



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.: 02
PROJECT NAME: Kenwood Academy Link and Mechanical (Rebid)
PROJECT NO.: 05326
CONTRACT NO.: C1602R
DATE OF ISSUE: February 29, 2024

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

Change 1 The Bid Due **TIME** has been **RESCHEDULED** from Friday, March 8, 2024 at 11:00a.m. to **Friday, March 8, 2024 at 2:00p.m.**

Change 2 The Pre-Award Meeting Date and Time **REMAINS** Monday, March 11, 2024 at 10:00a.m.

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 – REVISED** – 00 01 02 Table of Contents; revised to add specification section 32 18 13 and remove section 32 18 15.

Change 2 **Book 3 – Volume 1 – ADDED** section 32 18 13 Synthetic Grass Surfacing System – Diamond Sports.

Change 3 **Book 3 – Volume 1 – REMOVED** section 32 18 15 Synthetic Grass Surfacing System – Sports Fields.

ITEM NO. 5: REVISIONS TO DRAWINGS

Change 1 G000 - PBC COVER SHEET; **REVISED** to show addendum #02 with addendum date.

Change 2 C-102 - EXISTING SITE AND DEMOLITION PLAN; **REVISED** to add notation regarding fencing at the north parking lot

Change 3 C-105 - CIVIL UTILITY PLAN; **REVISED** to modify note in Utility Legend

Change 4 C-108 - ENLARGED VIEWS PLAN II; **REVISED** to add notations enlarged driveway view (1/C-108)

Change 5 L101 - LANDSCAPE SITE PLAN; **REVISED** to update notation regarding swing gate at the south west of the football field

Change 6 L104 - SITE FENCING AND FURNISHING PLAN; **REVISED** to update notation regarding swing gate at the south west of the football field and notation regarding batting cage

Change 7 L504 - FURNISHING DETAILS; **REVISED** to update detail 2/L504, Ornamental Metal Swing Gate Elevation

Change 8 A110 - ENLARGED PARTIAL PLAN 1st floor; **REVISED** to add and revise wall tags.

Change 9 A111 - ENLARGED PLAN 2nd floor; **REVISED** to add and revise wall tags.

- Change 10** A201 - ENLARGED ELC- ROOM PLAN, SCHEDULES AND DETAILS; **REVISED** to add additional notations regarding demolition plan
- Change 11** A605 - PARTITION TYPES; **REVISED** to add information regarding partition types and add partition type E.
- Change 12** **REVISED** Drawing E001-MEP ONE LINE RISER DIAGRAM AND NOTES: Revised feeders for CU-9, CU-10 and CU-11
- Change 13** **REVISED** Drawing M000-MEP MECHANICAL SYMBOLS, NOTES, AND ABBREVIATIONS: Updated Refrigeration Schedule with revised condensing unit selections
- Change 14** **REVISED** Drawing M103-MEP MECHANICAL PENTHOUSE PLANS: KENWOOD (BUILDING C) Updated DX pipe sizing
- Change 15** **REVISED** Drawing M104-MEP MECHANICAL ROOF PLANS - KENWOOD (BUILDING C): Updated DX pipe sizing & condensing unit weights
- Change 16** **REVISED** Drawing M200-MEP MECHANICAL SCHEDULES AND DETAILS: Updated selections in Air Cooled Condensing Unit Schedule and DX Cooling Coil Schedule. Revised and added Split System Refrigerant Piping Detail
- Change 17** **REVISED** Drawing M301-MEP BAS CONTROL DIAGRAM: Revised condensing unit BAS requirements.

ITEM NO. 6: REQUESTS FOR INFORMATION

RFI-1. There is a man gate shown to be installed on landscape and civil drawings at the southeast corner of the track/field fencing; however, it was confirmed that this gate should not be included in the scope. Please advise.

Question: Provide new ornamental gate scope as indicated on sheets L104 and L504 revised and included in this addendum.

RFI-2.

Question: During the walk thru I observed wood fencing separating the residential and the Kenwood North Lot. I also observed a wrought iron fence at the entrance to the lot and along the east of the lot bearing north and south. Neither the residential fence nor the ornamental fence is identified on Sheet C-102 as being removed, salvage, to remain.

Are we to replace the wood fence or protect that is separating the property lines? Please note that the painted wood fence is in need of repair as it stands.

Per sheet L104 the north entry ornamental fence is being replaced, although it is not shown as being removed on C-102. Is the existing ornamental fencing at the East, along the football field to remain or be replaced?

Response: The fence at the west side of the north parking lot is identified to be removed per sheet C-102. The fence on the east side of the parking lot adjacent to the football field is to be removed as noted on sheet C-102 of the Contract Documents.

RFI-3.

Question: At the new entrance, the Teacher's Lot on E. Hyde Park Boulevard, where the driveway apron is proposed there are existing utilities that are not show on C-102 or C-108. During the site visit I observed an existing gas valve box, as well, as two manhole covers. One manhole lid on the sidewalk at proposed apron location, the other right behind the ornamental fence within the proposed drive. Please advise.

Response: The various utility manholes and valve boxes have been identified to be adjusted to the final grade of the driveway. Please refer to sheet C-102 and C-108 revised and included in this addendum.

RFI-4.

Question: On sheet C-105 the legend for the copper water service reads "see note 6", there is not a note 6 on this sheet. Please advise.

Response: This should read "see note 5". Refer to note 5 on sheet C-105 revised and included in this addendum.

RFI-5.

Question: (Regarding Trainer and Locker Room Renovation) On sheet A201, in the existing locker room to be converted to the Electrical Room, please advise what is the existing flooring finish to be removed. Is it ceramic tile, VCT, epoxy, etc.

Response: [The existing concrete floor is painted. Remove paint and prep surface for new finish. Please refer to revised sheet A201 included in this addendum.](#)

RFI-6.

Question: (Regarding Trainer and Locker Room Renovation) On sheet A202, the Trainer and Boy's Locker Rooms call for a new tile floor, on sheet A201, neither of these rooms require the removal of the existing floor system. Please advise if the existing floor finish in these rooms are to be removed. If so, what is the floor finish.

Response: [Please refer to sheet A201 revised and included in this addendum.](#)

RFI-7.

Question: (Regarding Trainer and Locker Room Renovation) On the contrary, the floor finish on sheet A201 for the Team Locker Room reads PT-2, I assume this to be painted floor, but sheet A202, indicates the finish floor to be tile. Please advise.

Response: [Please refer to sheet A201 revised and included in this addendum.](#)

RFI-8.

Question: (Regarding Trainer and Locker Room Renovation) What is the new concrete finish in the corridor per 3/A202?

Response: [Please refer to sheet A202 revised and included in Addendum No. 1.](#)

RFI-9.

Question: (Regarding Partition Types) Please note that the exterior walls/partitions in the link are not identified by partition type. Some walls are 6" CFMF and others are 8" CFMF. Can you identify which walls 6" and/or 8" by a wall type?

Response: [All exterior Wall Types are the same construction type. 8" metal studs have a 6" HSS structural column inside the wall. 6" metal stud walls do not have a column inside. Please refer to sheets A110, A111, and A605 revised and included in this addendum.](#)

RFI-10.

Question: (Regarding Partition Types) To determine the depth of the solid surface sills 5 3/4" or 7 3/4" it would be helpful to know the stud size per wall type.

Response: [E1 partitions to have 5 3/4" sill depth and E2 partitions to have 7 3/4" sill depth. Please refer to sheets A110, A111, and A605 revised and included in this addendum.](#)

RFI-11.

Question: (Regarding Partition Types) Sheet A605 "Partition Type" is missing information for all partition types. Please reissue.

Response: [Please refer to sheet A605 revised and included in this addendum.](#)

RFI-12.

Question: Can the Bid Due Date and Time be extended?

Response: [Please refer to Item No. 1, Change No. 1.](#)

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

1. [Specification Section 00 01 02 Table of Contents; dated 02/29/2024](#)
2. [Specification Section 32 18 13 Synthetic Grass Surfacing System – Diamond Sports; dated 02/29/2024](#)

This Addendum includes the following attached Drawings:

1. [G000 - PBC COVER SHEET, dated 02/29/2024](#)
2. [C-102 EXISTING SITE AND DEMOLITION PLAN, dated 02/29/2024](#)
3. [C-105 CIVIL UTILITY PLAN, dated 02/29/2024](#)
4. [C-108 ENLARGED VIEWS PLAN II, dated 02/29/2024](#)
5. [L101 LANDSCAPE SITE PLAN, dated 02/29/2024](#)
6. [L104 SITE FENCING AND FURNISHING PLAN, dated 02/29/2024](#)
7. [L504 FURNISHING DETAILS, dated 02/29/2024](#)
8. [A110-ENLARGED PARTIAL PLAN – FIRST FLOOR, dated 02/29/2024](#)
9. [A111 - ENLARGED PLAN - SECOND FLOOR, dated 02/29/2024](#)
10. [A201 - ENLARGED ELC- ROOM PLAN, SCHEDULES AND DETAILS, dated 02/29/2024](#)
11. [A605 - PARTITION TYPES, dated 02/29/2024](#)
12. [E001-MEP ONE-LINE RISER DIAGRAM AND NOTES, dated 02/29/2024](#)
13. [M000-MEP MECHANICAL SYMBOLS, NOTES, AND ABBREVIATIONS, dated 02/29/2024](#)
14. [M103-MEP MECHANICAL PENTHOUSE PLANS - KENWOOD \(BUILDING C\), dated 02/29/2024](#)
15. [M104-MEP MECHANICAL ROOF PLAN - KENWOOD \(BUILDING C\), dated 02/29/2024](#)
16. [M200-MEP MECHANICAL SCHEDULES AND DETAILS, dated 02/29/2024](#)
17. [M301-MEP BAS CONTROL DIAGRAM, dated 02/29/2024](#)

END OF ADDENDUM NO. 02

SECTION 00 01 02

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COMCHECK ENVELOPE COMPLIANCE CERTIFICATE ISSUED FOR PERMIT

END OF SECTION 00 01 02

SECTION 32 18 13

SYNTHETIC GRASS SURFACING SYSTEM - DIAMOND SPORTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Synthetic grass surfacing for use as a competitive sport field for Diamond Sports.

1.02 REFERENCE STANDARDS

- A. ASTM D1335 - Standard Test Method for Tuft Bind of Pile Yarn Floor Coverings 2017.
- B. ASTM D1577 - Standard Test Methods for Linear Density of Textile Fiber 2007.
- C. ASTM D2256/D2256M - Standard Test Method for Tensile Properties of Yarns by the Single-Strand Method 2010.
- D. ASTM D2859 - Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials 2016 (Reapproved 2021).
- E. ASTM D3218 - Standard Specification for Polyolefin Monofilaments 2007.
- F. ASTM D3574 - Standard Test Methods for Flexible Cellular Materials—Slab, Bonded, and Molded Urethane Foams 2017.
- G. ASTM D418 - Standard Test Methods for Testing Pile Yarn Floor Covering Construction 1993.
- H. ASTM D422 - Standard Test Method for Particle-Size Analysis of Soils 1963 (Reapproved 2007).
- I. ASTM D696 - Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between -30°C and 30°C with a Vitreous Silica Dilatometer 2016.
- J. ASTM D4716/D4716M - Standard Test Method for Determining the (In-plane) Flow Rate per Unit Width and Hydraulic Transmissivity of a Geosynthetic Using a Constant Head 2014.
- K. ASTM D5034 - Standard Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test) 2009.
- L. ASTM D5793 - Standard Test Method for Binding Sites per Unit Length or Width of Pile Yarn Floor Coverings 2018.
- M. ASTM D5848 - Standard Test Method for Mass Per Unit Area of Pile Yarn Floor Covering 2010.
- N. ASTM F355 - Standard Test Method for Impact Attenuation of Playing Surface Systems, Other Protective Sport Systems, and Materials Used for Athletics, Recreation and Play 2016.
- O. {RSTEMP#10003442}
- P. ASTM F1015 - Standard Test Method for Relative Abrasiveness of Synthetic Turf Playing Surface 2003.
- Q. ASTM F1551 - Standard Test Methods for Comprehensive Characterization of Synthetic Turf Playing Surfaces and Materials 2009.
- R. ASTM F1936 - Standard Specification for Impact Attenuation of Turf Playing Systems as Measured in the Field 2010 (Reapproved 2015).
- S. ASTM F1936 - Standard Specification for Impact Attenuation of Turf Playing Systems as Measured in the Field 2010.
- T. ASTM F3146 - Standard Test Method for Impact Attenuation of Turf Playing Systems Designated for Rugby 2018.
- U. ASTM F3188 - Standard Specification for Extractable Hazardous Metals in Synthetic Turf Infill Materials 2016.

- V. ASTM F3189 - Standard Test Method for Measuring Force Reduction, Vertical Deformation, and Energy Restitution of Synthetic Turf Systems Using the Advanced Artificial Athlete 2020 Edition, November 1, 2020.
- W. ASTM G21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi 2015, with Editorial Revision (2021).
- X. ASTM G22 - Standard Practice for Determining Resistance of Plastics to Bacteria 1976 Edition, 1976.
- Y. DIN EN 71-3 - Safety of toys - Part 3: Migration of certain elements (includes Amendment A1:2021) 2021 Edition, June 2021.
- Z. DIN EN 933-7 - Tests for geometrical properties of aggregates - Part 7: Determination of shell content; percentage of shells in coarse aggregates; German version EN 933-7:1998 1998 Edition, May 1998.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Pre-installation Conference: At least 1 week prior to the start of the synthetic grass surface system work, coordinate a conference, to be held at the Site.
 - 1. Ensure required submittals have been provided with sufficient time for review, prior to scheduling the Pre-installation Meeting.
 - 2. Review the construction schedule, availability of materials, installer's personnel qualifications and experience. Provide the equipment and facilities needed to avoid delays in the installation procedure, testing and inspection. Follow certification procedures. Coordinate the installation with other Site Work. When available, review results of preliminary subsurface investigation(s) performed by the Board.
 - 3. Require attendance by all affected installers including but not limited to
 - a. Contractor's Superintendent
 - b. Installer
 - c. Manufacturer/Fabricator Representative
 - d. Other affected Subcontractors
 - e. Architect/ Engineer of Record
 - f. Board' s Representative
 - 4. 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. Product Data: Submit product data for each product specified including adhesives and bonding materials. Include sources for component materials, including infill materials.
 - 1. Submit Manufacturer's specifications and installation instructions.
- B. Material Certificates: Signed by manufacturer, certifying the materials and system proposed for the project comply with the specified performance criteria.
- C. Shop Drawings: Submit shop drawings that include scaled plans, sections, and large-scale details showing the installation and attachment of the synthetic grass surfacing system. The drawings shall include details for inserts or sleeves for bases, home plates and goal assemblies, flags, and posts; field markings; field roll joining and seaming; sealing; and perimeter securement of the synthetic grass surfacing system. Details shall be drawn at a scale of not less than 3" = 1'-0". Relationships to the work of others shall be clearly indicated for the coordination of the work with other building trades.
 - 1. Include installer's procedures for seaming panels together.

2. Include field marking plan(s) as required, identify markings for baseball batting cage, indicated in the documents. Identify all warning tracks, pitcher's mound area, batter's box and catcher's area, safety lines, on deck areas, etc...
3. Include drainage pad details.
- D. Samples: Three 18-inch by 18-inch samples showing details of finished installation. Include an example of an inlaid, colored stripe, and a field joined seam between adjacent rolls.
 1. For fields where striping for multiple sports is required, provide a separate set of samples for each required striping color, with each set of samples to include only one inlaid stripe color.
- E. Samples: Three 18-inch by 18-inch constructed, cut away samples showing full-depth, and assembled system, including backing and infill.
- F. Samples: One pound samples of each infill component material. Each sample is to have a label identifying the material, its source, and evidence of compliance with specified product characteristics and testing.
- G. Samples: Three 8-inch by 12" drainage pad samples.
- H. Qualifications for Installer: Name and experience of Installers designated supervisory personnel assigned to project. Include a listing of other on-site personnel and their experience. Changes to assignments/personnel require approval in writing from Board.
- I. Qualifications for Land Surveyor.
- J. Field Test Reports.
- K. Maintenance Instructions: Manufacturer's written instructions for routine cleaning, adjustment, grooming, and maintenance procedures. Include activities and procedures that could be detrimental to the turf grass system and should be avoided.
- L. Sample of Manufacturer's and Installer's Warranties.
- M. Sample of Warranty for Maintenance Equipment (if provided).
- N. Sample of Manufacturer's Continued Maintenance Contract.
- O. Maintenance Data: For synthetic grass surfacing system and maintenance equipment, to be included in maintenance manuals. Include the following:
 1. Manufacturer's written instructions manual for routine cleaning, adjustment, grooming and other maintenance procedures. Include installation and removal of marking paint. Also include activities and procedures that could be detrimental to the synthetic grass surfacing system and should be avoided.
 2. Owner's Manuals for field grooming and sweeping equipment.
 3. Warranty information for field grooming and sweeping equipment.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Firm specializing in the manufacturing of synthetic grass surfacing, who has completed work similar in design and extent to that required for the project, in not less than 20 competitive sports fields, each field at least 65,000 square feet in area, in the last two years, and whose work has resulted in construction with a record of successful in-service performance.
 1. The manufacturer shall have sufficient production capacity, organized internal quality control and testing procedures, and published written and illustrated installation manuals, to manufacture and properly install the synthetic grass surfacing system without causing a delay in the progress of the Work.
- B. Installer Qualifications: Firm experienced in the installation of synthetic grass sports fields, who is certified or approved by the synthetic grass manufacturer to install their materials, who has

successfully installed work similar in design and extent to that required for the project, in not less than 5 projects, in the last three years, who employs personnel that are trained and experienced in the installation of synthetic grass systems, and whose work has resulted in construction with a record of successful in-service performance. Qualifications of the installer and installer's personnel must be demonstrated to the satisfaction of the Board and the Architect/ Engineer of Record.

- C. Surveyor: Engage a State of Illinois Licensed Land Surveyor to properly lay out the field for the cage; verify the dimensions and locate the design elements, including inlaid markings and inserts. Verify the elevations of base materials and perimeter curbs; and verify that finish grades are in compliance with the requirements of the project (see Division 31) and of the synthetic grass surfacing manufacturer.
- D. Single-Source Responsibility: Obtain synthetic grass surfacing system materials, from a single manufacturer regularly engaged in manufacturing the materials.
- E. Product must be made in ISO accredited facility in the United States of America according to the Federal Trade Commission Made in USA Standard.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to the site in original, unopened containers, wrapping, or packaging, with manufacturer's labels intact, identifying project, material, and production run or lot number for fabric roll. Fabric roll labels shall be marked with sequence number for individual roll, locating that roll within the installation sequence and layout of the field.
 - 1. Immediately following delivery, inspect materials for damaged or defective items, including materials that are out of tolerance regarding edge alignment and pile height. Materials that are found to be damaged or defective shall be replaced at no additional cost to the Board.
- B. Store materials in a secure, dry, well-ventilated location where protected from weather, exposure to UV, soil, dust, moisture and other contaminants. Store fabric rolls horizontally, on a flat surface. Store infill materials indoors, in a secure, ventilated location to ensure materials will remain dry.
- C. Packaging of Infill material in Supersacks
 - 1. Supersacks must be rated at 2,200 lbs. (minimum) working load
 - 2. A 5:1 safety factor must be met
 - 3. Must have a minimum loop length of 8-inches
 - 4. Supersacks must be UV treated with a 1,200-hour standard
 - 5. Requires a minimum 5.5-ounce fabric weight of the packaging
 - 6. Side seams must be at least 50% of the way down the bag
 - 7. The bag should be clean and free of debris at the point of shipment
 - 8. The supersack should be secure and stable on the pallet
 - 9. Billing shall be for the net shipping weight of the infill material
 - 10. Infill producers may use recycled supersacks if specifically requested
- D. Pallets for Infill materials will meet the following specifications:
 - 1. Pallets shall be 2 way or 4 way
 - 2. No broken or cracked boards
 - 3. No missing boards
 - 4. Fasteners all level with the surface, none missing
 - 5. Construction shall be as follows:
 - 6. Top: 1x4's (nominal), measuring 3/4-inch thick by 3-1/2-inch wide with gaps less than 3-inches

7. Structural requirements: 2 by 4's (nominal), measuring 1-1/2-inch thick by 3-1/2-inch wide with a minimum of 3
 8. Bottom: 1x4's (nominal), measuring 3/4-inch thick by 3-1/2-inch wide with a minimum of 3. Handle according to manufacturer's recommendations to prevent damage, deterioration, distortion, or soiling.
- E. Drainage Pad - Product is to be shipped as flat panels on pre-packaged pallets. Prior to installation, manufacturer must provide an endorsed certificate as proof of at least \$1,000,000 product liability insurance stipulated in the United States of America with field owner named as the certificate holder. The insurance certificate must specify the name and address of the facility at which the specified product will be installed.

1.07 PROJECT CONDITIONS

- A. Do not install synthetic grass surfacing materials when:
1. Substrate surfaces/materials are wet, excessively damp, or have standing water.
 2. Weather conditions, or forecasted conditions, in the opinion of the Installer or manufacturer's representative, will have an adverse effect on the installation.
- B. Install synthetic grass surfacing materials only when:
1. Material surface temperatures, including aggregate base materials, are above 40° F, and anticipated to remain above 40° F for not less than 48 hours following installation.
- C. Traffic: Close areas to receive synthetic grass surfacing to pedestrian traffic prior to, during, and for not less than 72 hours following installation.

1.08 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents. Attic Stock to be delivered to the School, CPS Warehouse or other location designated by Board.
1. Cleaning Solution: Five gallons of industrial-strength cleaning solution, recommended in writing by fabric manufacturer, and fabric manufacturer's written cleaning instructions. Cleaning solution to be given to the school building manager or designee.
 2. Synthetic Grass Surfacing System Fabric: For repairs and/or/replacement of areas displaying excessive wear.
 - a. 600 square feet of fabric - 15-foot-wide roll by 40 feet in length
 - b. Four (4) sets of replacement panels for batter's box area and pitcher's mound circle, including storing and replacing the panels.

1.09 WARRANTY

- A. System Warranty: Submit a written warranty, for a minimum period of eight (8) years, beginning from date of Substantial Completion of the synthetic grass surfacing system installation, and executed by the Contractor, surfacing system manufacturer, and installer, agreeing to repair or replace materials and components of the synthetic grass surfacing system that develop any defects in materials or workmanship within the specified warranty period. Defects include excessive fading; excessive shrinkage; excessive wear, beyond that attributable to normal use; tuft bind loss; fabric delamination; loss of backing integrity; seam and edge raveling; perimeter attachments; distortion, either vertically or horizontally, due to dimensional instability; disengagement of inserted lines or graphics; lack of infill stability; and any other deterioration of the surfacing system or evidence of failure to meet performance requirements. However, it is understood that pitcher's mounds, batter's boxes shall only be warranted for two years.
1. "Excessive fading" means the synthetic grass surfacing system shall remain a uniform color, without a change in appearance that is perceptible and objectionable, as

- determined by the Architect/ Engineer of Record, when viewed visually in comparison with the original samples.
2. "Excessive wear" means the synthetic grass surfacing system pile height shall not decrease by more than ten percent (10%) each year, or more than fifty percent (50%) within the specified warranty period.
 3. The warranty shall include that the synthetic grass surfacing system shall meet the impact/shock absorption values specified, when tested in its installed condition.
 4. The warranty shall include that if the synthetic grass surfacing system is determined to no longer be serviceable within the specified warranty period, the manufacturer and installer shall, at no cost to the Board, remove and replace those areas of the surfacing system not meeting the specified performance criteria for pile height and impact/shock absorption.
 5. The warranty shall not be limited by the amount of use and shall not be prorated.
- B. Product Warranty - Drainage Pad: Material must be covered by a pre-approved and binding 16-year limited product and performance warranty issued by a company in the United States of America. Warranty shall include the provision that manufacturer will deliver to the Board and install new panels to replace the non-conforming panels. The warranty shall include the temporary removal and repair or replacement of the artificial turf and infill over the affected area.
1. Warranty must specify static and dynamic load limits in pounds and pounds per square inch. Warranty must not specify monetary limits of liability. Warranty must allow owner a notice period of at least 30 days for non-compliance claims.
 2. Warranty must include guarantee for surface system $G_{max} \leq 135 G'$ s according to ASTM F1936 10 for warranty period of artificial turf.
- C. Insurance: The warranty shall be supported by a prepaid, non-cancelable insurance policy or a Warranty Bond, for the full warranty period specified. The policy shall be underwritten by a Best A-Rated, or better, insurance carrier and must have an annual aggregate of \$5,000,000, with a minimum of \$500,000 for each claim, to provide for full removal and replacement of the synthetic grass surfacing system in the event that catastrophic failure occurs.
1. Insurance coverage shall specifically provide for reimbursement to the warranty holder in the event of bankruptcy, or closure of business, of the surfacing system manufacturer.
 2. Insurance coverage shall apply to the playing surface and shall include the infill, seaming, colored inlays, and all labor.
 3. Provide the following documents: Warranty Certificate, Accord Certificate, and the actual Insurance Policy and proof of A.M. Best Rating for insured warranty provider.
 4. Insurance coverage shall apply to the warranty period specified, beginning from date of Final Acceptance of the synthetic grass surfacing system work, with no uninsured periods or periods of self-insurance.
 5. Insurance shall be provided by a third party insurer with an A.M. Best financial strength rating of "Excellent" or higher.
 6. Insurance coverage shall not have exclusions for epidemic or catastrophic failure; shall not limit the hours of use; shall not exclude heavily trafficked areas or related uses, such as team practice; and shall not exclude colored fibers within the synthetic grass surfacing system.

PART 2 PRODUCTS

2.01 MANUFACTURERS

KENWOOD ACADEMY LINK PBC PROJECT NO. 05326	32 18 13 - 6	SYNTHETIC GRASS SURFACING SYSTEM - DIAMOND SPORTS
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- A. Synthetic grass surfacing system for competitive sports: 2" 100% slit-film product with a face weight of 46 ounces per sq. in.
 - 1. AstroTurf; www.astroturf.com
 - 2. FieldTurf; www.fieldturf.com
 - 3. Midwest Sport and Turf Systems; www.midwestsportandturf.com
 - 4. MondoTurf; www.mondoworldwide.com
 - 5. Shaw Sports Turf; www.shawsportsturf.com
- B. Infill: Either Synthetic Infill or Organic Infill to be combined with Silica Sand for the turf system assembly.
 - 1. Synthetic Infill: TPE (Thermoplastic Elastomer)
 - a. Celanese Corporation/SO.F.TER, SPA; Forgrin HT 140; www.celanese.com
 - b. Guardian Innovations; Bio-Based TPE Infill, www.guardianinnovations.com
 - c. Target Technologies International, Inc.; TTI Pro-Max 37; www.TTIOnline.com
 - d. USGreentech; Powerfill; www.usgreentech.com
 - 2. Organic Infill
 - a. BrockFill; brockusa.com
- C. Drainage Pad/Shock Pad: Select appropriate drainage pad/shock pad for the proposed infill (Synthetic Infill or Organic Infill)
 - 1. Brock ShockPad SP14; www.brockusa.com
 - 2. Schmitz ProPlay Sport 20; www.schmitzfoam.com
- D. Drainage Pad for Organic Infill
 - 1. Brock ShockPad SP17; www.brockusa.com

2.02 SYSTEM DESIGN

- A. The synthetic grass surfacing system shall be specifically recommended and designed by the manufacturer for installation and use as a field for competitive team sports activities. The system shall be designed to accommodate both routine and regular practice, and game-day activities; while also accommodating school-related activities, including physical education classes.
- B. The system shall provide maximum safety to children and other users, while providing the look, feel, and playability of natural grass.
- C. The synthetic grass surfacing system shall provide superior traction in all types of weather with the use of conventional athletic shoes and composition molded-soles. Long cleats should not be required for play on the finished surfacing system.
- D. The synthetic grass surfacing system shall be constructed to maximize dimensional stability, to resist damage during normal use, and to minimize UV degradation, including fading.
- E. The synthetic grass surfacing system shall be resistant to weather, insects, rot, mildew, and fungus growth, and shall be non-allergenic and non-toxic.

2.03 PERFORMANCE REQUIREMENTS

- A. Synthetic grass surfacing system shall comply with the following:
 - 1. Linear Density: Not less than 9,000 ± 5% Denier; ASTM D1577.
 - 2. Thickness of One Turf Yarn: Not less than 240 microns; ASTM D1777 and ASTM D3218.
 - 3. Yarn Melting Point: Not less than 246° F; {RS#10003442}.
 - 4. Tensile Strength on One Turf Yarn: Not less than 20 pounds; ASTM D2256/D2256M.
 - 5. Elongation on One Turf Yarn: Not less than 50 percent; ASTM D2256/D2256M.

6. Pile Height: Varies based upon turf system selected, minimum 2-inch pile height required; ASTM D418.
 7. Tuft Gauge: 3/8"- 3/4": ASTM D5793
 8. Pile (Face) Weight: Not less than 46 oz./ yd²; ASTM D5848
 9. Primary Backing Weight: Not less than 7 oz./ yd²; ASTM D5848
 10. Secondary Backing Weight (Average): Not less than 20 oz. /yd²; ASTM D5848
 11. Total Weight: Not less than 73 oz./ yd²; ASTM D5848
 12. Tuft Bind: Not less than 10 pounds; ASTM D1335.
 13. Grab Tensile of Textile Fabrics, Length: Not less than 200 pounds/force; ASTM D5034.
 14. Grab Tensile of Textile Fabrics, Width: Not less than 200 pounds/force; ASTM D5034.
 15. Flame Resistance: Pass; ASTM D2859; Pill burn.
 16. Relative Abrasiveness Index: Less than 40; ASTM F1015.
 17. Fungal and Bacterial Resistance: Less than 1; ASTM G21.
 18. Carpet Permeability: Not less than 14 inches per hour ASTM D4491/D4491M
 19. Impact/ Shock Absorption (G-max): ASTM F355 and ASTM F1936. Both of the following (a and b) are a function of the shock pad warranty;
 - a. At install and end of 1st year: less than or equal to 115G.
 - b. Over full warranty period: Less than 135G.
 20. Head Injury Criterion (HIC): ASTM F3146, Procedure A. After install: critical fall height (CFH > 1.3 m), HIC less than 1000.
- B. Provisions for Thermal Movement: The synthetic grass surfacing system, when installed, shall accommodate expansion and contraction, to a maximum of 0.01%, over the average range of temperature and humidity conditions experienced in Chicago.
- C. Uplift Resistance: The synthetic grass surfacing system shall be capable of withstanding gusts or sustained winds of up to 85 mph without damage to, or displacement of, the turf fabric or the field markings.
- D. Drainage: The synthetic grass surfacing system shall allow for the free movement and drainage of surface water through the surfacing system to the subsurface drainage system, located within the granular aggregate base layer.

2.04 SYNTHETIC GRASS FABRIC

- A. Fabric: Provide 100% slit film fibers tufted into a dimensionally stable, layered backing system, including a secondary backing.
 1. Grass Area Color: Green.
 2. Striping Color: White

2.05 INFILL

- A. Provide Synthetic (TPE) Infill or Organic Infill per synthetic surfacing manufacturer to assure their warranty of the synthetic grass system
- B. Synthetic Infill or Organic Infill shall be approved by the Board and be free of hazardous materials as defined by current Local, State and Federal regulations.
- C. Infill shall be non-toxic and heavy metal safe in accordance with the following;
 1. Consumer Safety Specification F963, which specifies a test procedure to determine the amount of hazardous metals that have the potential to be present in toys and handled or ingested by children or;
 2. EU Directive DIN EN 71-3.

- D. The synthetic grass installation is to be a system provided by one single-source Manufacturer meeting the requirements outlined in this specification; and the warranty is for the entire synthetic turf system, including, but not limited to: turf carpet (filaments, backing, sewing, adhesives, etc.), sand ballast, infill, specified shock pad and related attachment materials.
- E. Manufacturer to demonstrate through independent testing results that initial G-Max requirements (at time of initial installation), and carpet weight (per requirements listed in Section 1.3 Part A) may be considered if they meet the performance factors such as warranty, G-max, and other technical requirements listed in this specification with certified testing and required installations of the system.
- F. Individual components from multiple manufacturers with individual component warranties shall not be accepted.
- G. Synthetic Infill shall comply with the following:
 - 1. The resilient infill granule shall consist of a TPE (thermoplastic elastomer non-rigid material based off thermoplastic resin) completely devoid of SBR derived from vulcanized rubber derived from recycled tires, with post-consumer content allowed. Infill shall have low thermal absorption and low thermal capacity. Color shall be light green, or other approved light color. Resilient infill shall be specifically designed for recreational outdoor use. Material must pass all required performance testing and environmental tests.
 - 2. Total thickness of infill shall have no more than 1/2" of the free end of the turf fiber exposed at time of initial installation.
 - 3. Particle Size: US Sieve 10 to 20 or as recommended by manufacturer to meet performance specifications. No more than 5% of total infill shall pass through a #200 sieve.
 - 4. Quantity: Minimum of (not less than) 2.0 lbs./ sq. ft.
- H. Organic Infill shall comply with the following:
 - 1. Engineered wood particle comprised of virgin natural pine wood grown and manufactured in the USA.
 - 2. Free of pesticides and heavy metals; ASTM F3188
 - 3. Vertical drainage rate that exceeds that of the artificial turf when tested alone according to test method ASTM F1551.
 - 4. Infill shall not materially degrade as an infill defined as a minimum of 80% of the material will fall between sieve screens of .8mm-2mm when tested according to DIN EN 933-7.
 - 5. Made from a species of tree that is sustainably harvested
 - 6. Domestically sourced – made in the USA only.
 - 7. Cradle to Cradle Certified
 - 8. USDA Certified Bio-based Product
 - 9. Infill must be hydrophilic and allow absorption of rain or condensation.
 - 10. Infill shall not require irrigation and the Owner shall not be required to perform moisture testing of the infill.
 - 11. Minimum bulk density of 15 lbs. / cu. ft.
 - 12. Demonstrate successful installation at a minimum of 100 full sized (>60,000 SF) synthetic turf athletic fields in the USA within the past 3 years
- I. Silica Sand: The silica sand infill material shall comply with the following
 - 1. Grain Size (particle size): Specially graded as recommended by the manufacturer for the specific system: ASTM D422 (soil),

2. Depth: As recommended by the manufacturer. The depth of the infill material must meet the specific system specifications at all locations.
3. Silica sand shall be dry and dust free; Dust < 0.1%
4. Sand shall be round non-angular in shape; Roundness 0.6+
5. Hardness; 6.0 to 8.0 Mohs Scale
6. Density; 90 to 100 lbs./cubic foot
7. Angle of repose; < 30o
8. Flammability: Pass (at installation): ASTM D2859
9. Color Uniformity: No significant changes in color uniformity as observed in the laboratory
10. Sand shall be heavy metal safe; Standard Specification for Extractable Hazardous Metals in Synthetic Turf Infill Materials; ASTM F3188-16

2.06 PREMOLDED RESILIENT DRAINAGE PAD/SHOCK PAD

- A. Pre-molded resilient drainage pad system (PRDP) shall be approved by Board and manufactured specifically for the intended use, made from fully recycled and or recyclable materials, with a minimum permeability rate of 30 to 60 inches per hour, and have a full 16-year minimum PRDP system warranty. PRDP shall be interlocking tile only. Warranty shall cover all material costs and labor associated with removal and replacement of any and/or all of the synthetic turf, any and all field markings and infill in an effort to address any warranty issues with the PRDP. PRDP shall be interlocking tile only. Rolled goods without expansion capabilities are not acceptable.
- B. Drainage Pad/Shock Pad: Select appropriate drainage pad/shock pad for the proposed infill (Synthetic Infill or Organic Infill)
 1. Drainage Pad/Shock Pad for Synthetic Infill
 - a. Brock ShockPad SP14
 - 1) Product Format: Interlocking panels composed of expanded polypropylene composite panels
 - 2) Size: Approximately 57.6 inches x 43.8 inches overall dimensions
 - 3) Area: Net coverage per panel 15.9 SF
 - 4) Thickness: 0.55 inches
 - 5) Panel Weight: approximately 2.8 lbs./panel
 - b. Schmitz ProPlay Sport 20
 - 1) Product Format: Interlocking panels composed of PEX flakes thermally bonded into a uniform tile with a needle punched geotextile
 - 2) Size: Approximately 84.38 inches x 24.95 inches
 - 3) Thickness: 0.78 inches
 - 4) Panel Weight: .65 lbs./ sq. ft.
 2. Drainage Pad for Organic Infill
 - a. Brock ShockPad SP17
 - 1) Product Format: Interlocking panels composed of expanded polypropylene composite panels
 - 2) Size: Approximately 67.6 inches x 47.5 inches overall dimensions
 - 3) Area: Net coverage per panel 21 sq. ft.
 - 4) Thickness: 0.67 inches
 - 5) Panel Weight: approximately 4.3 lbs./ panel

- C. General Requirements: An impact energy absorbing sub-base drainage system designed specifically for use with synthetic turf is required. The specified material must have physical, drainage and performance properties that meet the following requirements:
 - 1. Minimum material nominal thickness 14 mm - material thickness must be within +/- 1.5 mm
 - 2. Tensile Strength >38 psi (ASTM D3574 -08 Test E)
 - 3. Tensile Elongation >10% (ASTM D3574 ASTM D3574-08 Test E)
 - 4. Compression Strength >25psi @ 25% strain (ASTM D3575-08 Test D)
 - 5. Linear Thermal Expansion < 0.10 mm /m /° C (ASTM D696)
 - 6. Water Permeability >500"/ hr. (ASTM F1551, DIN 18-035, Part 6)
 - 7. Head Injury Criterion <1,000 from >0.5m drop height (ASTM F355-16, E)
 - 8. GMax <160 G's (ASTM F355-16 Missile A)
 - 9. Shock Absorption >50% (ASTM F3189-17)
 - 10. Vertical Deformation <5.0mm (ASTM F3189-17)
 - 11. Surface system must provide maximum average GMax of <115G's upon initial testing of installed field 1 year from installation (ASTM F1936-10)
 - 12. Surface system must provide maximum average GMax of field of 135G's during warranty period of artificial turf. (ASTM F1936-10)
 - 13. Resistance to Bacteria- no growth (ASTM G22)
 - 14. Resistance to Fungi- no growth (ASTM G21)
- D. Drainage pad seams should be mechanically locked into place by hand without cutting, splicing, use of additional materials, glue, fasteners, or secondary processes and equipment.
- E. Product must not contain concentrations of metals, volatile organic compounds (VOCs), or semi-volatile organic compounds (SVOCs) at concentrations greater than EPA Regional Screening Levels or Department of Toxic Substances Control Human Health Risk Assessment (HHRA) Note 3 thresholds. (EPA 60108, EPA 7470A EPA 7471A, EPA 8260B, EPA 8270C).
- F. Product must not contain leachable concentrations of metals, VOCs, or SVOCs (using the synthetic precipitation leaching procedure) greater than maximum contaminant levels (MCLs) or Regional Water Quality Control Board Environmental Screening Levels for groundwater and surface water - fresh water aquatic habitat. (EPA 60108, EPA 7470A EPA 7471A, EPA 8260B, EPA 8270C).

