineering, LTD. 225 W Ohio St, 4th Floor Chicago, IL 60654 LANDSCAPE ARCHITEC TERRA Engineering, LTE 225 W Ohio St, 4th Floor

Chicago, IL 60604

Chicago, IL 60654 **ENVIRONMENTAL ENGINEER**

33 W Monroe ST #1825 Chicago, IL 60603 2942 W Van Buren St

REVISIONS

02/10/23 100% DD 04/07/23 75% CD 04/28/23 100% CD 06/05/23 ADDENDUM 03 06/09/23 ADDENDUM 05

DRAWN BY: KOO LLO **SCALE**: 12" = 1'-0"

MEP-207 CLRM WING ROOF PLAN - MEP COORDINATION

PBC Project Name: **DETT ELEMENTARY SCHOOL** ANNEX & RENOVATIONS

PBC Contract No: 05445 CPS Project #2021-26031-ADM Project No: 2138

COVER SHEET

Sheet NOT FOR CONSTRUCTION

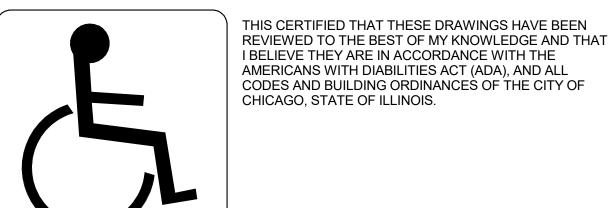
Registration Expiration date:

THE PROJECT WILL CONSIST OF A RENOVATION OF THE EXISTING ROBERT NATHANIEL DETT ELEMENTARY SCHOOL AND OCCUPANCY FOR THE EXISTING BUILDING WILL REMAIN TYPE E-1. THE PROPOSED OCCUPANCY OF THE NEW ANNEX ADDITION IS ASSEMBLY (OCCUPANCY TYPE A-4).

MASONRY FACADE RESTORATION, AND RENOVATION OF THE PARKING AREAS, SIDEWALKS, AND TRASH ENCLOSURE AREA. THE INTERIOR SCOPE OF RENOVATION WORK OF THIS PROJECT INCLUDES THE ADDITION OF A NEW ELEVATOR, ALTERATION OF SELECT INTERIOR ROOM LAYOUTS, ALTERATION OF EXISTING TOILET ROOMS TO BE MADE ACCESSIBLE, AND RENOVATION OF FINISHES, CASEWORK, AND MEPFP SYSTEMS.

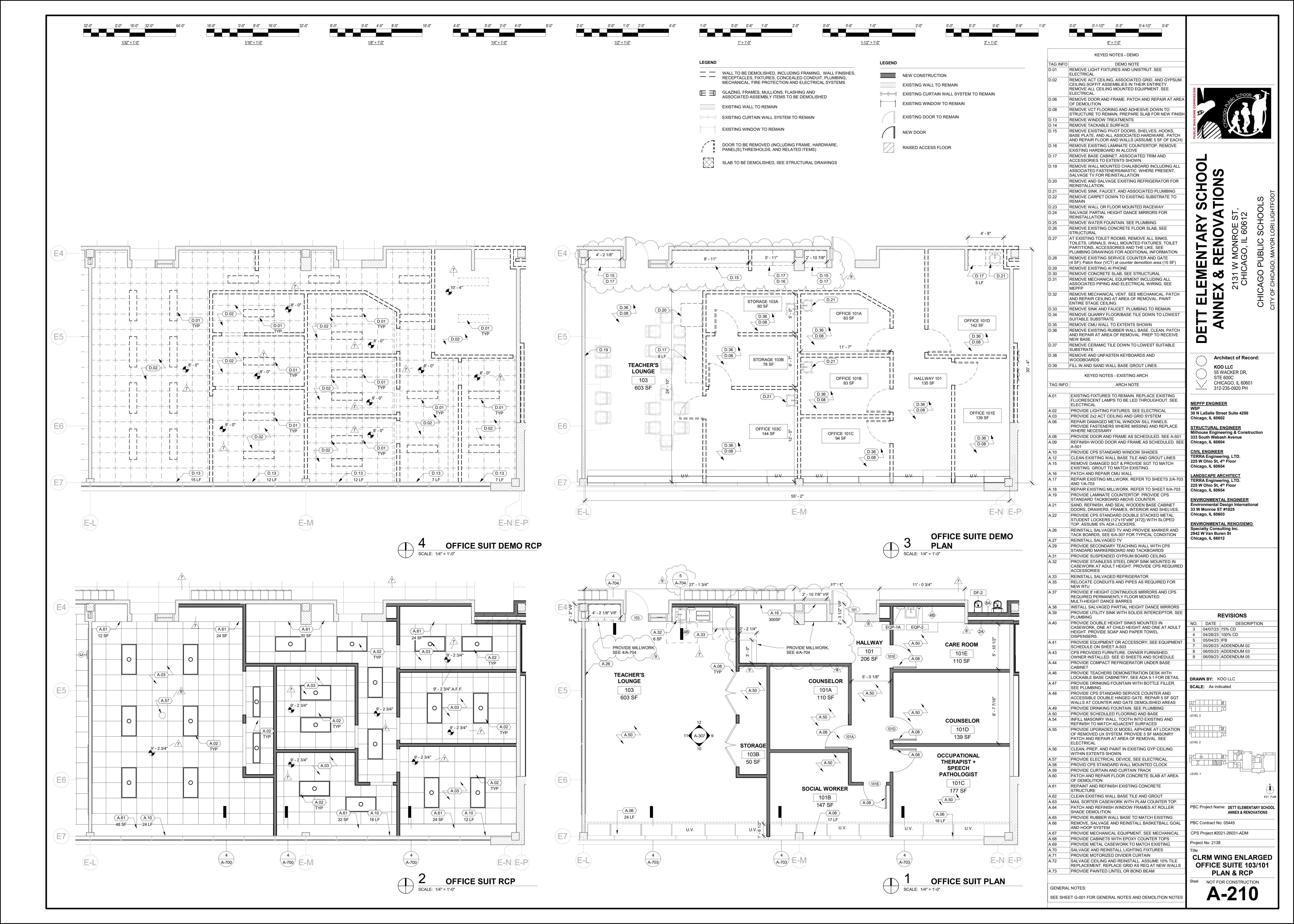
CERTIFICATION STATEMENT:
I hereby certify that these plans were prepared under my direct supervision and to the best of my professional knowledge they conform to the Chicago Building Code.
Signature:
Signed date:
Illinois License Number:

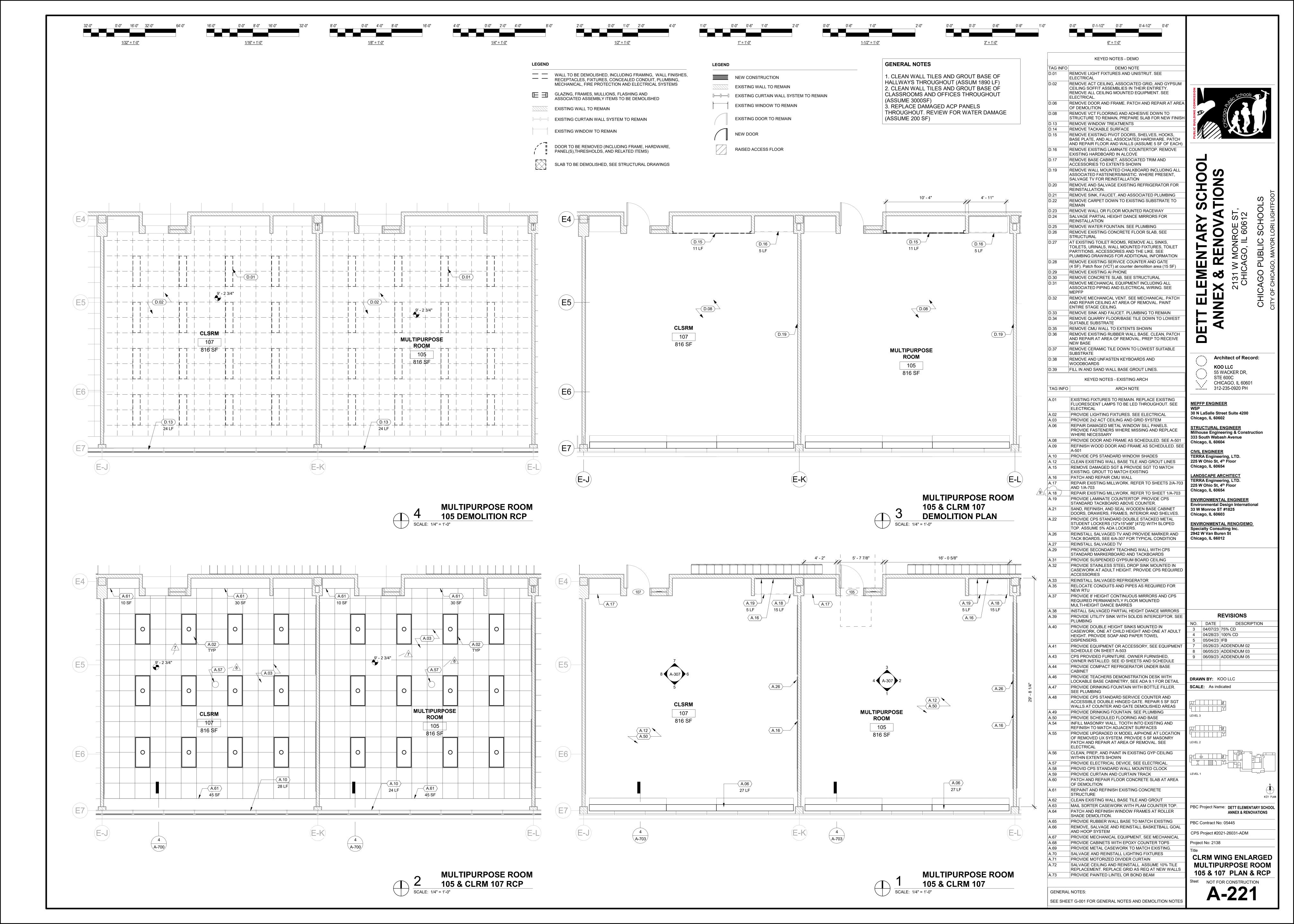
CERTIFICATION:



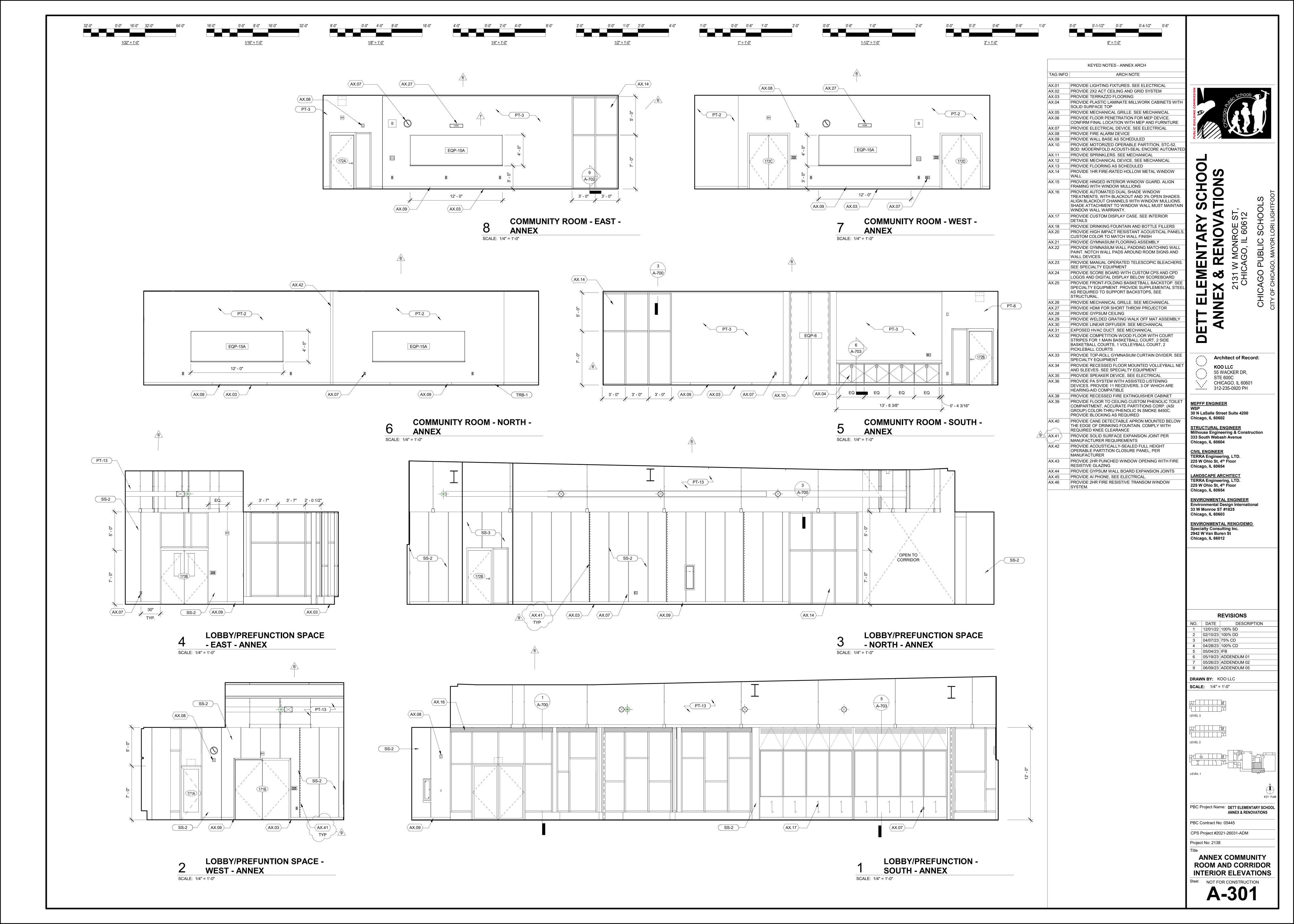
LICENSED ENGINEER

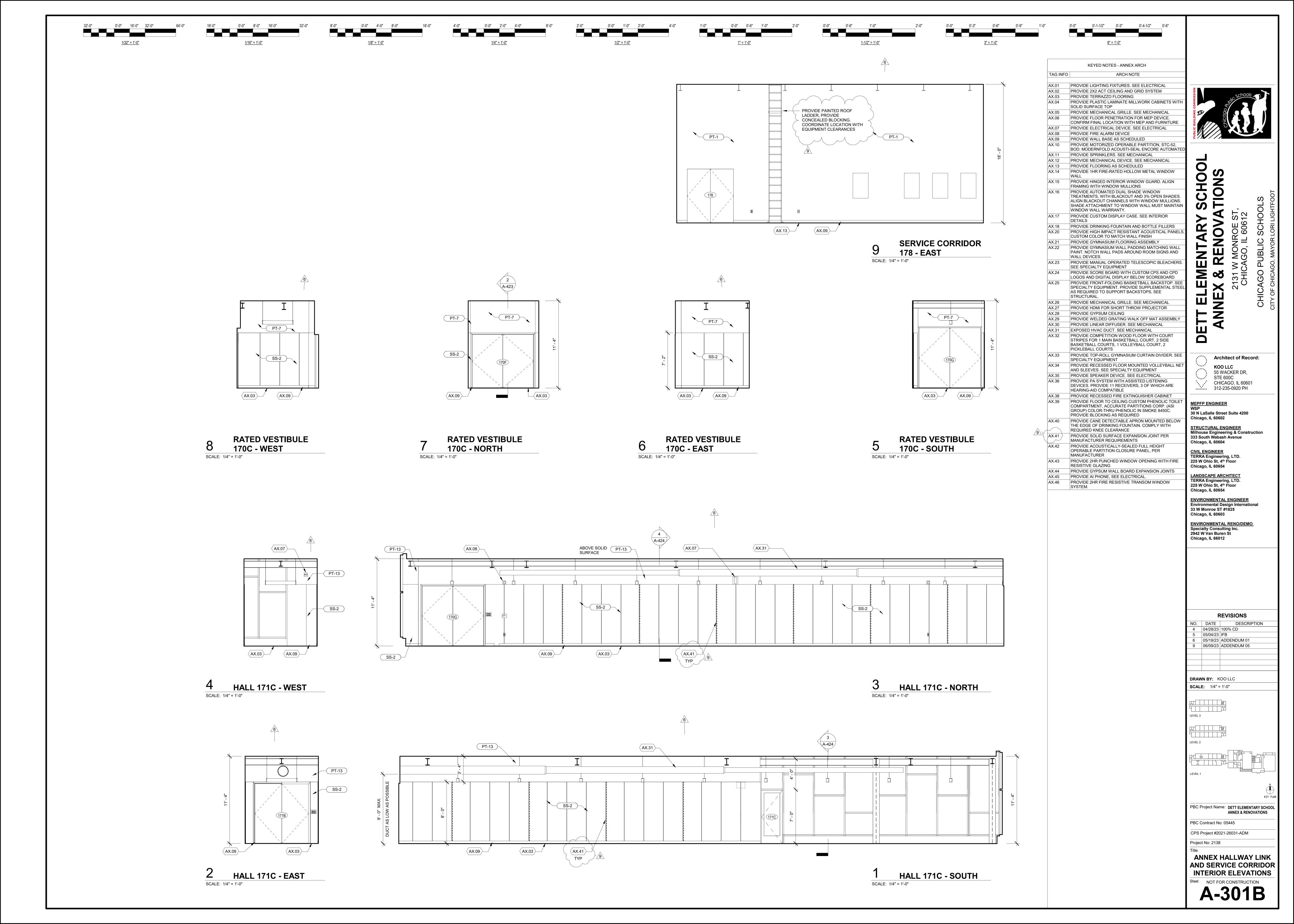
LICENSED ARCHITECT / LANDSCAPE ARCHITECT /

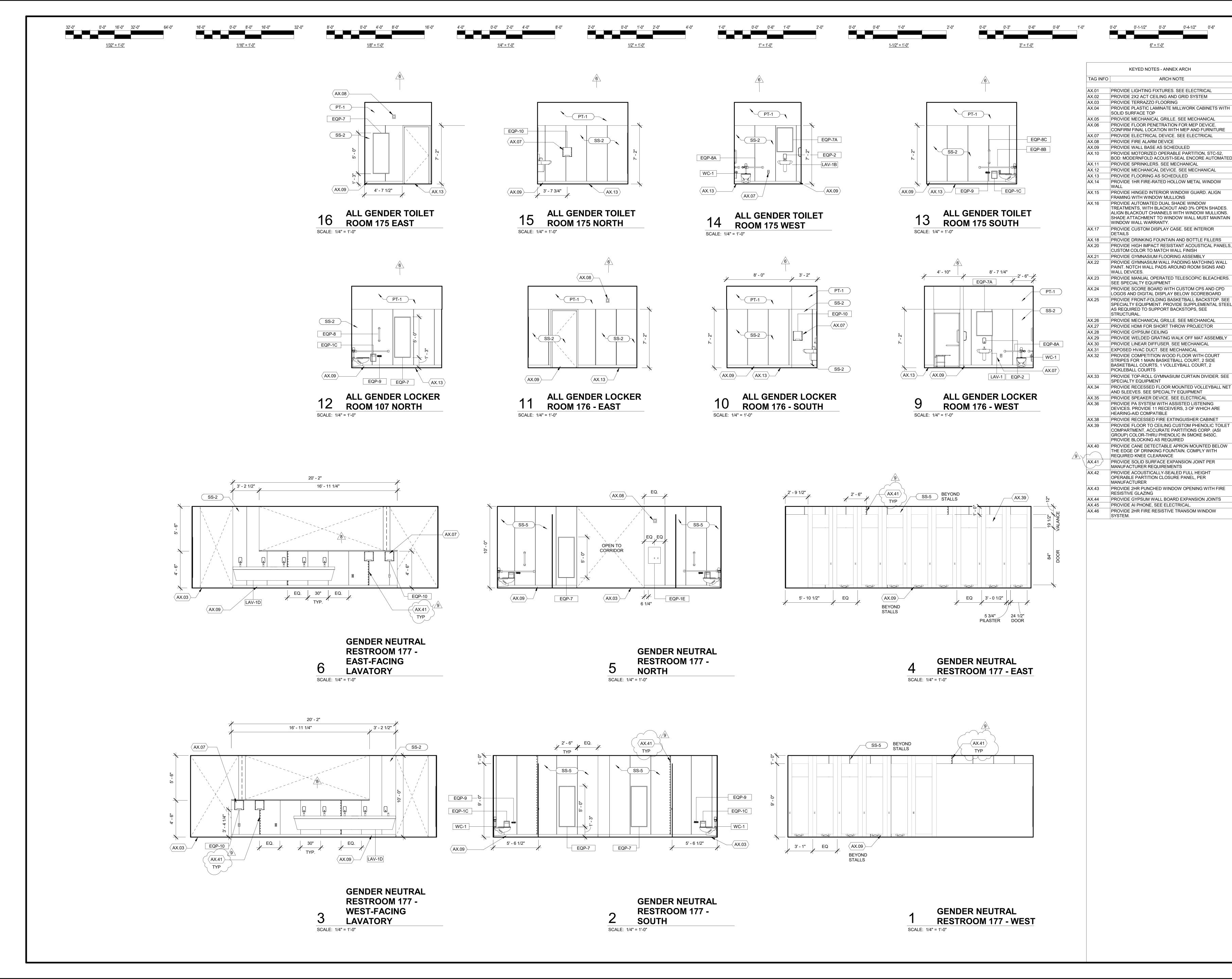














SCHOC

Architect of Record: KOO LLC 55 WACKER DR, STE 600C CHICAGO, IL 60601 ...:.... 312-235-0920 PH

MEPFP ENGINEER
WSP 30 N LaSalle Street Suite 4200 Chicago, IL 60602

STRUCTURAL ENGINEER
Milhouse Engineering & Construction 333 South Wabash Avenue Chicago, IL 60604

<u>CIVIL ENGINEER</u> TERRA Engineering, LTD. 225 W Ohio St, 4th Floor Chicago, IL 60654

LANDSCAPE ARCHITECT TERRA Engineering, LTD. 225 W Ohio St, 4th Floor Chicago, IL 60654 **ENVIRONMENTAL ENGINEER**

Environmental Design International 33 W Monroe ST #1825 Chicago, IL 60603

ENVIRONMENTAL RENO/DEMO Specialty Consulting Inc. 2942 W Van Buren St Chicago, IL 66012

REVISIONS DESCRIPTION 04/07/23 75% CD 04/28/23 100% CD 5 05/04/23 IFB 6 05/19/23 ADDENDUM 01 8 06/05/23 ADDENDUM 03

9 06/09/23 ADDENDUM 05 DRAWN BY: KOO LLC

SCALE: 1/4" = 1'-0"

LEVEL 3

PBC Project Name: **DETT ELEMENTARY SCHOOL** ANNEX & RENOVATIONS

PBC Contract No: 05445 CPS Project #2021-26031-ADM

Project No: 2138 **ANNEX INTERIOR** BATHROOM ELEVATIONS

Sheet NOT FOR CONSTRUCTION A-303A

			Ζ	8\		FINISH S	CHEDULE		
Area	-		Number	Floor Finish	Wall Base	North Wall	South Wall	East Wall	West Wall
127 SF		STORAGE	161	VCT-1		PT-1, CMU-1	PT-1, CMU-1	PT-1, CMU-1	PT-1, CMU-1
127 01		VAULT	162	VCT-1	SGT-1	PT-1, CMU-1	PT-1, CMU-1	PT-1, CMU-1	PT-1, CMU-1
113 SF		RECEPTION	163	VCT-1	SGT-1	PT-1, CMU-1	PT-1, CMU-1	PT-1, CMU-1	PT-1, CMU-1
2438 SF		CLERICAL	164	CP-1	SGT-1	PT-1, CMU-1	PT-1, WT-1, CMU-1	PT-1, CMU-1	PT-1, CMU-1
223 SF		CORRIDOR	165	VCT-1	SGT-1	PT-1, SGT-1	PT-1, SGT-1	PT-1, SGT-1	PT-1, SGT-1 7
194 SF		CORRIDOR	165A	VCT-1	RB-1	PT-1, SGT-1	PT-1, SGT-1	PT-1, SGT-1	-
25 SF		SERVICE CORRIDOR	165B	VCT-1	RB-1 /7	-	· · · · · · · · · · · · · · · · · · ·	PT-1	PT-1, SS-2
95 SF		CORRIDOR	165C	VCT-1	RB-1	-	PT-1, SGT-1, CMU-1		PT-1, SS-2
187 SF		VESTIBULE	170A	TR-1	TRB-1	SS-2. PT-13	SS-2. PT-13	SS-2. PT-13	SS-2. PT-13
43 SF		VESTIBULE	170B	TR-1	TRB-1	SS-2. PT-13	SS-2. PT-13	SS-2. PT-13	SS-2. PT-13
206 SF		RATED VESTIBULE (4HR)	170C	TR-1	TRB-1	SS-2. PT-13	SS-2. PT-13	SS-2. PT-13	SS-2. PT-13
110 SF		LOBBY / PREFUNCTION	171	TR-1, TR-3	TRB-1	SS-2. PT-13	SS-2. PT-13	SS-2. PT-13	SS-2. PT-13
147 SF									
177 SF		HALL	171A	TR-1	TRB-1	SS-2. PT-13	SS-2. PT-13	SS-2. PT-13	SS-2. PT-13
100.05		CORRIDOR	171B ₈	TR-1, TR-3	TRB-1	SS-2. PT-13	SS-2. PT-13	SS-2. PT-13	SS-2, PT-13
139 SF		11011		TD 4	TDD 4	00 0 DT 40	00 0 DT 40	00 0 DT 40	00 0 DT 40
110 SF		HALL	171C	TR-1	TRB-1	SS-2. PT-13	SS-2. PT-13	SS-2, PT-13	SS-2, PT-13
231 SF		COMMUNITY ROOM	172 8	TR-1, TR-2	TRB-1	PT-8	PT-3	PT-3	PT-8 7
323 SF		COMMUNITY RM. STORAGE	172A		TRB-1	PT-1	PT-1	PT-1	PT-1
105 SF		GYMNASIUM	173	WD-1	WB-1	PT-1, PT-4, PT-3, WT-2	PT-1, PT-4, PT-3, WT-2	PT-8, PT-4, SS-4, WT-2	PT-1, PT-8, PT-4, SS-4, WT-2
123 SF		GYM OFFICE	173A	VCT-2	RB-1	PT-1, WT-1	PT-1, WT-3	(1)	PT-1
603 SF 50 SF	-	CPS GYM STORAGE	173A	VCT-2	RB-1	PT-1, W1-1	PT-1, W1-3	PT-1	PT-1
262 SF	-	CPD GYM STORAGE	173C	VCT-2	RB-1	PT-1	PT-1 / 0 \	PT-1	PT-1
175 SF	-	PUMP ROOM	173D	RS-1	RS-1	PT-1	PT-1	PT-1	PT-1
175 SF 52 SF	-	CUSTODIAL ROOM	1730	RS-1	RS-1	PT-1	PT-1	PT-1	PT-1
125 SF		ALL GENDER TOILET ROOM	175	TR-1	TRB-1	SS-5	SS-5	SS-5	SS-2
85 SF	-	ALL GENDER LOCKER ROOM	176	TR-1	TRB-1	SS-5	SS-5	SS-5	SS-2
85 SF	-	GENDER NEUTRAL RESTROOM	177	TR-1	TRB-1	SS-5	SS-5	SS-5, SS-2	SS-5, SS-2 9
816 SF		SERVICE CORRIDOR	178	RS-1	RS-1	PT-1	PT-1	PT-1	PT-1
108 SF	-	ELECTRIC ROOM	179	RS-1	RS-1	PT-1	PT-1	PT-1	PT-1
818 SF		IDF	180	RT-11	RB-1	PT-1	PT-1	PT-1	PT-1
816 SF		STORAGE ROOM	181	RS-1		PT-1	PT-1	PT-1	PT-1
1246 SF		CLOSET	182	TR-1	RS-1 8 -	PT-1	PT-1 8	PT-1	PT-1
64 SF		CORRIDOR	200	VCT-2	CMU-1	PT-1, SGT-1, CMU-1	PT-1, SGT-1, CMU-1		PT-1, SGT-1, CMU-1
61 SF		COMPUTER ROOM	201	VCT-2 //8	SGT-1	PT-1, CMU-1		PT-8, CMU-1	PT-1, CMU-1
1166 SF		MULTI-PURPOSE	202	VCT-2	SGT-1, RB-1	PT-1, WT-1, CMU-1	PT-1, CMU-1	PT-1, CMU-1	PT-8, CMU-1
38 SF		STORAGE	202A	VCT-2	RB-1	PT-1	PT-1, CMU-1	PT-1, CMU-1	PT-1
37 SF		ELEVATOR MACHINE RM	202B	RS-1	RS-1	PT-1, CMU-1, WT-1	PT-1	PT-1, CMU-1	DT 1
940 SF		CLSRM	203	VCT-2	SGT-1	PT-1, CMU-1	PT-1, WT-1, CMU-1	PT-8, CMU-1	PT-1, CMU-1
48 SF		CLSRM	204	VCT-2	SGT-1	PT-1, WT-1, CMU-1	PT-1, CMU-1	PT-1, CMU-1	PT-8, CMU-1
58 SF		CLSRM	205	VCT-2	SGT-1	PT-1, CMU-1	PT-1, WT-1, CMU-1	PT-8, CMU-1	PT-1, CMU-1
1181 SF		CLSRM	206	VCT-2	SGT-1	PT-1, WT-1, CMU-1	PT-1, CMU-1	PT-1, CMU-1	PT-8, CMU-1
38 SF		CLSRM	207	VCT-2 ∧	SGT-1	PT-1, CMU-1	PT-1, WT-1, CMU-1	PT-8, CMU-1	PT-1, CMU-1
213 SF	8	CLSRM	208	VCT-2	SGT-1 7	PT-1, WT-1, CMU-1	PT-1, CMU-1	PT-1, CMU-1	PT-8, CMU-1
204 SF	`	CLSRM	209	VCT-2	SGT-1, RB-1	PT-1, CMU-1	PT-1, WT-1, CMU-1	PT-8, CMU-1	PT-1, CMU-1
55 SF		CLSRM	210	VCT-2	SGT-1	PT-1, WT-1, CMU-1	PT-1, CMU-1	PT-1, CMU-1	PT-8, CMU-1
250 SF		SENSORIAL RM	211	VCT-2	SGT-1, RB-1	PT-1, CMU-1	PT-1, WT-1, WT-4,	PT-8, CMU-1	PT-1, CMU-1
237 SF							CMU-1		
2288 SF		DANCE ROOM	213	RT-4	SGT-1, RB-1	PT-1, CMU-1	PT-1, WT-4, SGT-1	PT-8, CMU-1	PT-1, CMU-1
		STORAGE	213A	VCT-2	CMU-1	PT-1, CMU-1		PT-1, CMU-1	PT-1, CMU-1
700 SF		BOY'S TOILET	214	TR-1	TRB-1	SS-5	SS-5	SS-5	SS-2
40 SF		JANITOR CLOSET	215	RS-1	RS-1	PT-1, CMU-1	PT-1, CMU-1		PT-1, CMU-1
44 SF		GIRL'S TOILET	216	TR-1	TRB-1	SS-5	SS-5	SS-2	SS-5
323 SF		STAIR #2	217	-	-	SGT-1	SGT-1	SGT-1	ŠGT-1 9
87 SF		STAIR #1	218	-	- 7	SGT-1	SGT-1	SGT-1	SGT-1
60 SF		BOYS TOILET	219	TR-1	I KD-I	SS-5	ŠŠ-5	SS-5	SS-2
440 SF		GIRLS TOILET	220	TR-1	TRB-1	SS-5	SS-5	SS-5	SS-2
450.05		ACCESSIBLE ALL GENDER	221	TR-1	TRB-1	SS-5	SS-5	SS-5	SS-2
158 SF		STORAGE	222	VCT-2	RB-1	PT-1	4	PT-1	PT-1 /7 —
UU L4		VECTION					PT-1		
88 SF		VESTIBULE	223	VCT-2	RB-1	PT-1	PT-1	PT-1	PT-1
126 SF	_	CORRIDOR	223 300	VCT-2 VCT-2	RB-1 SGT-1	PT-1 PT-1, SGT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1	PT-1 PT-1, SGT-1,CMU-1	PT-1 PT-1, SGT-1, CMU-1
126 SF 108 SF		CORRIDOR CLSRM	223 300 301	VCT-2 VCT-2 VCT-2	RB-1 SGT-1 SGT-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, WT-1, CMU-1	PT-1 PT-1, SGT-1,CMU-1 PT-8, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1
126 SF 108 SF 61 SF		CORRIDOR CLSRM INCENTIVE ROOM	223 300 301 302	VCT-2 VCT-2 VCT-2 VCT-2	RB-1 SGT-1 SGT-1 SGT-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1,CMU-1 PT-8, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1
126 SF 108 SF 61 SF 51 SF		CORRIDOR CLSRM INCENTIVE ROOM CLSRM	223 300 301 302 303	VCT-2 VCT-2 VCT-2 VCT-2 VCT-2	RB-1 SGT-1 SGT-1 SGT-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1	PT-1 PT-1, SGT-1,CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-1, CMU-1
126 SF 108 SF 61 SF 51 SF 63 SF		CORRIDOR CLSRM INCENTIVE ROOM CLSRM COMPUTER ROOM	223 300 301 302 303 304	VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2	RB-1 SGT-1 SGT-1 SGT-1 SGT-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1,CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1
126 SF 108 SF 61 SF 51 SF 63 SF 69 SF		CORRIDOR CLSRM INCENTIVE ROOM CLSRM COMPUTER ROOM CLSRM	223 300 301 302 303 304 305	VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2	RB-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1	PT-1 PT-1, SGT-1,CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-1, CMU-1
126 SF 108 SF 61 SF 51 SF 63 SF 69 SF 113 SF		CORRIDOR CLSRM INCENTIVE ROOM CLSRM COMPUTER ROOM CLSRM CLSRM	223 300 301 302 303 304 305 306	VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2	RB-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1,CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1
126 SF 108 SF 61 SF 51 SF 63 SF 69 SF 113 SF 1110 SF		CORRIDOR CLSRM INCENTIVE ROOM CLSRM COMPUTER ROOM CLSRM CLSRM CLSRM PULL-OUT ROOM	223 300 301 302 303 304 305 306 308	VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2	RB-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, WT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1,CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1
126 SF 108 SF 61 SF 51 SF 63 SF 69 SF 113 SF 1110 SF 83 SF		CORRIDOR CLSRM INCENTIVE ROOM CLSRM COMPUTER ROOM CLSRM CLSRM PULL-OUT ROOM SCIENCE LAB	223 300 301 302 303 304 305 306 308 309	VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2	RB-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1, RB-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, WT-1, CMU-1 PT-8, PT-10, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1,CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1
126 SF 108 SF 61 SF 51 SF 63 SF 69 SF 113 SF 1110 SF 83 SF 709 SF		CORRIDOR CLSRM INCENTIVE ROOM CLSRM COMPUTER ROOM CLSRM CLSRM PULL-OUT ROOM SCIENCE LAB SCIENCE LAB STORAGE	223 300 301 302 303 304 305 306 308 309 309A	VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2	RB-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1, RB-1 SGT-1, RB-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-8, PT-10, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1,CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-10, PT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1
126 SF 108 SF 61 SF 51 SF 63 SF 69 SF 113 SF 1110 SF 83 SF 709 SF 49 SF		CORRIDOR CLSRM INCENTIVE ROOM CLSRM COMPUTER ROOM CLSRM CLSRM PULL-OUT ROOM SCIENCE LAB SCIENCE LAB STORAGE RESOURCE ROOM	223 300 301 302 303 304 305 306 308 309 309A 310	VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2	RB-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1, RB-1 SGT-1, RB-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-8, PT-10, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1,CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-10, PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1
126 SF 108 SF 61 SF 51 SF 63 SF 69 SF 1113 SF 1110 SF 83 SF 709 SF 49 SF 5681 SF		CORRIDOR CLSRM INCENTIVE ROOM CLSRM COMPUTER ROOM CLSRM CLSRM PULL-OUT ROOM SCIENCE LAB SCIENCE LAB STORAGE RESOURCE ROOM MUSIC ROOM	223 300 301 302 303 304 305 306 308 309 309A 310 311	VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2 VCT-2	RB-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1, RB-1 SGT-1, RB-1 SGT-1 SGT-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1,CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-10, PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1
126 SF 108 SF 61 SF 51 SF 63 SF 69 SF 113 SF 1110 SF 83 SF 709 SF 49 SF 5681 SF 70 SF		CORRIDOR CLSRM INCENTIVE ROOM CLSRM COMPUTER ROOM CLSRM CLSRM PULL-OUT ROOM SCIENCE LAB SCIENCE LAB STORAGE RESOURCE ROOM MUSIC ROOM GAME ROOM	223 300 301 302 303 304 305 306 308 309 309A 310 311 312	VCT-2	RB-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1, RB-1 SGT-1, RB-1 SGT-1 SGT-1 SGT-1 SGT-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-8, PT-10, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, WT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1,CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-10, PT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1
126 SF 108 SF 61 SF 51 SF 63 SF 69 SF 113 SF 1110 SF 83 SF 709 SF 49 SF 5681 SF 70 SF 227 SF		CORRIDOR CLSRM INCENTIVE ROOM CLSRM COMPUTER ROOM CLSRM CLSRM PULL-OUT ROOM SCIENCE LAB SCIENCE LAB STORAGE RESOURCE ROOM MUSIC ROOM GAME ROOM VISUAL ART RM	223 300 301 302 303 304 305 306 308 309 309A 310 311 312 313	VCT-2	RB-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1, RB-1 SGT-1, RB-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-8, PT-10, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1,CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-10, PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1
126 SF 108 SF 61 SF 51 SF 63 SF 69 SF 113 SF 1110 SF 83 SF 709 SF 49 SF 5681 SF 70 SF 227 SF 218 SF		CORRIDOR CLSRM INCENTIVE ROOM CLSRM COMPUTER ROOM CLSRM CLSRM CLSRM PULL-OUT ROOM SCIENCE LAB SCIENCE LAB STORAGE RESOURCE ROOM MUSIC ROOM GAME ROOM VISUAL ART RM STORAGE	223 300 301 302 303 304 305 306 308 309 309A 310 311 312 313	VCT-2	RB-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1, RB-1 SGT-1, RB-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1,CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1
126 SF 108 SF 61 SF 51 SF 63 SF 69 SF 1110 SF 83 SF 709 SF 49 SF 5681 SF 70 SF 227 SF 218 SF		CORRIDOR CLSRM INCENTIVE ROOM CLSRM COMPUTER ROOM CLSRM CLSRM CLSRM PULL-OUT ROOM SCIENCE LAB SCIENCE LAB STORAGE RESOURCE ROOM MUSIC ROOM GAME ROOM VISUAL ART RM STORAGE BOY'S TOILET	223 300 301 302 303 304 305 306 308 309 309A 310 311 312 313 313A 314	VCT-2	RB-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1, RB-1 SGT-1, RB-1 SGT-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 SS-5	PT-1 PT-1, SGT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1,CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-10, PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 SS-5	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 SS-2
126 SF 108 SF 61 SF 61 SF 51 SF 63 SF 69 SF 1110 SF 83 SF 709 SF 49 SF 5681 SF 70 SF 227 SF 218 SF 142 SF 378 SF	8	CORRIDOR CLSRM INCENTIVE ROOM CLSRM COMPUTER ROOM CLSRM CLSRM CLSRM PULL-OUT ROOM SCIENCE LAB SCIENCE LAB SCIENCE LAB STORAGE RESOURCE ROOM MUSIC ROOM GAME ROOM VISUAL ART RM STORAGE BOY'S TOILET GIRL'S TOILET	223 300 301 302 303 304 305 306 308 309 309A 311 312 313 313A 314 315	VCT-2 VCT-1 VCT-2 VCT-1	RB-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1, RB-1 SGT-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 SS-5 SS-5	PT-1 PT-1, SGT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 SS-5 SS-5	PT-1 PT-1, SGT-1,CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 SS-5 SS-2	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 SS-2 SS-5
126 SF 108 SF 61 SF 51 SF 63 SF 69 SF 113 SF 1110 SF 83 SF 709 SF 49 SF 5681 SF 70 SF 227 SF 218 SF 142 SF 378 SF 66 SF	8	CORRIDOR CLSRM INCENTIVE ROOM CLSRM COMPUTER ROOM CLSRM CLSRM CLSRM PULL-OUT ROOM SCIENCE LAB SCIENCE LAB STORAGE RESOURCE ROOM MUSIC ROOM GAME ROOM VISUAL ART RM STORAGE BOY'S TOILET GIRL'S TOILET	223 300 301 302 303 304 305 306 308 309 309A 310 311 312 313 313A 314 315 316	VCT-2	RB-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1, RB-1 SGT-1, RB-1 SGT-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 SS-5 SS-5 PT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1,CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1
126 SF 108 SF 61 SF 61 SF 51 SF 63 SF 69 SF 113 SF 1110 SF 83 SF 709 SF 49 SF 5681 SF 70 SF 227 SF 218 SF 142 SF 378 SF 66 SF 223 SF	8	CORRIDOR CLSRM INCENTIVE ROOM CLSRM COMPUTER ROOM CLSRM CLSRM CLSRM PULL-OUT ROOM SCIENCE LAB SCIENCE LAB STORAGE RESOURCE ROOM MUSIC ROOM GAME ROOM VISUAL ART RM STORAGE BOY'S TOILET GIRL'S TOILET JANITOR'S CLOSET STAIR #2	223 300 301 302 303 304 305 306 308 309 309A 310 311 312 313 313A 314 315 316 317	VCT-2 VCT-1 VCT-2 VCT-1	RB-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1, RB-1 SGT-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 SS-5 SS-5 PT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 SS-5 SS-5 PT-1, CMU-1	PT-1 PT-1, SGT-1,CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 SS-5 SS-2 PT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 SS-2 SS-5 PT-1, CMU-1
126 SF 108 SF 61 SF 51 SF 63 SF 69 SF 113 SF 1110 SF 83 SF 709 SF 49 SF 5681 SF 70 SF 227 SF 218 SF 142 SF 378 SF 66 SF	8	CORRIDOR CLSRM INCENTIVE ROOM CLSRM COMPUTER ROOM CLSRM CLSRM CLSRM PULL-OUT ROOM SCIENCE LAB SCIENCE LAB STORAGE RESOURCE ROOM MUSIC ROOM GAME ROOM VISUAL ART RM STORAGE BOY'S TOILET GIRL'S TOILET	223 300 301 302 303 304 305 306 308 309 309A 310 311 312 313 313A 314 315 316	VCT-2 VCT-1 VCT-2 VCT-1	RB-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1 SGT-1, RB-1 SGT-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1 PT-1, CMU-1 SS-5 SS-5 PT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, WT-1, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1,CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-1, CMU-1	PT-1 PT-1, SGT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1 PT-1, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-8, CMU-1 PT-1, CMU-1