2.07 ACCESSORIES

- A. Adhesive: Manufacturer's standard bonding adhesive; resistant to moisture, bacterial and fungus attacks, and ultraviolet light.
- B. Provide all additional materials, equipment and accessories necessary for a complete installation as recommended by the manufacturer. Included are all glues, adhesives, perimeter fasteners, backings, extra synthetic grass system materials for markings and inlays, scrim materials, tools, labor, equipment, and means for protection of adjacent surfaces and materials.

2.08 FABRICATION

- A. Fabric Rolls: Fabricate synthetic grass fabric in strips, 15-feet wide by length required to extend completely down the field, without intermediate cross seams. Allow for the removal of not less than three feet of fabric, by full width of roll, for use in performance testing of the system.
 - 1. Primary field lines shall be woven into the surfacing system fabric in the factory. Other inlaid lines (hash marks) shall be installed in the field.

2. Field marking lines related to baseball shall be in accordance with the layouts and requirements indicated in the National Federation of High School Associations publication, "Court and Field Diagram Guide."

FIELD MAINTENANCE EQUIPMENT

- B. General: As required or requested by Board, provide sweeper and groomer devices, as recommended by the synthetic grass surfacing system manufacturer and approved by the Architect/Engineer of Record, specifically designed for use on the specified synthetic grass and infill system, which provide proper care and maintain surfacing system manufacturer's warranty. The field maintenance equipment shall be provided, fully assembled and operational, with a full set of manuals, to the Board. Instructional sessions shall be provided to the maintenance personnel designated by the Board by a trained technician from the maintenance equipment manufacturer prior to Final Acceptance.
 1. Verify compatibility with Board's existing utility vehicles prior to ordering.
- C. Turf Sweeper: Provide a towed, non-powered turf sweeper with hitch. The sweeper attachment shall be fitted with synthetic bristle brushes as recommended by the turf manufacturer for the collection of surface debris.
 1. Provide a GreensGroomer LitterKat Synthetic Turf Sweeper with a 6' -0" tow behind Sportsfield Magnet
- D. Groomer: Provide a dragging platform, minimum 72-inches wide, fitted with heavy-duty, synthetic bristle brushes, metal raking tines, and aerating stars suitable for use with installed turf infill. Platform shall include a towing mechanism and a lift mechanism to raise the brushes for transport.
 1. Provide a GreensGroomer 920SDE groomer.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Reports:
 1. Aggregate Base Testing: The Contractor shall provide the installer with copies of test reports documenting the aggregate base compaction values and permeability of the sub-grade system per Section 31 22 15 - Earthwork for Permeable Surfacing Systems.
 2. Planarity Survey: The Contractor shall provide the installer with planarity survey data, including the drainage system, as prepared by a State of Illinois Licensed Land Surveyor.
- B. Examine aggregate base materials to receive synthetic grass surfacing system, with installer present, for compliance with manufacturer's requirements and other conditions affecting performance.
 1. Verify that aggregate base materials are dry and free of foreign or deleterious materials that could interfere with installation of the synthetic grass surfacing system.
 2. Verify the finish elevations, slopes, and planarity of the aggregate base material comply with requirements of the Project and surfacing system manufacturer.
 3. Record findings, prepare a written report, signed by Contractor and installer, and submit copies of report to the Engineer of Record and the Board's Representative.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.
 1. Commencement of installation shall indicate acceptance of existing conditions.

3.02 PREPARATION

- A. Thoroughly clean the aggregate base materials of foreign material, soil, and all other substances and materials that may be detrimental to permeability of the aggregate base and/ or installation of the synthetic grass system. Take precautions as required to ensure the aggregate base remains free of foreign materials throughout the installation period.

3.03 INSTALLATION

- A. General: All work shall be performed by skilled workmen, who are experienced and trained by the manufacturer in the installation of the synthetic grass surfacing system. Work shall be performed in strict accordance with the Drawings, reviewed shop drawings, and manufacturer's written installation instructions.
- B. Synthetic grass surfacing fabric rolls shall be unrolled and allowed to relax prior to installation.
- C. Fabric Roll Installation:
 - 1. Synthetic grass surfacing fabric rolls shall be installed across entire width of field, perpendicular to long dimension of field, directly over prepared aggregate base, with extreme care taken to avoid disturbing the prepared aggregate base, including its compaction and planarity. All areas disturbed during installation shall be repaired, properly compacted, and returned to the original planarity by the Installer.
 - a. Rolls shall extend from edge to edge of the field. Cross seams are not allowed.
 - b. Rolls shall be rolled out in same direction and installed with uniform pile direction of fibers.
 - c. Rolls shall be installed according to the roll numbering sequence, in consecutive order.
 - d. Rolls shall be laid straight and true to line. Adjacent rolls, when laid together, shall form a tight fitting seam for the entire length of the fabric. Fitted pieces are not allowed.
 - e. Fabric shall be precisely and neatly trimmed, so to be tight fitting and properly dressed, around installed sleeves, bases, inserts, and other devices within the field that are for the installation of goal posts, flags, and other marking devices.
- D. Seaming of Fabric:
 - 1. Seams in the synthetic grass fabric rolls shall be sewn together, utilizing the manufacturer's standard sewing procedures, ensuring that each roll is properly sewn to the next.
 - a. Seams extending across the field shall be at 15-foot intervals only.
 - b. Seams shall be flat, tight, and permanent, with no separation or fraying.
 - c. Seams, when completed, shall display no visible signs of joining, with fibers brushed to provide full coverage of fibers over the seam.
 - d. Gluing of seams is not allowed. Gluing is only permitted for repairing of problem areas, completion of corners, and for installation of graphics or inlaid lines.
- E. Inlaid Lines and Markings:
 - 1. Install inlaid field markings and/ or design elements, as indicated on the Drawings, using techniques recommended by the system manufacturer. Where inlaid lines are to be installed, the primary field fabric shall be sheared down to the backing according to manufacturer's recommendations, with extreme care taken to ensure the primary backing is not cut or otherwise damaged in any way. In the event that seaming tape is required, such seaming tape shall be non-permeable so that adhesive does not penetrate through the seaming tape onto the PRDP.

- a. Upon completion, installation of inlaid elements shall provide a permanent, secure, and hazard-free playing surface, free of irregularities, including recesses, ridges, and bumps.
- F. Sidelines: Sideline areas shall not be installed until installation of main field rolls has been completed, including sewing. Sideline rolls are to be installed perpendicular to the main field rolls.
- G. Infill Material Installation:
 - 1. Infill materials shall be applied in thin lifts, as recommended by the synthetic grass surfacing system manufacturer, to ensure the voids between the fibers are filled and the fibers are being held vertically and non-directional.
 - a. Infill materials shall be installed only when synthetic grass surfacing fabric and fibers are completely dry.
 - b. Infill materials shall be applied in not less than 8 lifts to achieve the overall depth required. Following each lift, the surfacing fabric shall be mechanically brushed to distribute the infill materials uniformly within/between the fibers and down to the backing, and to ensure a uniform density of the infill materials is achieved.
 - c. Infill materials shall be applied so as to provide more than 1/2" of the free end of the fibers being exposed above the top of the infill at the time installation is complete.
 - d. The synthetic grass surface shall be mechanically groomed and treated after the final lift of infill material is applied, in accordance with manufacturer's instructions.
- H. Perimeter Anchoring:
 - 1. Following sewing of interior seams and application of not less than 75 percent of the infill materials, the synthetic grass surfacing system fabric shall be anchored/ secured to the perimeter nailers with corrosion-resistant fasteners recommended by the manufacturer, in accordance with manufacturer's written instructions, but not more than 12-inches on center.
 - a. The synthetic grass fabric shall be stretched prior to being anchored, in accordance with manufacturer's written instructions.

3.04 FIELD QUALITY CONTROL

- A. Inspection: After installation is complete, the synthetic grass surfacing system installer, synthetic grass surfacing system Manufacturer's Representative and Engineer of Record shall inspect entire project area. Lines shall be checked for overall layout, dimensions, straightness, correctness and workmanship. Any corrections shall be noted in a written report and corrected prior to Final Acceptance.
- B. The Board will engage a qualified Independent Testing Agency to perform the following inspections and tests:
 - 1. Prior to the Installation of Synthetic Grass Surfacing Fabric:
 - a. Determine, at the frequency required by the surfacing system manufacturer that in-place density of compacted fill complies with its requirements and as indicated on the Landscape Details.
 - b. Determine that aggregate base and base materials provide the required permeability and drainage.
 - 2. Testing of Installed Turf Fabric:
 - a. The newly installed synthetic grass surfacing system shall be tested to confirm it complies with the specified performance requirements for shock absorption and drainage.

- b. Testing shall be done at frequency and locations recommended by the surfacing system manufacturer and per performance requirements of this Specification (1 time per year at a minimum for the duration of the warranty).
 - c. If tests show that installed synthetic grass surfacing system does not meet the specified performance requirements, the surfacing system shall be repaired or replaced and retested until shown to be in conformance. Repair, replacement and retesting shall be at Contractor's expense.
- C. Tests and inspections require approval prior to the issuance of Substantial Completion.

3.05 CLEANING

- A. The Installer shall keep the site clean and clear of debris throughout the project. Waste materials, including excess materials remaining after completion of each phase of the Work, shall be removed daily and legally disposed of offsite.
- B. Installer shall provide all labor, supplies and equipment required to completely remove stains and other blemishes from all finished surfaces.
- C. Provide protection over installed synthetic grass surfacing systems, including closing the area to traffic, as required to ensure installed system will be free of damage at time of Final Acceptance.

3.06 DEMONSTRATION AND TRAINING

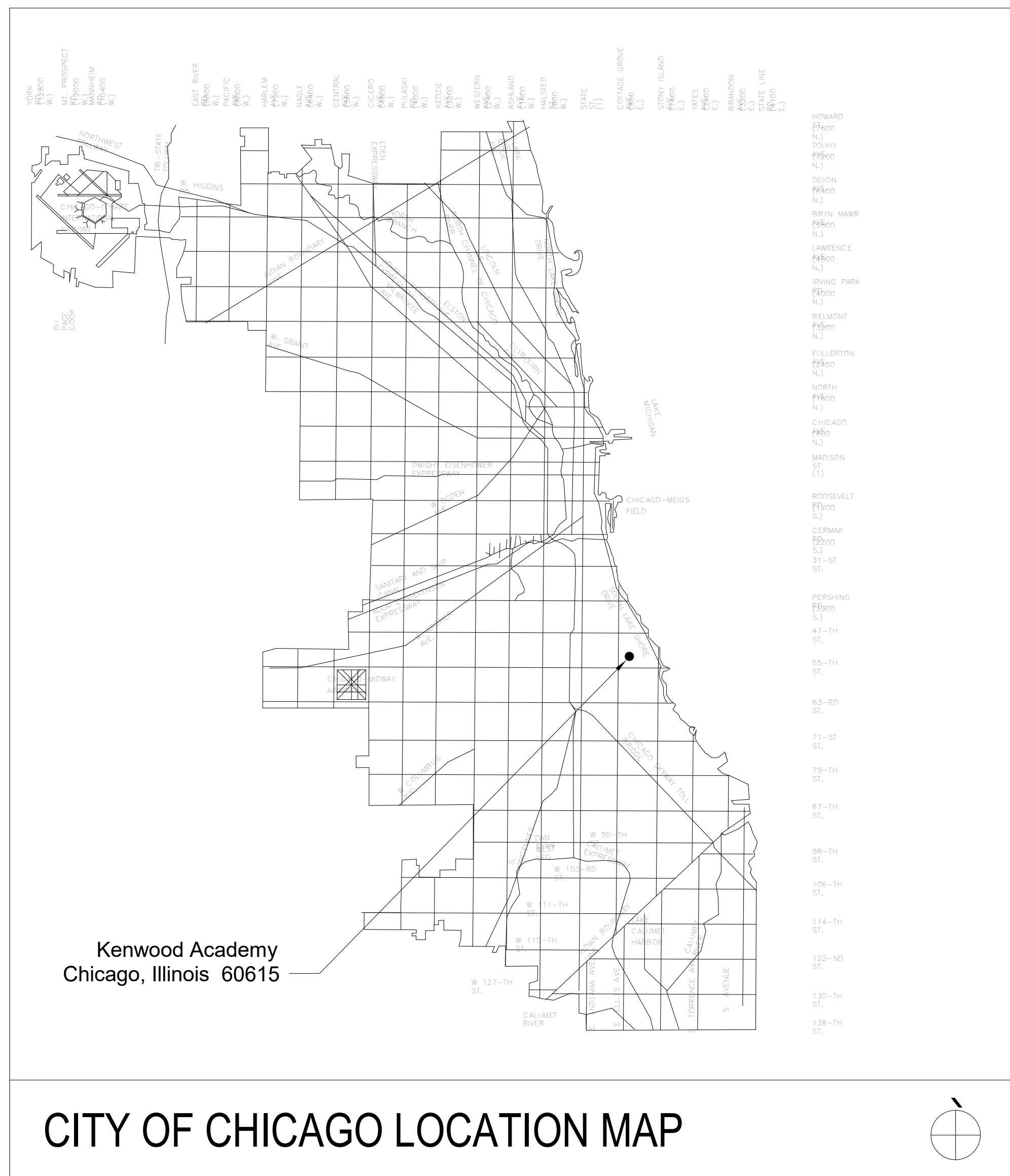
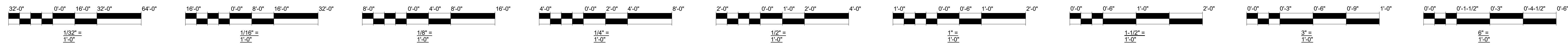
- A. Train the Board's Staff, including Regional Maintenance Crew Personnel, regarding the maintenance and repair or replacement of the synthetic grass. Training dates and times shall be coordinated with Board and School. They shall include the following:
 - 1. The proper use and long-term maintenance of the synthetic grass surfacing system and field maintenance equipment, as required for warranty compliance.
 - 2. Maintenance practices recommended by the manufacturer for the synthetic grass surfacing system surfaces at daily, weekly, monthly, quarterly and annual intervals.
 - 3. Sample the application or addition of rubber or sand infill for the field.
 - 4. Removal of gum and related substances.
 - 5. Removal of seeds
 - 6. Recommended operation of the trash sweeper equipment.
 - 7. The operation of the grooming equipment, including frequency of use from each manufacturer.
 - 8. As required for training purposes, installer shall provide a small field utility vehicle suitable for towing maintenance equipment, to demonstrate the operation and towing procedures.
 - 9. Installer shall provide and review with maintenance personnel a written or printed sample of a maintenance log required to be kept by the Board's maintenance personnel for warranty compliance.
- B. All training shall be completed prior to Substantial Completion of the project.

3.07 MAINTENANCE SERVICE

- A. Initial Maintenance Service: Beginning at Substantial Completion, maintenance service shall include twelve (12) months' full maintenance by experienced employees of the installer. Service shall include regular preventive maintenance, at intervals required by system manufacturer for warranty compliance; repair or replacement of worn, damaged or loose sections of installed fabric; and application of replacement infill materials, as required due to anticipated schedule type (baseball, etc.), frequency and hours of use of the field to be supplied by Board.
 - 1. Include not less than three (3) service calls for preventive maintenance purposes.

2. Maintenance work shall be performed within 72 hours of a service call. Routine maintenance shall be performed during pre-determined scheduled visits coordinated with and agreed upon by the local school administration. These visits shall not result in costs or inconvenience incurred by the local school or other entity recognized by Board as an authorized user of the surface.
3. Maintenance work shall not include repair or replacement due to misuse, abuse and vandalism.

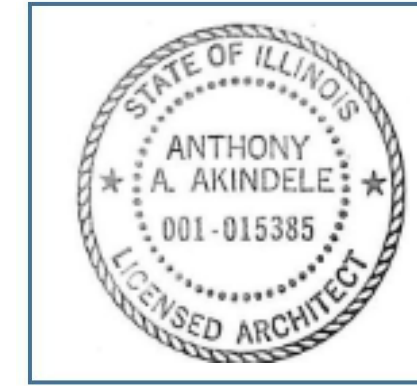
END OF SECTION



CITY OF CHICAGO BUILDING CODE CERTIFICATION STATEMENT
 THIS IS TO CERTIFY THAT THESE DOCUMENTS HAVE BEEN PREPARED BY ME, OR UNDER MY DIRECT SUPERVISION, AND THAT TO THE BEST OF MY KNOWLEDGE THESE DOCUMENTS COMPLY WITH THE CITY OF CHICAGO BUILDING CODE.
 SIGNATURE: *Anthony A. Akindele*
 NAME: ANTHONY A. AKINDELE
 ILLINOIS LICENSE NUMBER: 001-015385
 REGISTRATION EXPIRATION DATE: 11-30-2024

ENERGY CONSERVATION CODE COMPLIANCE STATEMENT:
 I CERTIFY THAT I AM REGISTERED DESIGN PROFESSIONAL AND THAT TO THE BEST OF MY KNOWLEDGE THE ATTACHED CONSTRUCTION DOCUMENTS FOR THE PROJECT AT 5015 SOUTH BLACKSTONE AVENUE, IN CHICAGO, IL 60615, FULLY COMPLY WITH THE REQUIREMENTS OF CHAPTER 18-13, ENERGY CONSERVATION IN THE MUNICIPAL CODE OF CHICAGO. ALSO IN COMPLIANCE WITH THE 2018 STATE OF ILLINOIS ENERGY CONSERVATION CODE.

SIGNATURE: *Anthony A. Akindele* DATE: _____
 ILLINOIS ARCHITECT'S LICENSE NUMBER: 001-15385



STAMP
 EXPIRES: 11.30.24

KENWOOD ACADEMY LINK + MECHANICAL PROJECT

5015 SOUTH BLACKSTONE AVENUE
CHICAGO, ILLINOIS 60615

PBC PROJECT NUMBER 05326

ADDENDUM #2 02.29.24



PUBLIC BUILDING COMMISSION OF CHICAGO
 BRANDON JOHNSON, MAYOR
 RAY GIDEROFF, ACTING EXECUTIVE DIRECTOR

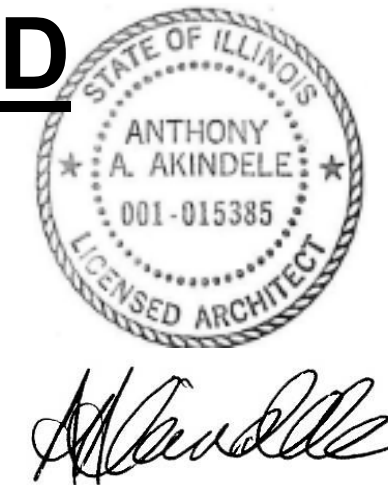
CHICAGO PUBLIC SCHOOLS
 PEDRO MARTINEZ, CHIEF EXECUTIVE OFFICER
 MIGUEL DEL VALLE, CHICAGO BOARD OF EDUCATION PRESIDENT
 IVAN HANSEN, CHIEF FACILITIES OFFICER, FACILITIES & CAPITAL DEPARTMENT



**KENWOOD ACADEMY
LINK + MECHANICAL PROJECT**
 5015 S. BLACKSTONE AVE.
 CHICAGO, IL 60615
 CHICAGO PUBLIC SCHOOLS
 CITY OF CHICAGO, MAYOR BRANDON JOHNSON

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STRUCTURAL ENGINEER

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SITE SURVEYOR

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Landscape Architect:

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 312 427 7240

Structural Engineer:

Milhouse Engineering, Inc.
 333 South Wabash Avenue
 Suite 2901
 Chicago, IL 60604
 312 924 4584

Mechanical, Electrical, Plumbing & Fire Protection Engineers:

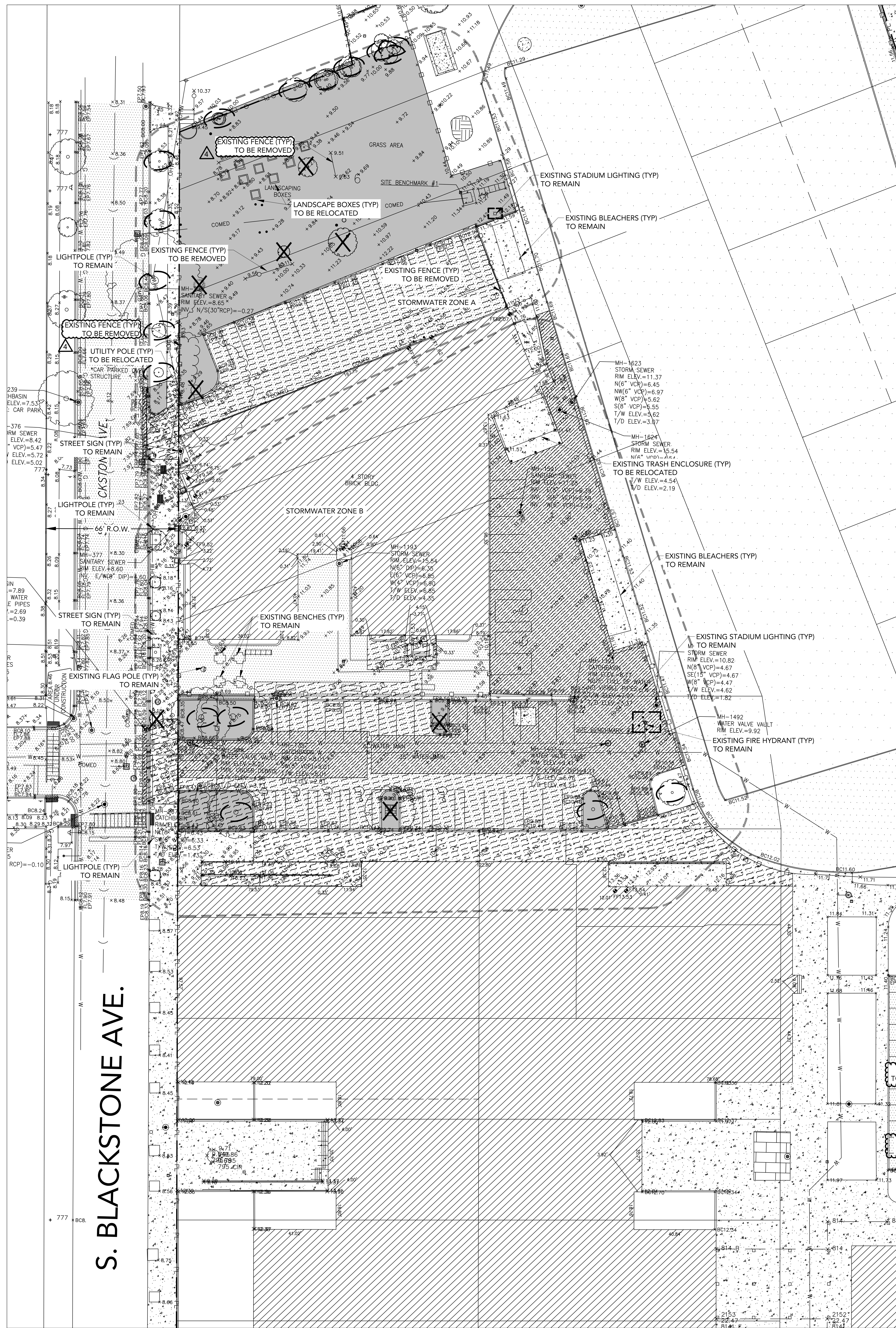
Melvin & Cohen Associates
 223 West Jackson Blvd
 Suite 820
 Chicago, IL 60606
 312 663 3700

No.	Date	Description
4	02.29.24	ADDENDUM #2
3	02.23.24	ADDENDUM #1
2	02.08.24	ISSUED FOR BID
1	02.02.24	ISSUED FOR PERMIT

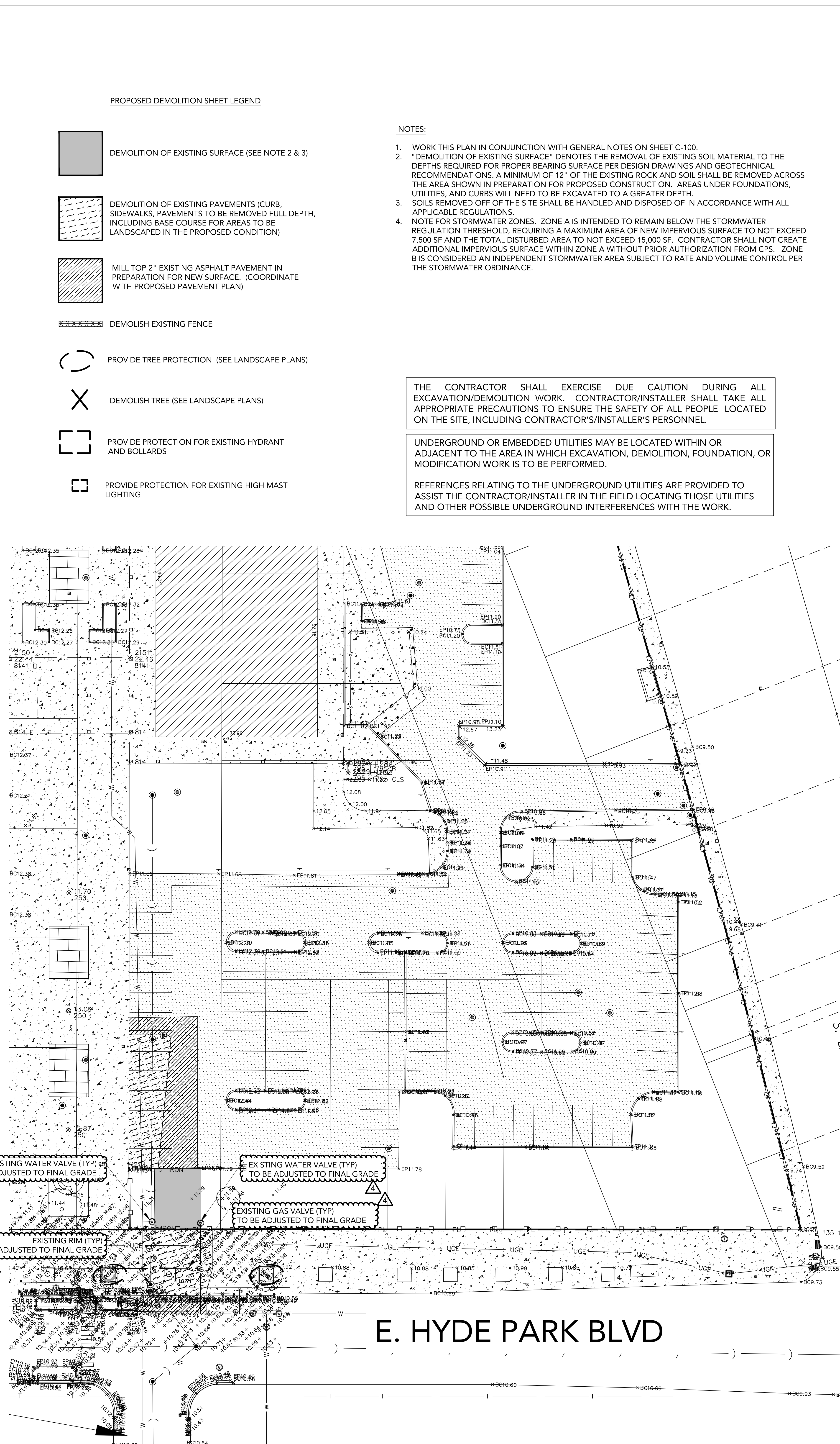
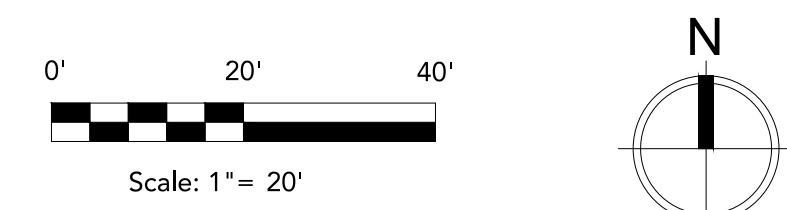
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 PBC Contract No: C1802R
 Project No: 05326
 Title:

COVER SHEET

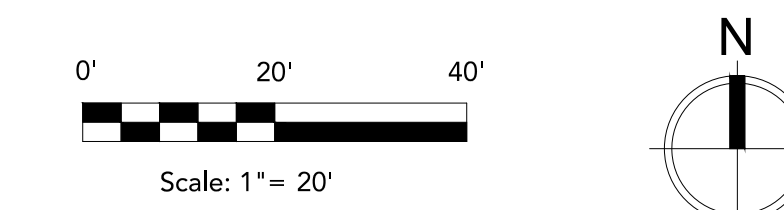
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1 EXISTING SITE AND DEMOLITION PLAN VIEW 1
C-102 SCALE = 1"=20'



2 EXISTING SITE AND DEMOLITION PLAN VIEW 2
C-102 SCALE = 1"=20'



PROPOSED DEMOLITION SHEET LEGEND

- DEMOLITION OF EXISTING SURFACE (SEE NOTE 2 & 3)
- DEMOLITION OF EXISTING PAVEMENTS (CURB, SIDEWALKS, PAVEMENTS TO BE REMOVED FULL DEPTH, INCLUDING BASE COURSE FOR AREAS TO BE LANDSCAPED IN THE PROPOSED CONDITION)
- MILL TOP 2" EXISTING ASPHALT PAVEMENT IN PREPARATION FOR NEW SURFACE. (COORDINATE WITH PROPOSED PAVEMENT PLAN)
- DEMOLISH EXISTING FENCE
- PROVIDE TREE PROTECTION (SEE LANDSCAPE PLANS)
- DEMOLISH TREE (SEE LANDSCAPE PLANS)
- PROVIDE PROTECTION FOR EXISTING HYDRANT AND BOLLARDS
- PROVIDE PROTECTION FOR EXISTING HIGH MAST LIGHTING

NOTES:

1. WORK THIS PLAN IN CONJUNCTION WITH GENERAL NOTES ON SHEET C-100.
2. "DEMOLITION OF EXISTING SURFACE" DENOTES THE REMOVAL OF EXISTING SOIL MATERIAL TO THE DEPTHS REQUIRED FOR PROPER BEARING SURFACE PER DESIGN DRAWINGS AND GEOTECHNICAL RECOMMENDATIONS. A MINIMUM OF 12" OF THE EXISTING ROCK AND SOIL SHALL BE REMOVED ACROSS THE AREA SHOWN IN PREPARATION FOR PROPOSED CONSTRUCTION. AREAS UNDER FOUNDATIONS, UTILITIES, AND CURBS WILL NEED TO BE EXCAVATED TO A GREATER DEPTH.
3. SOILS REMOVED OFF OF THE SITE SHALL BE HANDLED AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.
4. NOTE FOR STORMWATER ZONES: ZONE A IS INTENDED TO REMAIN BELOW THE STORMWATER REGULATION THRESHOLD, REQUIRING A MAXIMUM AREA OF NEW IMPERVIOUS SURFACE TO NOT EXCEED 7,500 SF AND THE TOTAL DISTURBED AREA TO NOT EXCEED 15,000 SF. CONTRACTOR SHALL NOT CREATE ADDITIONAL IMPERVIOUS SURFACE WITHIN ZONE A WITHOUT PRIOR AUTHORIZATION FROM CPS. ZONE B IS CONSIDERED AN INDEPENDENT STORMWATER AREA SUBJECT TO RATE AND VOLUME CONTROL PER THE STORMWATER ORDINANCE.

THE CONTRACTOR SHALL EXERCISE DUE CAUTION DURING ALL EXCAVATION/DEMOLITION WORK. CONTRACTOR/INSTALLER SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO ENSURE THE SAFETY OF ALL PEOPLE LOCATED ON THE SITE, INCLUDING CONTRACTOR'S/INSTALLER'S PERSONNEL.

UNDERGROUND OR EMBEDDED UTILITIES MAY BE LOCATED WITHIN OR ADJACENT TO THE AREA IN WHICH EXCAVATION, DEMOLITION, FOUNDATION, OR MODIFICATION WORK IS TO BE PERFORMED.

REFERENCES RELATING TO THE UNDERGROUND UTILITIES ARE PROVIDED TO ASSIST THE CONTRACTOR/INSTALLER IN THE FIELD LOCATING THOSE UTILITIES AND OTHER POSSIBLE UNDERGROUND INTERFERENCES WITH THE WORK.