SS-2

SS-5

PT-1, CMU-1

0'-0" 1'-0" 2'-0"

<u>1/2" = 1'-0"</u>

0'-0" 0'-6" 1'-0"

<u>1" = 1'-0"</u>

0'-0" 2'-0" 4'-0"

1/4" = 1'-0"

EXISTING BUILDING PAINT SCOPE:

<u>1-1/2" = 1'-0"</u>

GYP-X, PT-9

ACT-X1. PT-9

ACT-X1, PT-9

ACT-X1, PT-9

ACT-X2, PT-9

ACT-1, PT-9

ACT-3, PT-9

ACT-1, PT-9

GYP-3, PT-9

GYP-3, PT-9

GYP-1, PT-9

EXP-2, PT-13

EXP-2, PT-13

→ACT-4, PT-9

ACT-3, PT-9

EXP-2, PT-9

ACT-1, PT-9

ACT-3, PT-9

ACT-3, PT-9

GYP-1, PT-9

GYP-2, PT-9

GYP-2, PT-9

GYP-2. PT-9

GYP-2, PT-9

GYP-1. PT-9

ACT-X2, PT-9

ACT-1, PT-9

ACT-4, PT-9

GYP-1. PT-9

GYP-1, PT-9

ACT-X1, PT-9

ACT-X1, PT-9

ACT-X1, PT-9

ACT-X1, PT-9

ACT-X1, PT-9

ACT-X1, PT-9

ACT-1, PT-9

ACT-X1, PT-9

ACT-4, PT-9

ACT-1, PT-9

EXP-2, PT-9

GYP-X, PT-9

GYP-2, PT-9

GYP-X, PT-9

GYP-X, PT-9

GYP-2, PT-9

GYP-2, PT-9

GYP-2, PT-9

GYP-1, PT-9

ACT-1, PT-9

ACT-X2, PT-9

ACT-X1, PT-9

ACT-1, PT-9

ACT-X1, PT-9

ACT-1, PT-9

ACT-X1, PT-9

ACT-X1, PT-9

ACT-1, PT-9

ACT-1, PT-9

ACT-3, PT-9

ACT-1, PT-9

ACT-4, PT-9

ACT-1, PT-9

ACT-1, PT-9

EXP-2, PT-9

GYP-2, PT-9

GYP-2, PT-9

GYP-2, PT-9

GYP-X, PT-9

GYP-X, PT-9

GYP-2, PT-9

GYP-2, PT-9

GYP-2, PT-9

GYP-1, PT-9

ACT-1, PT-9

EXP-2

EXP-2

EXP-2

EXP-2

EXP-2, PT-13, GYP-3, 1525 SF

EXP-2, PT-13, GYP-3, 595 SF

Area

136 SF

338 SF

825 SF

89 SF

116 SF

306 SF

7470 SF

227 SF

143 SF

795 SF

156 SF

119 SF

106 SF

2614 SF

1295 SF

815 SF

818 SF

815 SF

814 SF

816 SF

816 SF

828 SF

793 SF

804 SF

198 SF

259 SF

251 SF

204 SF

209 SF

54 SF

9 SF

104 SF

2636 SF

787 SF

797 SF

815 SF

818 SF

815 SF

817 SF

816 SF

1446 SF

165 SF

814 SF

807 SF

830 SF

806 SF

117 SF

195 SF

202 SF

40 SF

259 SF

254 SF

205 SF

214 SF

104 SF

55 SF

9 SF

1069 SF

<u>3" = 1'-0"</u>

KITCHEN. VERIFY CONSTRUCTION IN FIELD

PAINT AS SCHEDULED IN ROOM SCHEDULE PRIME AND PAINT ALL ROOMS AND SPACES WITHIN THE EXISTING SCHOOL, INCLUDING ROOMS WITH NO SCOPE SHOWN ON DRAWINGS. DO NOT PAINT ANY EXISTING GLAZED TILE OR GLAZED MASONRY

BUT IS NOT LIMITED TO, CORRIDORS, GYMNASIUM, LUNCHROOM,

GENERAL PAINT NOTES:

1. REVIEW QUALITY ASSURANCE REQUIREMENTS IN SPECIFICATIONS, GC TO SCHEDULE A PRE-APPLICATION CONFERENCE PRIOR TO PAINTING. SEE RENOVATION PAINTING SPECIFICATION FOR ADDITIONAL INFORMATION. IN ALL ROOMS SCHEDULE TO BE PAINTED, PAINT ALL MISCELLANEOUS

METAL INCLUDING AIR GRILLES, PIPES, LOUVERS, RACEWAY, ETC. SCUFF

LOCATION OF GLAZED TILE OR GLAZED MASONRY WAINSCOT INCLULDES

0'-1-1/2"

0'-3"

<u>6" = 1'-0"</u>

REMOVE ALL LOOSE, CRACKED, AND PEELING PAINT, WHERE NOT AT CMU WALLS, SKIM COAT SURFACE IN ORDER TO ACHIEVE A UNIFORM FINISH. ALLOW FOR 300SF

SAND AND CLEAN METAL SURFACES TO REMOVE CONTAMINANTS.

PATCH HOLES IN WALLS AND CEILINGS GREATER THAN 1/4" IN ANY DIRECTION. SKIM COAT WALL IN AREA OF REMOVED TRIM. PREP AND PRIME WITH FLAT, WHITE LATEX PRIMER PRIOR TO PAINTING, ALLOW FOR 200SF IN ADDITION TO PATCH AND REPAIR SCOPE ALREADY NOTED ON THE DRAWINGS

5. PAINT ALL EXPOSED DUCTWORK, PIPING, CONDUIT, JUNCTION BOXES, AND SIMILAR ITEMS THAT ARE EXISTING TO REMAIN, PAINT COLOR TO MATCH

ADJACENT WALL OR CEILING SURFACE. 6. SCUFF SAND ALL BRICK, BLOCK, AND TILE, CLEAN SURFACE TO REMOVE

ANY SURFACE CONTAMINANTS PRIOR TO PAINTING. WHERE EXISTING FIRE ALARM/ELECTRICAL DEVICES, OR SIGNAGE ARE

REMOVED, PATCH AND PAINT SURFACES TO MATCH ADJOINING SURFACES.

8. AT EXISTING CONCRETE CEILINGS AND STRUCTURE TO RECEIVE PAINT, ASSUME CEMENTITIOUS SURFACE PATCHING FOR 30% OF AREA.

ANNEX ACOUSTICAL METAL DECKING

1. PROVIDE ACOUSTICAL METAL DECKING THROUGHOUT THE ENTIRE ANNEX, SEE STRUCTURAL.

2. BASIS OF DESIGN IS EPIC METALS CORPORATION TORIS A. PROVIDE ACOUSTICAL ELEMENTS TO ACHIEVE MINIMUM NRC 0.95

3. EXPOSED ACOUSTICAL DECKING AT THE ANNEX GYM TO BE FACTORY

FINISHED WHITE TO MATCH CEILING COLORS 4. EXPOSED ACOUSTICAL DECKING AT ALL OTHER LOCATIONS TO BE FACTORY

FINISHED BLACK TO MATCH CEILING AND WALL FINISHES 5. COVER AND PROTECT FINISH ON EXPOSED DECKING WHILE PAINTING ADJACENT ELEMENTS, INCLUIDNG BUT NOT LIMITED TO WALLS, STRUCTURE, MEPFP INFRASTRUCTURE.

EXPOSED MEPFP EQUIPMENT AND EXPOSED STRUCTURE

1. ALL EXPOSED STRUCTURE TO BE PAINTED TO MATCH ADJACENT SURFACES 2. ALL EXPOSED MEPFP EQUIPMENT TO BE PAINTED TO MATCH ADJACENT SURFACES



S

Architect of Record: **KOO LLC** 55 WACKER DR. STE 600C CHICAGO, IL 60601 ...:.... 312-235-0920 PH

MEPFP ENGINEER 30 N LaSalle Street Suite 4200 Chicago, IL 60602

STRUCTURAL ENGINEER Milhouse Engineering & Construction 333 South Wabash Avenue Chicago, IL 60604

CIVIL ENGINEER TERRA Engineering, LTD. 225 W Ohio St, 4th Floor Chicago, IL 60654

LANDSCAPE ARCHITECT TERRA Engineering, LTD. 225 W Ohio St, 4th Floor Chicago, IL 60654 ENVIRONMENTAL ENGINEER **Environmental Design International**

33 W Monroe ST #1825 Chicago, IL 60603 ENVIRONMENTAL RENO/DEMO Specialty Consulting Inc. 2942 W Van Buren St

Chicago, IL 66012

REVISIONS

NO. DATE DESCRIPTION 04/07/23 75% CD 4 04/28/23 100% CD 5 05/04/23 IFB 7 05/26/23 ADDENDUM 02 8 06/05/23 ADDENDUM 03 9 06/09/23 ADDENDUM 05

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LEVEL 3

LEVEL 2

PBC Project Name: **DETT ELEMENTARY SCHOOL ANNEX & RENOVATIONS**

PBC Contract No: 05445 CPS Project #2021-26031-ADM

Project No: 2138 **FINISH NOTES AND** SCHEDULE

Sheet NOT FOR CONSTRUCTION

A-502



0'-0" 16'-0" 32'-0"

<u>1/32" = 1'-0"</u>

BUILDING ENGINEER PARKING

PRINCIPAL PARKING SPACE

CORRIDOR

JANITOR'S CLOSE

ELECTRIC ROOM

ENTRY

BOOK ST.