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CHICAGO PUBLIC SCHOOLS
CITY OF CHICAGO, MAYOR LORI LIGHTFOOT

Architect:
NIA ARCHITECTS, INC.
nia
nia architects inc

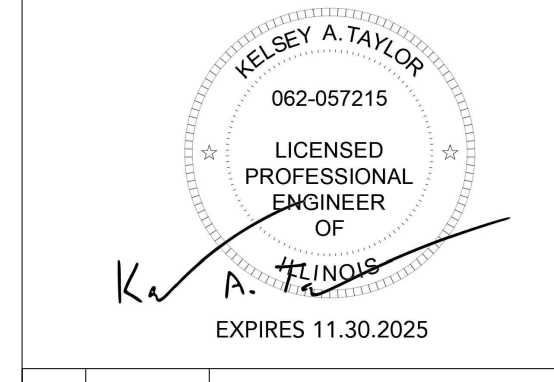
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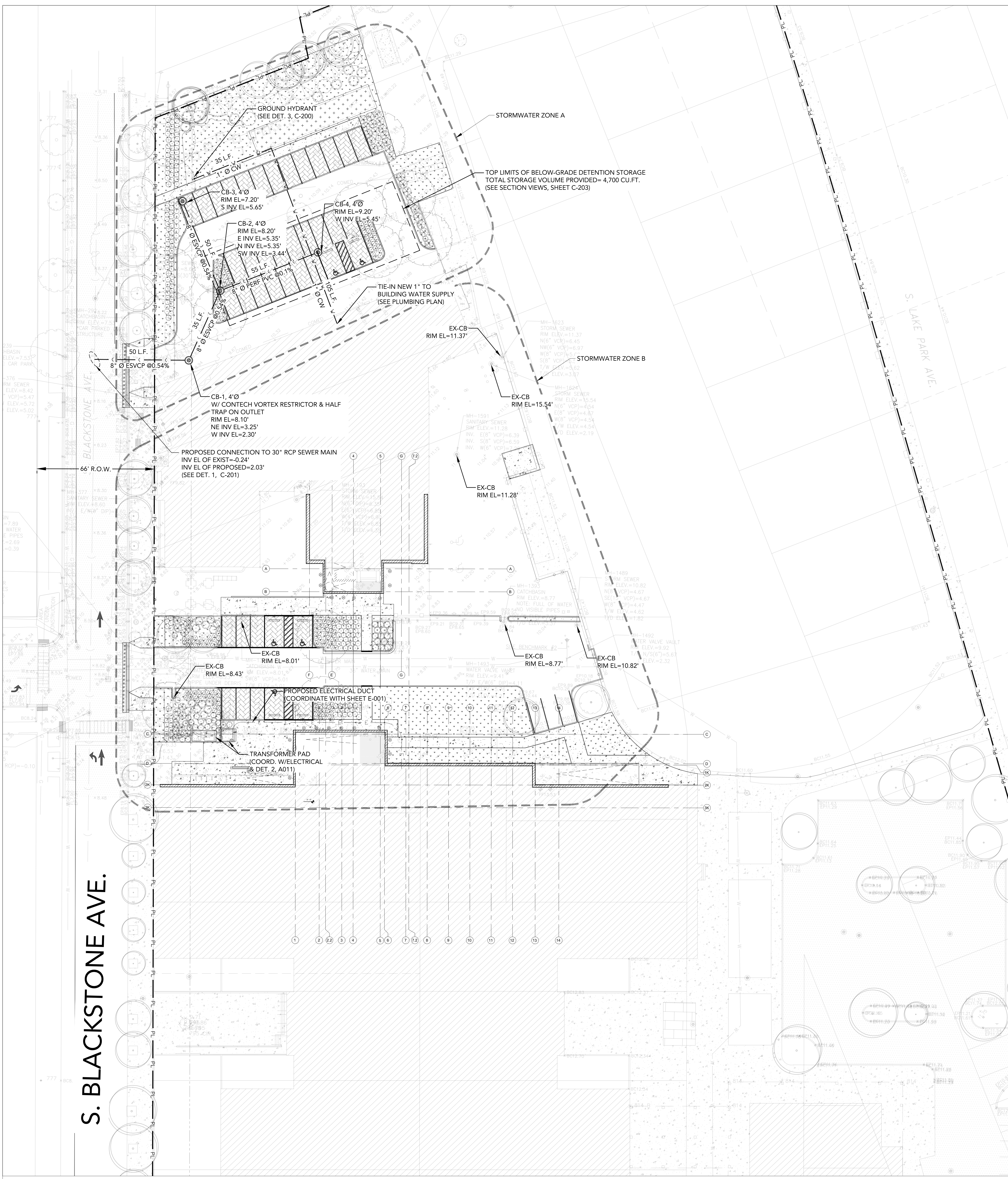
Mechanical, Electrical, Plumbing & Fire Protection Engineers:
Melvin & Cohen Associates
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312.924.4584



No.	Date	Description
4	02.29.24	ADDENDUM #2
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PBC Project Name: Kenwood Academy Link
PBC Contract No.: C1602R
Project No.: 05328

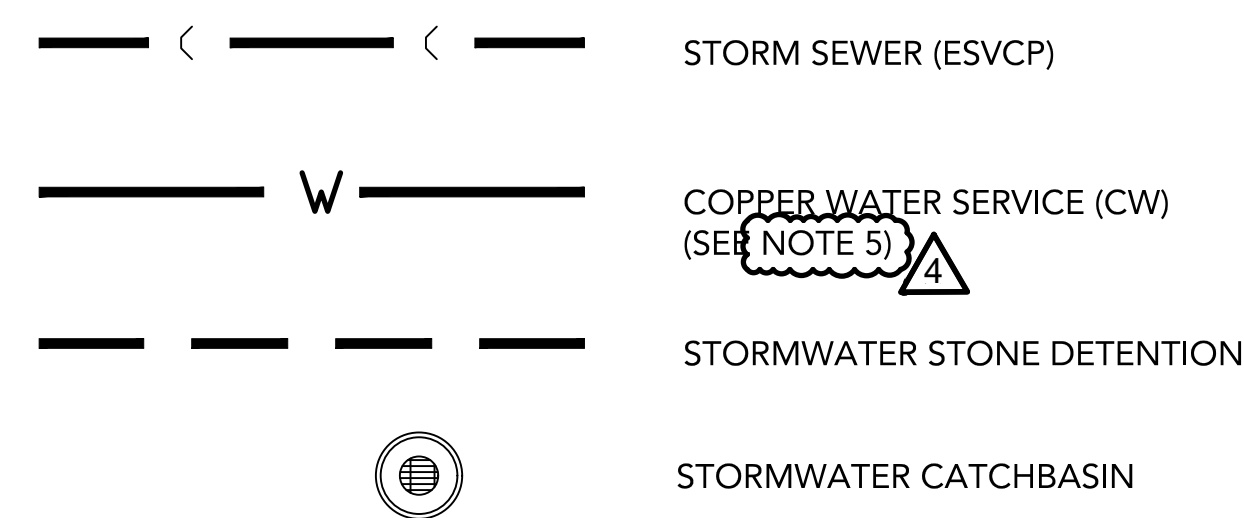
EXISTING SITE AND DEMOLITION PLAN



NOTES:

1. STORMWATER STONE DETENTION BASIN BENEATH PROPOSED PERMEABLE PAVEMENT LOT. PRELIMINARY STORMWATER VOLUME = 4,700 CF (APPROX 12,400 CF OF CA-7 STONE) (SEE TYP DETAILS SHEET C-200 & C-203)
2. XFMR PAD SHALL BE PRECAST AND PRE-APPROVED BY COMED, IN COORDINATION WITH ELECTRICAL PLANS.
3. CONTRACTOR SHALL BE FULLY APPRISED OF THE HIGH-VOLTAGE POLES, OVERHEAD WIRES, AND UNDERGROUND CABLES, IN AND AROUND THE ALLEY.
4. PERF. PVC PIPE SHALL BE SDR-26 PER SPEC. SECTION 33 31 00.
5. WATER SERVICE LINES TO GROUND HYDRANT SHALL BE TYPE "K" SEAMLESS COPPER CONFORMING WITH ASTM B88 INSTALLED WITH WROUGHT COPPER FITTINGS IN ACCORDANCE WITH ASME B16.22. WATER SERVICE LINES SHALL BE INSTALLED WITH A MINIMUM OF 5'-6" OF COVER.

PROPOSED UTILITY LEGEND



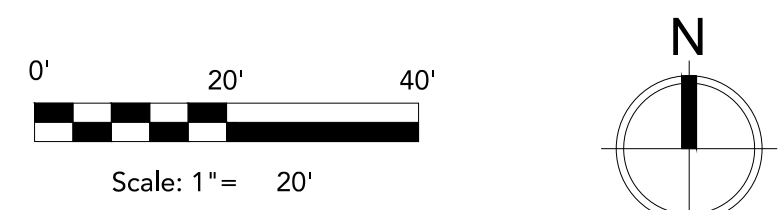
STORM WATER SUMMARY (NORTH)

100-YEAR DETENTION REQUIRED PER DWM STORMWATER TOOL = 4,547 CU.FT.
 VOLUME CONTROL REQUIRED PER DWM STORMWATER TOOL = 548 CU.FT.
 STORAGE PROVIDED IN STONE DETENTION = 4,532 CU.FT.
 STORAGE PROVIDED IN PIPES AND CATCHBASINS = 95 CU.FT.
 TOTAL STORAGE PROVIDED = 4,627 CU.FT.
 VOLUME CONTROL MET BY PERMEABLE PAVERS

S. BLACKSTONE AVE.

S. LAKE PARK AVE.

1 CIVIL UTILITY PLAN VIEW
 C-105 SCALE = 1" = 20'



UNDERGROUND OR EMBEDDED UTILITIES MAY BE LOCATED WITHIN OR ADJACENT TO THE AREA IN WHICH EXCAVATION, DEMOLITION, FOUNDATION, OR MODIFICATION WORK IS TO BE PERFORMED.

REFERENCES RELATING TO THE UNDERGROUND UTILITIES ARE PROVIDED TO ASSIST THE CONTRACTOR/INSTALLER IN THE FIELD LOCATING THOSE UTILITIES AND OTHER POSSIBLE UNDERGROUND INTERFERENCES WITH THE WORK.

THE CONTRACTOR SHALL EXERCISE DUE CAUTION DURING ALL EXCAVATION/DEMOLITION WORK. CONTRACTOR/INSTALLER SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO ENSURE THE SAFETY OF ALL PEOPLE LOCATED ON THE SITE, INCLUDING CONTRACTOR'S/INSTALLER'S PERSONNEL.



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 CHICAGO, IL 60615
 CHICAGO PUBLIC SCHOOLS
 CITY OF CHICAGO, MAYOR LORI LIGHTFOOT

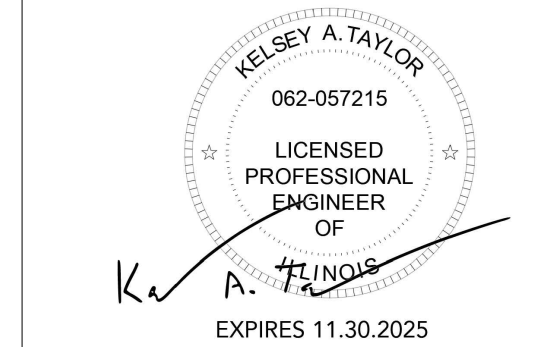
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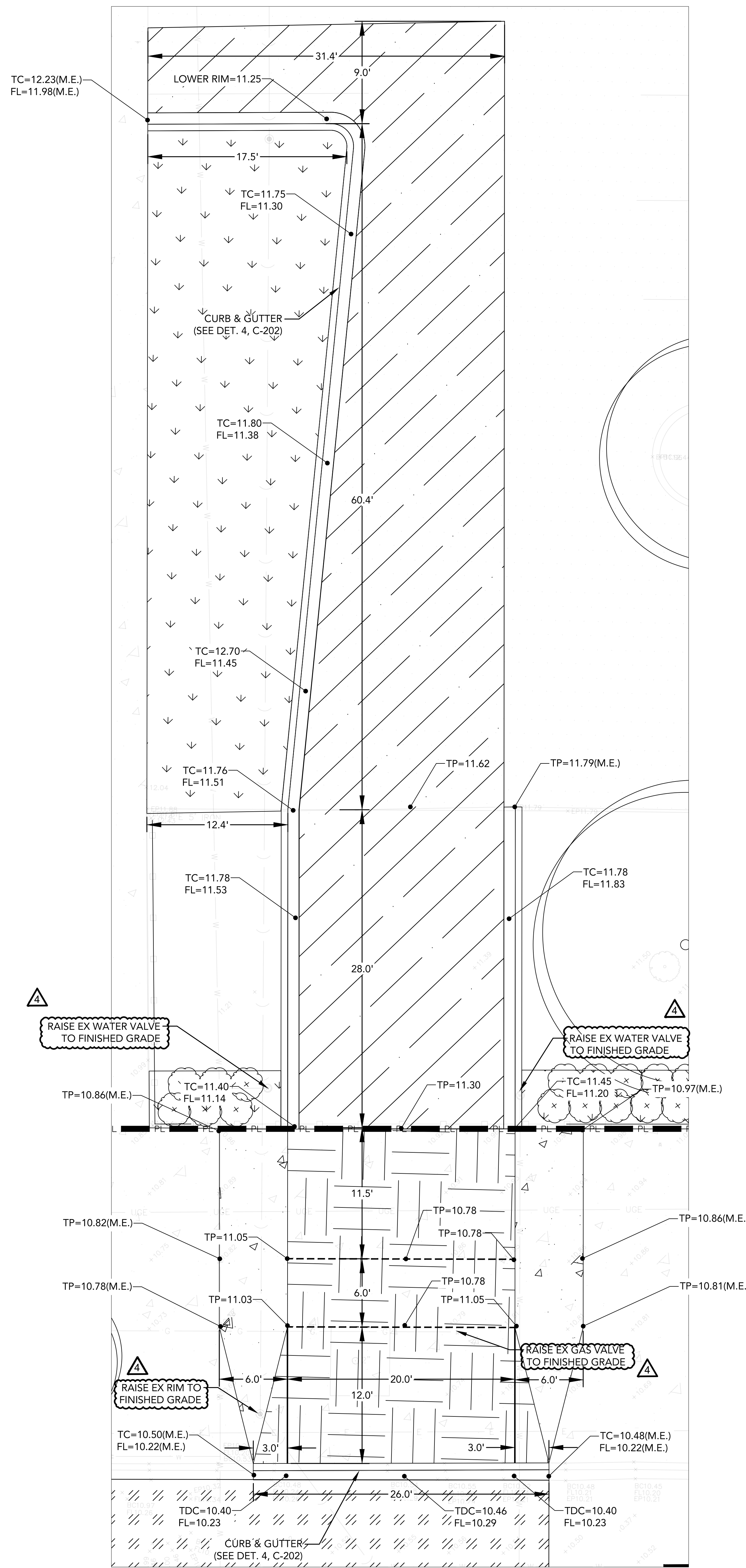


No.	Date	Description
4	02.29.24	ADDENDUM #2
3	02.23.24	ADDENDUM #1
2	02.08.24	ISSUED FOR BID
1	02.02.24	ISSUED FOR PERMIT

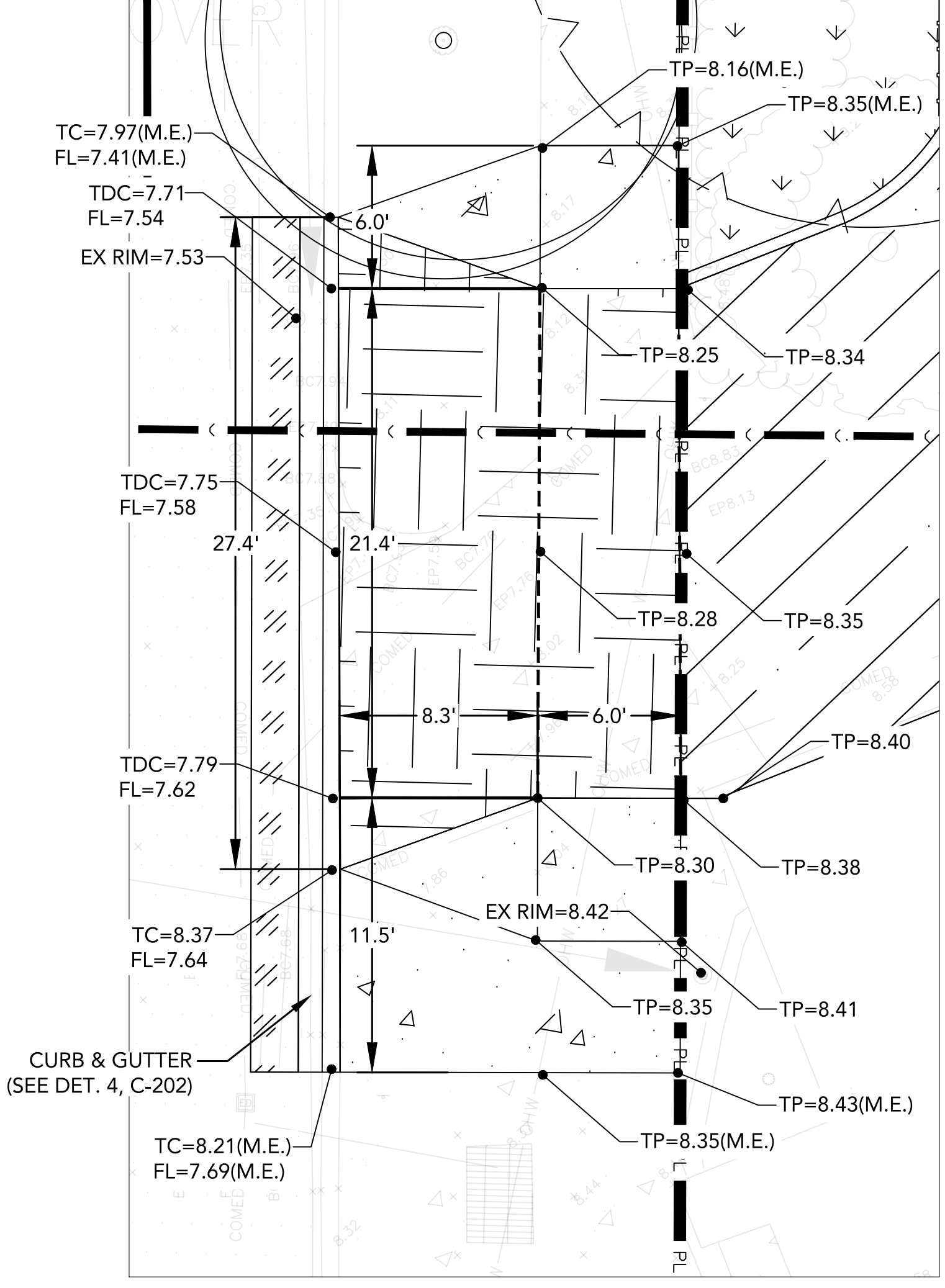
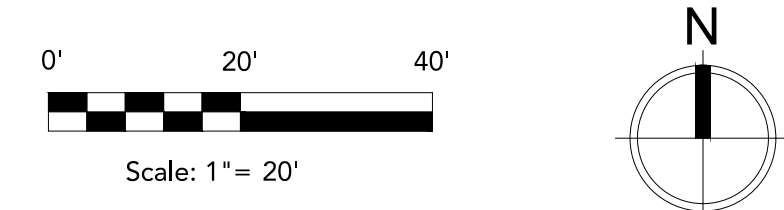
PBC Project Name: Kenwood Academy Link
 PBC Contract No.: C1602R
 Project No.: 05328

Table: CIVIL UTILITY PLAN

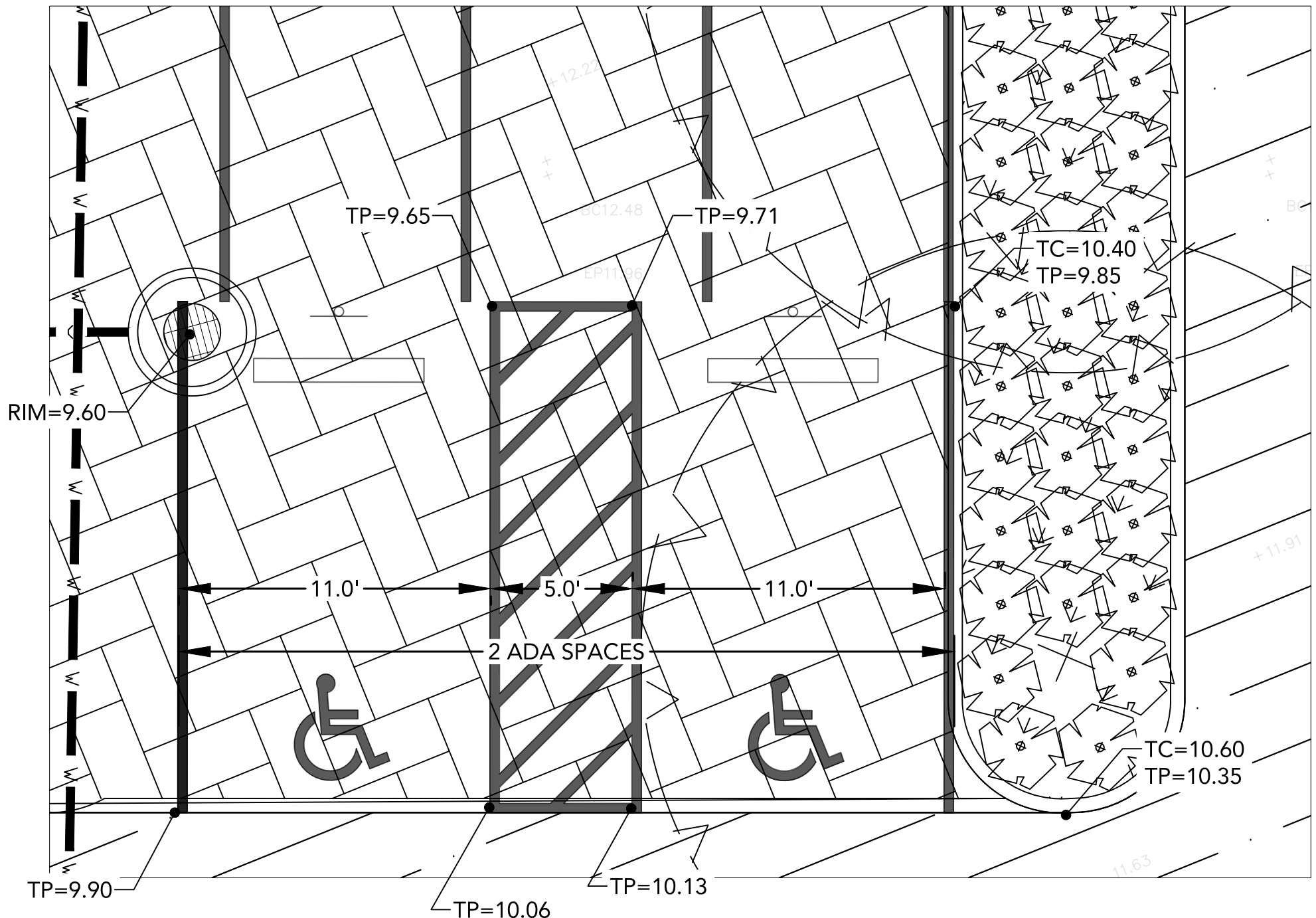
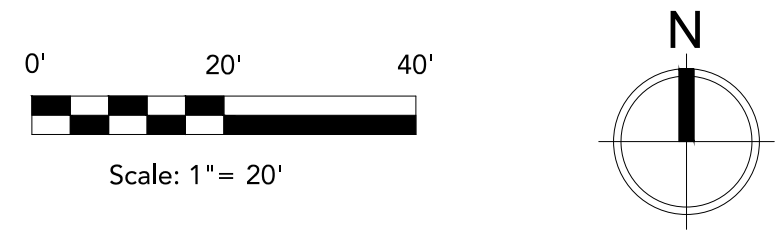
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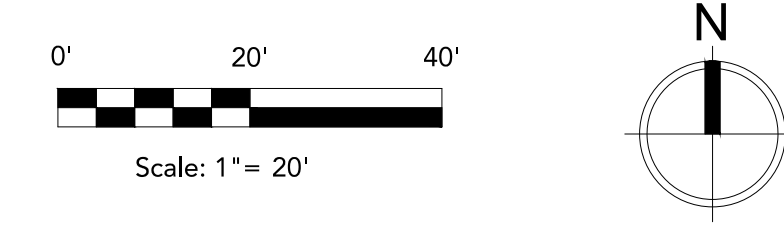
1 KENWOOD DRIVEWAY ENLARGED VIEW
C-108 SCALE = 1"=20'



2 BLACKSTONE NORTH DRIVEWAY ENLARGED VIEW
C-108 SCALE = 1"=20'

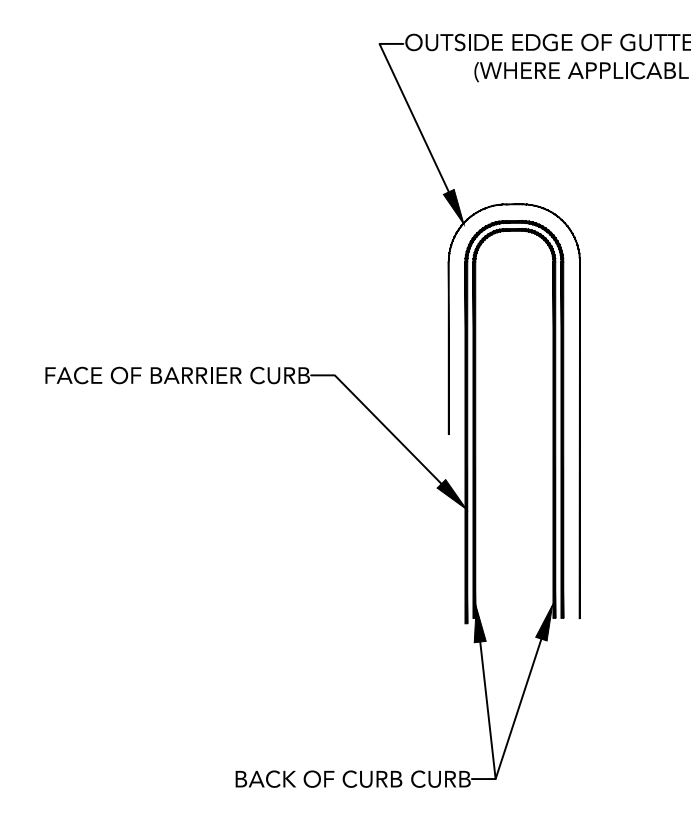


3 NORTH ADA STALL ENLARGED VIEW
C-108 SCALE = 1"=20'



NOTES:

- 1) THE PROPOSED ELEVATIONS SHOWN REFERENCE THE TOP OF FINISHED SURFACE, UNLESS OTHERWISE NOTED.
- 2) WORK THIS PLAN WITH SPECIFICATIONS, IN PARTICULAR ARTICLE 3.9 ("GRADING") OF SECTION 31 05 00 ("EARTHWORK").
- 3) TRANSITION TOP OF PROPOSED CURBS DOWN TO SURROUNDING GRADE AT PLACES WHERE CURB TERMINATES.
- 4) THE GENERAL INTENT OF THE PROPOSED GRADES IS TO LIMIT BREAKS IN PAVEMENT TO LESS THAN 1/4" AT PEDESTRIAN PATHWAYS SUBJECT TO WHEELCHAIR TRAVEL. IF THIS CANNOT BE ACHIEVED, CONTRACTOR SHALL CONTACT CIVIL ENGINEER PRIOR TO CONSTRUCTION.



GRADING PLAN LEGEND

- FLOW ARROW - INDICATES DRAINAGE PATH
- GRADE BREAK
- OVERLAND FLOW PATH
- 15.35 GRADE ELEVATION (SOIL, GROUND, LANDSCAPE)
- FL=15.35 FLOW LINE ELEVATION OF CURB & GUTTER (PER DET. 3 OR DET. 5, C-202)
- TC=19.35 TOP OF CURB (PER DET. 4 OR DET. 5, C-202)
- TDC=19.35 TOP OF DEPRESSED CURB (SEE DET. 3, C-202)
- TP=19.35 TOP OF PAVEMENT ELEV. (FINISHED SURFACE ELEV.)
- TP=19.25(M.E.) TOP OF PAVEMENT ELEV. (MATCH EXISTING ADJACENT SURFACE ELEV.)

GEOMETRIC PAVEMENT LEGEND

- ASPHALT STREET REPAIR
- ASPHALT PAVEMENT (SEE NOTE 1)
- CONCRETE WALKWAY
- LANDSCAPE (SEE LANDSCAPE)
- HEAVY DUTY CONCRETE PAVEMENT 8" PORTLAND CEMENT CONCRETE 8" CA-6 AGGREGATE BASE COURSE
- PERMEABLE PAVERS

KENWOOD ACADEMY LINK

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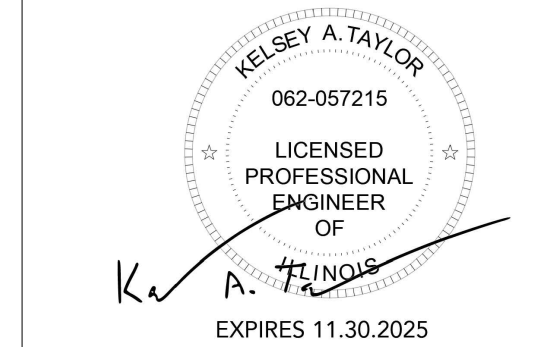
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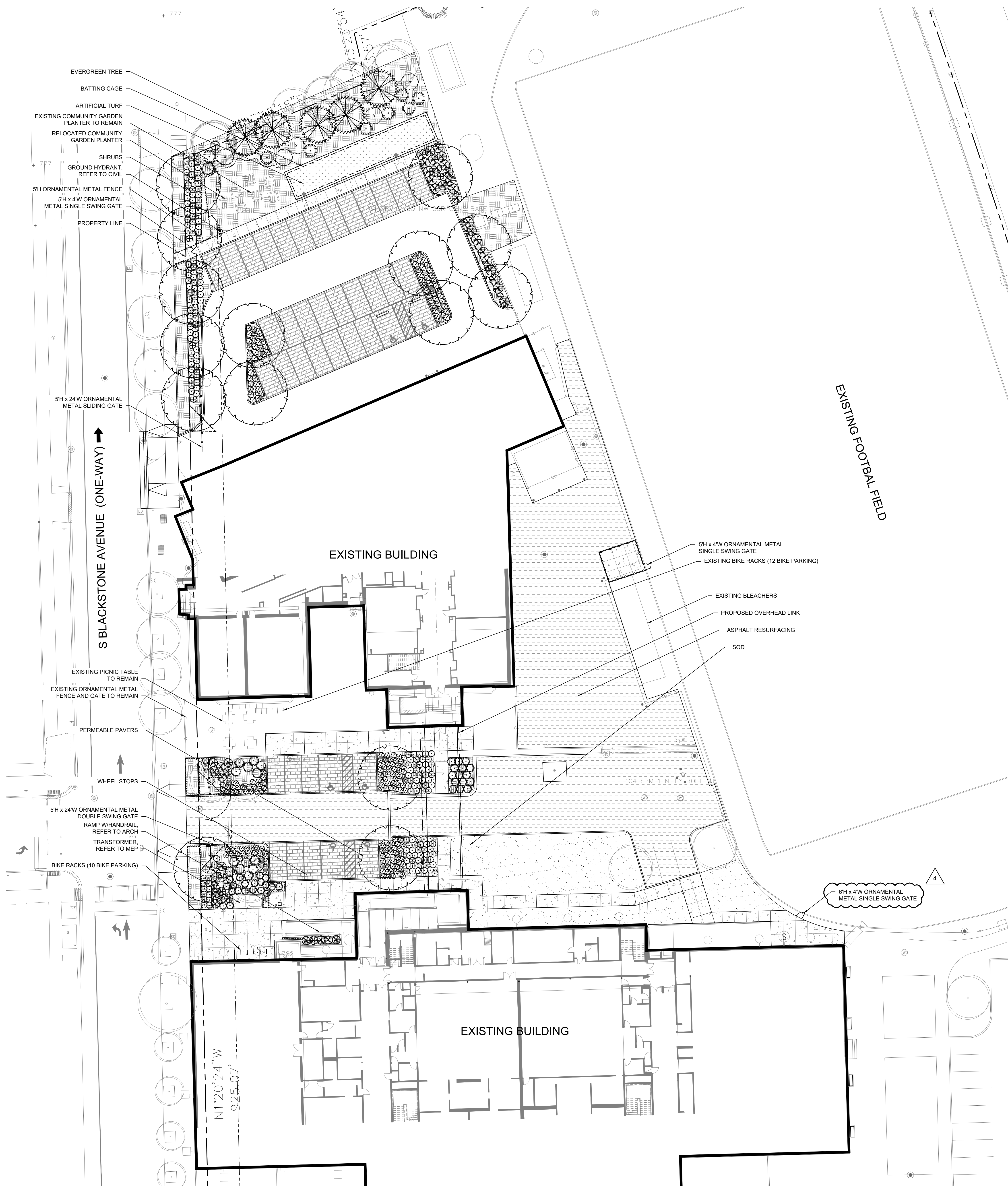
Mechanical, Electrical, Plumbing & Fire Protection Engineers:

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PBC Project Name: Kenwood Academy Link
PBC Contract No: C1602R
Project No.: 05328
Title: ENLARGED VIEWS PLAN II



LEGEND:

- PROPERTY LINE
- PROJECT LIMIT LINE
- 5H ORNAMENTAL FENCE
- [Pattern] CONCRETE PAVING, TYPE 1
- [Pattern] ARTIFICIAL TURF
- [Pattern] PERMEABLE PAVERS
- [Pattern] ASPHALT RESURFACING
- [Symbol] EXISTING TREE TO REMAIN AND BE PROTECTED
- [Symbol] SHADE TREE
- [Symbol] ORNAMENTAL TREE
- [Symbol] EVERGREEN TREE
- [Symbol] SHRUB
- [Pattern] PERENNIALS/GROUND COVER
- [Pattern] SOD
- [Symbol] GROUND HYDRANT, REFER TO CIVIL
- [Symbol] BIKE RACKS

1 LANDSCAPE SITE PLAN
1" = 20'-0"

NOTE: CONTRACTOR SHALL VERIFY ALL EXISTING SITE CONDITIONS AND CHECK PROJECT DIMENSIONS.



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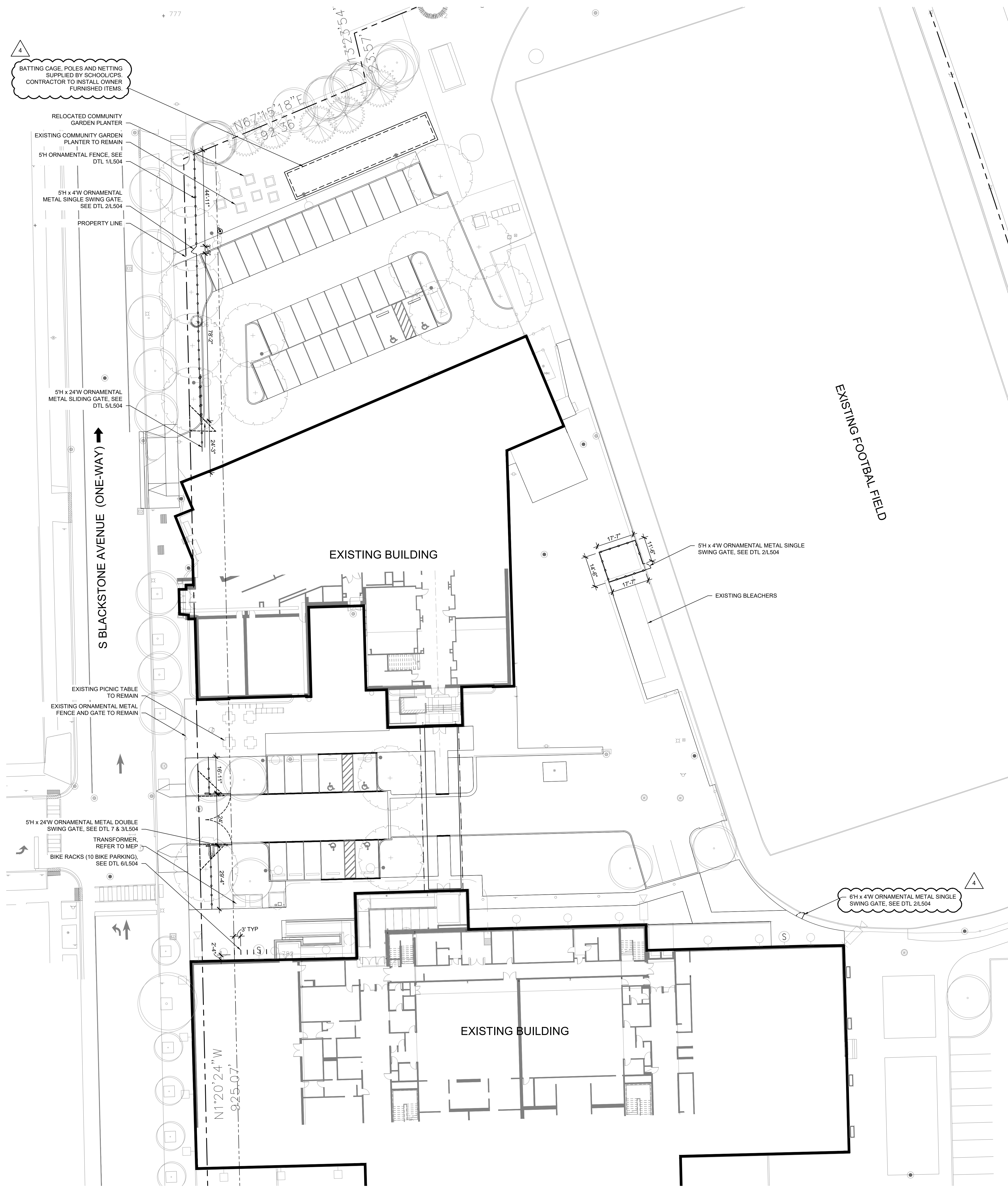
PBC Project Name: Kenwood Academy Link -MEP
PBC Contract No: C1602R
Project No.: 05328

Title
LANDSCAPE
SITE PLAN

Sheet
L101

LEGEND:

- PROPERTY LINE
- PROJECT LIMIT LINE
- 5H ORNAMENTAL FENCE
- ||||| BIKE RACKS



1 SITE FENCING AND FURNISHING PLAN
1" = 20'-0"



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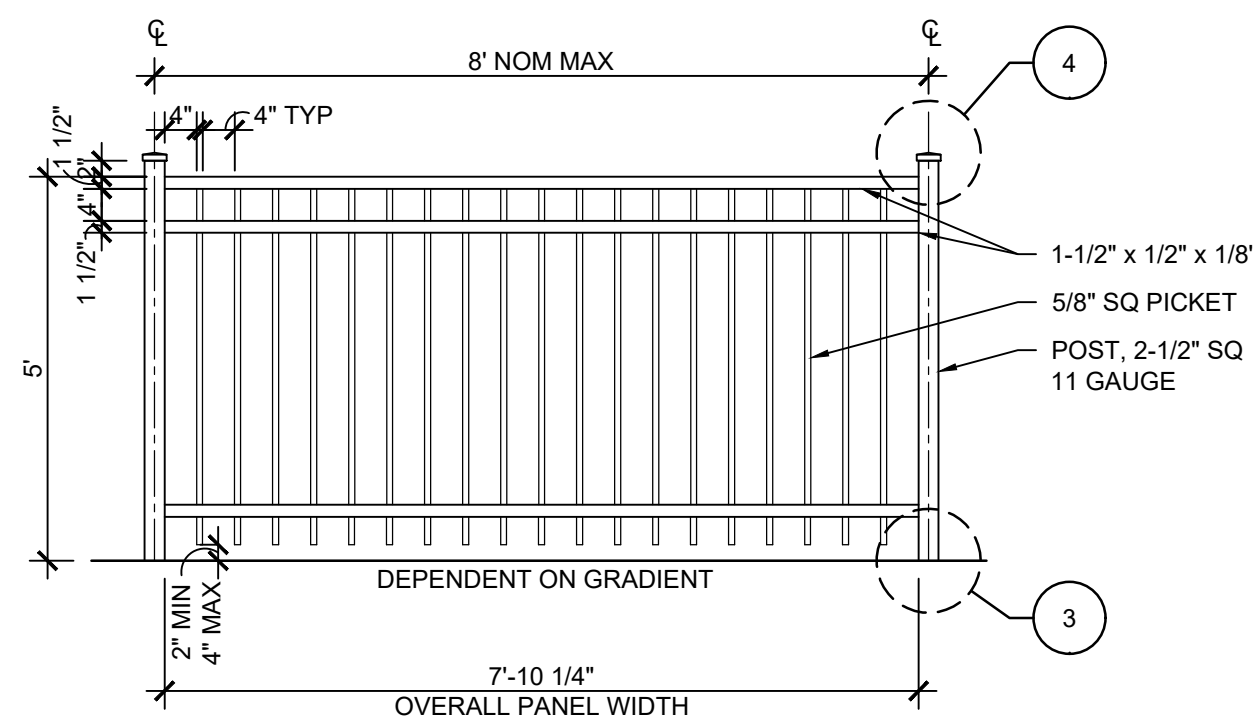
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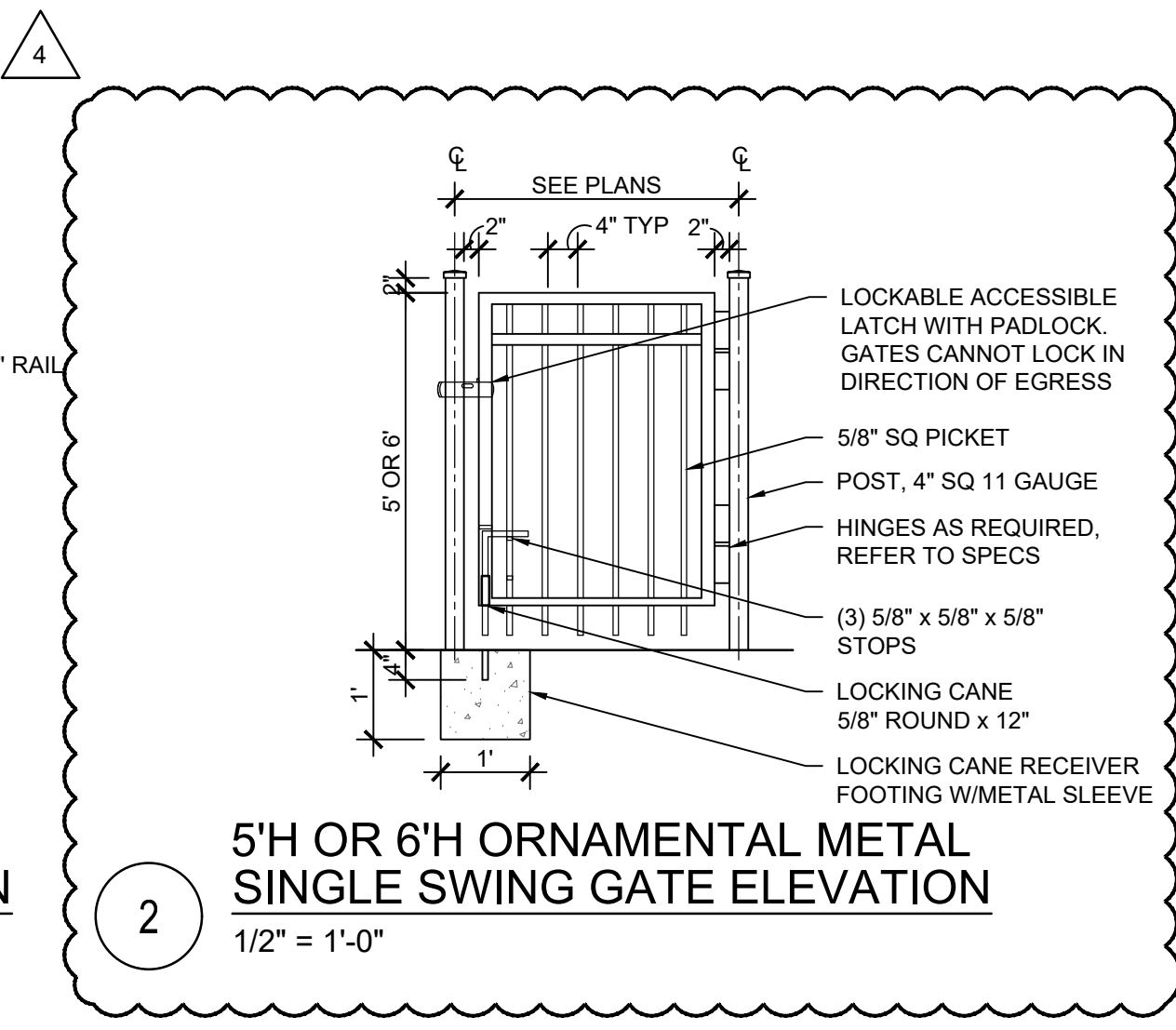
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Project No.: 05328
Title: SITE FENCING AND FURNISHING PLAN
Sheet: L104

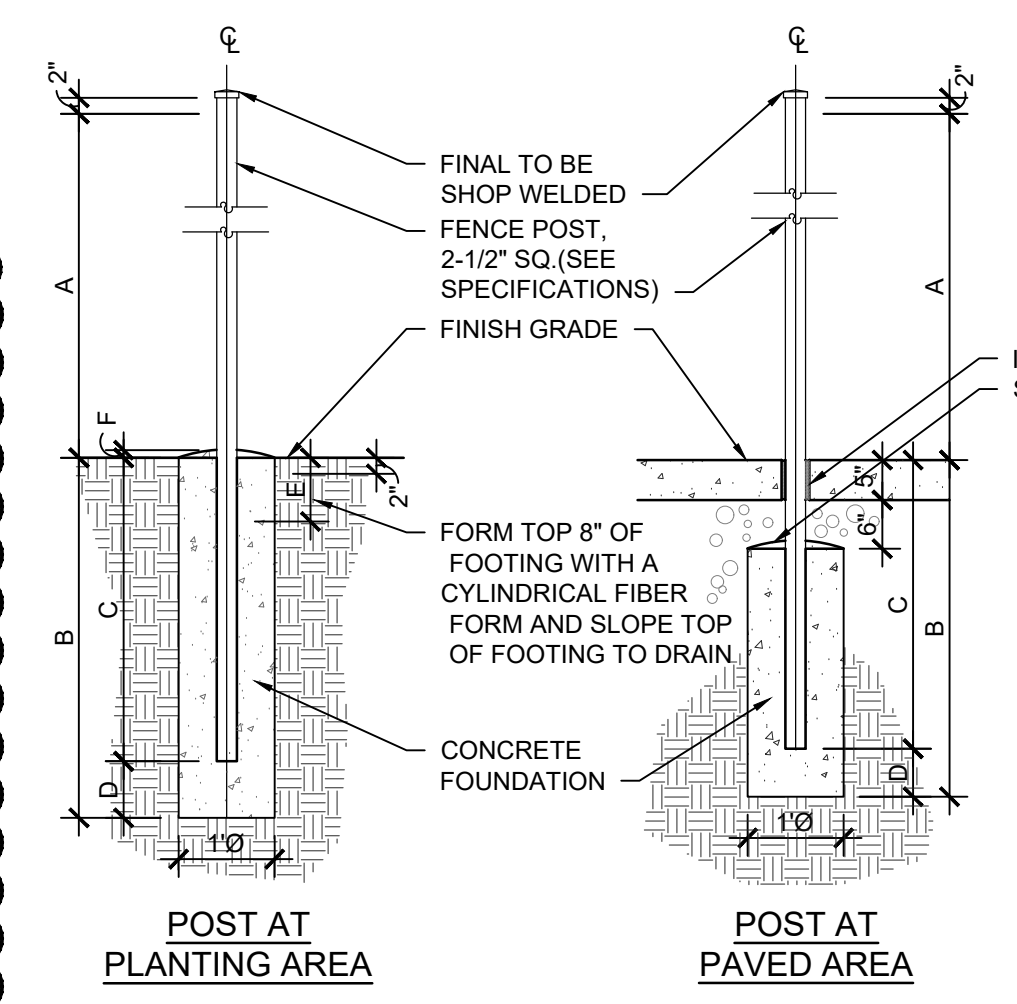
NOTE: CONTRACTOR SHALL VERIFY ALL EXISTING SITE CONDITIONS AND CHECK PROJECT DIMENSIONS.



1 5'H ORNAMENTAL METAL FENCE ELEVATION
1/2" = 1'-0"



2 5'H OR 6'H ORNAMENTAL METAL SINGLE SWING GATE ELEVATION
1/2" = 1'-0"

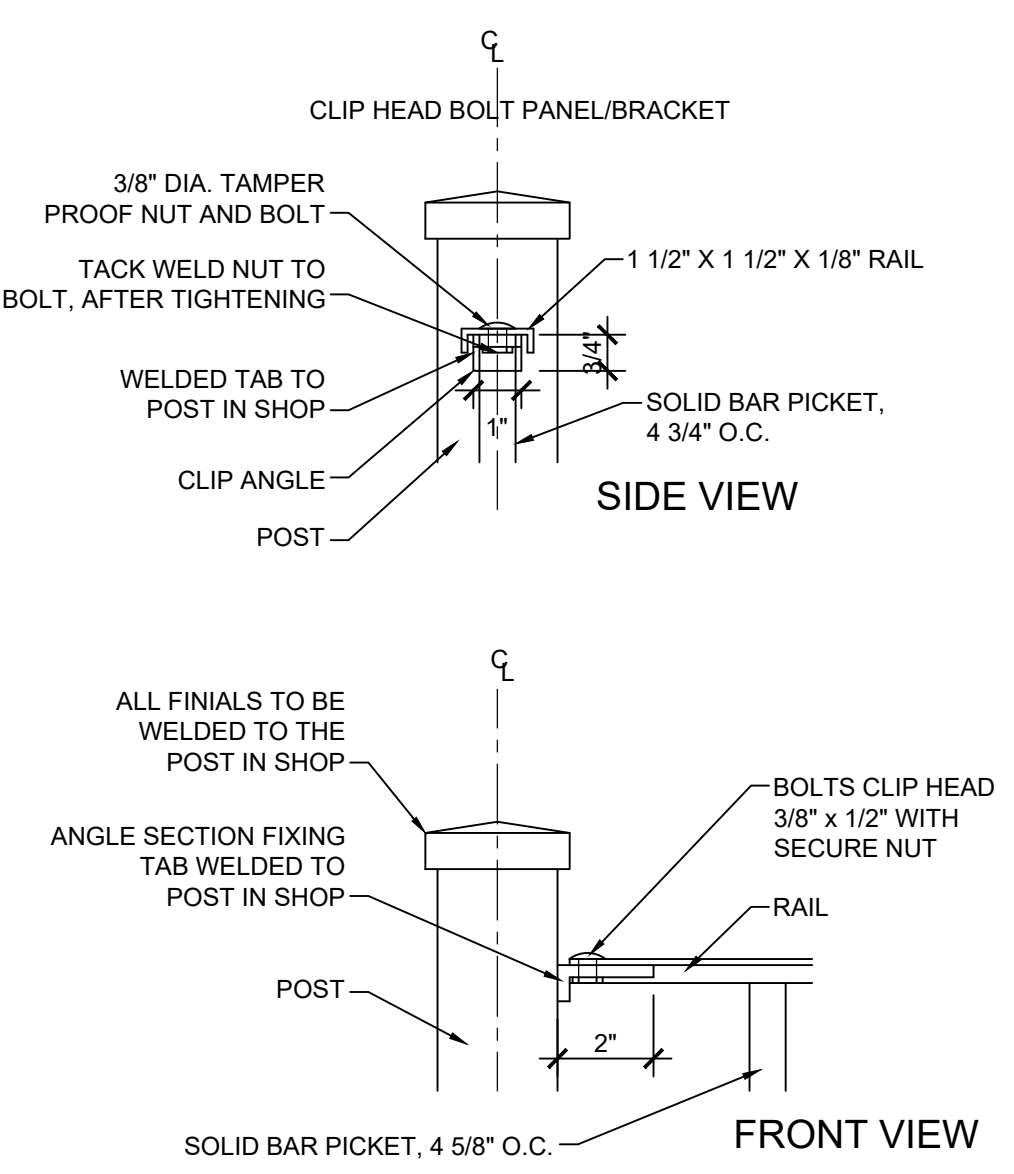


3 FENCE POST FOOTING DETAIL
1/2" = 1'-0"

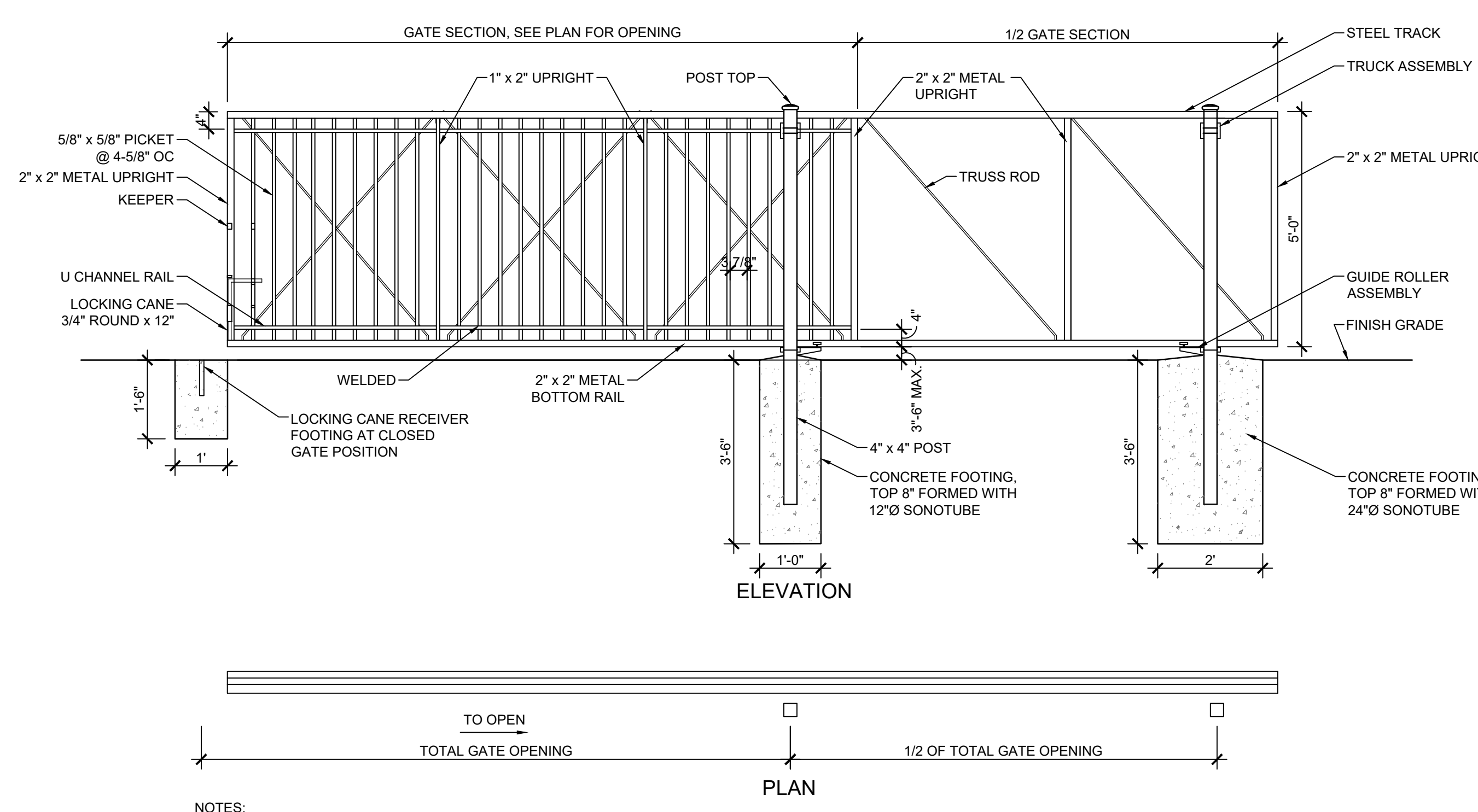
NOTE: 1. IF POST IS LESS THAN 2" FROM EDGE OF CONCRETE FOUNDATION, THE CONTRACTOR SHALL BE REQUIRED TO REMOVE AND RECONSTRUCT THAT POST FOUNDATION.

POST DIMENSION / FOOTING DEPTH			
	POST DIMENSIONS		FOOTING DEPTH
A	4'-0"	3'-0"	6'-0"
B	3'-6"	4'-0"	4'-0"
C	3'-0"	3'-6"	4'-0"
D	2'-6"	3'-0"	3'-0"
E	2'-0"	2'-6"	2'-0"
F	1'-6"	2'-0"	1'-6"

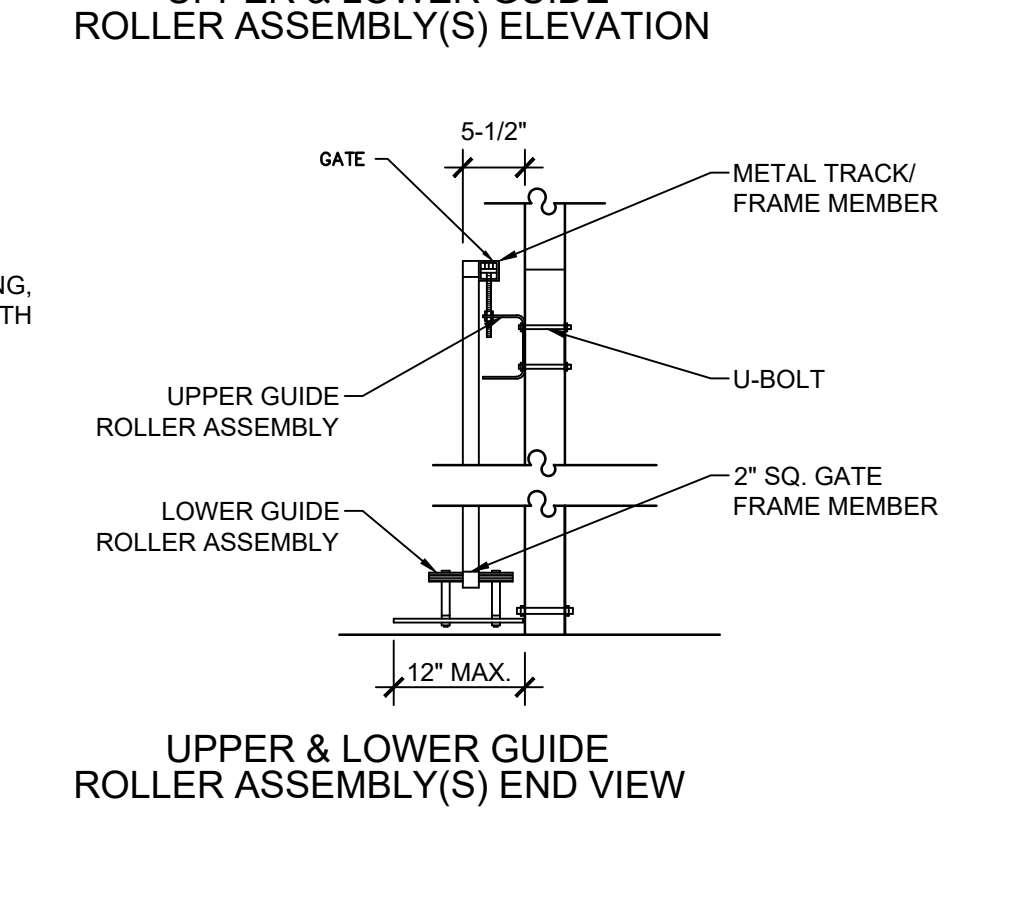
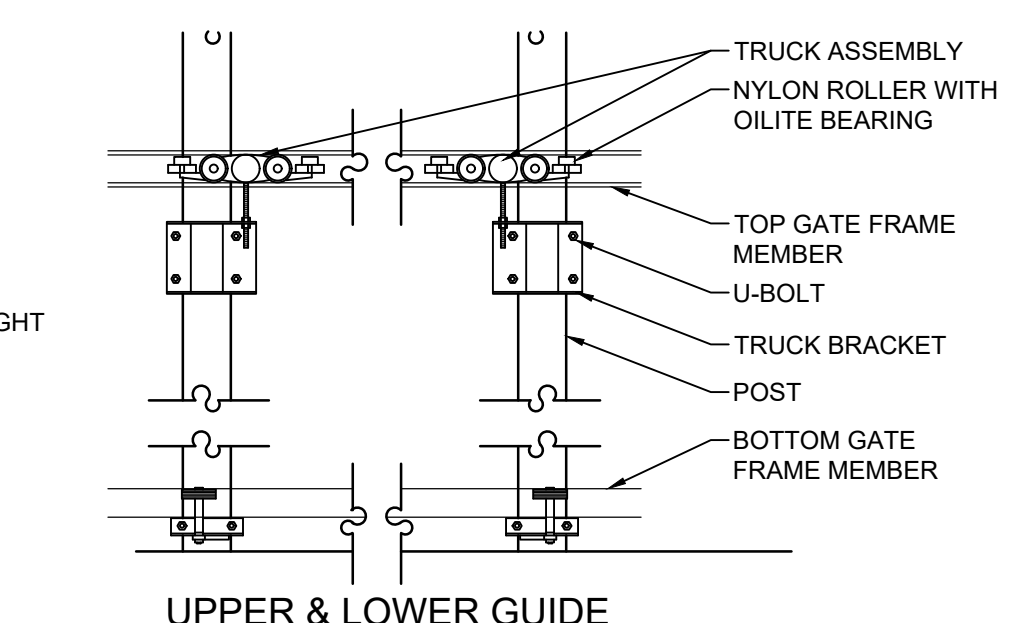
NOTE: 1. CORNER AND GATE POSTS: 4" SQ.
2. INTERMEDIATE POSTS: 2-1/2" SQ.



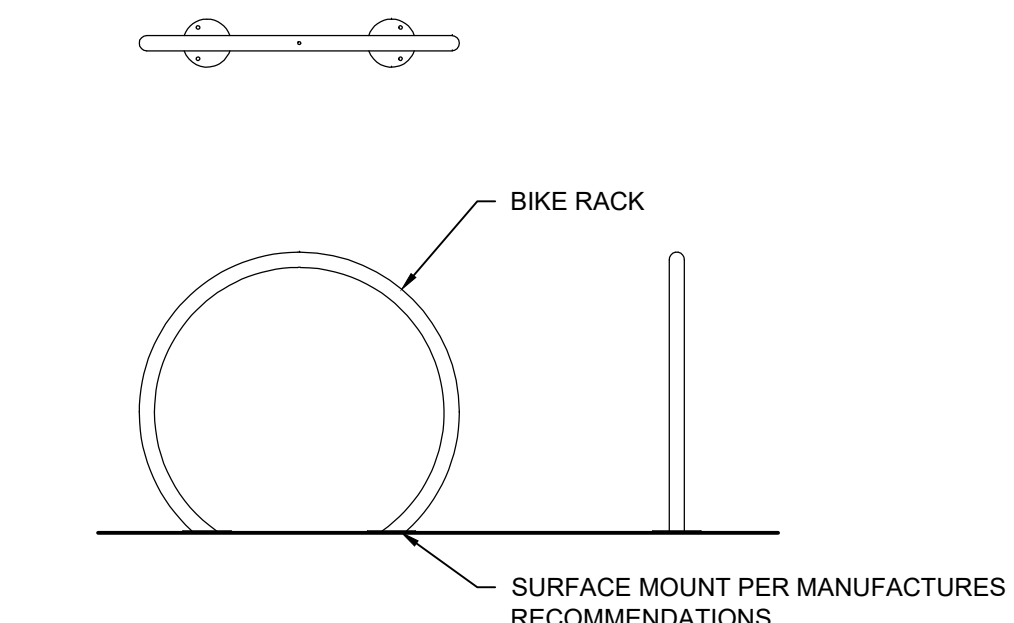
4 POST CAP DETAIL
3/8" = 1'-0"



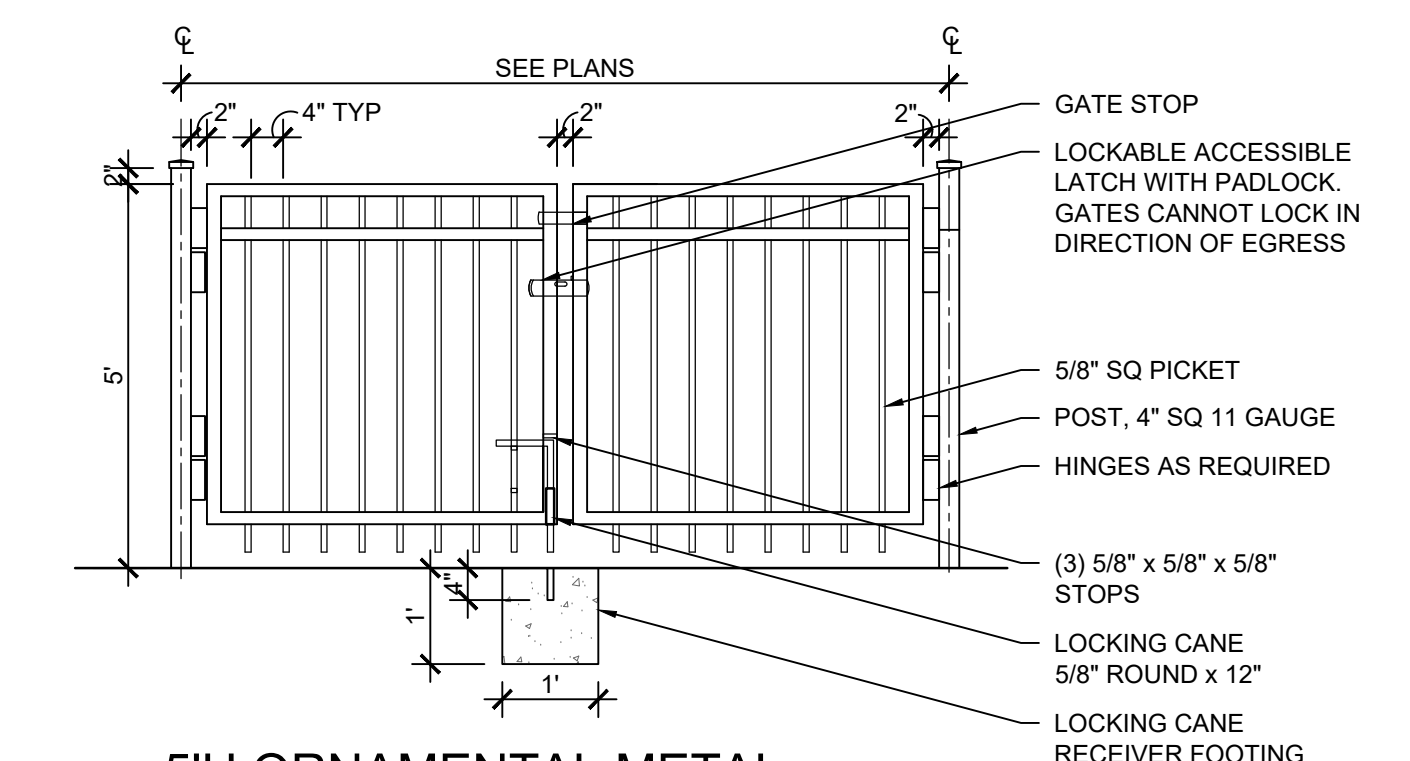
5 5'H ORNAMENTAL METAL SLIDING GATE DETAIL
1/2" = 1'-0"



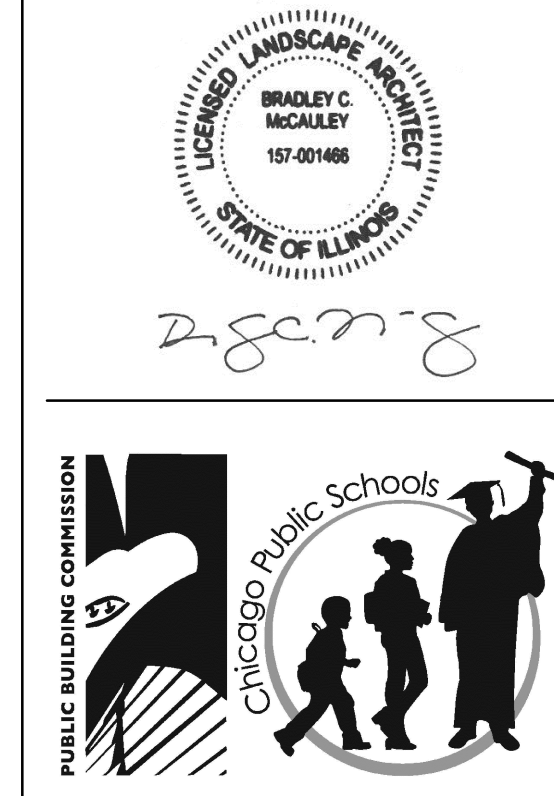
- GENERAL FENCING NOTES:**
- PROVIDE 3-HEAVY DUTY BARREL HINGES W/ 5/8" DIAMETER STAINLESS STEEL PINS, BALL BEARINGS & GREASE FITTINGS (90° OPENING), W/ MEANS OF ANCHORING GATE IN OPEN POSITION AGAINST FENCE.
 - PROVIDE 2-3/4" SQUARE LOCKING CANES IN 1/8" THICK SLEEVES WELDED TO FENCE POST.
 - PROVIDE 1-HORIZONTAL CANE NEAR TOP OF GATE & 1-VERTICAL CANE TO LOCK TO A DEPTH OF 4" INTO 1'-0"x1'-0"x1'-0" CONCRETE EXTENSION OF FENCE POST FOOTING.
 - PROVIDE 3/4" STOPS TO HOLD CANES IN OPEN AND CLOSED POSITIONS.
 - CONTRACTOR TO VERIFY STRUCTURAL DESIGN OF FENCING AS PER CITY OF CHICAGO BUILDING CODE ARTICLE 15 FENCES 15-96-150 WIND LOAD. FENCES SHALL BE DESIGNED AND CONSTRUCTED TO RESIST A HORIZONTAL WIND PRESSURE OF NOT LESS THAN 90 POUNDS PER SQUARE FOOT IN ADDITION TO ALL OTHER FORCES TO WHICH THEY MAY BE SUBJECTED.
 - SUBMIT COMPLETE FABRICATION AND INSTALLATION DRAWINGS. SHOW PLAN LAYOUT INCLUDING LOCATION OF FENCING AND GATE POSTS, ADJUSTMENT PANELS AND DETAILS OF POST INSTALLATION, EXPANSION JOINTS AND WELDING DETAILS.
 - MAINTAIN CONSISTENT ELEVATION OF TOP RAIL FOR FENCE PANEL AND GATES.
 - PROVIDE LOCKING CANE RECEIVER FOOTING IN BOTH OPEN & CLOSE POSITIONS (TWO TYP FOR EACH DOUBLE GATE FULLY OPENED).
 - FOR SWING GATES GREATER THAN 8'W PROVIDE CROSS BRACING PER MANUFACTURERS RECOMMENDATIONS.
 - PROVIDE ACCESSIBLE LEVERED HARDWARE ACCORDING TO ADAAG 404.2 STANDARDS.
 - ALL FENCE OPERABLE HARDWARE SHALL COMPLY WITH ANSI A117.1-2003 SECTION 3094 OPERATION AND 3093 HEIGHT AND 3092 CLEAR FLOOR SPACE, AND CPS CHILDRENS STANDARDS.