ALCOVE

STORAGE

HALLWAY

COUNSELOR

COUNSELOR

CARE ROOM

WORK ROOM

TEACHER'S LOUNGE

MULTIPURPOSE ROOM

ALCOVE

OFFICE

OFFICE

STORAGE

ALCOVE

OFFICE

OFFICE

OFFICE

OFFICE

CORRIDOR

KINDERGARTEN

KINDERGARTEN

KINDERGARTEN

KINDERGARTEN

CLSRM

CLSRM

STORAGE

TOILET RM

TOILET RM

VESTIBULE

STORAGE

TOILET RM

TOILET RM

STAIR #2

STAIR #1

KITCHEN

JANITOR

STORAGE

STORAGE

OFFICE

CORRIDOR

FOOD PREP

CORRIDOR

STORAGE

STORAGE

OFFICE

STORAGE

CORRIDOR

STAFF TOILET

STAFF TOILET

GYM STORAGE

GYM STORAGE

EXISTING GYM

VESTIBULE

BOYS TOILET

GIRLS TOILET

HEALTH ROOM

ADJUSTMENTS

OFFICE

TOILET RM

BOILER RM

GYM OFFICE

STAGE

GIRLS TOILET

BOYS TOILET

LUNCHROOM

ACCESSIBLE ALL GENDER

SOCIAL WORKER

OCCUPATIONAL THERAPIST +

SPEECH PATHOLOGIST

0'-0" 8'-0"

Wall Base

SGT-1

SGT-1

TRB-1

CMU-1

TRB-1

TRB-1

SGT-1

Number Floor Finish

VCT-1

VCT-1

100A

100C

100D

100E

100B VCT-1

100F RT-11

101A CP-1

101B CP-1

101C CP-1

101E VCT-1

102A VCT-1

102B VCT-1

102C VCT-1

103B VCT-1

104B VCT-1

104C VCT-1

104D VCT-1

104E VCT-1

105 VCT-2

105F VCT-2

VCT-2

103

104

104A

108A

109

109B

108B T-1

109A T-1

110B T-1

111A T-1

127 VCT-2

132 VCT-1

133 QT-1

136 VCT-1

139 VCT-1

VCT-1

VCT-1

TR-1

148 VCT-1

154

158

158A

159 CP-1

140 T-2

VCT-1

VCT-1

VCT-1

<u>1/16" = 1'-0"</u>

PT-1, SGT-1, CMU-1

PT-1, CMU-1

PT-1. CMU-1

PT-1, CMU-1

PT-1, CMU-1

PT-1, CMU-1

PT-1, CMU-1

PT-1, CMU-1

PT-1, CMU-1

PT-1. CMU-1

PT-1, CMU-1

PT-1, CMU-1

PT-1, CMU-1

PT-1, CMU-1

PT-1. CMU-1

PT-1, CMU-1

PT-1, CMU-1

PT-1, CMU-1

SGT-1 x ~

PT-1. CMU-1

PT-1, CMU-1

PT-1. CMU-1

PT-1, CMU-1

PT-1. CMU-1

PT-1. CMU-1

PT-1. CMU-1

√(PT-1, CMU-1

PT-1. CMU-1

PT-1. CMU-1

PT-1, CMU-1

△ PT-1, CMU-1

PT-1, CMU-1

SS-2

PT-1, CMU-1

PT-1, CMU-1

PT-1, CMU-1

PT-1, CMU-1

PT-1, CMU-1

7\ PT-1, CMU-1, T-1

PT-1. CMU-1

PT-1, CMU-1, T

PT-1, CMU-1, T-

PT-1, CMU-1, T-1

PT-1, WT-1, CMU-1

PT-1, WT-1, CMU-1

PT-1. WT-1. CMU-1

PT-1, WT-1, CMU-1 PT-1, CMU-1

PT-1. WT-1. CMU-1

PT-1, WT-1, CMU-1

PT-1, WT-1, CMU-1

16'-0"

FINISH SCHEDULE

32'-0"

South Wall

PT-1, CMU-1

PT-1, CMU-1

PT-1, CMU-1

PT-1, CMU-1

PT-1, CMU-

PT-1, CMU-1

PT-1

PT-1, CMU-1

PT-1, CMU-1, T-1

PT-1, CMU-1, T-1

PT-1, CMU-1, T-1

PT-1, WT-1, CMU-1 PT-1

PT-1, WT-1, CMU-1 PT-1

PT-1, SGT-1, CMU-1 PT-1, SGT-1, CMU-1 PT-1, SGT-1, CMU-1 PT-1, SGT-1, CMU-7)

East Wall

PT-1, SGT-1, CMU-1 PT-1, SGT-1, CMU-1 PT-1, SGT-1, CMU-1

PT-1, CMU-1

PT-1, CMU-1

PT-1, CMU-1

PT-1, CMU-1

PT-1, CMU-1

PT-1. CMU-1

PT-1, CMU-1

PT-1. CMU-1

PT-1, CMU-1

/8\\PT-8, CMU-1

PT-1. CMU-1

PT-1, CMU-1,

PT-1, CMU-1,

PT-1, CMU-1

PT-1. CMU-1

PT-1, SGT-1, CMU-1, PT-1, SGT-1, CMU-1 PT-1, SGT-1, CMU-1 PT-1, SGT-1, CMU-1 ACT-X1, PT-9

PT-1, SGT-1, CMU-1 | PT-1, SGT-1, CMU-1 | PT-1, SGT-1, CMU-1 | PT-1, SGT-1, CMU-1/7\—ACT-1, PT-9

PT-1, CMU-1, T-1

/8\-|PT-8, CMU-1

8 PT-1. CMU-1

PT-1, WT-1, CMU-1 PT-8, CMU-1

PT-1, WT-1, CMU-1, PT-8, CMU-1

PT-1, WT-1, CMU-1 PT-1, CMU-1

PT-1, CMU-1, T-1 PT-1, CMU-1, T-1

PT-1, SGT-1, CMU-1, PT-1, SGT-1, CMU-1 PT-1, SGT-1, CMU-1 PT-1, SGT-1, CMU-1/7

PT-1, SGT-1, CMU-1 PT-1, SGT-1, CMU-1 PT-1, SGT-1, CMU-1 PT-1, SGT-1, CMU-1

PT-1, SGT-1, CMU-1 PT-1, SGT-1, CMU-1 PT-1, SGT-1, CMU-1 PT-1, SGT-1, CMU-1

PT₋1, SGT-1, CMU-1 PT-1, SGT-1, CMU-1 PT-1, SGT-1, CMU-1 PT-1, SGT₋1, CMU-1

PT-1, SGT-1, CMU-1 PT-1, SGT-1, CMU-1 PT-1, SGT-1, CMU-1 PT-1, SGT-1, CMU-1

PT-1, WT-1, CMU-1 PT-1, CMU-1

PT-1, WT-1, CMU-1 PT-1, CMU-1

0'-0" 4'-0"

<u>1/8" = 1'-0"</u>

PT-1, CMU-1

PT-1, CMU-1

PT-1. CMU-1

PT-1, CMU-1

PT-1, CMU-1

PT-1. CMU-1

PT-1, CMU-1

PT-8, CMU-1

PT-1, CMU-1

PT-1, CMU-1

PT-1. CMU-1

PT-1, CMU-1, 7

PT-1, CMU-1

PT-1. CMU-1

PT-8, CMU-1

PT-1, CMU-1

PT-1, CMU-1, T-

PT-1, CMU-1, T-1

-PT-8, CMU-1

⊸ SGT-1 ກ

PT-1. CMU-1

PT-1, CMU-1

PT-1. CMU-1

PT-1, CMU-1 / 9

PT-1, CMU-1, T-1

West Wall

8'-0"

16'-0"

Ceiling Finish

- ACT-X2, PT-9

ACT-X2, PT-9

EXP-2, PT-9

EXP-2, PT-9

EXP-2, PT-9

EXP-2, PT-9

ACT-3, PT-9

ACT-1, PT-9

ACT-1, PT-9

ACT-1, PT-9

ACT-1, PT-9

ACT-1, PT-9

ACT-1, PT-9

ACT-X2, PT-9

ACT-X2, PT-9

ACT-1, PT-9

ACT-1, PT-9

ACT-1, PT-9

ACT-1, PT-9

ACT-X2, PT-9

ACT-X2, PT-9

ACT-X2, PT-9

ACT-X2, PT-9

ACT-X2, PT-9

ACT-X2, PT-9

ACT-1, PT-9

ACT-1, PT-9

ACT-X1, PT-9

ACT-1, PT-9

ACT-X1, PT-9

ACT-X1. PT-9

GYP-X, PT-9

ACT-X1, PT-9

GYP-X, PT-9

ACT-X2, PT-9

ACT-X1, PT-9

ACT-X1, PT-9

GYP-X, PT-9

ACT-X1, PT-9

GYP-X, PT-9

GYP-2, PT-9

GYP-2, PT-9

GYP-2, PT-9

GYP-X. PT-9

GYP-X, PT-9

ACT-5A, PT-9

GYP-X. PT-9

GYP-X, PT-9

AB-1, PT-9

GYP-X, PT-9

ACT-1, PT-9

GYP-X, PT-9

GYP-X. PT-9

GYP-X, PT-9

GYP-X, PT-9

GYP-1. PT-9

EXP-2, PT-9

GYP-1, PT-9

GYP-X, PT-9

GYP-1, PT-9

EXP-2, PT-9

ACT-1, PT-9

GYP-2, PT-9

GYP-2, PT-9

GYP-X, PT-9

ACT-X1, PT-9

ACT-X1, PT-9

ACT-X1, PT-9

GYP-X, PT-9

GIRL'S TOILET

STORAGE

VESTIBULE

ACCESSIBLE ALL GENDER

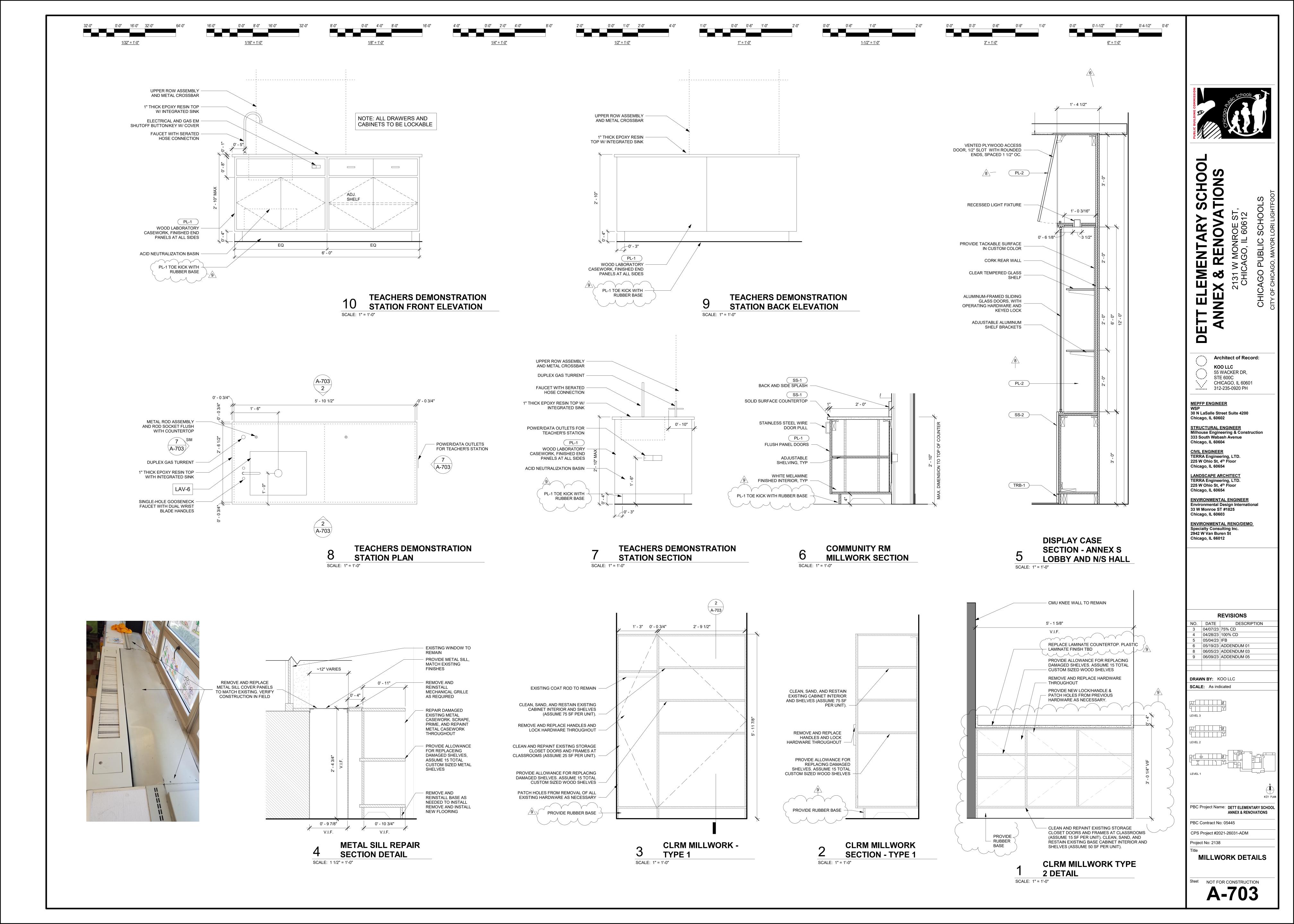
321

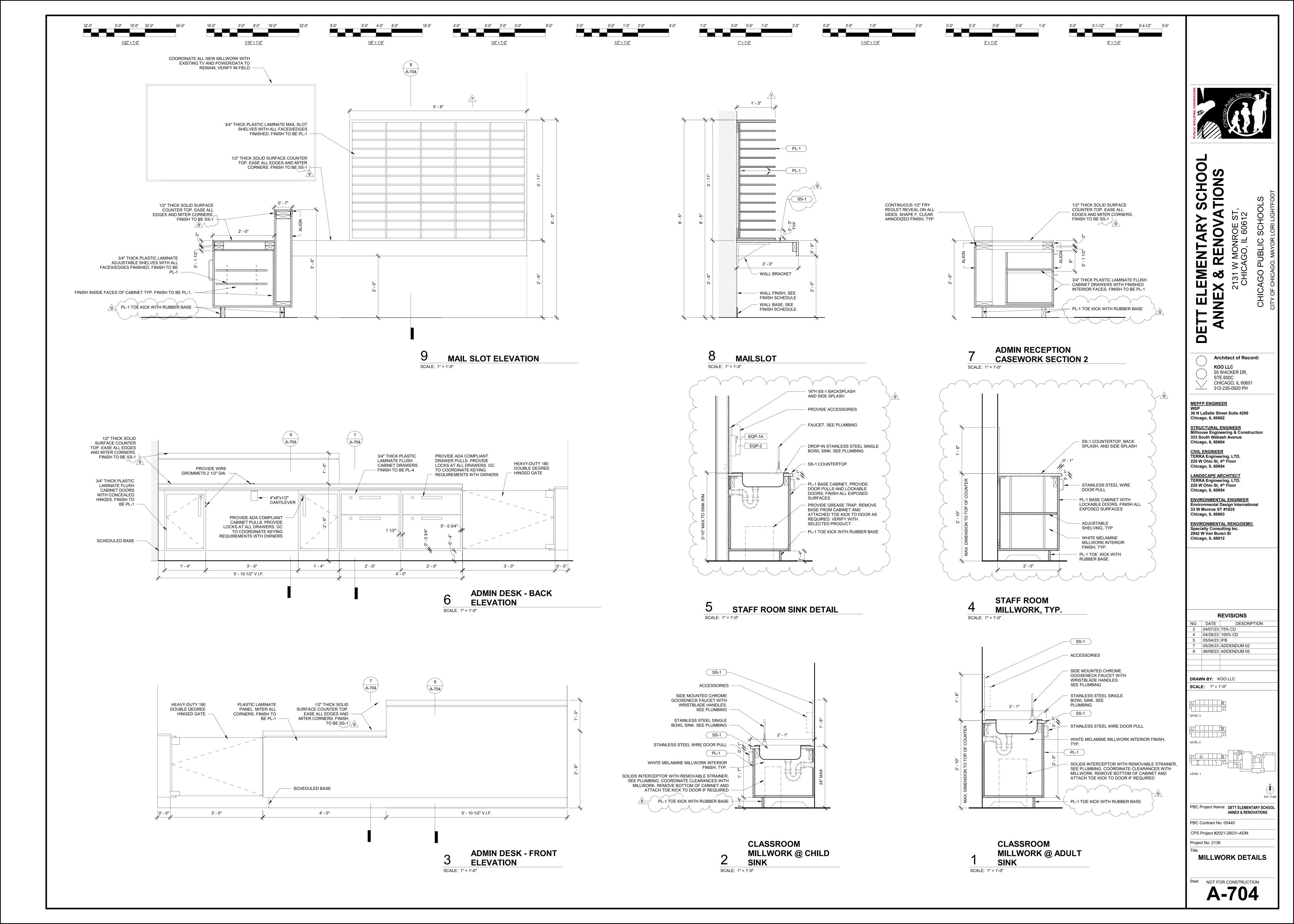
TR-1

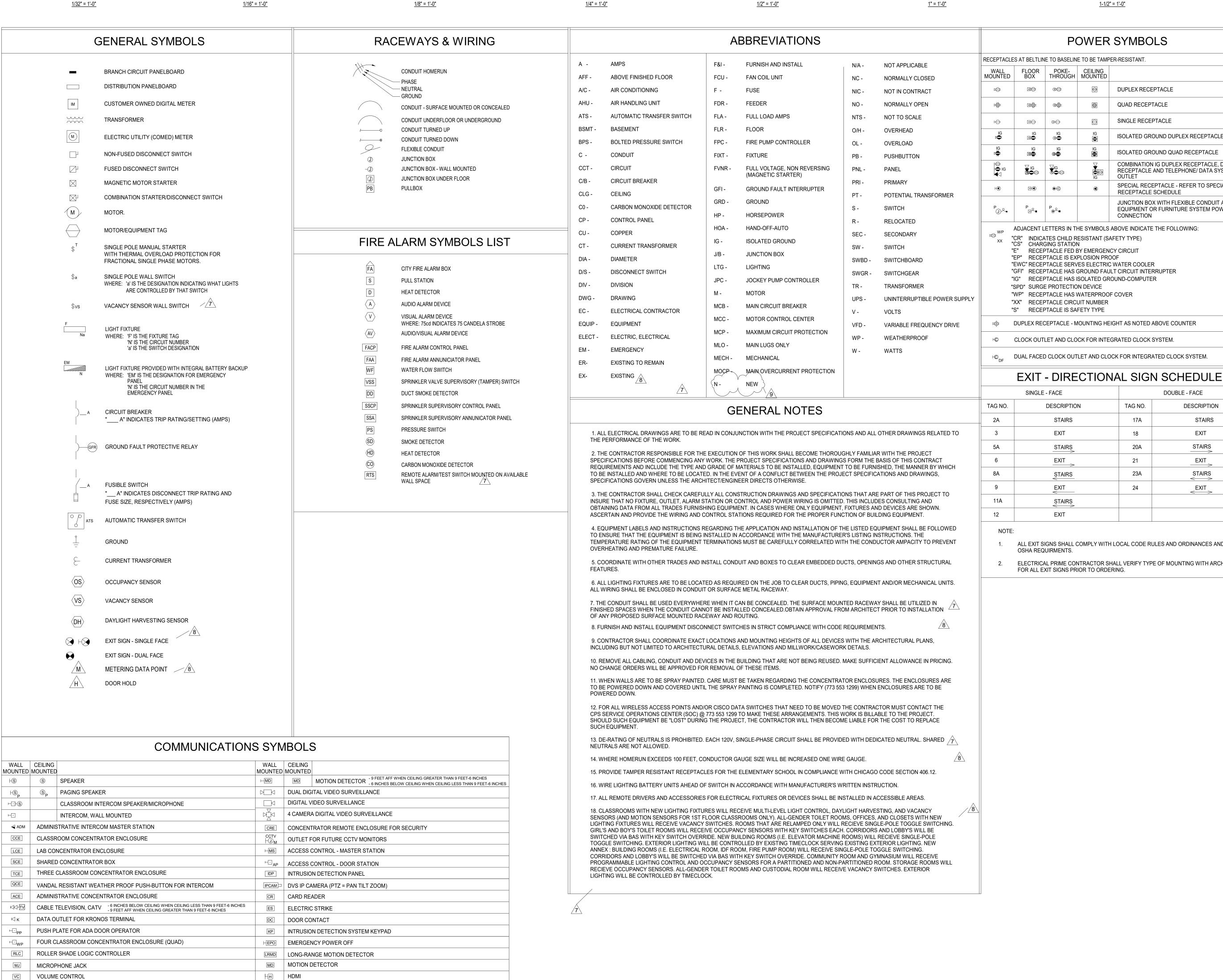
322 VCT-2

323 VCT-2

TRB-1







0'-0" 2'-0"

0'-0" 1'-0" 2'-0"

0'-0" 0'-6"

0'-0" 16'-0" 32'-0"

0'-0" 8'-0"

16'-0"

⊣H HDMI

AUDIO EQUIPMENT RACK SIGNAL CIRCUIT JUNCTION BOX

CEILING MOUNTED MONITOR SPEAKER JUNCTION BOX

AUDIO EQUIPMENT SIGNAL CIRCUIT JUNCTION BOX

FLOOR BOX POKE-THROUGH CEILING MOUNTED SUBSCRIPT INDICATES THE FOLLOWING FOR WALL MOUNTED OUTLETS, (U.N.O.):

"PTZ" PAN TILT ZOOM CAMERA

"V" VANDEL DOME FOR INSIDE CAMERA

"VE" VANDEL DOME FOR OUTSIDE CAMERA

"FIX" FIXED CAMERA

WIRELESS CLOCK; "P" DENOTES A/C-POWERED

AUDIO SPEAKER JUNCTION BOX

AUDIO VOLUME CONTROL

HWAP WIRELESS ACCESS POINT

MICROPHONE/LINE INPUT FLOOR POCKET

MICROPHONE/LINE INPUT FLOOR POCKET

INTERCOM CONTROL CABINET

WALL | FLOOR | POKE- | CEILING | SUBSCRIPT INDICATES THE FOLLOWING: MOUNTED BOX THROUGH MOUNTED WALL MOUNTED OUTLETS, (U.N.O.):

■ TELEPHONE OUTLET

D_⊚ୃ∿∎

"H" HANDICAP, REFER TO DRAWINGS FOR

"W" WALL MOUNTED AT 54 INCHES A.F.F.

"M" AUTOMATIC METER READER OUTLET

JUNCTION BOX WITH FLEXIBLE CONDUIT AND

FINAL EQUIPMENT OR FURNITURE SYSTEM CONNECTION. SUBSCRIPT INDICATES THE

"D" DATA AND TELEPHONE SYSTEMS

MOUNTING HEIGHT

"AS" ATTENDANCE SWIPE

DATA AND TELEPHONE SYSTEMS

"K" FOR KRONOS

HDMI SYSTEMS OUTLET

FOLLOWING:

TRANSFORMER

BUZZER

⊡◀

D_□Q_■

D ~

0'-0" 4'-0"

DUPLEX RECEPTACLE QUAD RECEPTACLE SINGLE RECEPTACLE ISOLATED GROUND DUPLEX RECEPTACLE

3" = 1'-0"

ISOLATED GROUND QUAD RECEPTACLE COMBINATION IG DUPLEX RECEPTACLE, DUPLEX RECEPTACLE AND TELEPHONE/ DATA SYSTEMS SPECIAL RECEPTACLE - REFER TO SPECIAL RECEPTACLE SCHEDULE JUNCTION BOX WITH FLEXIBLE CONDUIT AND FINAL EQUIPMENT OR FURNITURE SYSTEM POWER CONNECTION ADJACENT LETTERS IN THE SYMBOLS ABOVE INDICATE THE FOLLOWING: "CR" INDICATES CHILD RESISTANT (SAFETY TYPE) "E" RECEPTACLE FED BY EMERGENCY CIRCUIT

"EP" RECEPTACLE IS EXPLOSION PROOF "EWC" RECEPTACLE SERVES ELECTRIC WATER COOLER "GFI" RECEPTACLE HAS GROUND FAULT CIRCUIT INTERRUPTER "IG" RECEPTACLE HAS ISOLATED GROUND-COMPUTER "SPD" SURGE PROTECTION DEVICE "WP" RECEPTACLE HAS WATERPROOF COVER "XX" RECEPTACLE CIRCUIT NUMBER "S" RECEPTACLE IS SAFETY TYPE DUPLEX RECEPTACLE - MOUNTING HEIGHT AS NOTED ABOVE COUNTER

CLOCK OUTLET AND CLOCK FOR INTEGRATED CLOCK SYSTEM. $+ \bigcirc_{\mathsf{DF}}$ DUAL FACED CLOCK OUTLET AND CLOCK FOR INTEGRATED CLOCK SYSTEM.

	EXIT - DIRECTIONAL SIGN SCHEDULE						
	SINGLE - FACE	DOUBLE - FACE					
TAG NO.	DESCRIPTION	TAG NO.	DESCRIPTION				
2A	STAIRS	17A	STAIRS				
3	EXIT	18	EXIT				
5A	STAIRS	20A	STAIRS				
6	EXIT >	21	EXIT				
8A	STAIRS	23A	STAIRS				
9	EXIT <	24	EXIT <──>				
11A	STAIRS						
12	EXIT						

ALL EXIT SIGNS SHALL COMPLY WITH LOCAL CODE RULES AND ORDINANCES AND MEET

ELECTRICAL PRIME CONTRACTOR SHALL VERIFY TYPE OF MOUNTING WITH ARCHITECT FOR ALL EXIT SIGNS PRIOR TO ORDERING.

0'-3"

<u>6" = 1'-0"</u>

9 S Ш Z Z

Architect of Record: **KOO LLC** 55 WACKER DR. STE 600C CHICAGO, IL 60601 ...:..... 312-235-0920 PH

MEPFP ENGINEER 30 N LaSalle Street Suite 4200 Chicago, IL 60602

STRUCTURAL ENGINEER Milhouse Engineering & Construction 333 South Wabash Avenue Chicago, IL 60604

CIVIL ENGINEER TERRA Engineering, LTD. 225 W Ohio St, 4th Floor Chicago, IL 60654 LANDSCAPE ARCHITECT

TERRA Engineering, LTD 225 W Ohio St, 4th Floor Chicago, IL 60654 **ENVIRONMENTAL ENGINEER Environmental Design International**

33 W Monroe ST #1825 Chicago, IL 60603

ENVIRONMENTAL RENO/DEMO Specialty Consulting Inc. 2942 W Van Buren St Chicago, IL 66012

REVISIONS

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DRAWN BY: **SCALE**: 1/8" = 1'-0"

PBC Project Name: **DETT ELEMENTARY SCHOOL**

ANNEX & RENOVATIONS PBC Contract No: 05445 CPS Project #2021-26031-ADM

Project No: 2138 **ELECTRICAL LEGENDS, NOTES & ABBREVIATIONS**

Sheet NOT FOR CONSTRUCTION

2018 CHICAGO ELECTRICAL CODE

G. NEW PARKING LOT LIGHTING CIRCUIT TO BE INTERCEPTED BY

H. EV CHARGING STATIONS: PROVIDE 2 #8 & 1#10 GRND IN 1"C HOMERUN FOR EACH CHARGING STATION. TO 40A-2P CB,

AND COORDINATE WITH CPS ITS DEPARTMENT.