6 BIKE RACK DETAIL
1/2" = 1'-0"



7 5'H ORNAMENTAL METAL DOUBLE SWING GATE ELEVATION
1/2" = 1'-0"



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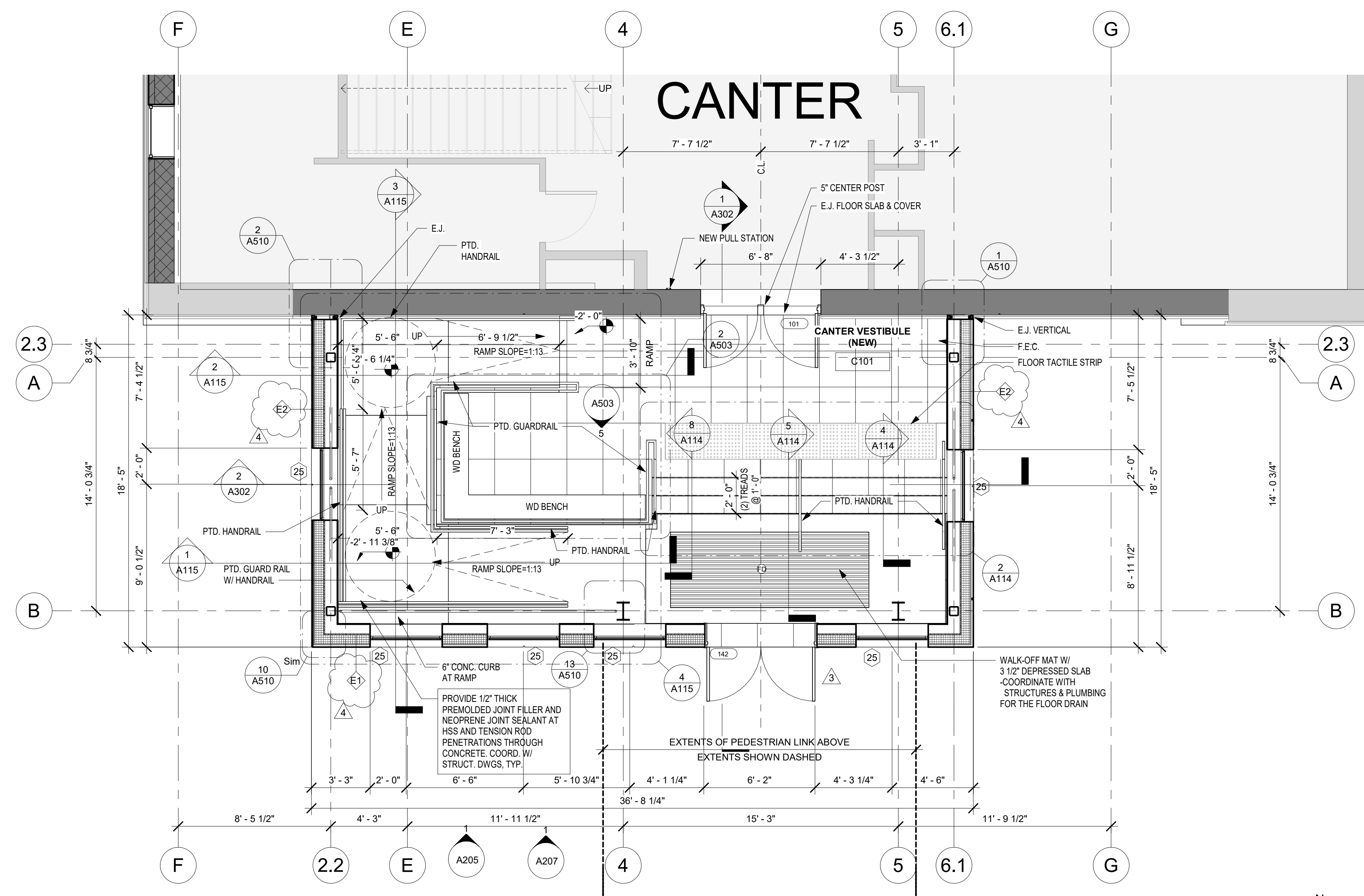
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PBC Project Name: Kenwood Academy Link -MEP
PBC Contract No: C1602R
Project No.: 05328

Title: SITE FENCING AND FURNISHING DETAILS

Sheet: L504



2 ENLARGED PARTIAL PLAN - FIRST FLOOR - CENTER
A109(A110) 1/4" = 1'-0"

GENERAL NOTES

1. GLAZING BASIS OF DESIGN: VITRO SOLARBAN 60, ALU. WINDOW "WAUSAU"
2. METAL PANEL BASIS OF DESIGN: ATAS-OMAWALL
3. REFERENCE ARCH, LIFE SAFETY & STRUCT DWGS FOR ADD. INFO REGARDING DESIGNATED FIRE RATED SEPARATIONS & LOCATIONS OF STRUCTURAL COMPONENTS IDENTIFIED AS RECEIVING INTUMESCENT PAINT OR SPRAYED-ON FIREPROOFING.
4. BUILT-UP, MOD. BITUMEN ROOFING SYSTEM
5. ROOF SLOPE = 1/4" PER 1'-0, MIN
6. MTL. COPING TO BE PROVIDED BY MTL. PANEL MANUF.
7. ROOF DRAIN (R.D.) ARE TYPICALLY ABOVE ROOF DECKING.
8. SEE SHEET A-601 FOR WINDOW SCHEDULE.
9. FOR HANDRAIL DETAILS SEE ADA SHEETS ADA.05 & ADA.06

APPLICABLE BUILDING CODES

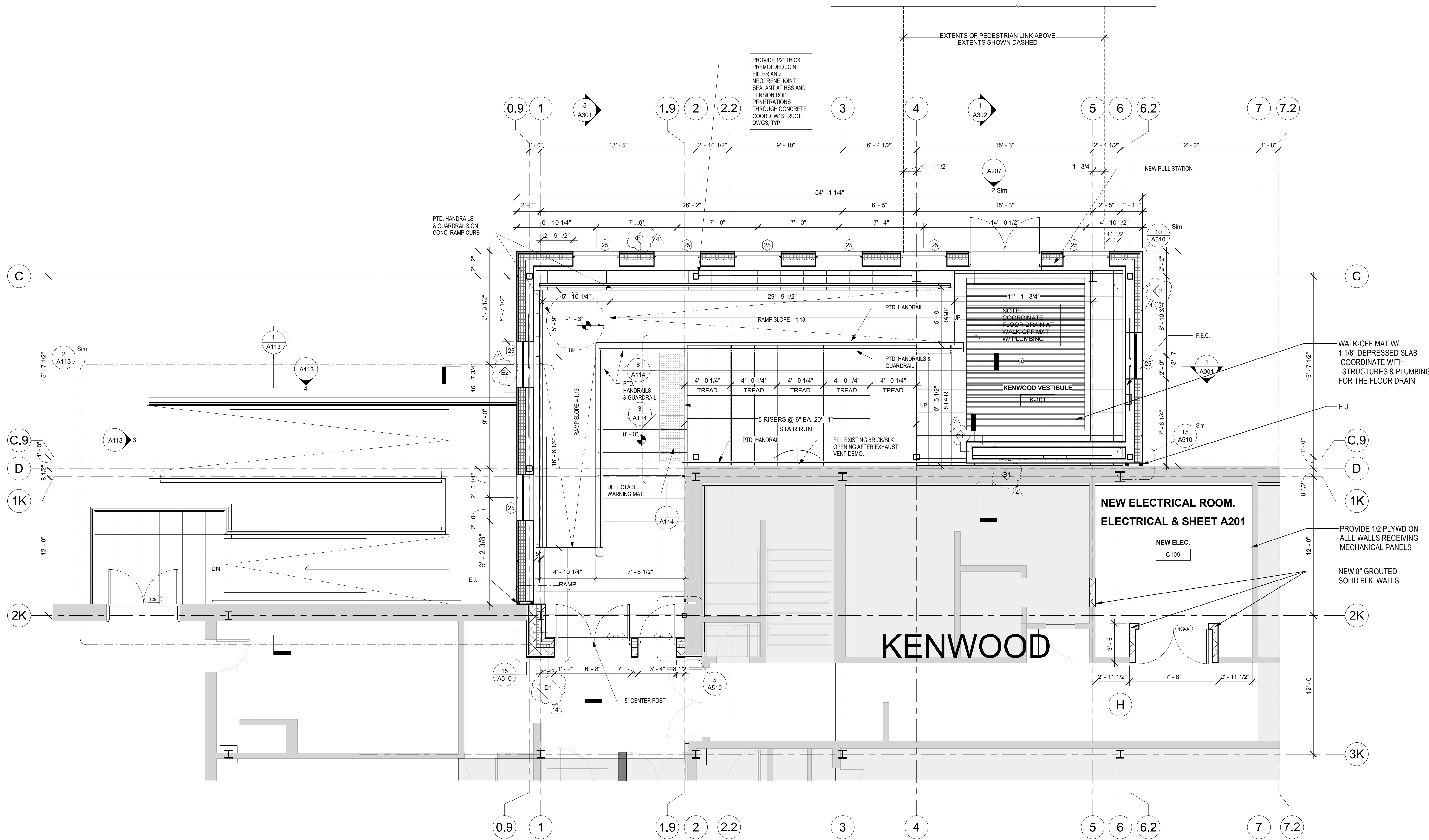
- ADA 2018 STANDARDS
- ILLINOIS ACCESSIBILITY CODE 2018
- CBC 2019 - CHAPTER 11; 14b
- ICC A117.1-2017
- 2021 IECC REQUIRED; ROOFS = R- 30, WALLS = R- 23
- ACTUAL: ROOFS = R- 30, WALLS = R- 40.79

- MINIMUM ROOF SLOPE = 1/4" : 1'-0"

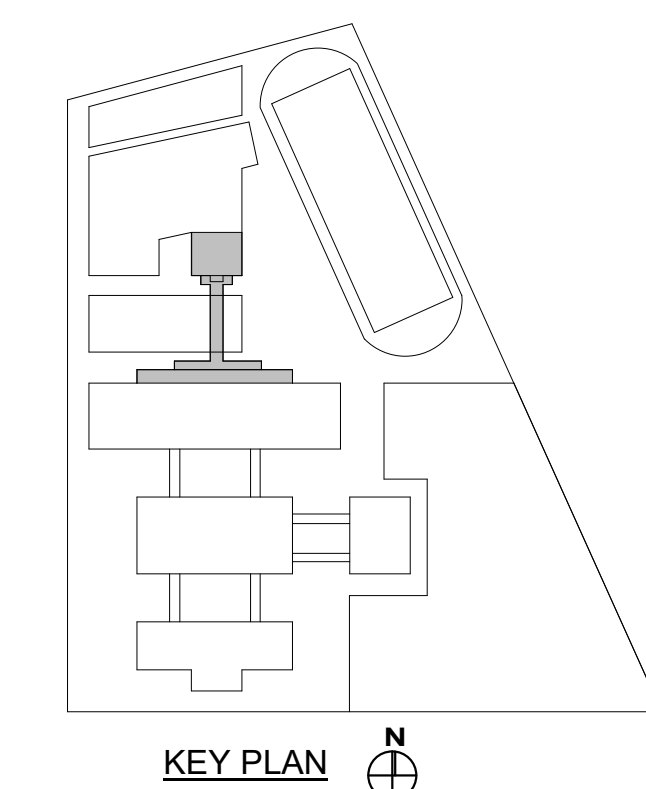
• NOTE: ALL EXPOSED STRUCTURAL STEEL IS TO BE PAINTED WITH INTUMESCENT PAINT

NOTE ON KENWOOD M.E.P. SCOPE

1. REFER TO SHEETS A201 AND A202 FOR SCOPE OF WORK RELATED TO MEP PORTION OF THE PROJECT INCLUDING, BUT NOT LIMITED TO, WORK RELATED TO FINISHES, FLOORS, AND CEILINGS.
2. REFER TO ELECTRICAL, MECHANICAL AND PLUMBING SHEETS FOR SCOPE OF WORK RELATED TO THOSE TRADES
3. PATCH EXISTING FINISHES AS NEEDED WHERE AFFECTED BY LINK OR MEP WORK.



1 ENLARGED PARTIAL PLAN - FIRST FLOOR - KENWOOD
A109(A110) 1/4" = 1'-0"



**KENWOOD ACADEMY
LINK + MECHANICAL PROJECT**
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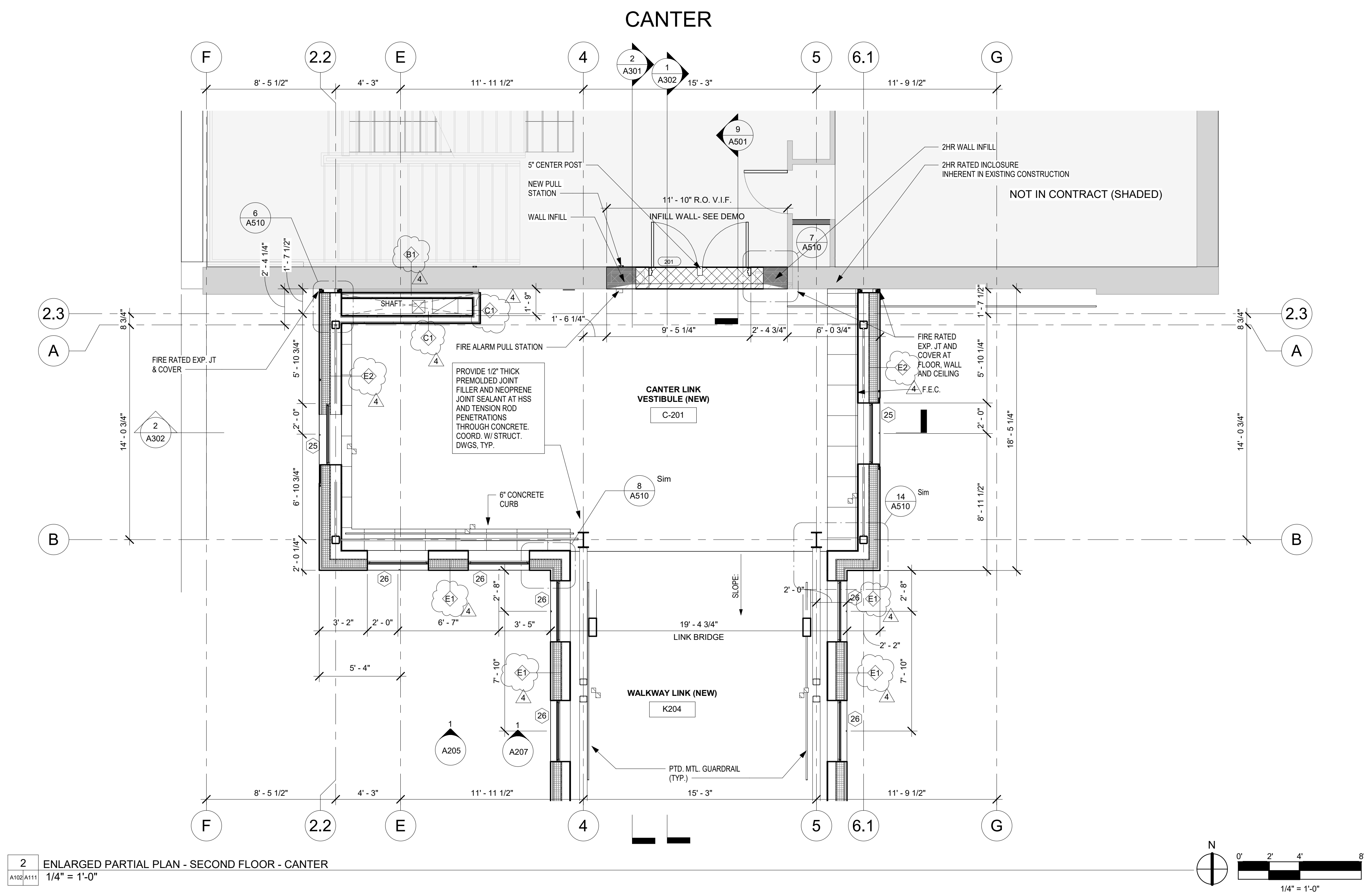
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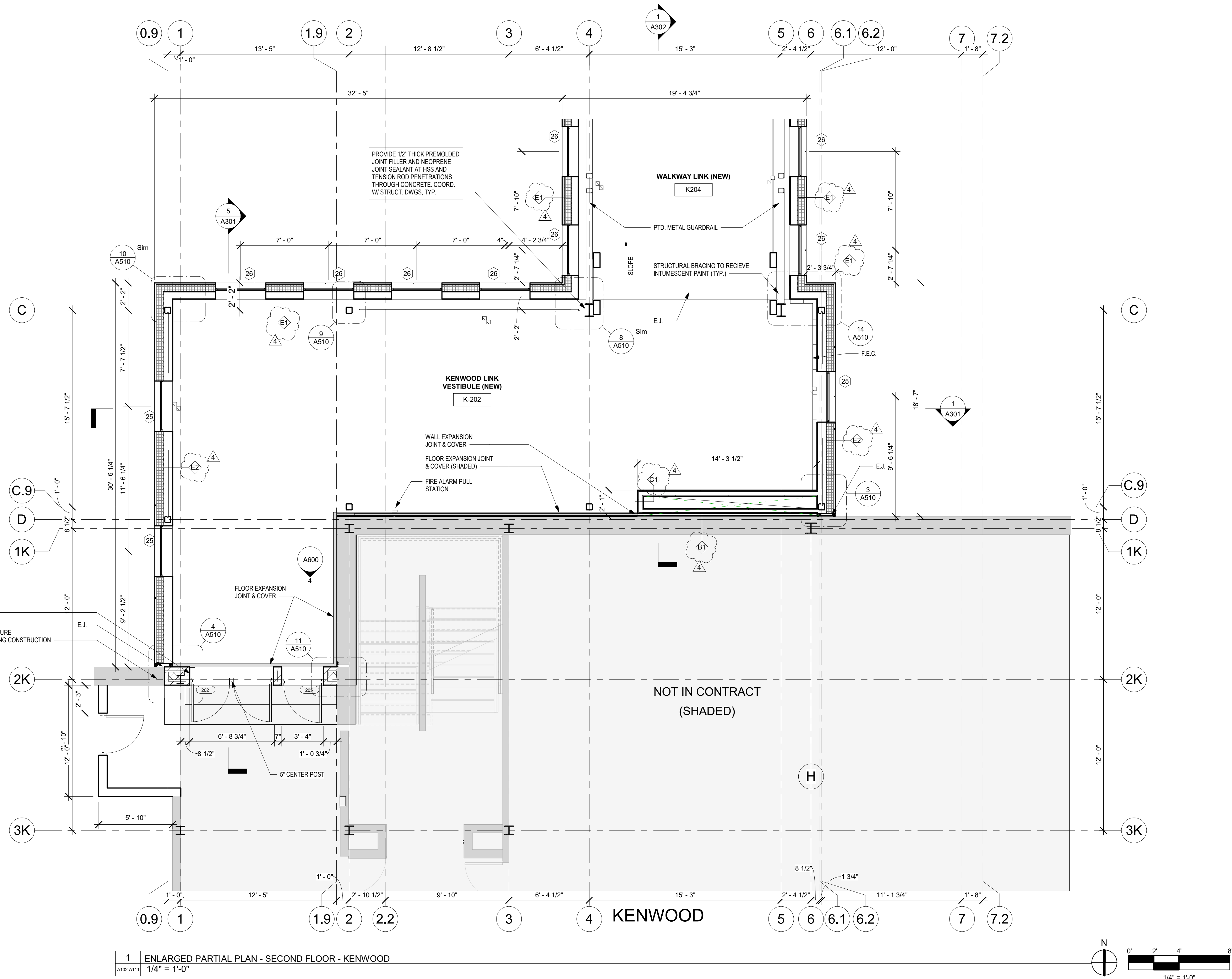
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PBC Project Name: Kenwood Academy Link & Mechanical
PBC Contract No.: C1802R
Project No.: 05328
Title: ENLARGED PARTIAL PLAN - FIRST FLOOR

Sheet
A110



2 ENLARGED PARTIAL PLAN - SECOND FLOOR - CANTER
1/4" = 1'-0"



1 ENLARGED PARTIAL PLAN - SECOND FLOOR - KENWOOD
1/4" = 1'-0"

GENERAL NOTES

- GLAZING BASIS OF DESIGN: VITRO SOLARBAN 60, ALU. WINDOW "WAUSAU"
- METAL PANEL BASIS OF DESIGN: ATAS-OMAWALL
- REFERENCE ARCH, LIFE SAFETY & STRUCT DWGS FOR ADD. INFO REGARDING DESIGNATED FIRE RATED SEPARATIONS & LOCATIONS OF STRUCTURAL COMPONENTS IDENTIFIED AS RECEIVING INTUMESCENT PAINT OR SPRAYED-ON FIREPROOFING.
- BUILT-UP, MOD. BITUMEN ROOFING SYSTEM
- ROOF SLOPE = 1/4" PER 1'-0, MIN
- MTL. COPING TO BE PROVIDED BY MTL. PANEL MANUF.
- ROOF DRAIN (R.D.) ARE TYPICALLY ABOVE ROOF DECKING. SEE SHEET A-601 FOR WINDOW SCHEDULE.
- FOR HANDRAIL DETAILS SEE ADA SHEETS ADA.05 & ADA.06

APPLICABLE BUILDING CODES

- ADA 2018 STANDARDS
- ILLINOIS ACCESSABILITY CODE 2018
- CBC 2019 - CHAPTER 11; 14b
- ICC A117.1-2017
- 2021 IECC REQUIRED; ROOFS = R- 30, WALLS = R- 23
- ACTUAL: ROOFS = R- 30, WALLS = R- 40,79

- MINIMUM ROOF SLOPE = 1/4" : 1'-0"

- NOTE: ALL EXPOSED STRUCTURAL STEEL IS TO BE PAINTED WITH INTUMESCENT PAINT

NOTE ON KENWOOD M.E.P. SCOPE

- REFER TO SHEETS A201 AND A202 FOR SCOPE OF WORK RELATED TO MEP PORTION OF THE PROJECT INCLUDING, BUT NOT LIMITED TO, WORK RELATED TO FINISHES, FLOORS, AND CEILINGS.
- REFER TO ELECTRICAL, MECHANICAL AND PLUMBING SHEETS FOR SCOPE OF WORK RELATED TO THOSE TRADES
- PATCH EXISTING FINISHES AS NEEDED WHERE AFFECTED BY LINK OR MEP WORK.



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LINK + MECHANICAL PROJECT
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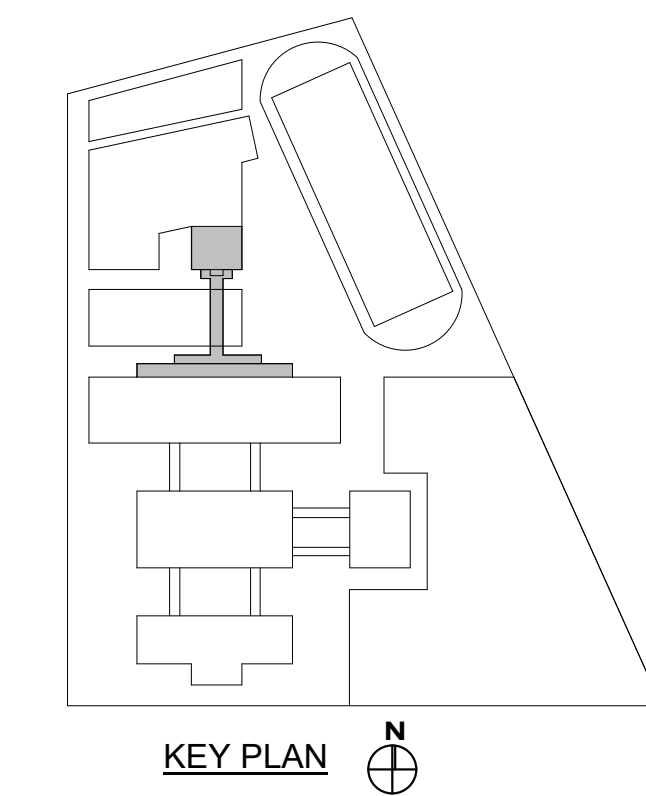
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2	02.08.24	ISSUED FOR BID
1	02.02.24	ISSUED FOR PERMIT

PBC Project Name: Kenwood Academy Link & Mechanical
PBC Contract No: C1802R
Project No: 05328
Title: ENLARGED PLAN - SECOND FLOOR

NOTE: REFERENCE ELECTRICAL, MECHANICAL AND PLUMBING SHEETS FOR ADDITIONAL SCOPE RELATED TO THE KENWOOD MEP PORTION OF THE PROJECT

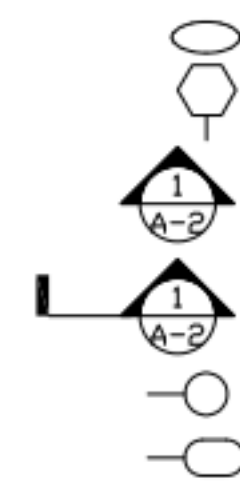
ABBREVIATIONS

AD	Area drain	MFR	Manufacturer
ADJ	Adjacent Finish	MH	Membrane
AFP	Above Finished Floor	MIN	Minimum
ALS	Acrylic Latex Sealant	MISC	Miscellaneous
ALUM	Aluminum	MO	Masonry Opening
ANOD	Anodized	MTL	Metal
APP	Access Panel	NC	Noise Criteria
APPROX	Approximately	NIC	Not in Contract
ARCH	Architectural	NO	Number
AS	Acoustical Sealant	NOM	Nominal
ATB	Acoustic Tile	NTS	Not To Scale
B/	Bottom Of	OA	Overall
BJF	Bituminous Joint Filler	OC	On Center
BLK	Block (Wood Blocking)	OD	Outside Diameter
BMT	Butylmatic Tape Sealant	OPNG	Opening
BRK	Brick	OPP	Opposite
BRS	Butyl Rubber Sealant	PARTN	Partition
C/C	Center to Center	PBR	Preshimmed Butyl Mastik
CJ	Control Joint	PL	Perpendicular
CJF	Control Joint Filler	PLM	Plastic
CL	Center Line	PLG	Plastic Laminate
CLO	Closet	PLP	Plumbing
CLOG	Ceiling	PLW	Plywood
COL	Clear Opening	PR	Pair
COL	Column	PREFAB	Prefabricated
CONC	Concrete	PSF	Pounds Per Square Foot
CONCP	Concrete Painted	PSI	Pounds Per Square Inch
CONS	Construction	2-PUMS	Polyurethane Sealant (Two Part)
CONTR	Contractor	PTD	Painted finish Required
CONT	Continuous	PVT	Painted finish Polyvinylidene Finish
CORR	Corridor	QT	Quarry Tile
CPT	Carpet (Wall to Wall)	QTY	Quantity
CMU	Concrete Masonry Unit	QUANT	Quantity
CMUP	Concrete Masonry Units Painted		
CO	Clean Out	RD	Roof Drain
CT	Ceramic Tile	REF	Reference
DF	Drinking Fountain	REIN	Reinforced
DIA	Diameter	REQ'D	Required
DIM	Dimension	REV	Revision
DN	Down	RM	Room
DTL	Detail	RO	Rough Opening
DW	Dry Wall	SECT	Section
DWP	Dry Wall Painted	SHT	Sheet
EA	Each	SIM	Similar
EC	Exposed Construction	SPEC	Specification
ECP	Exposed Construction Painted	SD	Square
EFIS	Expanding Foam Tape Sealant	SS	Stainless Steel
FEC	Fire Extinguisher Cabinet	SRS	Silicone Rubber Sealant
GA	Gauge	SSS	Silicone Sanitary Sealant
GALV	Galvanized	ST	Sealant Tape
GB	Glazed Block	STD	Standard
GC	General Contractor	STL	Steel
GL	Glass	STR	Strap
GRND	Ground	STRUCT	Structural
HDW	Hardware	SUSP	Suspended
HNCO	Hollow Neoprene Compression Gasket	T	Tread
HORIZ	Horizontal	T/O	Top Of
HM	Hollow Metal	TEL	Telephone
HP	High Point	THK	Thick
HR	Hours	TT	Traffic Topping Typical
HT	Height	UNO	Unless Otherwise Noted
ID	Inside Diameter	VERT	Vertical
IN	Inch	VEST	Vestibule
INFO	Information	VF	Verify in Field
INSUL	Insulation	VCT	Vinyl Composition Tile
INT	Interior	VWC	Vinyl Wall Covering
JC	Janitors Closet	W/	With
LAM	Laminated	WC	Water Closet
LAY	Layover	WD	Wood
LP	Low Point	WP	Work Point
MACH	Machine	WPR	Waterproofing
MATL	Material	WVNR	Wood Veneer
MAX	Maximum		
MECH	Mechanical		
MED	Medium		

MATERIAL SYMBOLS

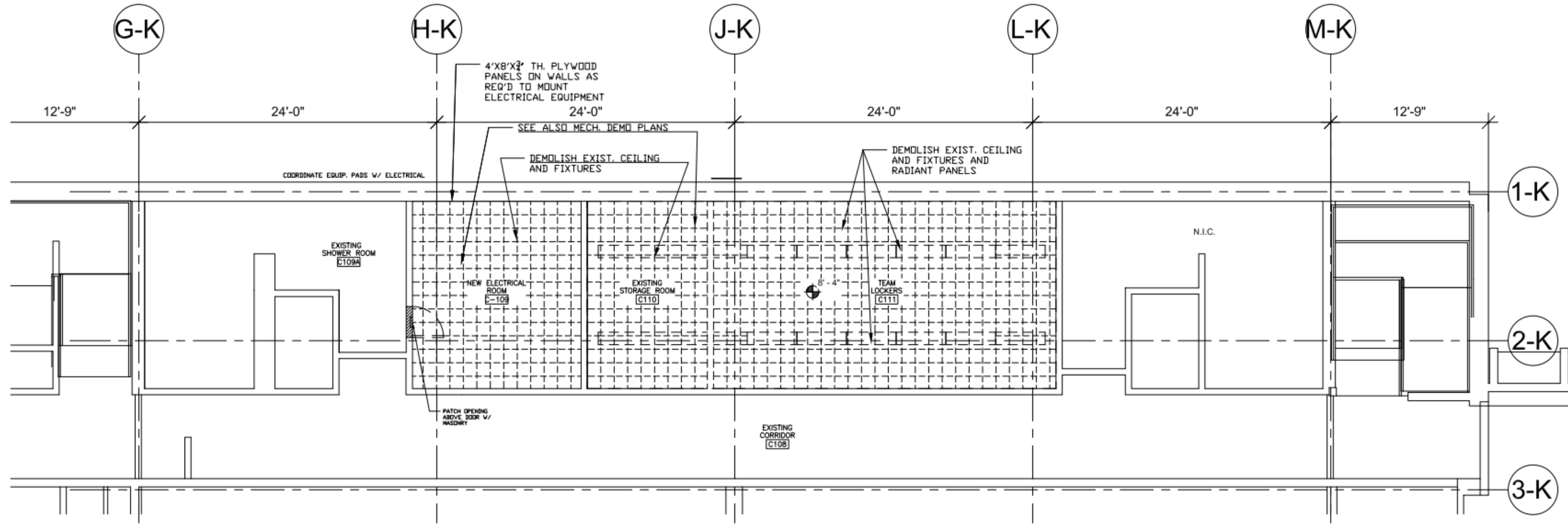


SYMBOL

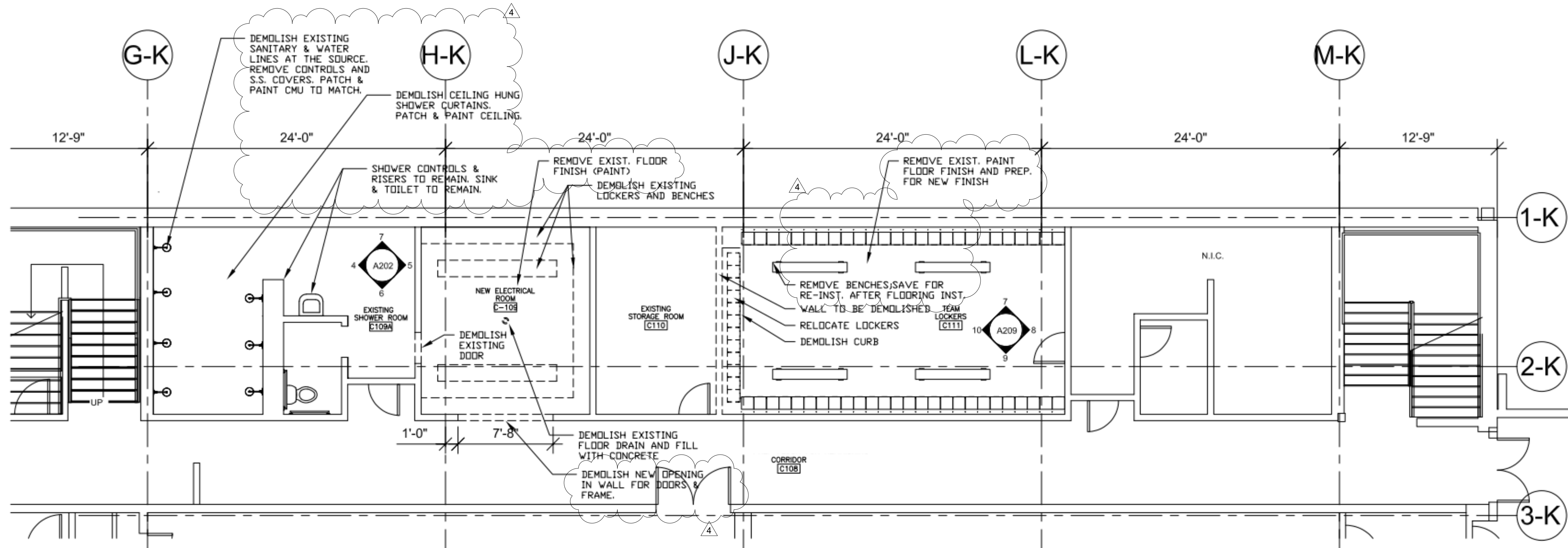


GENERAL NOTES - DEMOLITION FLOOR PLANS

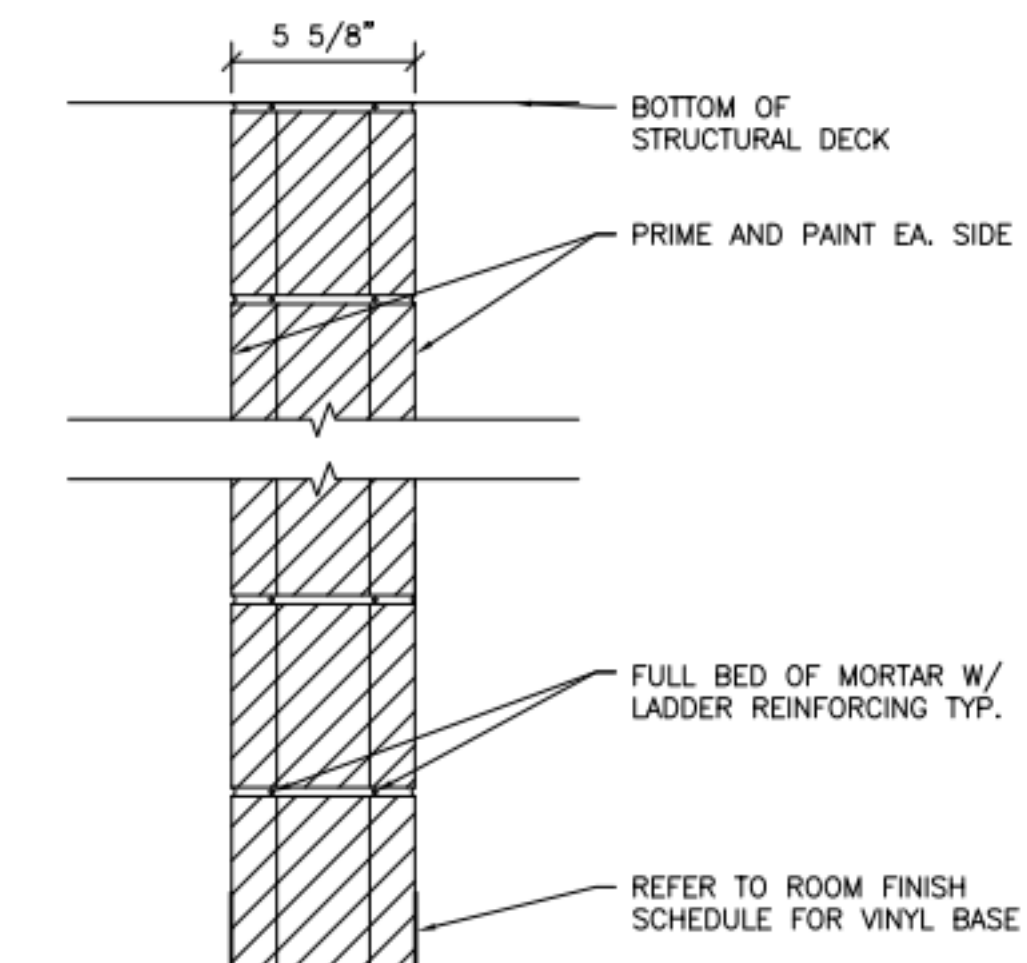
- DASHED LINES INDICATE AREA TO BE DEMOLISHED.
- REMOVE GRABBERS IN NEW TRAINER'S ROOM.
- CUT 18" x 18" HOLE IN WEST WALL OF TRAINER'S ROOM TO UNDERSIDE OF STAIR. RE-ROUTE EXHAUST DUCT THRU FIRECAULK AROUND OPENING. CUT 18" x 18" HOLE THROUGH NORTH WALL OF TRAINER'S ROOM FOR EXHAUST RE-ROUTE. FIRECAULK OPENING. COORDINATE W/ LINK PROJECT EXHAUST TO ROOF. SEE ALSO SHEET M103-LINK PROJECT.
- CONTRACTOR TO REVIEW ALL EXISTING CONDITIONS IN EXISTING DRAWINGS TO ESTIMATE COST OF DEMOLITION IN EACH BUILDING, CENTER AND KENWOOD-BUILDING C.
- CONTRACTOR TO BE CAREFUL NOT TO DISTURB, DISRUPT OR DAMAGE EXISTING FOUNDATIONS ON EITHER BUILDING EXCEPT WHERE NECESSARY TO BUILD NEW FOUNDATIONS & FOOTINGS FOR NEW FOUNDATIONS. SEE STRUCTURAL.