1-CAMERA (DOME) - MODEL #M3086V

I1. 1-CAMERA (WALL-MOUNT) - MODEL #P3267LV

1E. 1-CAMERA (DOME - WALL-MOUNT) - P3265V

CAMERA TYPE MODEL NUMBERS

Q6075E + Q6010E

17. Q3819VE

I2. 2-CAMERA - MODEL #P4705PLVE 4-CAMERA - MODEL #P3727PLE

LIGHTING.

EXISTING SPARE TIMECLOCK CONTACTOR SERVING EXTERIOR

CIRCUITING AS SHOWN. JUNCTION BOXES FOR EACH CHARGING

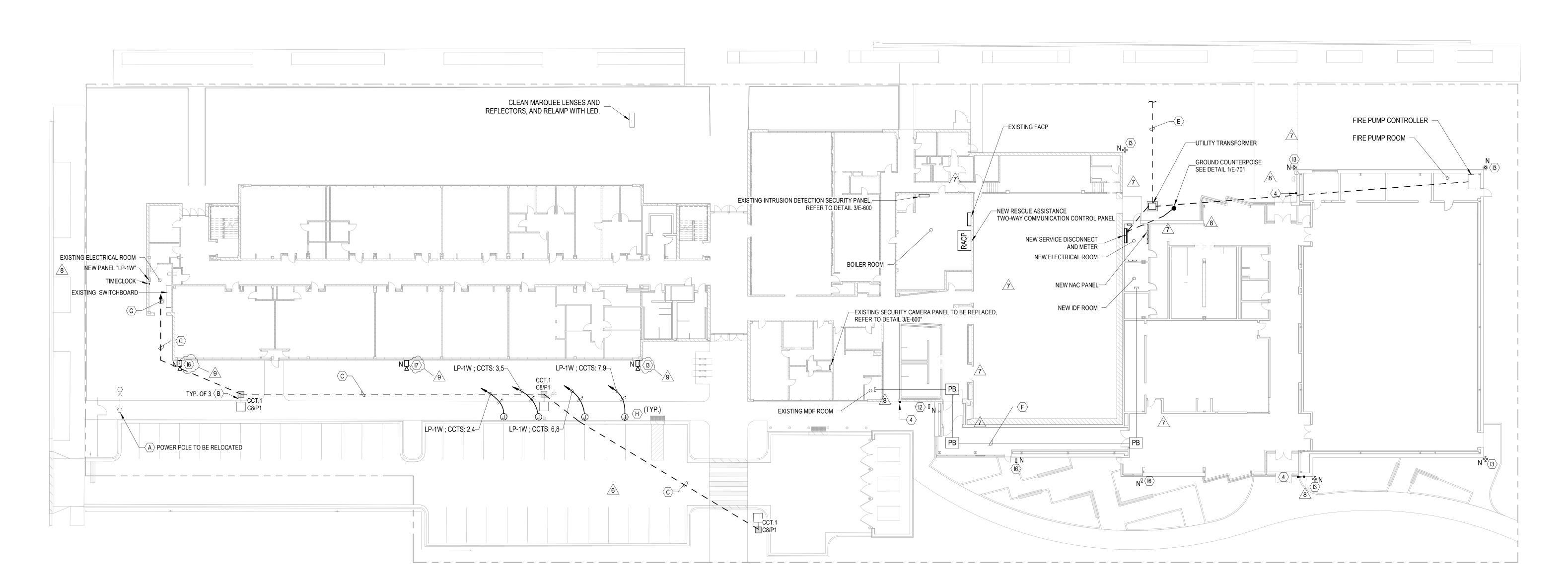
LOCATIONS WITH CIVIL DRAWINGS. PROVIDE DATA CABLE FROM CHARGER TO NEAREST DATA CONCENTRATOR. COORDINATE WITH EV CHARGER TYPE FOR WI-FI ENABLED CHARGING AUTHORIZATION

STATION TO BE LOCATED UNDER EACH UNIT. COORDINATE

LEGEND:

NEW BELOW-GRADE POWER CONDUIT - - - - - - - -

NEW ABOVE-GRADE POWER CONDUIT



1 ELECTRICAL SITE PLAN

SCALE: 1" = 20'-0"

SCHOO! ELEMENTARY

Architect of Record: **KOO LLC** 55 WACKER DR, STE 600C CHICAGO, IL 60601 ...:.... 312-235-0920 PH

ANNE

MEPFP ENGINEER
WSP 30 N LaSalle Street Suite 4200 Chicago, IL 60602

STRUCTURAL ENGINEER Milhouse Engineering & Construction 333 South Wabash Avenue Chicago, IL 60604 <u>CIVIL ENGINEER</u> TERRA Engineering, LTD. 225 W Ohio St, 4th Floor

Chicago, IL 60654 LANDSCAPE ARCHITECT TERRA Engineering, LTD. 225 W Ohio St, 4th Floor

Chicago, IL 60654 **ENVIRONMENTAL ENGINEER Environmental Design International** 33 W Monroe ST #1825 Chicago, IL 60603

ENVIRONMENTAL RENO/DEMO Specialty Consulting Inc. 2942 W Van Buren St Chicago, IL 66012

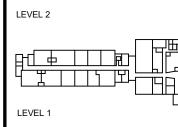
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9 06/09/23 ADDENDUM 05

DRAWN BY: **SCALE**: 1" = 20'-0"

LEVEL 3



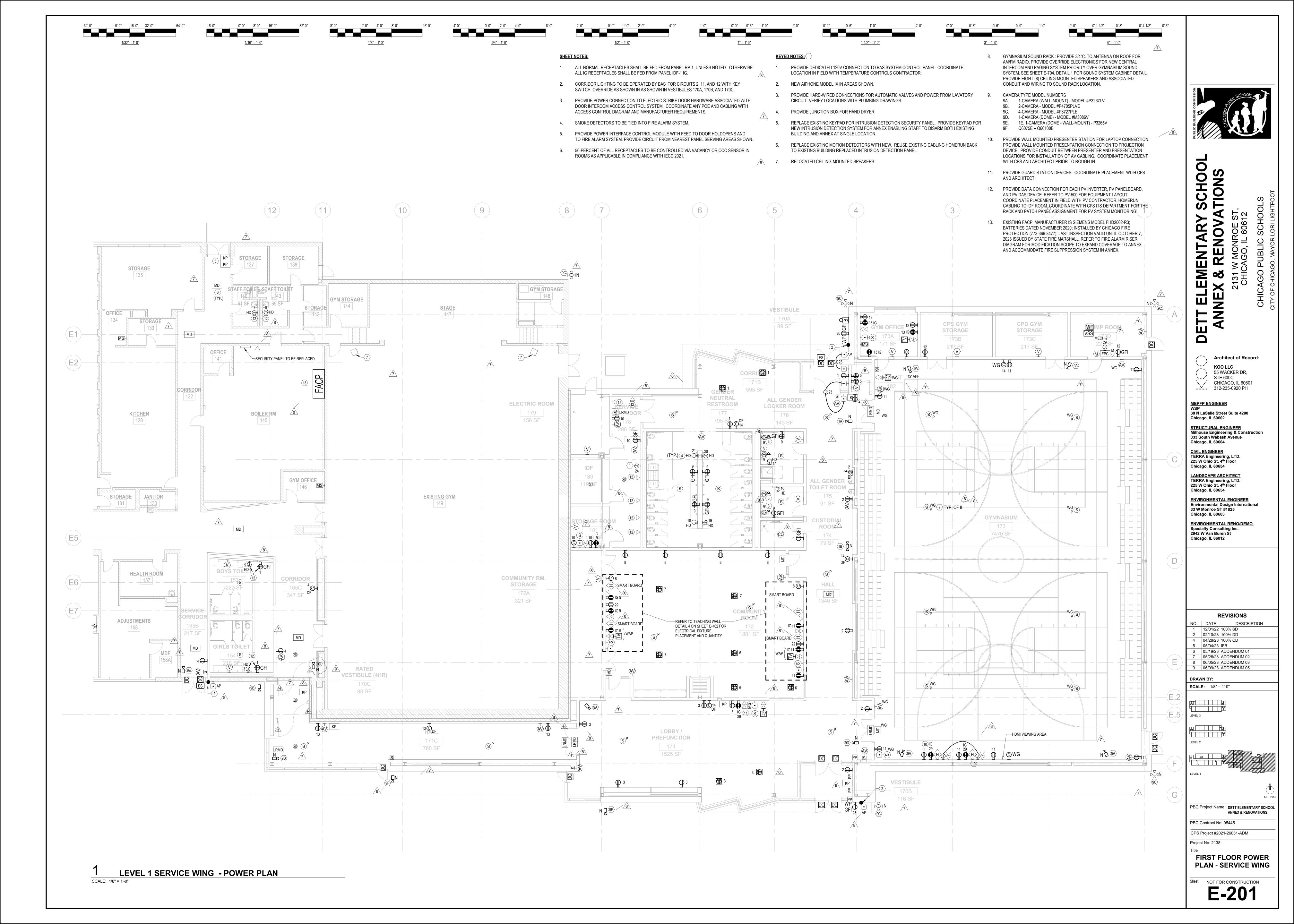
PBC Project Name: **DETT ELEMENTARY SCHOOL**

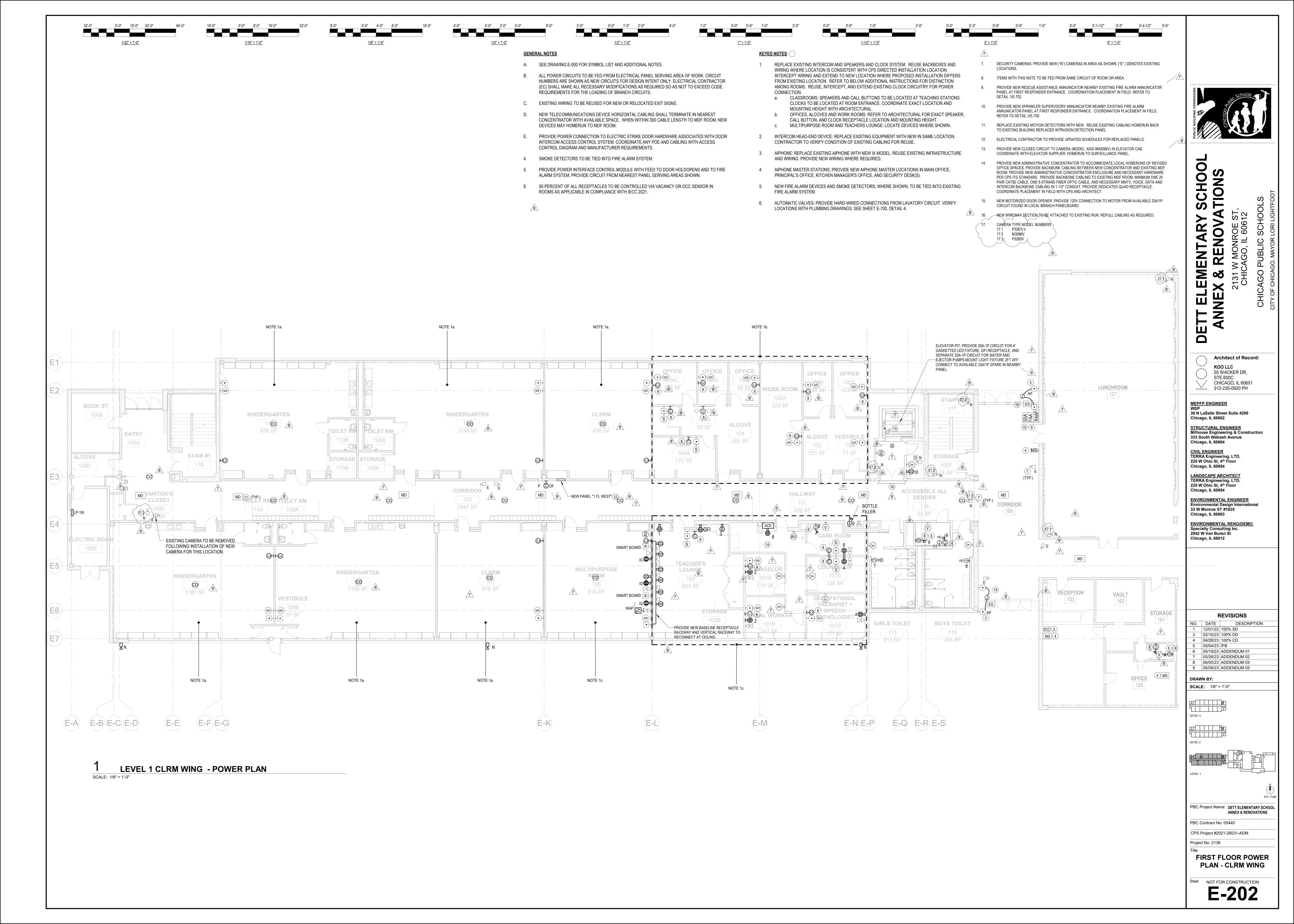
PBC Contract No: 05445

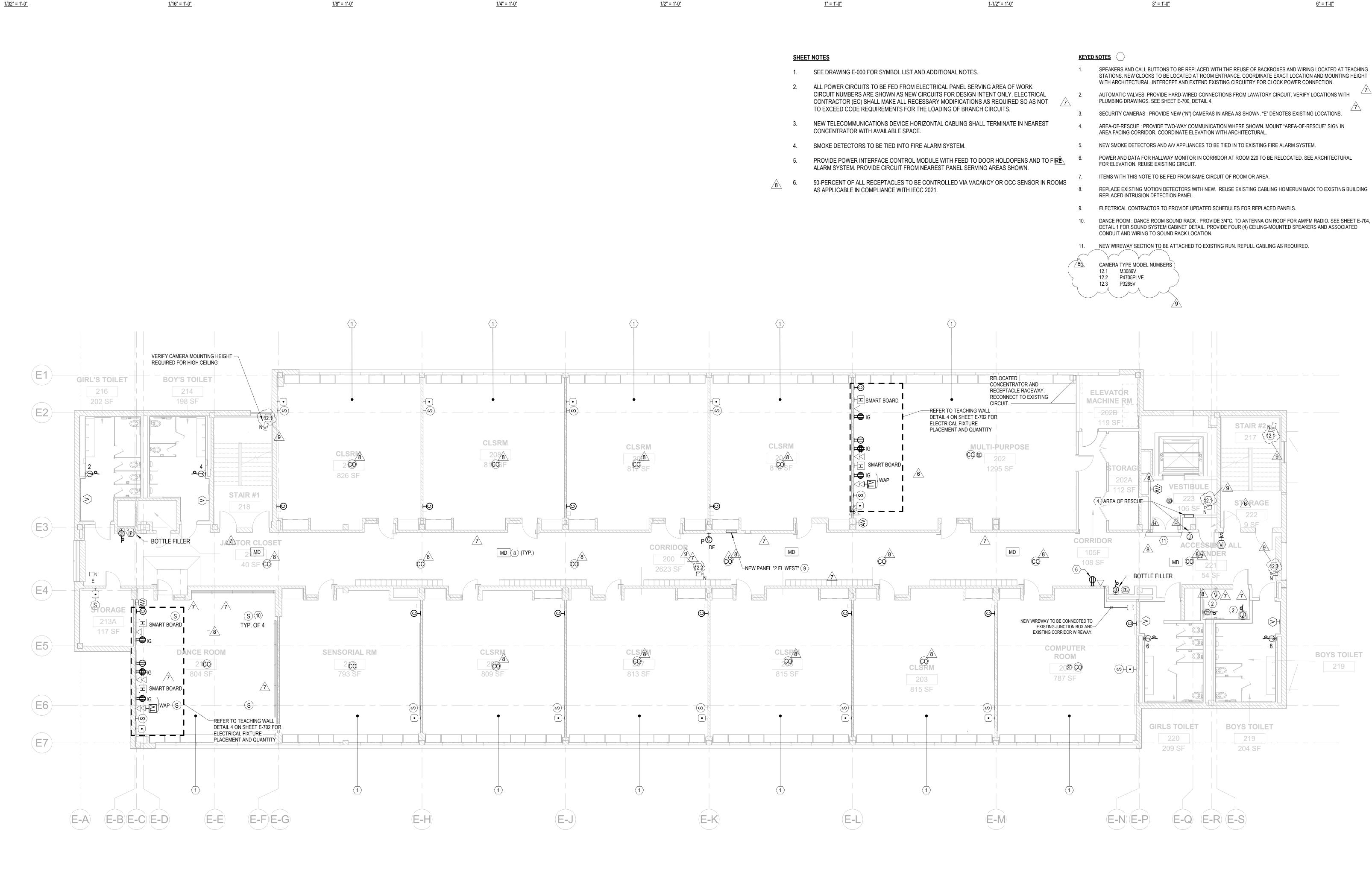
CPS Project #2021-26031-ADM Project No: 2138

Sheet NOT FOR CONSTRUCTION

ELECTRICAL SITE PLAN







0'-0" 1'-0" 2'-0"

0'-0" 0'-6" 1'-0"

1 LEVEL 2 CLRM WING - POWER PLAN

SCALE: 1/8" = 1'-0"

0'-0" 16'-0" 32'-0"

0'-0" 8'-0" 16'-0"

0'-0" 4'-0" 8'-0"

0'-0" 2'-0" 4'-0"



SCHOOL

0'-1-1/2" 0'-3" 0'-4-1/2" 0'-6"

SN SN

X & RENOVATIONS
2131 W MONROE ST,
CHICAGO, IL 60612

Architect of Record:

KOO LLC

55 WACKER DR,
STE 600C

CHICAGO, IL 60601
312-235-0920 PH

MEPFP ENGINEER
WSP
30 N LaSalle Street Suite 4200
Chicago, IL 60602

STRUCTURAL ENGINEER
Milhouse Engineering & Construction
333 South Wabash Avenue
Chicago, IL 60604

CIVIL ENGINEER

CIVIL ENGINEER
TERRA Engineering, LTD.
225 W Ohio St, 4th Floor
Chicago, IL 60654

LANDSCAPE ARCHITECT
TERRA Engineering, LTD.
225 W Ohio St, 4th Floor

225 W Ohio St, 4th Floor Chicago, IL 60654

ENVIRONMENTAL ENGINEER
Environmental Design International
33 W Monroe ST #1825

Chicago, IL 60603

ENVIRONMENTAL RENO/DEMO
Specialty Consulting Inc.
2942 W Van Buren St
Chicago, IL 66012

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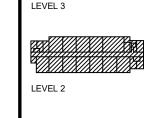
NO. DATE DESCRIF 1 12/01/22 100% SD 2 02/10/23 100% DD 4 04/28/23 100% CD 5 05/04/23 IFB 6 05/19/23 ADDENDUM 01 7 05/26/23 ADDENDUM 02 8 06/05/23 ADDENDUM 03

9 06/09/23 ADDENDUM 05

DRAWN BY:

SCALE: 1/8" = 1'-0"

LEVEL 3



EVEL 2

PBC Project Name: DETT ELEMENTARY SCHOOL

PBC Contract No: 05445

CPS Project #2021-26031-ADM

Project No: 2138

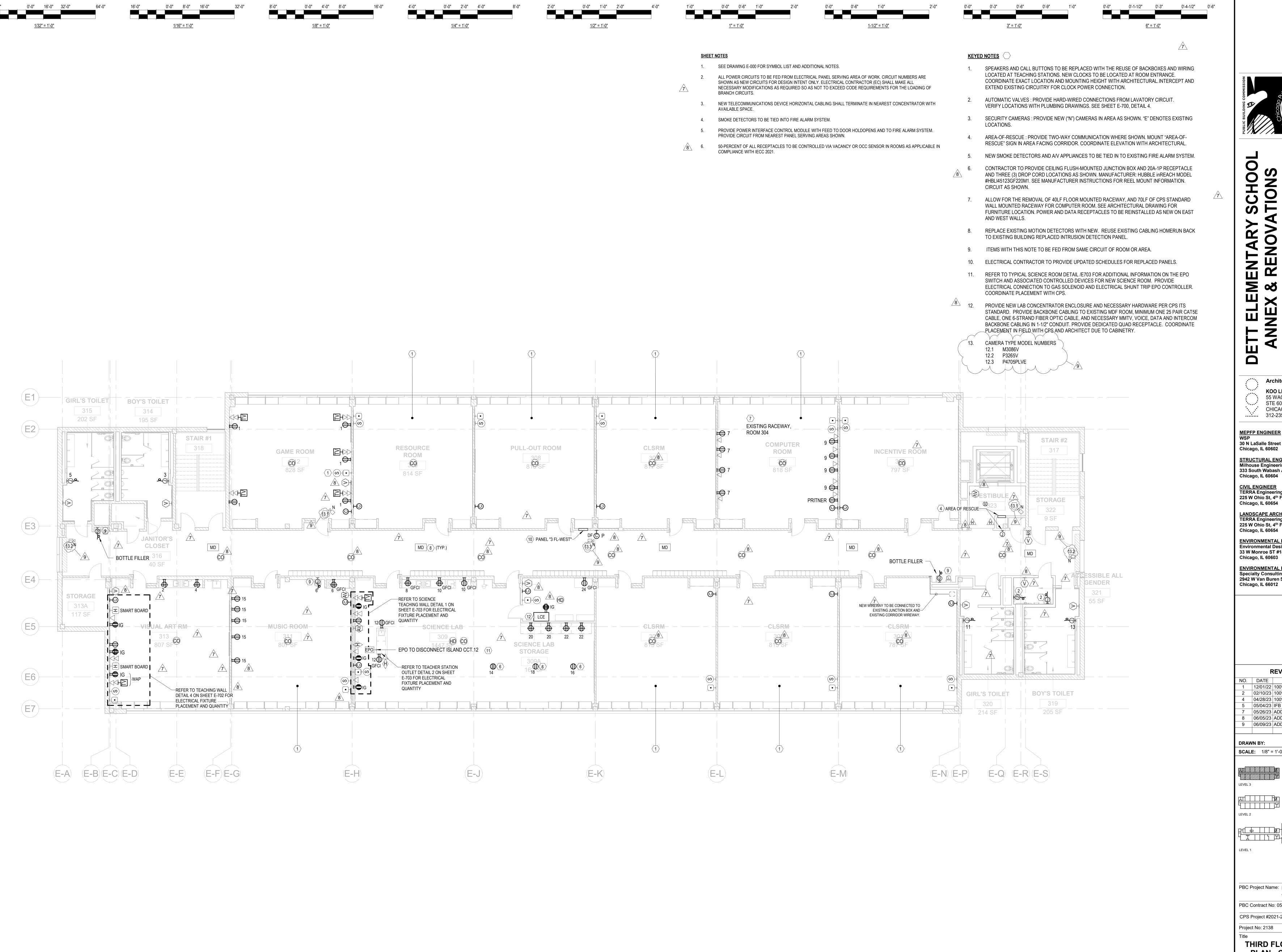
Title

SECOND FLOOR POWER

Sheet NOT FOR CONSTRUCTION

F-203

PLAN - CLRM WING



TIONS

KOO LLC 55 WACKER DR, STE 600C CHICAGO, IL 60601 ...:.... 312-235-0920 PH

Architect of Record:

MEPFP ENGINEER
WSP 30 N LaSalle Street Suite 4200 Chicago, IL 60602

AN

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ENVIRONMENTAL RENO/DEMO Specialty Consulting Inc. 2942 W Van Buren St Chicago, IL 66012

> **REVISIONS** DESCRIPTION

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DRAWN BY:

SCALE: 1/8" = 1'-0"

LEVEL 3

PBC Project Name: **DETT ELEMENTARY SCHOOL**

PBC Contract No: 05445 CPS Project #2021-26031-ADM

Project No: 2138 THIRD FLOOR POWER **PLAN - CLRM WING**

Sheet NOT FOR CONSTRUCTION E-204

1 LEVEL 2 - CLRM WING LIGHTING RCP

SCALE: 1/8" = 1'-0"

(E-A) (E-B)(E-C)(E-D)

PROVIDE AUTOMATIC

IN PRIMARY ZONE

-DIMMING/DAYLIGHT HARVESTING $^{-\!\prime}$

(E-H)

PROVIDE AUTOMATIC
—DIMMING/DAYLIGHT

HARVESTING IN PRIMARY ZONE

(E-F)(E-G)

PROVIDE AUTOMATIC

HARVESTING IN PRIMARY ZONE

-DIMMING/DAYLIGHT

Architect of Record:

KOO LLC

55 WACKER DR,

STE 600C

CHICAGO, IL 60601

312-235-0920 PH

ANNE

SCHOOL

ELEMENTARY

DETT

TIONS

MEPFP ENGINEER
WSP
30 N LaSalle Street Suite 4200
Chicago, IL 60602

STRUCTURAL ENGINEER
Milhouse Engineering & Construction
333 South Wabash Avenue
Chicago, IL 60604

CIVIL ENGINEER
TERRA Engineering, LTD.
225 W Ohio St, 4th Floor

225 W Ohio St, 4th Floor Chicago, IL 60654

LANDSCAPE ARCHITECT TERRA Engineering, LTD. 225 W Ohio St, 4th Floor

Chicago, IL 60654

ENVIRONMENTAL ENGINEER
Environmental Design International
33 W Monroe ST #1825
Chicago, IL 60603

ENVIRONMENTAL RENO/DEMO
Specialty Consulting Inc.
2942 W Van Buren St
Chicago, IL 66012

 REVISIONS

 NO.
 DATE
 DESCRIPTION

 1
 12/01/22
 100% SD

 2
 02/10/23
 100% DD

 4
 04/28/23
 100% CD

 5
 05/04/23
 IFB

 6
 05/19/23
 ADDENDUM 01

 7
 05/26/23
 ADDENDUM 02

8 06/05/23 ADDENDUM 03

9 06/09/23 ADDENDUM 05

DRAWN BY:

PROVIDE AUTOMATIC

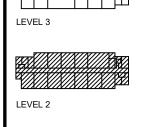
HARVESTING IN PRIMARY ZONE

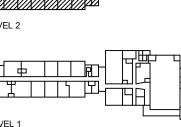
(E-Q) (E-R)(E-S)

—DIMMING/DAYLIGHT

E-M

SCALE: 1/8" = 1'-0"





PBC Project Name: **DETT ELEMENTARY SCHOOL**

PBC Contract No: 05445

CPS Project #2021-26031-ADM

Project No: 2138

Title

SECOND FLOOR

LIGHTING PLAN - CLRM

WING

Sheet NOT FOR CONSTRUCTION E-303