2 ENLARGED DEMO RCP
3/16" = 1'-0"



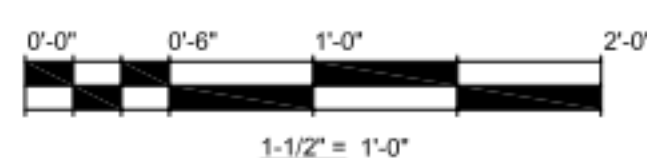
2 ENLARGED DEMO FLOOR PLAN
3/16" = 1'-0"



TYPE	GAGE	SIZE	SPACING
X	N/A	N/A	N/A

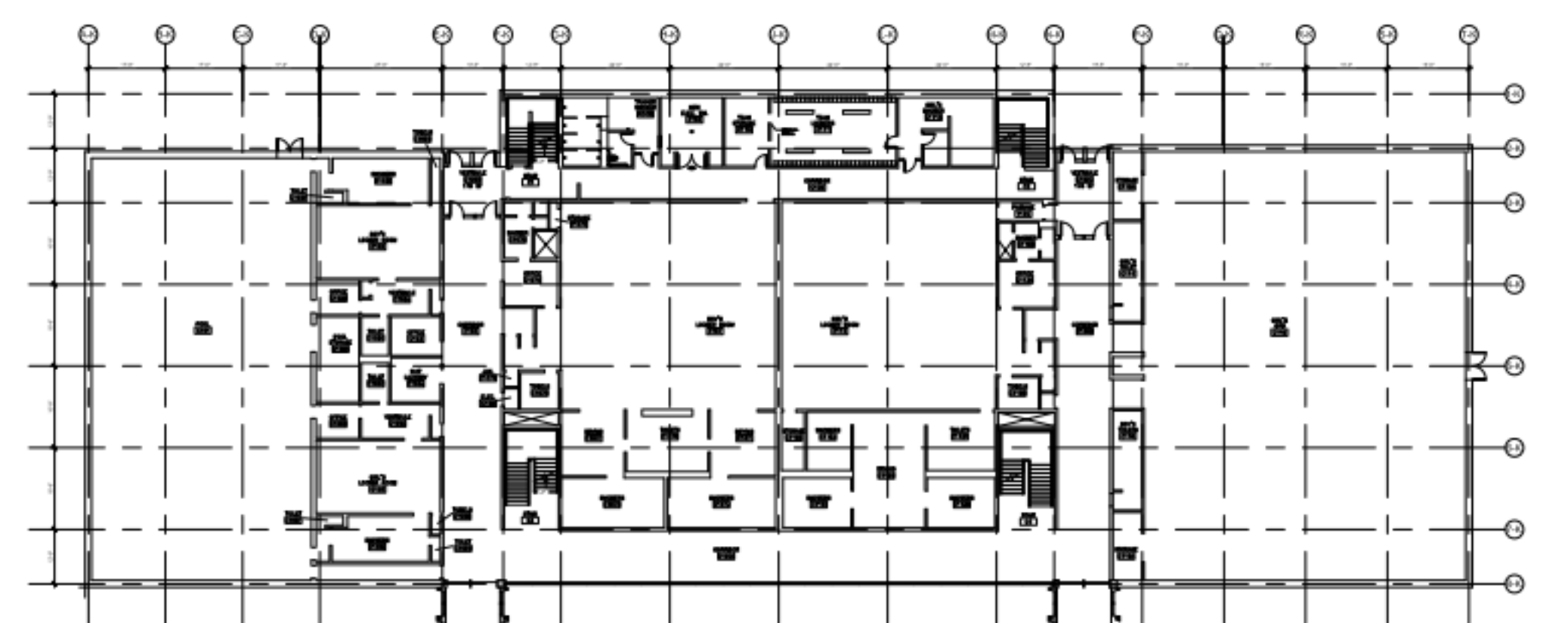
MAX. HT. # PSF	FIRE UL NO.	RATING	WALL THK.
N/A	1906	2HR	5-5/8"

1 WALL TYPE 1
1/12" = 1'-0"

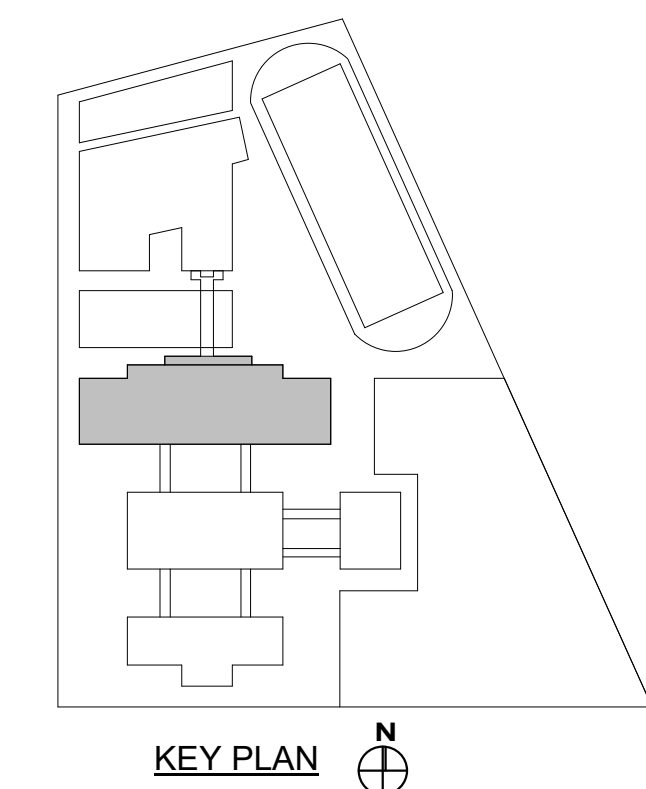


DOOR NO.	ROOM NAME	DOOR		FRAME		DETAIL			REMARKS	
		DOOR OPENING SIZE	TYPE	MATL.	FINISH	HEAD	JAMB	SILL		
108A	ELECTRICAL ROOM	6'-0" x 7'-0"	1	MTL	PTD	1	MTL	PTD	111	8

LEGEND	ROOM NAME	WALL FINISH				BASE FINISH	CEILING		FLOOR FINISH	REMARKS
		NORTH	SOUTH	EAST	WEST		FINISH	HEIGHT AFF.		
C-109	ELECTRICAL	PT-1	PT-1	PT-1	PT-1	MATCH EXIST.	EXPOSED	---	PT-2	REMOVE EXISTING FLOOR FINISH
C-108A	TRAINER ROOM	TILE	TILE	TILE	TILE	MATCH EXIST.	EXPOSED	---	TILE	SEE SPECIFICATIONS FOR TILES
C-111	TEAM LOCKERS	PT-1	PT-1	PT-1	PT-1	MATCH EXIST.	2X2 ACT	8'-4"	TILE	SEE SPECIFICATIONS FOR TILES



1 OVERALL BUILDING 'C' 1ST FLOOR PLAN
1/32" = 1'-0"



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No.	Date	Description
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3	02.23.24	ADDENDUM #1
2	02.08.24	ISSUED FOR BID
1	02.02.24	ISSUED FOR PERMIT

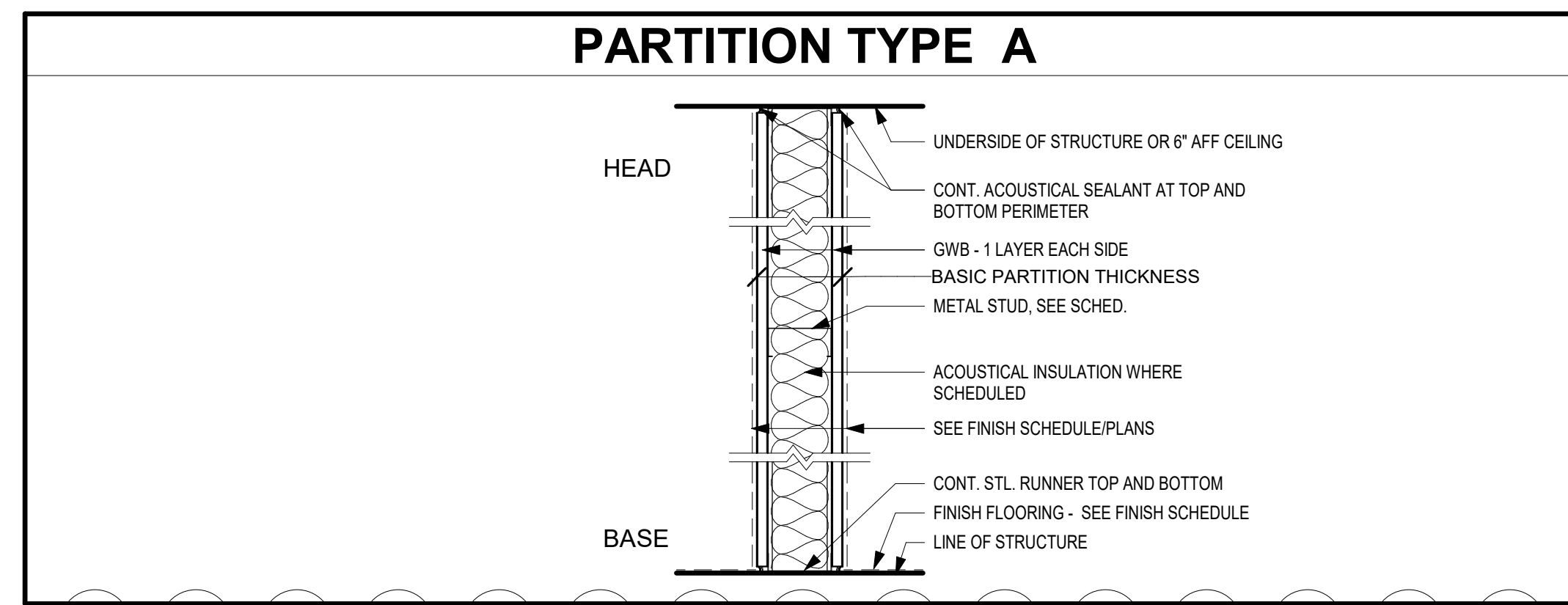
PBC Project Name: Kenwood Academy Link & Mechanical
PBC Contract No.: C1602R
Project No.: 0528

ENLARGED E.L.C. ROOM PLAN, SCHEDULES AND DETAILS

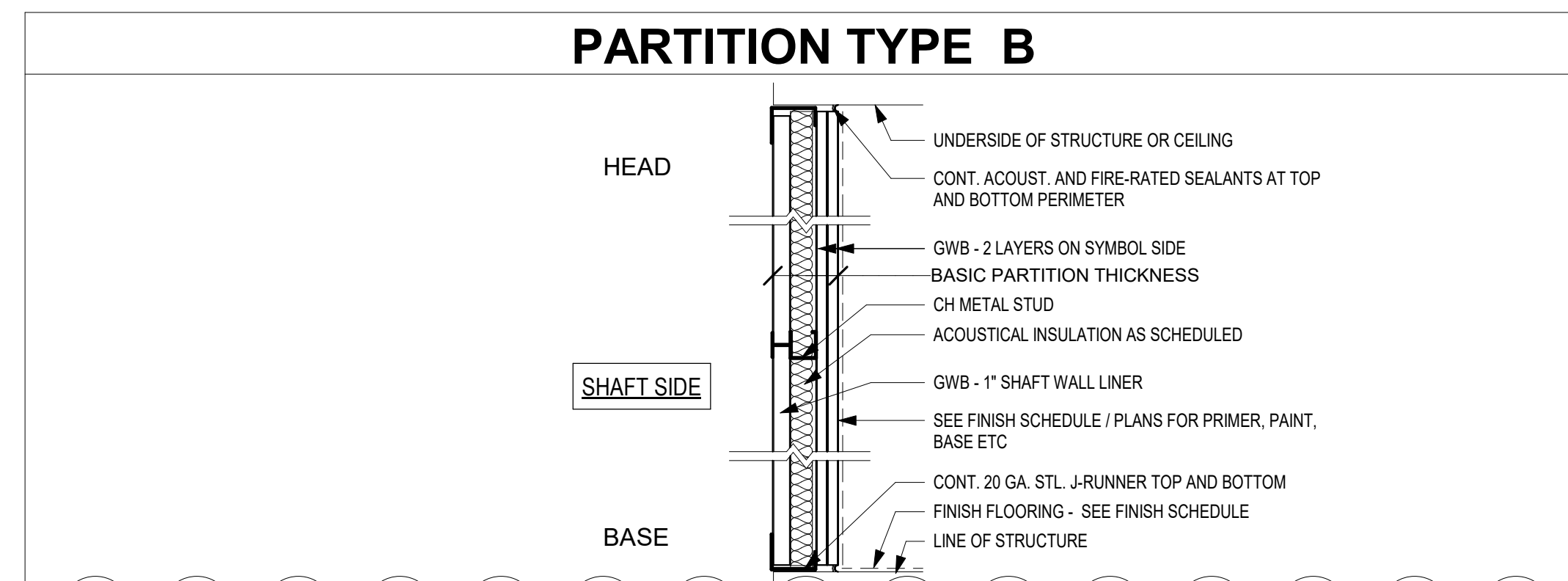
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A201

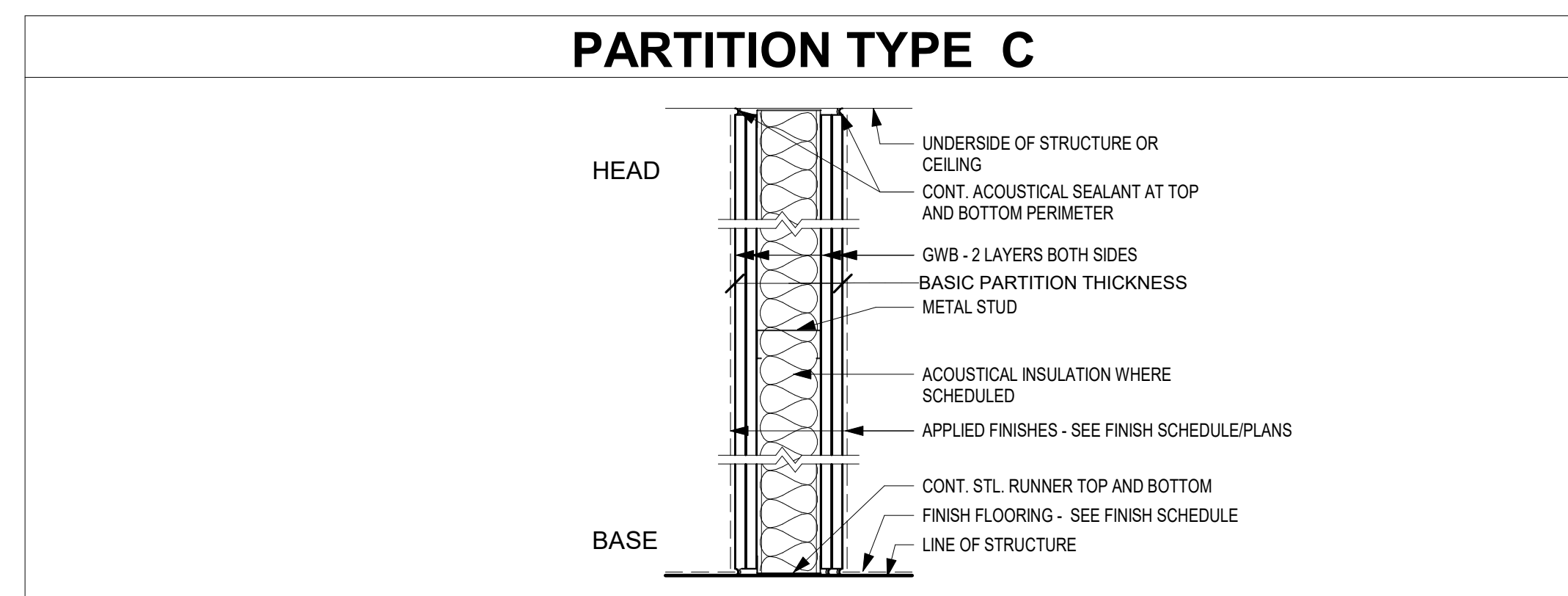
NOTE: CONTRACTOR SHALL VERIFY ALL EXISTING SITE CONDITIONS AND CHECK PROJECT DIMENSIONS.



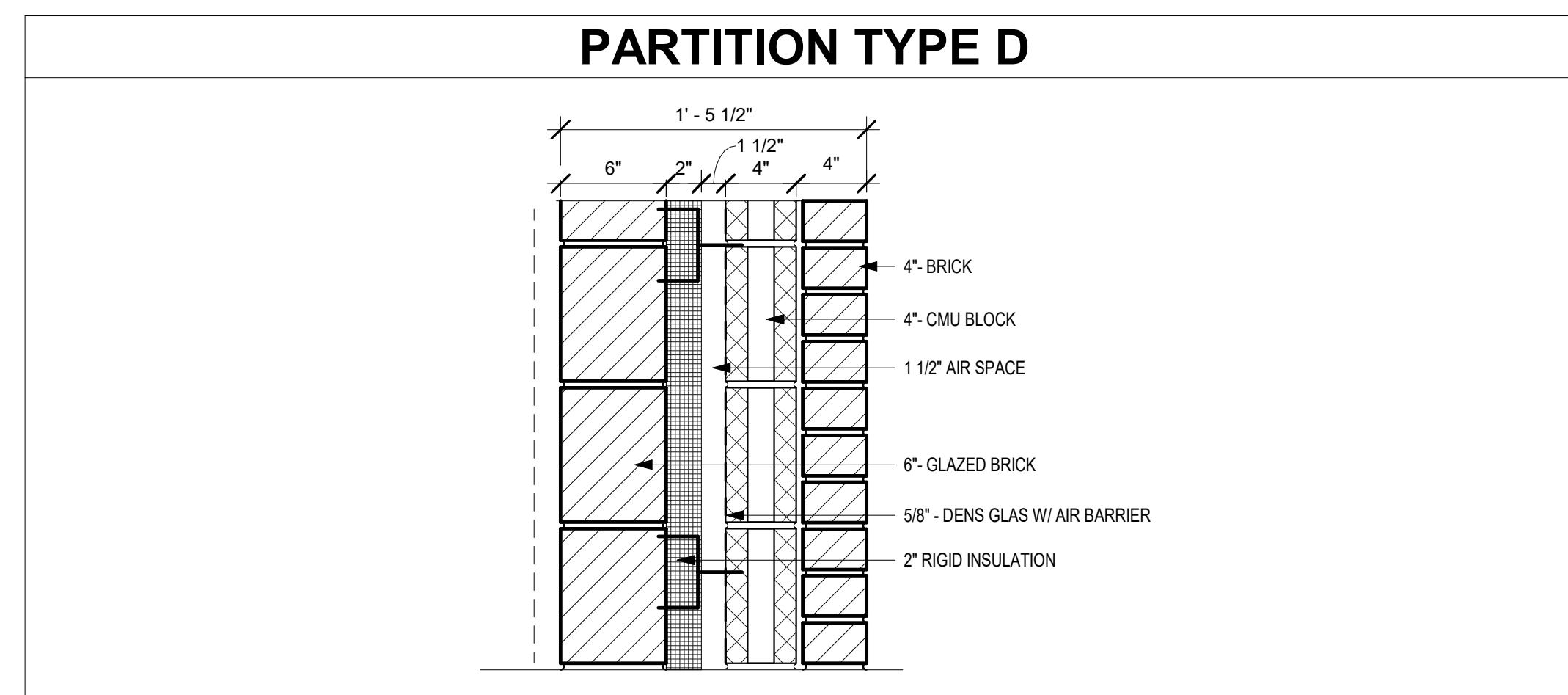
PARTITION A WALL SCHEDULE										
WALL TYPE	STUD WIDTH (IF APPLICABLE)	WALL WIDTH	STUDS TO STRUCTURE ABOVE (SEE DETAILS)		FIRE RATING	FIRE TEST #	ACOUSTICAL INSULATION	STC #	ACOUSTICAL TEST #	COMMENTS / REMARKS
			GWB TO STRUCTURE	GWB 6\"/>						
A		0' - 5 1/4"								



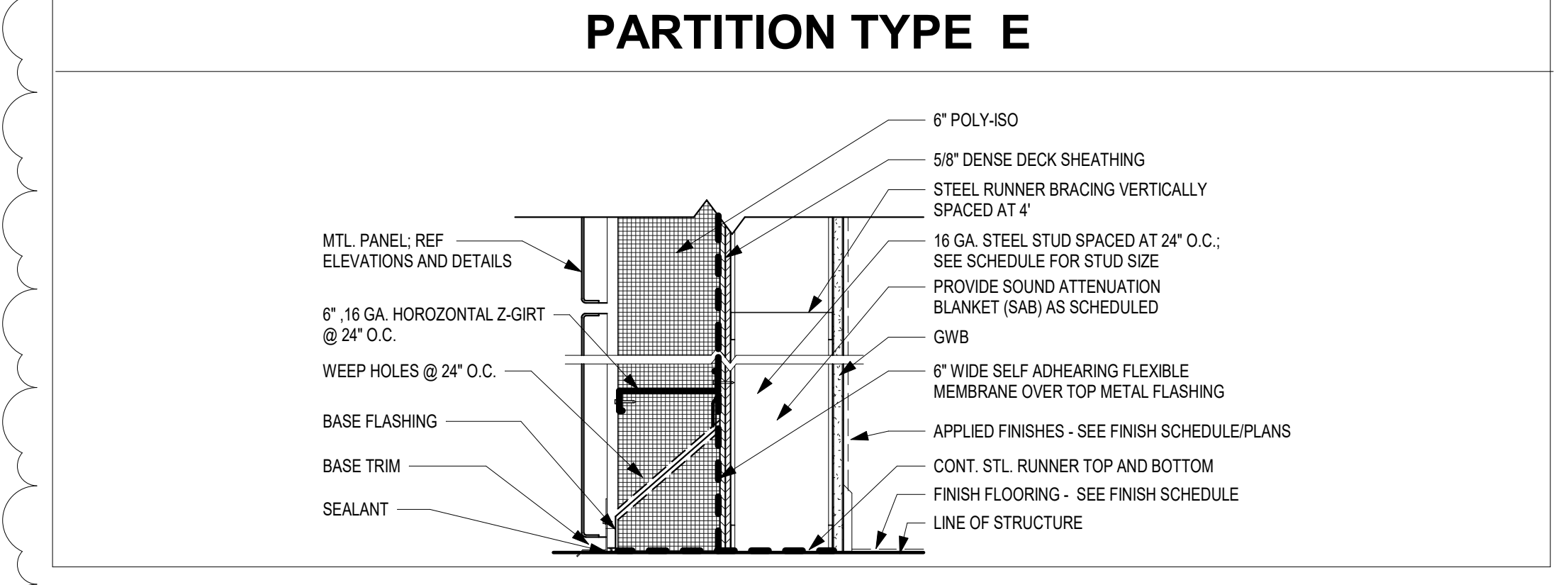
PARTITION B WALL SCHEDULE										
WALL TYPE	STUD WIDTH (IF APPLICABLE)	WALL WIDTH	STUDS TO STRUCTURE ABOVE (SEE DETAILS)		FIRE RATING	FIRE TEST #	ACOUSTICAL INSULATION	STC #	ACOUSTICAL TEST #	COMMENTS / REMARKS
			GWB TO STRUCTURE	GWB 6\"/>						
B1	0' - 2 1/2"	0' - 4 1/2"	X		2 HR	UL DES 415 SYSTEM B	Yes	43	USG 040912	



PARTITION C WALL SCHEDULE										
WALL TYPE	STUD WIDTH (IF APPLICABLE)	WALL WIDTH	STUDS TO STRUCTURE ABOVE (SEE DETAILS)		FIRE RATING	FIRE TEST #	ACOUSTICAL INSULATION	STC #	ACOUSTICAL TEST #	COMMENTS / REMARKS
			GWB TO STRUCTURE	GWB 6\"/>						
D1	0' - 3 5/8"	0' - 6 1/8"	X		2 HR	UL DES U423	Yes	58	RAL-TL-84-136	



PARTITION D WALL SCHEDULE										
WALL TYPE	STUD WIDTH (IF APPLICABLE)	WALL WIDTH	STUDS TO STRUCTURE ABOVE (SEE DETAILS)		FIRE RATING	FIRE TEST #	ACOUSTICAL INSULATION	STC #	ACOUSTICAL TEST #	COMMENTS / REMARKS
			GWB TO STRUCTURE	GWB 6\"/>						
D1	0' - 4"	1' - 7 1/2"			2 HR					



PARTITION E WALL SCHEDULE										
WALL TYPE	STUD WIDTH (IF APPLICABLE)	WALL WIDTH	STUDS TO STRUCTURE ABOVE (SEE DETAILS)		FIRE RATING	FIRE TEST #	ACOUSTICAL INSULATION	STC #	ACOUSTICAL TEST #	COMMENTS / REMARKS
			GWB TO STRUCTURE	GWB 6\"/>						
E1	0' - 6"	1' - 3 1/2"					Yes			
E2	0' - 8"	1' - 5 1/2"					Yes			

PARTITION GENERAL NOTES

1. GENERAL
 - A. REFERENCE ROOM FINISH SCHEDULE FOR BASES AND FINAL FINISHES NOT SHOWN ON PARTITION TYPES
2. FRAMING
 - A. ALL BEARING PARTITIONS SHALL BE CONSTRUCTED PER STRUCTURAL DRAWINGS AND SPECIFICATIONS.
 - B. ALL NON-BEARING PARTITIONS SHALL BE CONSTRUCTED TO LIMIT DEFLECTION TO L/240 WITH UNIFORM P.P.S.F. UNIFORM LOADING.
 - C. PROVIDE DOUBLE FRAMING AT ALL LIMBS OF FRAMES AND CASED OPENINGS.
 - D. ISOLATE NON-BEARING FRAMING FROM STRUCTURAL ELEMENTS TO PREVENT THE TRANSFER OF LOADS TO PARTITION FRAMING.
 - E. WHERE CONTROL JOINTS ARE REQUIRED BASED ON SPECIFIED FREQUENCY, AND ARE NOT SHOWN ON INTERIOR ELEVATIONS, LOCATE CONTROL JOINTS ON BOTH THE STRIKE AND SWING SIDE OF DOORS. WHEN PROVIDING CONTROL JOINTS AT DOORS DOES NOT MEET THE SPECIFIED FREQUENCY, PROVIDE DOUBLE STUD CONTROL JOINT CONSTRUCTION AND VERIFY LOCATION WITH THE ARCHITECT.
 - F. SCREW ATTACHMENT OF STUDS TO RUNNER TRACKS TO OCCUR ON BOTH SIDES.
 - G. PROVIDE ADEQUATE SHEET METAL OR STEEL BACKING FOR ALL WALL MOUNTED ARCHITECTURAL WOODWORK, FINISH CARPENTRY, TOILET PARTITIONS AND ACCESSORIES, RAILINGS AND SIMILAR MOUNTED ITEMS.
 - H. ALL FRAMING SHALL COORDINATE WITH ALL BUILDING TRADES INCLUDING BUT NOT LIMITED TO MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION.
3. GYPSUM BOARD
 - A. ITEMS SHOWN OR SCHEDULED TO BE SEAM OR RECESSED SHALL BE INSTALLED FLUSH WITH THE FINISH FACE OF PARTITIONS UNLESS OTHERWISE NOTED. PARTITION DEPTH OR TYPE SHALL BE ADJUSTED TO ACCOMMODATE THE DEPTH OF RECESSED ITEM OR AS DIRECTED BY THE ARCHITECT.
 - B. PROVIDE CEMENTITIOUS BACKER BOARD AT ALL SHOWER LOCATIONS AND WATER-RESISTANT BACKER BOARD AT ALL OTHER LAVATORY AND TOILET LOCATIONS.
4. FIRE RATED PARTITIONS
 - A. PROVIDE PERMANENTLY STENCILED IDENTIFICATION ABOVE THE CEILING AT 4' 0" O.C. ON ALL CORRIDOR PARTITIONS, SMOKE PARTITIONS, HORIZONTAL EXIT PARTITIONS, EXIT ENCLOSURES, AND FIRE RATED WALLS. THE IDENTIFICATION SHALL BE A MINIMUM OF 4" HIGH AND READ AS FOLLOWS: "FIRE AND SMOKE BARRIER - PROTECT ALL OPENINGS"
 - B. RATED PARTITIONS ARE TO BE CONSTRUCTED BEFORE NON-RATED PARTITIONS. ADJUT NON-RATED PARTITIONS TO RATED PARTITIONS.
 - C. ALL FIRE-RESISTANCE RATED PARTITIONS SHALL BE CONSTRUCTED FROM TOP OF NON-FINISHED FLOOR CONSTRUCTION TO BOTTOM OF FLOOR CONSTRUCTION ABOVE.
 - E. FIRE RATED HEAD CONDITIONS AND THROUGH PENETRATIONS, WHETHER A SUB-PART OF THE REFERENCED RATED ASSEMBLY, OR AS SHOWN IN DETAIL, REPRESENT TYPICAL HEAD-OF-WALL CONDITIONS. ATYPICAL CONDITIONS DISCOVERED DURING REQUIRED TRADE COORDINATION ARE REQUIRED TO MAINTAIN THE INTEGRITY OF THE FIRE-RESISTANCE RATING NOTED ON THE FLOOR PLANS. PROVIDE AN INDUSTRY RECOGNIZED FIRE RESISTANCE TEST, OR LETTER OF ENGINEERING JUDGMENT, FOR ALL ATYPICAL CONDITIONS FOR REVIEW PRIOR TO CONSTRUCTION.
 - F. ALL THROUGH PENETRATIONS IN FIRE-RESISTANCE RATED PARTITIONS SHALL BE SEALED WITH MATERIALS AND ASSEMBLIES NECESSARY TO MAINTAIN THE REQUIRED FIRE-RESISTANCE RATING OF THE PARTITION.
5. SOUND RESISTANCE RATINGS
 - A. ALL PARTITIONS NOTED TO BE SOUND RESISTANCE RATED (SAR) SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH THE REFERENCED TEST.
 - B. GYPSUM BOARD PARTITIONS SHALL BE CONSTRUCTED WITH SOUND ATTENUATED INSULATION AS SCHEDULED. INSULATION SHALL BE CONTINUOUS AND WITHOUT INTERRUPTION.
 - C. ALL THROUGH PENETRATIONS IN SOUND RESISTANCE RATED PARTITIONS SHALL BE SEALED WITH ACOUSTICAL SEALANT TO MAINTAIN REFERENCED SOUND RESISTANCE RATING.
 - D. THROUGH PENETRATIONS IN ALL PARTITIONS NOTED TO BE SOUND RESISTANCE RATED AND FIRE RESISTANCE RATED ARE REQUIRED TO BE SEALED WITH MATERIALS CAPABLE OF MEETING BOTH SOUND AND FIRE RESISTANCE RATINGS.



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PBC Project Name: Kenwood Academy Link + Mechanical
 PBC Contract No: C1802R
 Project No: 05328
 Title: PARTITION TYPES

Sheet: **A605**

MECHANICAL GENERAL DEMOLITION NOTES

- MECHANICAL DEMOLITION NOTES:**
- WHERE MECHANICAL SYSTEMS OR PORTIONS OF SYSTEMS ARE INDICATED TO BE REMOVED, REMOVE ALL MISCELLANEOUS COMPONENTS THAT ARE MADE OBSOLETE BY REMOVAL OF THE SYSTEM.
 - ALL DEMOLITION OF THE HVAC SYSTEM AS CALLED FOR ON THE CONTRACT DOCUMENTS SHALL BE UNDER THE CONTRACTOR'S WORK. INCLUDE DEMOLITION OF ALL MECHANICAL COMPONENTS, NOT REQUIRED FOR THE NEW WORK, WHETHER SPECIFICALLY INDICATED ON CONTRACT DOCUMENTS OR NOT.
 - BEFORE STARTING ANY DEMOLITION ON HVAC EQUIPMENT WHICH HAS AN ELECTRICAL CONNECTION DISCONNECTING OF THE POWER SUPPLY WITH THE DIVISION 28 CONTRACTOR. DO NOT PROCEED WITH MECHANICAL DEMOLITION UNTIL ELECTRICAL POWER HAS BEEN SAFELY DISCONNECTED FROM EQUIPMENT TO BE DEMOLISHED. REMOVE ALL EQUIPMENT, ELECTRICAL, TEMPERATURE CONTROL, HEATING AND CONDENSING COMPONENETS, ETC. THAT ARE BEING MADE OBSOLETE BY THE SCOPE OF THIS PROJECT.
 - WARNING: ASBESTOS-CONTAINING BUILDING MATERIALS ARE OR MAY BE PRESENT IN THIS BUILDING OR TO PERSON. ANY ASBESTOS-CONTAINING BUILDING MATERIALS (UNLESS THAT PERSON IS A LICENSED ASBESTOS WORKER AND CONDUCTS SUCH WORK IN ACCORDANCE WITH SPECIFICATIONS) CONTAINED IN THE PROJECT DOCUMENTS AND IN COMPLIANCE WITH ILLINOIS DEPARTMENT OF PUBLIC HEALTH RULES AND REGULATIONS.**
 - VERIFY SIZE OF ALL EXISTING OPENINGS, DOORS, ETC. FOR GETTING EQUIPMENT AND MATERIAL OUT OF BUILDING. CONTRACTOR SHALL PROVIDE DISCONNECTS OF MECHANICAL COMPONENTS BEING REMOVED AS REQUIRED TO FACILITATE EXITING OF HIS EQUIPMENT/MATERIAL FROM THE BUILDING.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN CLEANUP THROUGHOUT THE COURSE OF THE DEMOLITION WORK.
 - ALL HVAC EQUIPMENT, MATERIAL, ETC. THAT IS BEING DEMOLISHED WILL BELONG TO THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE NOTED. ALL SUCH ITEMS WILL BE REMOVED FROM THE BUILDING SITE BY THE CONTRACTOR, NO ITEM WHICH IS BEING REMOVED UNDER THE DEMOLITION CONTRACT MAY BE REUSED UNDER THE NEW WORK CONTRACT UNLESS NOTED ON THE DRAWINGS.
 - SEQUENCE OF ALL DEMOLITION WORK SHALL BE IN STRICT ACCORDANCE WITH THE CONTRACT DOCUMENTS AND/OR AS DIRECTED BY THE USING AGENCY.
 - CONTRACTOR TO PROTECT ALL WINDOWS AND BUILDING SURFACES DURING DEMOLITION. ANY COSTS INCURRED BY DAMAGE FROM CUTTING TORCHES, SPARKS, HEAT OR OTHER DEMOLITION PROCEDURES WILL BE BACK CHARGED TO THE CONTRACTOR.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL LABOR AND MATERIAL REQUIRED TO PATCH ALL OPENINGS IN EXISTING WALLS AND FIRE SEPARATIONS CREATED BY THE REMOVAL OF CONTRACTOR'S MATERIAL AND EQUIPMENT. WHERE THESE OPENINGS ARE NOT TO BE REUSED, PATCHING OF ALL EXISTING FLOOR, WALL AND ROOF OPENINGS IS THE RESPONSIBILITY OF THE CONTRACTOR.
 - PRIOR TO THE START OF DEMOLITION, THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND SERVICE SIZES NOTED IN THESE DRAWINGS. ANY DISCREPANCY IN THE NOTED SIZES COULD NOT BE THE BASIS OF ADDITIONAL COST CLAIM.
 - CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INCURRED IN REPAIRS, RELOCATIONS, OR REPLACEMENT OF ANY CABLES, CONDUITS, OR OTHER SERVICES THAT ARE TO REMAIN BUT DAMAGED WITHOUT PROPER INVESTIGATION.
 - CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND SERVICES FOR THE DEMOLITION, REMOVAL, AND LEGAL DISPOSAL OF EXISTING EQUIPMENT, DUCTWORK, PIPING, ASSOCIATED CONTROLS, ASSOCIATED STRUCTURAL SUPPORTS, HANGERS, TIE-BACKS, SUPPORTS, ANCHORS, MISCELLANEOUS HARDWARE, MISCELLANEOUS EQUIPMENT, REMOVAL OF APPURTENANCE EQUIPMENT AND MATERIALS, AND LIMITED DISPOSAL OF ALL EQUIPMENT AND MATERIALS RENDERED OBSOLETE OFF THE PREMISES.
 - MAINTAIN TEMPORARY WARNING SIGNAGE, BARRICADES, YELLOW PROTECTION TAPE, WARNING LIGHTS, AND OTHER SIMILAR ITEMS AROUND ANY AREAS THAT CREATE A HAZARD DURING THE DEMOLITION PROCESS.
 - PROVIDE TEMPORARY WEATHER PROTECTION AT ALL ROOF OPENINGS WHERE MECHANICAL EQUIPMENT IS BEING REMOVED.

TAB SCOPE NOTES

- REFER TO SPECIFICATION 23 05 93 FOR ADDITIONAL REQUIREMENTS. SEE BELOW FOR SOME SPECIFIC REQUIREMENTS BEYOND THE STANDARD BALANCING REQUIRED FOR THE PROJECT.
- PERFORM PRECONSTRUCTION READINGS PRIOR TO THE START OF ANY WORK ON THE SYSTEMS AND PERFORM FINAL TESTING AND BALANCING AT THE COMPLETION OF THE PROJECT FOR THE FOLLOWING SYSTEMS:
 - A. AIR HANDLING UNITS AHU-9 THRU 11, ASSOCIATED RETURN / EXHAUST FANS E-9 THRU 11 AND TOILET EXHAUST FANS E-25 & 26. PERFORM TOTAL SYSTEM READINGS AND READINGS AT EACH ASSOCIATED AIR INLET & OUTLET. RECORD FILTER CONDITION, ECONOMIZER & BYPASS DAMPER POSITIONS DURING TESTING. PERFORM TESTING WITH ALL MAXIMUM UNIT ZONE DAMPERS POSITIONED FOR FULL HEAT. DUPLICATE PRECONSTRUCTION CONDITIONS FOR FINAL TESTING.
 - B. UPON COMPLETION OF PROJECT:
 - A. COMPLETELY BALANCE ALL NEW & EXISTING SUPPLY AIR, RETURN AIR AND EXHAUST AIR SYSTEMS TO THE DESIGN AIRFLOWS.
 - B. CALIBRATE OUTSIDE AIRFLOW MEASURING STATIONS AT RTU-8, AHU-9 THRU 11 AT DESIGN MINIMUM OUTSIDE AIR.
 - C. DETERMINE RTU-8 MINIMUM EXHAUST FAN SPEED TO MATCH OUTSIDE AIRFLOW AND COORDINATE W/ BAS CONTRACTOR.

MECHANICAL GENERAL NOTES

- SEQUENCE, COORDINATE, AND INTEGRATE THE VARIOUS ELEMENTS OF MECHANICAL SYSTEMS, MATERIALS, AND EQUIPMENT. COMPLY WITH THE FOLLOWING REQUIREMENTS:
 - ALL WORK SHALL CONFORM TO APPLICABLE INDUSTRY STANDARDS. ALL WORK SHALL COMPLY WITH ALL APPLICABLE LOCAL, NATIONAL, AND NATIONAL CODES.
 - MECHANICAL AND ASSOCIATED (M&A) SHALL NOT HAVE CONTROL OVER OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. SINCE THESE ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY UNDER THE CONTRACT FOR CONSTRUCTION, M&A SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SCHEDULES OR FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. M&A SHALL NOT HAVE CONTROL OVER OR CHARGE OF ACTS OR OMISSIONS OF ANY OTHER PERSONS PERFORMING PORTIONS OF THE WORK.
 - THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND INSPECTION FEES AS REQUIRED FOR HIS PORTION OF THE WORK.
 - THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS WITH THE OWNER PERTAINING TO WORKING HOURS, REUSE/ DISPOSAL, SECURITY, INTERRUPTIONS OF BUILDING UTILITIES OR FUNCTIONS, OWNERSHIP OF SALVAGED MATERIALS, AND ALL OTHER ITEMS OF MUTUAL INTEREST.
 - THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID TO DETERMINE THE FULL EXTENT OF THE WORK AND EXISTING FACILITIES.
 - THE CONTRACTOR SHALL VERIFY ALL EXISTING JOB SITE CONDITIONS PERTAINING TO THE WORK INDICATED ON THE DRAWINGS AND REPORT ANY DISCREPANCIES OR OMISSIONS WHICH WOULD INTERFERE WITH SATISFACTORY COMPLETION OF THE WORK.
 - THESE DRAWINGS & SPECIFICATIONS ARE PRESENTED TO THE CONTRACTOR WITH THE UNDERSTANDING THAT HE IS EXPERT & COMPETENT IN THE PREPARATION OF CONTRACT BID PRICES ON THE BASIS OF SUCH INFORMATION AS IS CONTAINED IN THESE SPECIFICATIONS & DRAWINGS.
 - WHERE DRAWINGS, SPECIFICATIONS, OR NOTES CONFLICT ONE ANOTHER, THE CONTRACTOR SHALL IMMEDIATELY ADVISE THE ARCHITECT OF SUCH CONFLICTS FOR PURPOSES OF BIDDING, AND PENDING WRITTEN RECEIPT OF ANY DIRECTION TO THE CONTRARY, THE CONTRACTOR SHALL INCLUDE IN HIS PROPOSAL THE MORE STRINGENT ALTERNATE DESCRIBED.
 - INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT TO CONFORM WITH APPROVED SUBMITTAL DATA, INCLUDING COORDINATION DRAWINGS, TO GREATEST EXTENT POSSIBLE CONFORM TO ARRANGEMENTS INDICATED BY THE CONTRACT DOCUMENTS, RECOGNIZING THAT PORTIONS OF THE WORK ARE SHOWN ONLY IN DIAGNAMATIC FORM. WHERE COORDINATION REQUIREMENTS CONFLICT WITH INDIVIDUAL SYSTEM REQUIREMENTS, REFER CONTRACT TO THE ARCHITECT.
 - ALL WORK SHALL BE GUARANTEED TO BE FREE FROM LEAKS OR DEFECTS FOR A PERIOD OF ONE YEAR FROM DATE OF PROJECT COMPLETION. ANY DEFECTIVE MATERIALS OR WORKMANSHIP AS WELL AS DAMAGE TO THE WORK OF ALL TRADES RESULTING FROM SAME SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE OWNER FOR THE DURATION OF THE STIPULATED GUARANTEE PERIOD.
 - COORDINATE MECHANICAL SYSTEMS, EQUIPMENT, AND MATERIALS INSTALLATION WITH OTHER BUILDING COMPONENTS. VERIFY ALL DIMENSIONS BY FIELD MEASUREMENTS. THE CONTRACTOR SHALL INSTALL THE WORK TO MEET FIELD CONDITIONS AT NO ADDITIONAL CHARGE, INCLUDING ADJUSTING RISERS TO ADD BEAMS & TRUSSES.
 - ARRANGE FOR CHANGES, SLOTS, AND OPENINGS IN OTHER BUILDING COMPONENTS DURING PROGRESS OF CONSTRUCTION TO ALLOW FOR MECHANICAL INSTALLATIONS.
 - THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE RESPECTIVE TRADES, AND SHALL SUBMIT COORDINATED SHOP DRAWINGS FOR REVIEW.
 - THE CONTRACTOR SHALL PROVIDE THAT THE JURISDICTION OF WORK BE DONE BY THE PROPER TRADES WITH NO DELAY.
 - EQUIPMENT, PIPING, DUCTWORK, GRILLES, REGISTER, DIFFUSERS, AND ALL ACCESSORIES SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS FOR A COMPLETE SYSTEM.
 - SHEET METAL DUCT GAGES, CONSTRUCTION, AND INSTALLATION SHALL BE IN ACCORDANCE WITH STANDARDS OF THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC. (SMACNA), IF LOCAL CODES REQUIRE OTHER STANDARDS THAN DESCRIBED IN SMACNA, THE LOCAL CODES SHALL GOVERN.
 - GENERAL LOCATIONS AND ARRANGEMENTS, DRAWINGS (PLANS, SCHEMATICS, AND DIAGRAMS) INDICATE THE GENERAL LOCATION AND ARRANGEMENT OF THE SYSTEMS IN A DIAGNAMATIC FORM ONLY. LOCATION AND ARRANGEMENT OF PIPE, DUCT, AND EQUIPMENT LAID-OUT SHALL TAKE INTO CONSIDERATION PIPE/DUCT SIZING AND PRESSURE LOSS, FAN SIZING, AND OTHER DESIGN CONSIDERATIONS, SO FAR AS PRACTICABLE, INSTALL SYSTEM AS INDICATED, ADJUST ROUTING AND PROVIDE ALL OFFSETS, FITTINGS, ETC., AS REQUIRED FOR COORDINATION WITH BUILDING AND ALL OTHER SYSTEMS AT NO ADDITIONAL COST TO THE USING AGENCY. ALL DEVIATIONS FROM THE DESIGN DRAWINGS SHALL BE REFLECTED ON THE SHOP DRAWINGS FOR REVIEW BY THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH FABRICATION OR INSTALLATION. CHANGES IN DUCT SIZE AND LOCATION SHALL BE MADE WHERE NECESSARY TO CONFORM TO SPACE CONDITIONS, AT NO ADDITION CHARGE. CONTRACTOR SHALL FIELD MEASURE DUCTWORK BEFORE FABRICATION.
 - DURING CONSTRUCTION, PROTECT ALL DUCTWORK, PIPING, AND EQUIPMENT FROM DAMAGE AND DIRT. CAP THE OPEN ENDS OF ALL DUCTWORK AND PIPING. CAP UNUSED DUCTS AND OPENINGS AIRTIGHT, WHETHER OR NOT INDICATED ON THE DRAWINGS.
- THE CONTRACTOR SHALL STORE HIS MATERIALS IN A MANNER THAT WILL MAINTAIN AN ORDERLY CLEAN APPEARANCE. IF STORED ON SITE IN OPEN OR UNPROTECTED AREAS, ALL EQUIPMENT AND MATERIAL SHALL BE KEPT OFF THE GROUND AND COVERED FOR PROTECTION FROM WEATHER AND CONSTRUCTION. EQUIPMENT AND MATERIAL IF DAMAGED OR LEFT UNPROTECTED SHALL BE REJECTED, AND REPAIRED OR REPLACED AT THE DIRECTION OF THE OWNER.
- INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT LEVEL AND PLUMB, PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS.
- INSTALL MECHANICAL EQUIPMENT TO FACILITATE SERVICING, MAINTENANCE, AND REPAIRS. PROVIDE ACCESS TO ALL EQUIPMENT COMPONENTS AS FAR AS PRACTICAL, CONNECT EQUIPMENT FOR EASE OF DISCONNECTING, WITH MINIMUM OF INTERFERENCE WITH OTHER INSTALLATIONS. EXTEND GREASE FITTINGS TO AN ACCESSIBLE LOCATION.
- PROVIDE AND MAINTAIN FOR THE DURATION OF CONSTRUCTION ALL SCAFFOLDS, TAPRALLS, CANOPIES, WARNING SIGNS, STEPS, PLATFORMS, BRIDGES, AND OTHER TEMPORARY CONSTRUCTION NECESSARY FOR PROPER COMPLETION OF WORK IN COMPLIANCE WITH PERMIT SAFETY AND OTHER REGULATIONS.
- CONTRACTOR SHALL INSTALL ALL AUXILIARY SUPPORTING STEEL AS REQUIRED FOR THE SUPPORTING OF THEIR PIPING, DUCTWORK, CONDUIT, EQUIPMENT, ETC. ALL SUPPORTING STEEL FOR ITEMS ABOVE A SUPPORTED CEILING SHALL BE FROM BUILDING STRUCTURAL MEMBERS ONLY. USE GALVANIZED STEEL TRUSSES, TRAFFIC AND CEILING HANGERS, AS NEEDED AT MAXIMUM 5 FT. INTERVAL. PROVIDE GALVANIZED STEEL SADDLES AT INSULATED PIPING.
- ALL DUCTWORK CONNECTIONS TO AIR MOVING EQUIPMENT SHALL BE MADE WITH FLEXIBLE DUCT CONNECTIONS ON THE INLET AND DISCHARGE OF ALL SUPPLY, RETURN, AND EXHAUST FANS.
- PROJECT DESIGN IS BASED ON PARTICULAR EQUIPMENT MANUFACTURERS AS INDICATED IN THE SCHEDULES, AND ESTABLISHES THE QUALITY REQUIRED. USE OF EQUIPMENT BY ONE OF THE OTHER ACCEPTABLE MANUFACTURERS MAY REQUIRE ADDITIONAL WORK BE PERFORMED FOR PROPER INTEGRATION WITH THE BUILDING DESIGN. THE CONTRACTOR SHALL VERIFY THAT THIS EQUIPMENT FITS IN THE ALLOCATED SPACE. THE RESPONSIBILITY SHALL INCLUDE ANY AND ALL EXTRA EXPENSE INCURRED BY AFFECTED TRADES, FIRE PROTECTION AND ELECTRICAL CONTRACTORS. THE CONTRACTOR PROVIDING THE EQUIPMENT SHALL ALSO BE RESPONSIBLE FOR ANY EXTRA EXPENSE INCURRED DUE TO CONSTRUCTION DELAYS AS A RESULT OF ANY ADDITIONAL COORDINATION AND/OR REVISION REQUIRED BY THE ALTERNATE EQUIPMENT MANUFACTURER SELECTION. ALL REVISIONS MUST BE REVIEWED BY THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH THE INSTALLATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING ALL THE DIMENSIONS OF THE PURCHASED EQUIPMENT TO VERIFY THAT IT WILL FIT IN THE SPACE SHOWN ON THE DRAWINGS. MINOR DEVIATIONS IN DIMENSIONS WILL BE PERMITTED, PROVIDED THE RATINGS MEET THOSE SHOWN ON THE DRAWINGS AND EQUIPMENT WILL PHYSICALLY FIT INTO THE SPACE ALLOCATED WITH REQUIRED ACCESS AROUND EQUIPMENT FOR OPERATION AND MAINTENANCE OF THE EQUIPMENT. THE CONTRACTOR SHALL BEAR ALL COSTS RELATED TO INSTALLATION OF THE EQUIPMENT WHERE MINOR DEVIATIONS EXIST BETWEEN THE SPECIFIED MANUFACTURERS, INCLUDING ITS IMPACT ON THE WORK OF OTHER TRADES.
- CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO MECHANICAL EQUIPMENT, MATERIALS OR WORK DONE, FINAL ACCEPTANCE OF THE ENTIRE PROJECT BY THE USING AGENCY.
- IT IS THE INTENT OF THESE SPECIFICATIONS AND DRAWINGS TO CALL FOR FINISHED WORK, TESTED, BALANCED, COMPLETE, AND OPERATING.
- ALL DUCTS AND PIPING SHALL BE SUPPORTED FROM APPROVED FOUNDATIONS AND SUPPORTS. DUCT HANGERS SHALL BE SOLID SHEET METAL, STRONG, RIGID, OR ANGLES PER SMACNA.
- CAP INDICATES THAT A DUCT OR PIPE SHALL BE PLUGGED OR CAPPED, AND SEALED WITH APPROVED MATERIALS.
- ALTERNATES TO PRODUCTS SPECIFIED SHALL BE SUBMITTED FOR REVIEW BEFORE PURCHASE.
- SHOULD THERE BE ANY DISCREPANCIES OR QUESTION OF INTENT, REFER THE MATTER TO THE ARCHITECT/ENGINEER FOR A FINAL DECISION BEFORE ORDERING ANY EQUIPMENT OR MATERIALS AND BEFORE STARTING ANY RELATED WORK.
- SUBMIT VENTILATION TESTING REPORTS TO OWNER & ENGINEER.
- PROVIDE ASSISTANCE TO TEST, ADJUSTING AND BALANCING CONTRACTOR BY MAKING ADJUSTMENTS TO SYSTEM AND SYSTEM COMPONENTS REQUIRED FOR ACHIEVING DESIGN PERFORMANCE.
- IF ACCEPTABLE PERFORMANCE OF ANY TEST IS NOT ACHIEVED, MAKE THE NECESSARY CORRECTIONS AND THE TEST SHALL BE REPEATED UNTIL ACCEPTABLE PERFORMANCE IS ACHIEVED.
- PRIME AND PAINT ALL EXPOSED EXTERIOR GAS PIPING WITH EXTERIOR ENAMEL OF COLOR APPROVED BY ARCHITECT. PROVIDE PIPE LABLES WITH YELLOW BACKGROUND AND THE WORD "GAS" IN BLACK LETTERS AT INTERVALS NOT EXCEEDING 5'-0".
- AFTER CONSTRUCTION IS COMPLETED, INCLUDING PAINTING, CLEAN EQUIPMENT AND ACCESSORIES INSIDE AND OUT THROUGH ANY MECHANICAL OR SCHEDULED EQUIPMENT. FINISHED EQUIPMENT, USING FINISH MATERIALS FURNISHED BY MANUFACTURER AND APPLIED TO MATCH THE QUALITY OF THE ORIGINAL FINISH.

MECHANICAL ABBREVIATIONS

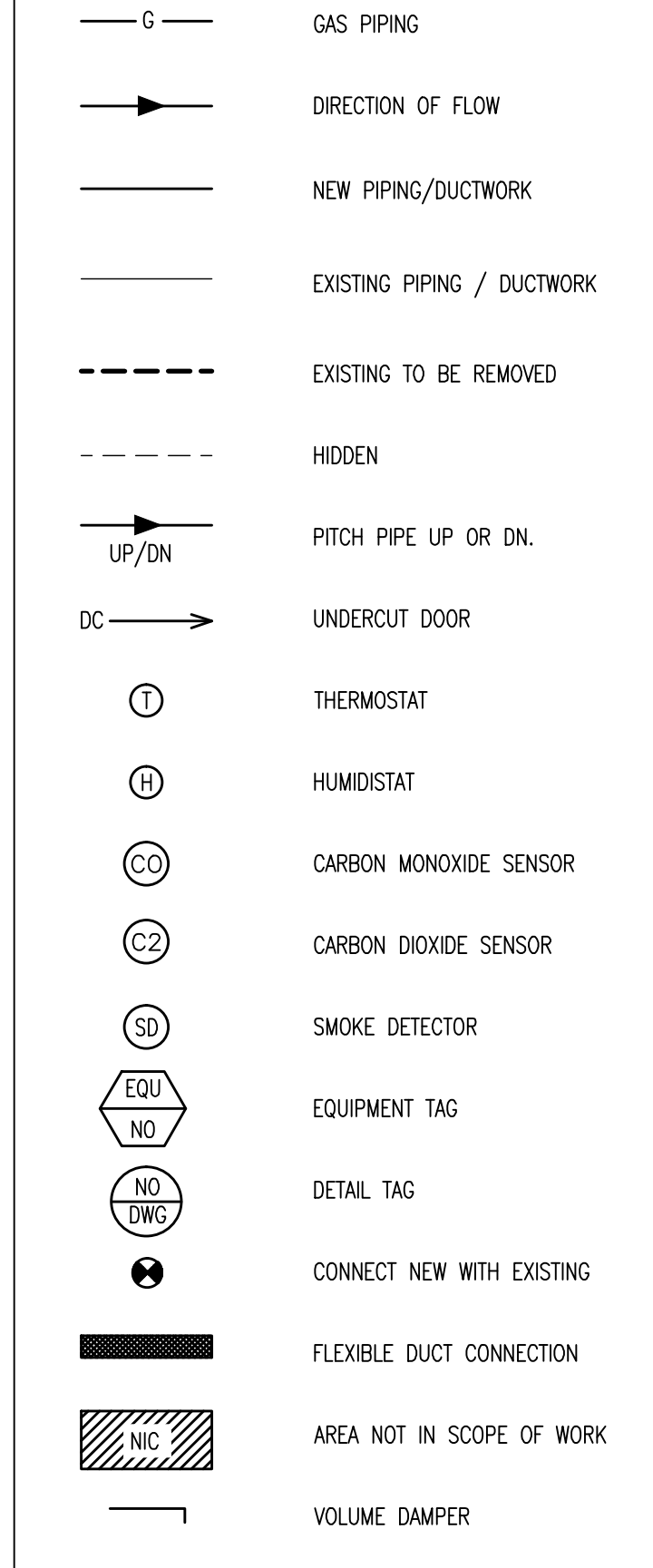
AD	ACCESS DOOR	UH	UNIT HEATER
A/E	ARCHITECT/ENGINEER	UV	UNIT VENTILATOR
AF	ABOVE FINISHED FLOOR	UNO	UNLESS NOTED OTHERWISE
BA	BUILDING AUTOMATION SYSTEM	VFD	VARIABLE FREQUENCY DRIVE
BD	BACKDRAFT DAMPER	VF	VERIFY IN FIELD
BTU	BRITISH THERMAL UNIT	VTR	VENT THRU ROOF
CA	COMBUSTION AIR	VO	VOLUME DAMPER
CAI	COMBUSTION AIR INTAKE	W	WIDE, WIDTH
CFM	CUBIC FEET PER MINUTE	NWS	WIRE MESH SCREEN
CD	CONDENSATE DRAIN	CHWS	CHILLED WATER SUPPLY
CO	CARBON MONOXIDE	CHWR	CHILLED WATER RETURN
CO2	CARBON DIOXIDE	CD	CONDENSATE DRAIN
CONV	CONVECTOR	CR	CONDENSATE RETURN
CUH	CABINET UNIT HEATER	CWS	CONDENSER WATER SUPPLY
DDC	DIRECT DIGITAL CONTROLS	CWR	CONDENSER WATER RETURN
DG	DOOR GRILLE	H/C/S TEMP	HOT/CHILLED WATER SUPPLY (DUAL TEMP)
DIFF	DIFFUSER	H/C/R TEMP	HOT/CHILLED WATER RETURN (DUAL TEMP)
(E)	EXISTING	HG	REFRIGERANT HOT GAS
EA	EXHAUST AIR, EACH	HGB	REFRIGERANT HOT GAS BYPASS
EF	EXHAUST FAN	HPS	HIGH PRESSURE STEAM
ETR	EXISTING TO REMAIN	HPR	HIGH PRESSURE STEAM CONDENSATE RETURN
FA	FREE AREA	HPWS	HEAT PUMP WATER SUPPLY
FLA	FULL LOAD CAPACITY	HPWR	HEAT PUMP WATER RETURN
FD	FIRE DAMPER	HWS	HOT WATER HEATING SUPPLY
FPI	FANS PER INCH	HR	HOT WATER HEATING RETURN
G	GAS	HWR	HOT WATER HEATING RETURN
GC	GENERAL CONTRACTOR	LPS	LOW PRESSURE STEAM
GN	GROSS NECK	LPR	LOW PRESSURE STEAM CONDENSATE RETURN
GR	GRILLE	RL	REFRIGERANT LIQUID
H	HIGH, HEIGHT	RS	REFRIGERANT SUCTION
HP	HORSE POWER		
MBH	1000 BTU PER HOUR		
MOD	MODULAR OPERATED DAMPERS		
NC	NORMALLY CLOSED		
NC	NOT IN CONTACT		
NO	NORMALLY OPEN		
NK	NECK		
OA	OUTSIDE AIR		
OW	OUTSIDE AIR INTAKE		
PNEU	PNEUMATIC		
RA	RETURN AIR		
REG	REGISTER		
R/E	RETURN/EXHAUST		
RO	ROUGH OPENING		
SA	SUPPLY AIR		
SF	SUPPLY FAN		
SFTA	SQUARE FEET FREE AREA		
SP	STATIC PRESSURE		
TEMP	TEMPERATURE		
TSTAT	THERMOSTAT		

EXISTING GAS SERVICE INFORMATION

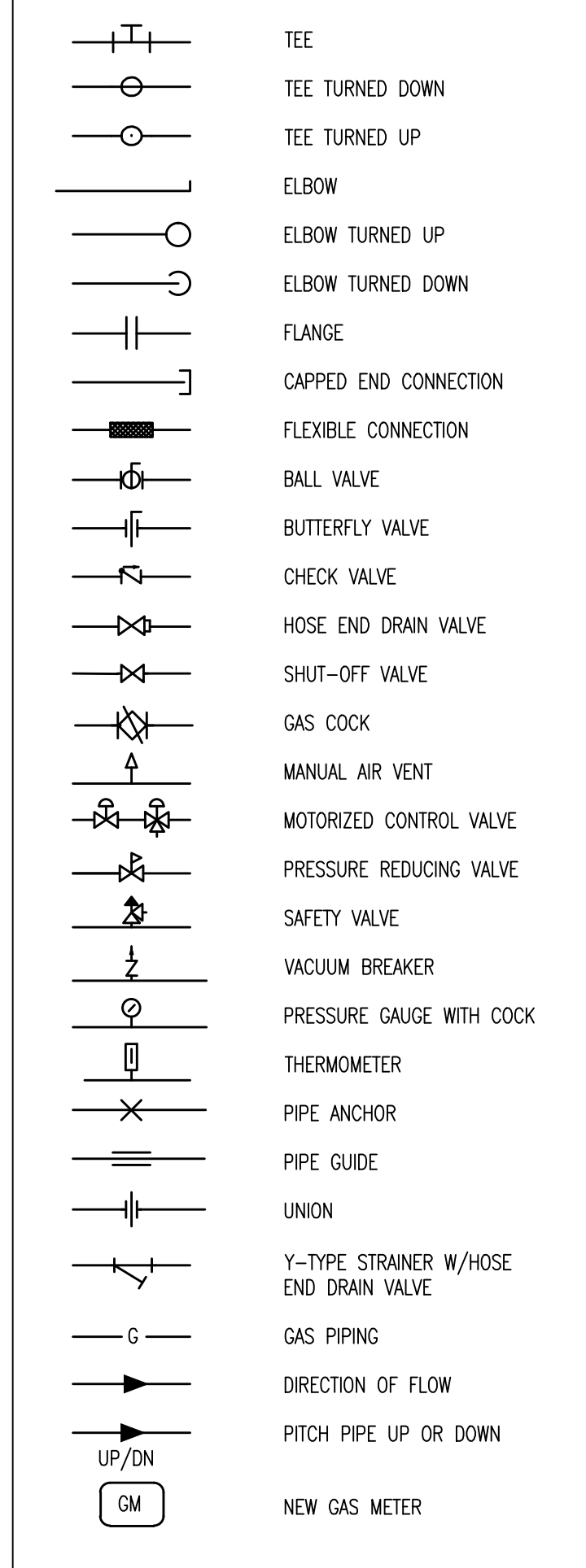
- SITE UTILITIES (2) METEER GAS SERVICES (1" MC & 2 PSIG) WITH METERS LOCATED AT THE SOUTH END OF BUILDING B. BUILDING C IS FED FROM THE 2 PSIG SERVICE.
- SUMMARY OF CONNECTED LOADS AT THE 2 PSIG SERVICE:
 - A. (2) EXISTING STEAM HEATING BOILERS IN BUILDING B PENTHOUSE, 25,000 MBH TOTAL
 - B. (1) EXISTING DOMESTIC HOT WATER HEATER IN BUILDING C PENTHOUSE, 1,800 MBH
 - C. (1) NEW MOTOR/AM PUMP RTU-B, 500 MBH

I HEREBY CERTIFY THAT THE HEATING SYSTEM WILL HEAT ALL ROOMS REGULARLY OCCUPIED BY HUMANS TO AN INSIDE TEMPERATURE OF 68° WHEN THE OUTSIDE TEMPERATURE IS MINUS -10°F AS REQUIRED BY SECTION 2410-196-410 AND 454-4-270) OF THE CHICAGO BUILDING CODE AND BY PARAGRAPHS 1204.1 OF CHAPTER 16-12 (INTERIOR ENVIRONMENT) OF THE PROPOSED BUILDING PLANNING AND LIFE SAFETY PORTION OF THE CODE.

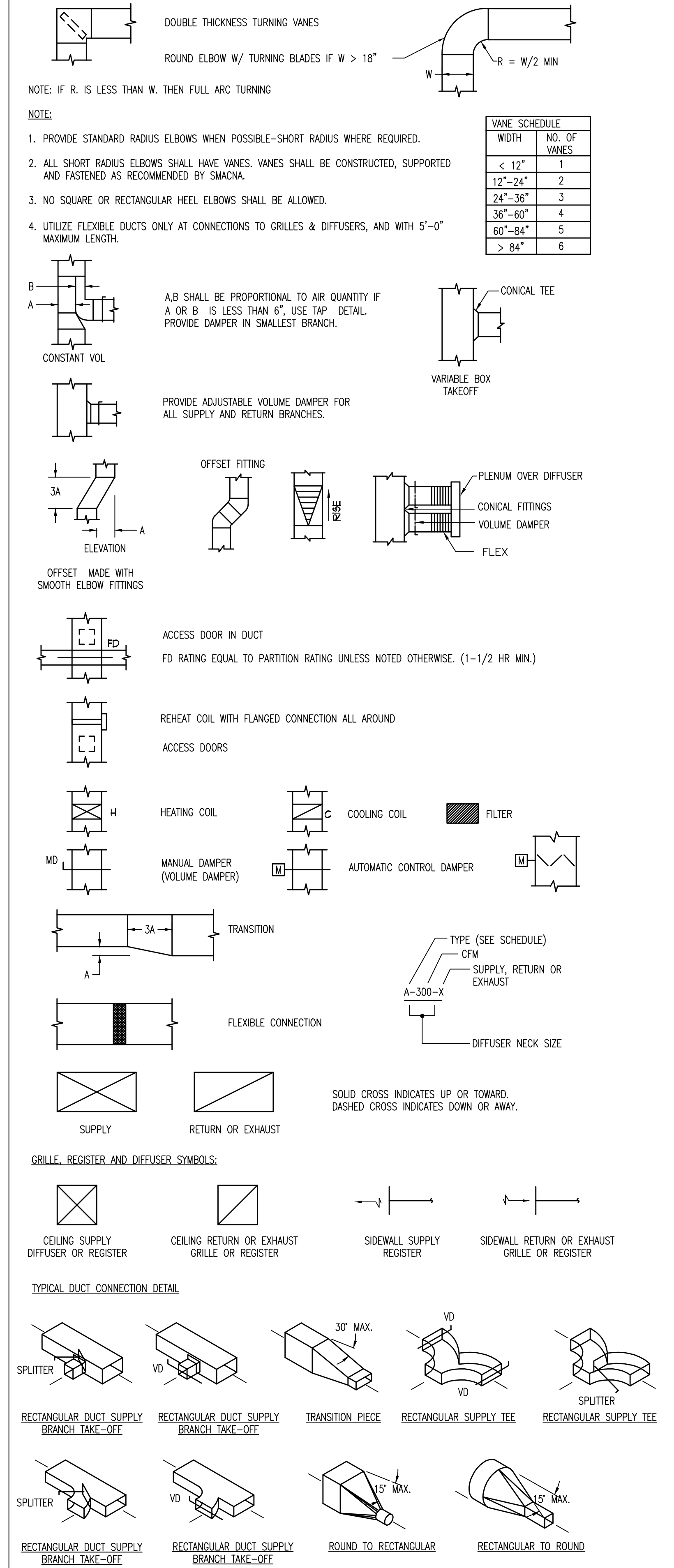
MECHANICAL SYMBOLS



PIPING SYMBOLS



DUCTWORK SYMBOLS & STANDARDS



AIR FLOW MEASURING DEVICE SCHEDULE

TAG	LOCATION	SYSTEM AND/OR SERVICE	AIR FLOW		DUCT SIZE		MANUFACTURER	MODEL	REMARKS
			MIN CFM	MAX CFM	WIDTH IN	HEIGHT IN			
AFMS-1	RTU-8	MIN OUTSIDE AIR	2310	2310	COORD W RTU MFR	EHTRON	GT4116	ALL	
AFMS-2	RTU-8	PURGE OUTSIDE AIR	0	2170	COORD W RTU MFR	EHTRON	GT4116	ALL	
AFMS-3	RTU-8	PURGE OUTSIDE AIR	0	2170	COORD W RTU MFR	EHTRON	GT4116	ALL	

PROVIDE INDEPENDENT AIRFLOW / TEMPERATURE SENSORS AND TRANSMITTERS FOR EACH OF THE (3) RTU-8/OA HOODS. PROVIDE TRANSMITTERS IN NEMA 4X ENCLOSURES. PROVIDE 1/2" LONG SLEEVE TO BE SANDWICHED BETWEEN THE RTU/OA HOOD AND UNIT INLET. PROVIDE PROBES MOUNTED INTERNAL TO THE 3/8" SLEEVE. PROVIDE INSTALLATION THAT IS FULLY WEATHERPROOF.

REFRIGERATION SCHEDULE

TAG	NUMBER OF UNITS	MFR	MODEL	DESCRIPTION	LOCATION	NO OF COMP	NOMINAL TONS	REFRIGERANT			HEAT REJECTION	REMARKS	
								TYPE	NUMBER OF CIRCUITS	LBS PER CIRCUIT			
CU-9	1	TRANE	RAU409	CONDENSING UNIT	ROOF	4	60	SCROLL	R-410A	2	60	AIR COOLED	ALL
CU-10	1	TRANE	RAU404	CONDENSING UNIT	ROOF	4	40	SCROLL	R-410A	2	50	AIR COOLED	ALL
CU-11	1	TRANE	RAU403	CONDENSING UNIT	ROOF	4	90	SCROLL	R-410A	2	90	AIR COOLED	ALL
RTU-8	1	DECON	DS-800-18	DEHUMIDIFICATION	ROOF	2	14	SCROLL	R-410A	2	37.5	AIR COOLED	ALL

NOTES:
1. REFRIGERANT SAFETY VALVES SHALL BE LOCATED ON THE HIGH SIDE OF THE SYSTEM, UPSTREAM OF ANY STOP VALVES. VALVE SHALL NOT EXCEED 450 PSIG.
2. LOCATE ALL REFRIGERATION EXPANSION VALVES, CONNECTIONS, ETC. OUTSIDE THE AIR STREAM.
3. REFRIGERANT QUANTITIES INCLUDE CONDENSING UNIT, EVAPORATOR AND LINE SET.
4. ALL REFRIGERANT PIPING TO BE TYPE K COPPER WITH BRAZED JOINTS.

EXISTING AIR HANDLING UNIT SCHEDULE (FOR REFERENCE)

TAG	LOCATION	AREA SERVED	CFM	OUTSIDE AIR		FAN				PH	HZ	SPEED CONTROL	COOLING COIL TAG	HEATING COIL	FILTERS	MANUFACTURER	MODEL	REMARKS
				MIN	MAX	FAN TYPE	DRIVE	HP	VOLT									
AHU-9	PENTHOUSE	LOCKER RMS	14820	12120	14820	FLENUM	DIRECT	2 @ 15	480	3	60	VFD	CC-9	EXIST STM 814 MBH PREHEAT & 663 MBH HOT DECK	(B) 24x24 + (2) 12x24 EACH BANK	YORK	XT140x102	ALL
AHU-10	PENTHOUSE	GIRLS GYM	10540	2860	10540	FLENUM	DIRECT	2 @ 15	480	3	60	VFD	CC-10	EXIST STM 432 MBH HOT DECK	(B) 24x24 + (3) 12x24 EACH BANK	YORK	XT140x890	ALL
AHU-11	PENTHOUSE	BOYS GYM	20000	8033	20000	FLENUM	DIRECT	2 @ 15	480	3	60	VFD	CC-11	EXIST STM 741 MBH HOT DECK	(B) 24x24 + (2) 24x24 EACH BANK	YORK	XT143x117	ALL

NOTES:
1. AHUS WERE INSTALLED IN 2003.
2. FILTERS = PLATED 2" MERV 8 PREFILTERS + 4" MERV 13 PRIMARY FILTERS.

TYPICAL AIR DEVICE (INLET/OUTLET) INSTALLATION DETAIL

1. SPIN COLLARS SHALL NOT BE PERMITTED.
2. SPECIAL CONDITIONS THAT CAN NOT MEET ONE OF THESE STANDARDS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION ON A CASE BY CASE BASIS.
3. DETAILS ILLUSTRATE INSTALLATION WITH ROUND NECK DIFFUSERS AND DUCTS. SQUARE OR RECTANGULAR NECK DIFFUSERS AND DUCTS SHALL BE SIMILAR.

NOTE: CONTRACTOR SHALL VERIFY ALL EXISTING SITE CONDITIONS AND CHECK PROJECT DIMENSIONS



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LINK + MECHANICAL PROJECT
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Mechanical, Electrical, Plumbing & Fire Protection Engineers:
Melvin & Cohen Associates, Inc.
223 West Jackson Boulevard
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312 663 3700

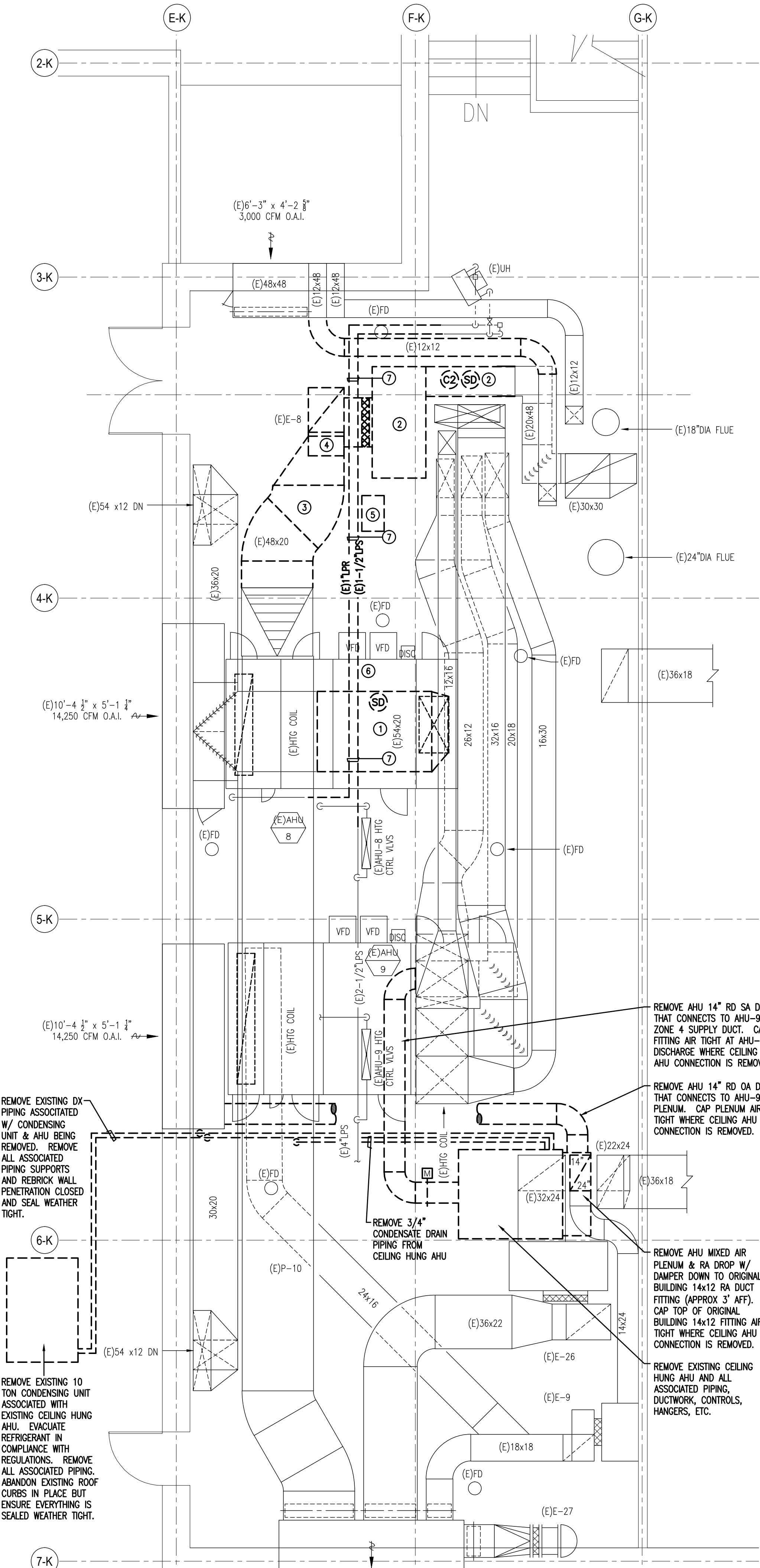
PBC Project Name: Kenwood Academy Link & Mechanical
PBC Contract No.: C1802R
Project No.: 05128
10/24/2011

Title: **MECHANICAL SYMBOLS, NOTES, AND ABBREVIATIONS**

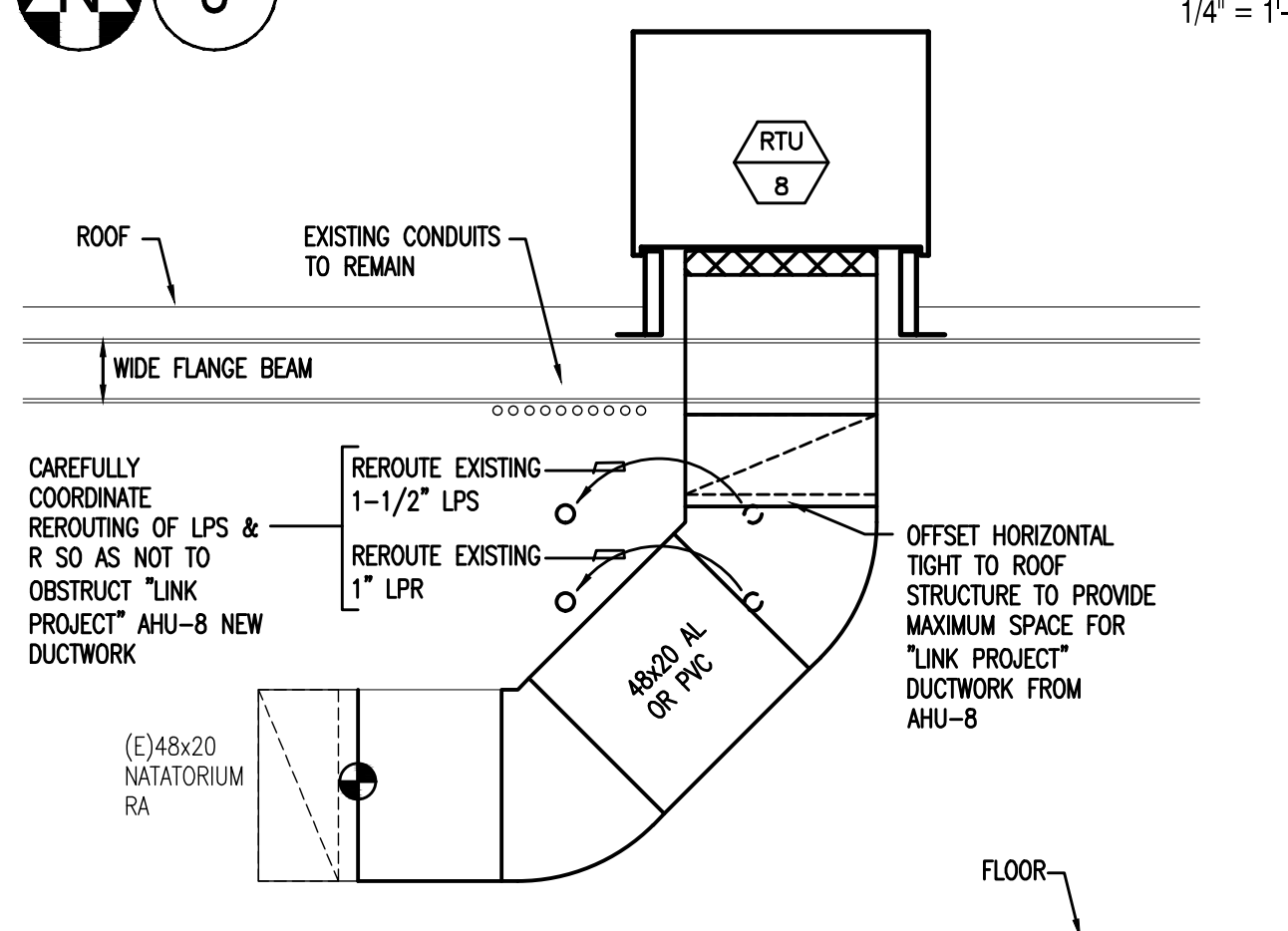
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- DEMOLITION GENERAL:**
- WHERE DEMOLITION OF MECHANICAL IS INDICATED, REMOVE ALL OBSOLETE COMPONENTS IN THEIR ENTIRETY, INCLUDING ALL ASSOCIATED INSULATION, HANGERS, SUPPORTS, RACEWAY, FITTING, ETC.
 - WHERE PIPING, RACEWAYS, ETC. ARE BEING REMOVED, FILL ALL UNUSED OPENINGS THROUGH WALLS, SLABS, BEAMS, AIR CHAMBERS, ETC.
 - UNDER THIS PROJECT, AHU-8 IS BEING REMOVED FROM SERVICE AS THE NATATORIUM SUPPLY UNIT. EXISTING AHU-8 SUPPLY AND RETURN DUCT CONNECTIONS ARE BEING REROUTED TO A NEW ROOF MOUNTED DEHUMIDIFICATION UNIT. EXISTING AHU-8 WILL BE ABANDONED IN PLACE FOR SERVICE AS PART OF A SEPARATE PROJECT. PRIOR TO START OF DEMOLITION OF ANY EXISTING AHU-8 COMPONENTS, LOCK THE ELECTRICAL POWER OFF TO THE UNIT, VALVE OFF THE STEAM AND CONDENSATE CONNECTIONS, FULLY DRAIN THE STEAM COIL AND DISABLE THE EXISTING DDC CONTROLS. COORDINATE DISABLING OF THE CONTROLS WITH THE BMS CONTRACTOR.
 - WHERE DDC CONTROL COMPONENTS AND RACEWAY ARE SECURED TO EQUIPMENT / DUCTWORK IDENTIFIED TO BE REMOVED, ALSO REMOVE THE DDC ITEMS & RACEWAY. MINIMIZE REMOVAL OF THE EXISTING DDC COMPONENTS AND TAKE CARE SO AS TO FACILITATE REUSE OF THE UNIT AS PART OF A SEPARATE PROJECT. COORDINATE REMOVAL OF ANY DDC COMPONENTS AND RACEWAY WITH THE BMS CONTRACTOR.

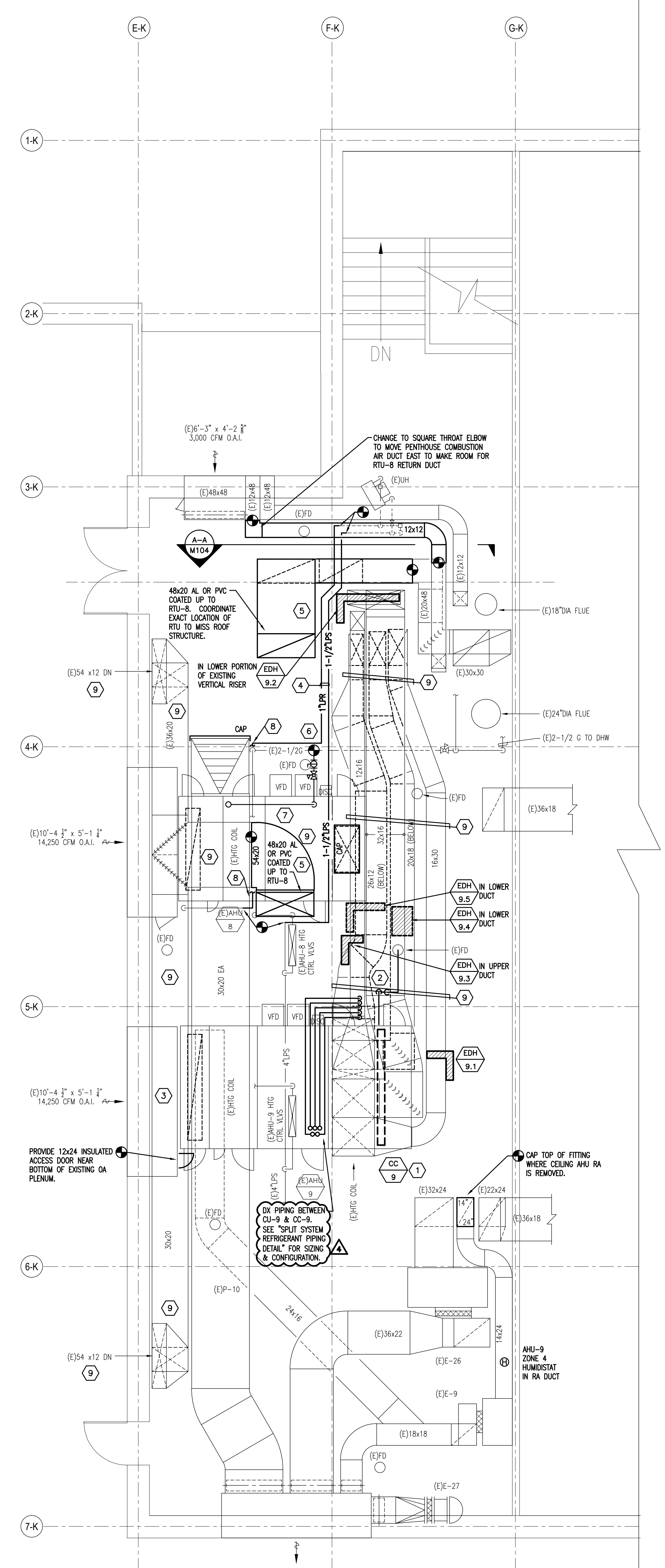
- REDO WORK KEYNOTES:**
- DISCONNECT EXISTING AHU-8 SA DUCT FROM THE UNIT DISCHARGE AND REMOVE DUCTWORK BACK TO THE LOCATION INDICATED. PREPARE FOR EXTENSION OF THE EXISTING DUCTWORK TO THE NEW ROOF MOUNTED DEHUMIDIFICATION UNIT. EXISTING AHU-8 SA DUCT DETECTOR AND ASSOCIATED RACEWAY TO MAKE ROOM FOR THE NEW SUPPLY DUCT ROUTING. PROVIDE A CAP AT THE AHU-8 DUCT DISCHARGE CONNECTION.
 - REMOVE EXISTING E-8 RA PLENUM & ASSOCIATED DUCTWORK BACK TO THE LOCATION INDICATED. PREPARE FOR EXTENSION OF THE EXISTING DUCTWORK TO THE NEW ROOF MOUNTED DEHUMIDIFICATION UNIT. REMOVE EXISTING E-8 RA DUCT DETECTORS AND ASSOCIATED RACEWAY TO MAKE ROOM FOR THE NEW RETURN DUCT ROUTING.
 - DISCONNECT EXISTING E-8 RA DUCT FROM THE FAN DISCHARGE AND REMOVE DUCTWORK BACK TO THE LOCATION INDICATED. PROVIDE A TEMPORARY CAP ON THE REMAINING 48x20 RA DUCT.
 - REMOVE EXISTING FAN E-8 IN ITS ENTIRETY INCLUDING HOUSING, MOTOR, DRIVE, HOUSEKEEPING PAD, ETC. UPON REMOVAL OF HOUSEKEEPING PAD, REPAIR THE FLOOR AS REQUIRED TO ACHIEVE A SMOOTH FINISH.
 - REMOVE EXISTING E-8 VARIABLE FREQUENCY DRIVE AND ASSOCIATED SUPPORT GRILLAGE.
 - REROUTE & RECONFIGURE EXISTING GAS CONDUIITS TO ACCOMMODATE THE NEW SA DUCT TO NEW RTU-8. RECONFIGURE ANY JUNCTION BOXES THAT WILL BE OBSTRUCTED BY THE NEW DUCTWORK.
 - REMOVE EXISTING LPS & LPR. REROUTE TO ACCOMMODATE NEW RTU-8 & ASSOCIATED DUCTWORK.



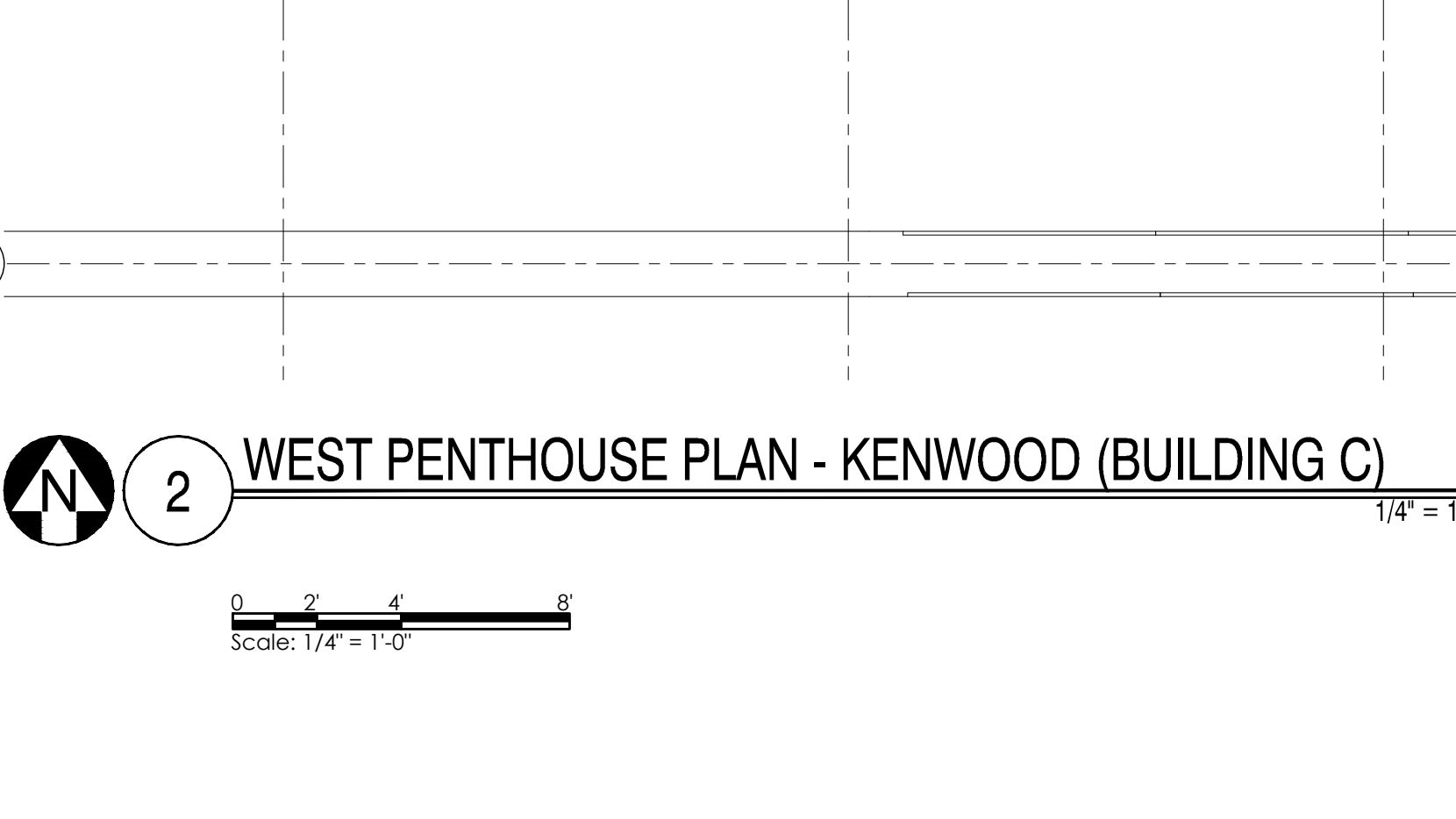
3 WEST PENTHOUSE DEMOLITION PLAN 1/4" = 1'-0"



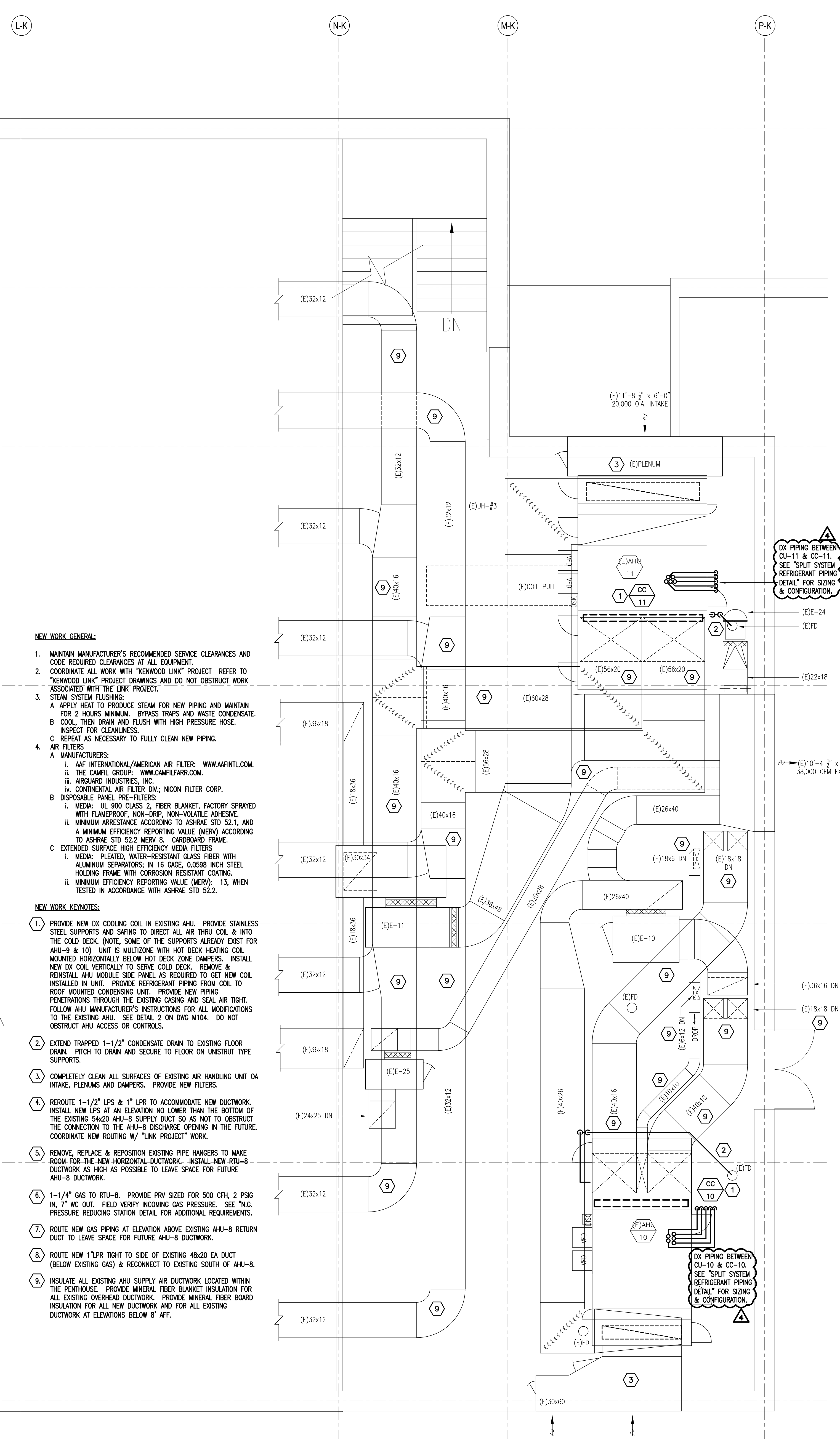
4 SECTION A-A 1/4" = 1'-0"



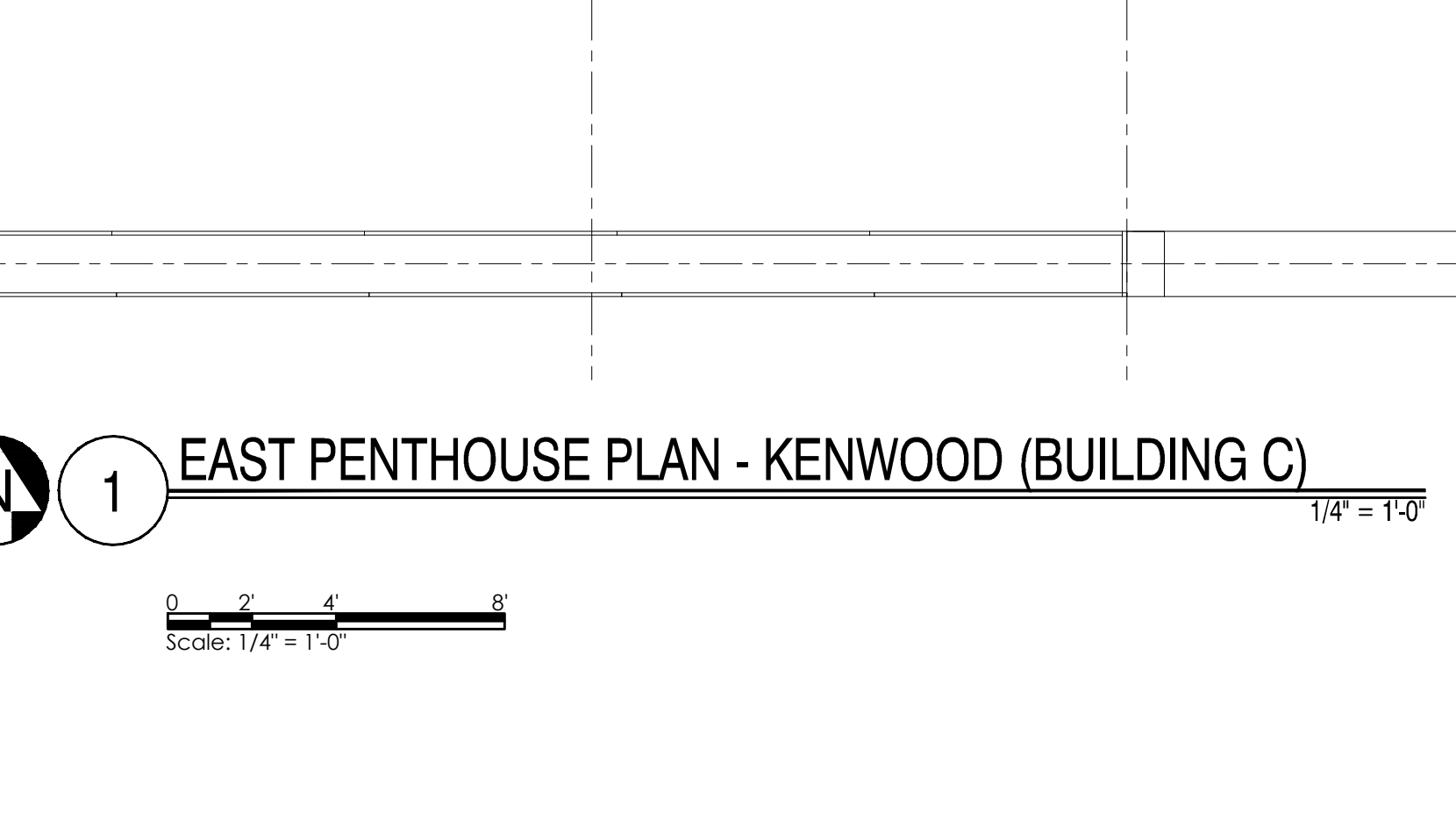
2 WEST PENTHOUSE PLAN - KENWOOD (BUILDING C) 1/4" = 1'-0"



2 WEST PENTHOUSE PLAN - KENWOOD (BUILDING C) 1/4" = 1'-0"



1 EAST PENTHOUSE PLAN - KENWOOD (BUILDING C) 1/4" = 1'-0"



1 EAST PENTHOUSE PLAN - KENWOOD (BUILDING C) 1/4" = 1'-0"

- NEW WORK GENERAL:**
- MAINTAIN MANUFACTURER'S RECOMMENDED SERVICE CLEARANCES AND CODE REQUIRED CLEARANCES AT ALL EQUIPMENT.
 - COORDINATE ALL WORK WITH "KENWOOD LINK" PROJECT. REFER TO "KENWOOD LINK" PROJECT DRAWINGS AND DO NOT OBSTRUCT WORK ASSOCIATED WITH THE LINK PROJECT.
 - STEAM SYSTEM FLUSHING:
 - APPLY HEAT TO PRODUCE STEAM FOR NEW PIPING AND MAINTAIN FOR 2 HOURS MINIMUM. BYPASS TRAPS AND WASTE CONDENSATE. COOL, THEN DRAIN AND FLUSH WITH HIGH PRESSURE HOSE. INSPECT FOR CLEANLINESS.
 - REPEAT AS NECESSARY TO FULLY CLEAN NEW PIPING.
 - AIR FILTERS:
 - MANUFACTURERS:
 - AF INTERNATIONAL/AMERICAN AIR FILTER. WWW.AFINTL.COM.
 - THE CARUL GROUP. WWW.CARULAIR.COM.
 - ARGOARD INDUSTRIES, INC.
 - CONVENTIONAL AIR FILTER (CAF): MCM FILTER CORP.
 - DISPOSABLE PANEL, PRE-FILTERS:
 - MINIMUM ARRESTANCE ACCORDING TO ASHRAE STD 52.1, AND A MINIMUM EFFICIENCY REPORTING VALUE (MERV) ACCORDING TO ASHRAE STD 52.2 MERV 8. CARBONADO FRAME.
 - MEDIA: PLEATED, WATER-RESISTANT GLASS FIBER WITH ALUMINUM SEPARATORS, IN 16 GAUGE, 0.0589 HIGH STEEL HOLDING FRAME WITH CORROSION RESISTANT COATING.
 - MINIMUM EFFICIENCY REPORTING VALUE (MERV): 13, WHEN TESTED IN ACCORDANCE WITH ASHRAE STD 52.2.
- NEW WORK KEYNOTES:**
- PROVIDE NEW DX COOLING COIL IN EXISTING AHU-8. PROVIDE STAINLESS STEEL SUPPORTS AND SIZING TO DIRECT ALL AIR THRU COIL & INTO THE COLD DECK. (NOTE: SOME OF THE SUPPORTS ALREADY EXIST FOR AHU-8 & 10) UNIT IS MULTIZONE WITH HOT DECK HEATING COIL MOUNTED HORIZONTALLY BELOW HOT DECK ZONE DAMPERS. INSTALL NEW DX COIL VERTICALLY TO SERVE COLD DECK. REMOVE & REINSTALL AHU MODULE SIDE PANEL AS REQUIRED TO GET NEW COIL INSTALLED IN UNIT. PROVIDE RETROGRAD PIPING FROM COIL TO ROOF MOUNTED CONDENSING UNIT. PROVIDE NEW PIPING PENETRATING THROUGH THE EXISTING JOIST AND SEAL AIR TIGHT. FOLLOW AHU MANUFACTURER'S INSTRUCTIONS FOR ALL MODIFICATIONS TO THE EXISTING AHU. SEE DETAIL 2 ON DWG M103. DO NOT OBSTRUCT AHU ACCESS OR CONTROLS.
 - EXTEND TRAPPED 1-1/2" CONDENSATE DRAIN TO EXISTING FLOOR DRAIN. FITCH TO DRAIN AND SECURE TO FLOOR ON UNSTRUT TYPE SUPPORTS.
 - COMPLETELY CLEAN ALL SURFACES OF EXISTING AIR HANDLING UNIT OR INTAKE PLENUM AND DAMPERS. PROVIDE NEW FILTERS.
 - REROUTE 1-1/2" LPS AT 1" LPR TO ACCOMMODATE NEW DUCTWORK. INSTALL NEW LPS AT AN ELEVATION NO LOWER THAN THE BOTTOM OF THE EXISTING 34x24 AHU-B SUPPLY DUCT SO AS NOT TO OBSTRUCT THE CONNECTION TO THE AHU-8 DISCHARGE OPENING IN THE FUTURE. RECOORDINATE NEW ROUTING W/ "LINK PROJECT" WORK.
 - REMOVE, REPLACE & REPOSITION EXISTING PIPE HANGERS TO MAKE ROOM FOR THE NEW HORIZONTAL DUCTWORK. INSTALL NEW RTU-8 DUCTWORK AS HIGH AS POSSIBLE TO LEAVE SPACE FOR FUTURE AHU-8 DUCTWORK.
 - 1-1/4" GAS TO RTU-8. PROVIDE PIP SIZED FOR 500 CFH, 2 PSIG AT 1" W/ OUT FIELD HEAT RISING GAS PRESSURE. SEE "LPS PRESSURE REDUCING STATION DETAIL FOR ADDITIONAL REQUIREMENTS.
 - ROUTE NEW GAS PIPING AT ELEVATION ABOVE EXISTING AHU-8 RETURN DUCT TO LEAVE SPACE FOR FUTURE AHU-8 DUCTWORK.
 - ROUTE NEW 1" LPR TIGHT TO SIDE OF EXISTING 48x20 EA DUCT (BELOW EXISTING GAS) & RECONNECT TO EXISTING SOUTH OF AHU-8.
 - INSULATE ALL EXISTING AHU SUPPLY AIR DUCTWORK LOCATED WITHIN THE PENTHOUSE. PROVIDE MINERAL FIBER BLANKET INSULATION FOR ALL EXISTING OVERHEAD DUCTWORK. PROVIDE MINERAL FIBER BOARD INSULATION FOR ALL NEW DUCTWORK AND FOR ALL EXISTING DUCTWORK AT ELEVATIONS BELOW 6' AFF.

NOTE: CONTRACTOR SHALL VERIFY ALL EXISTING SITE CONDITIONS AND CHECK PROJECT DIMENSIONS



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 872.216.9819

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 312.924.4584

Mechanical, Electrical, Plumbing & Fire Protection Engineers:
 Melvin & Cohen Associates, Inc.
 223 West Jackson Boulevard
 Suite 820
 Chicago, IL 60606
 312.663.3700

4 02.29.24 ADDENDUM # 2
 3 02.23.24 ADDENDUM # 1
 2 02.08.24 ISSUED FOR BID
 1 02.22.23 ISSUED FOR PERMIT

Project Name: Kenwood Academy Link + Mechanical
 PBC Contract No: C1802R
 Project No: 05208
 Title: MECHANICAL PENTHOUSE PLANS - KENWOOD (BUILDING C)
 Sheet: M103-MEP



**KENWOOD ACADEMY
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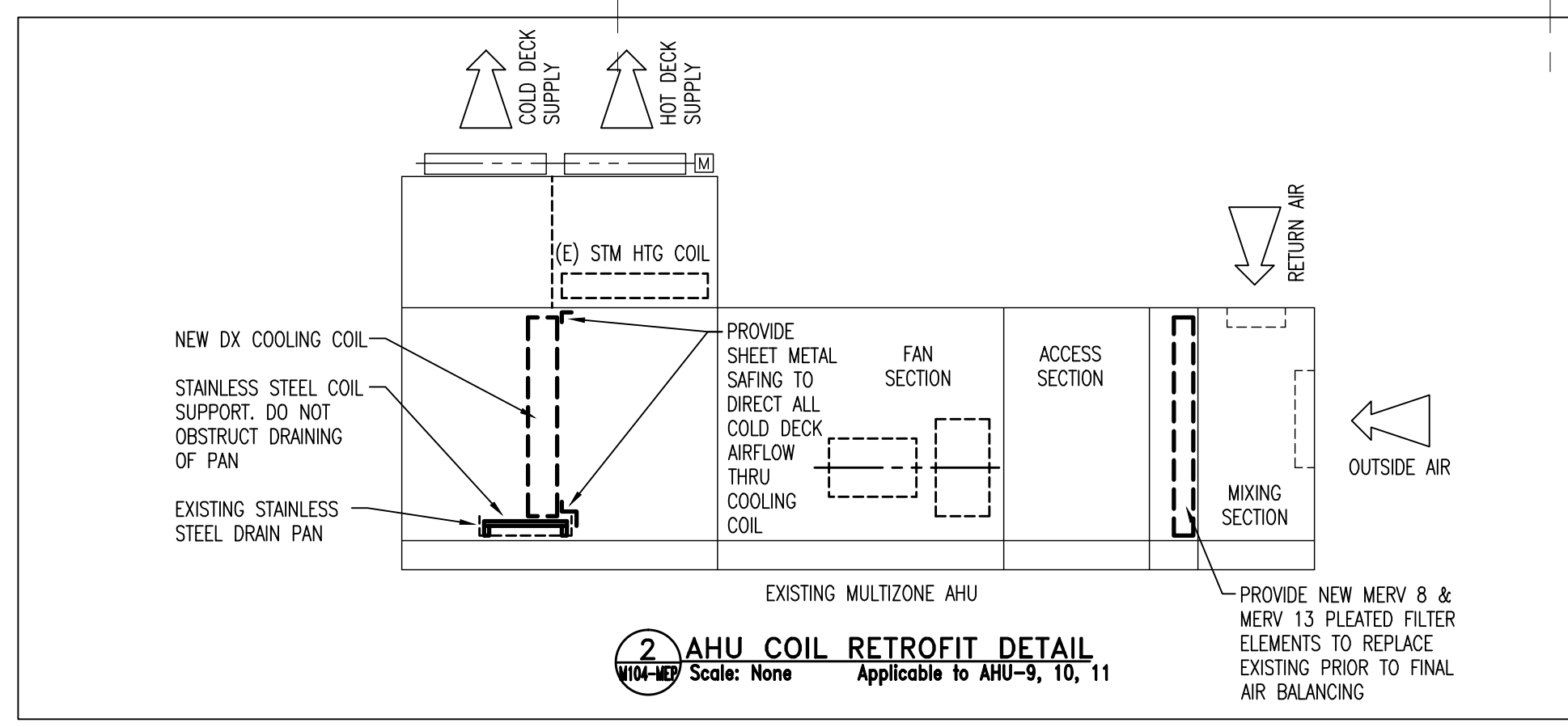
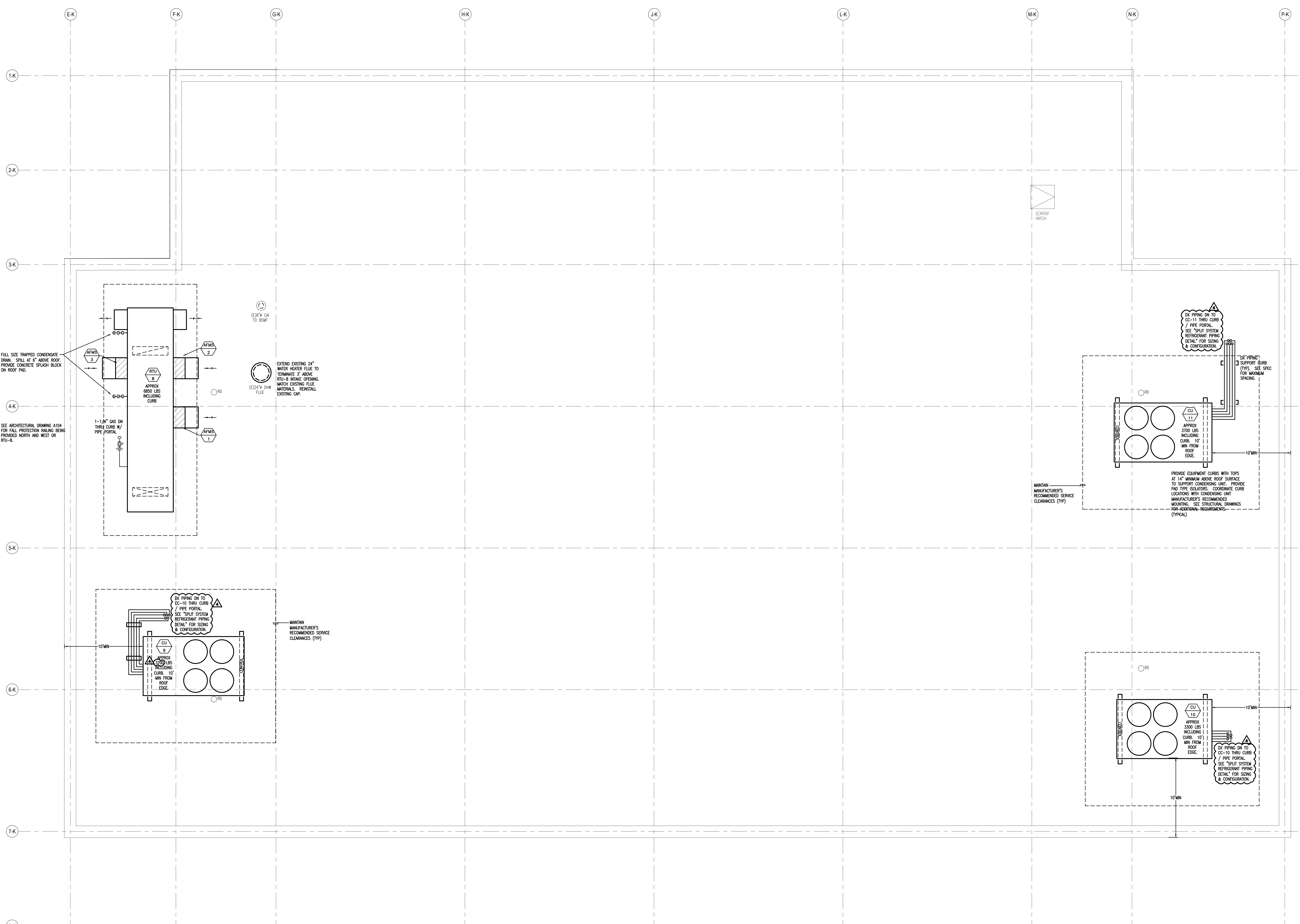
Mechanical, Electrical, Plumbing & Fire Protection Engineers:
Melvin & Cohen Associates, Inc.
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Chicago, IL 60606
312.663.3700

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2	02.08.24	ISSUED FOR BID
1	02.02.24	ISSUED FOR PERMIT

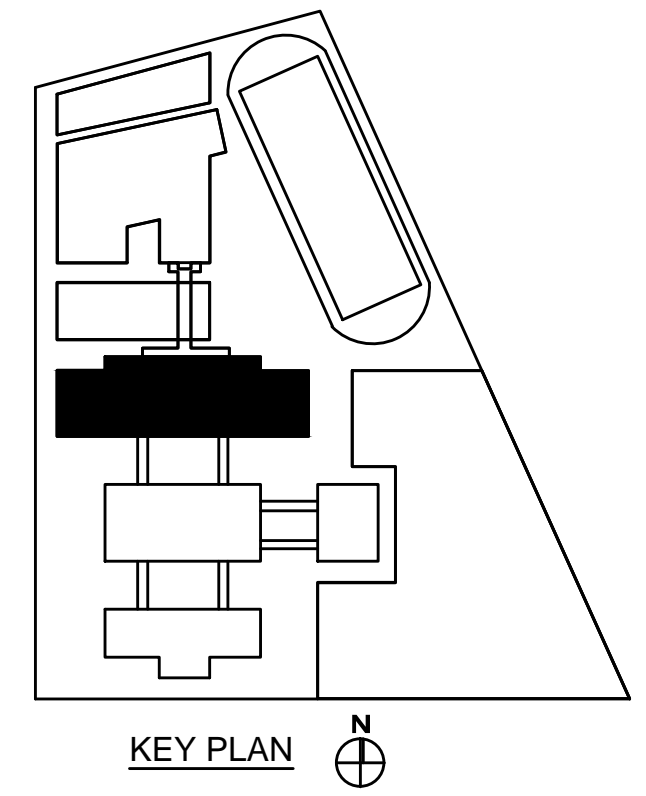
PBC Project Name: Kenwood Academy Link + Mechanical
PBC Contract No: C1902R
Project No: 05106

Title: **MECHANICAL
ROOF PLAN - KENWOOD
(BUILDING C)**

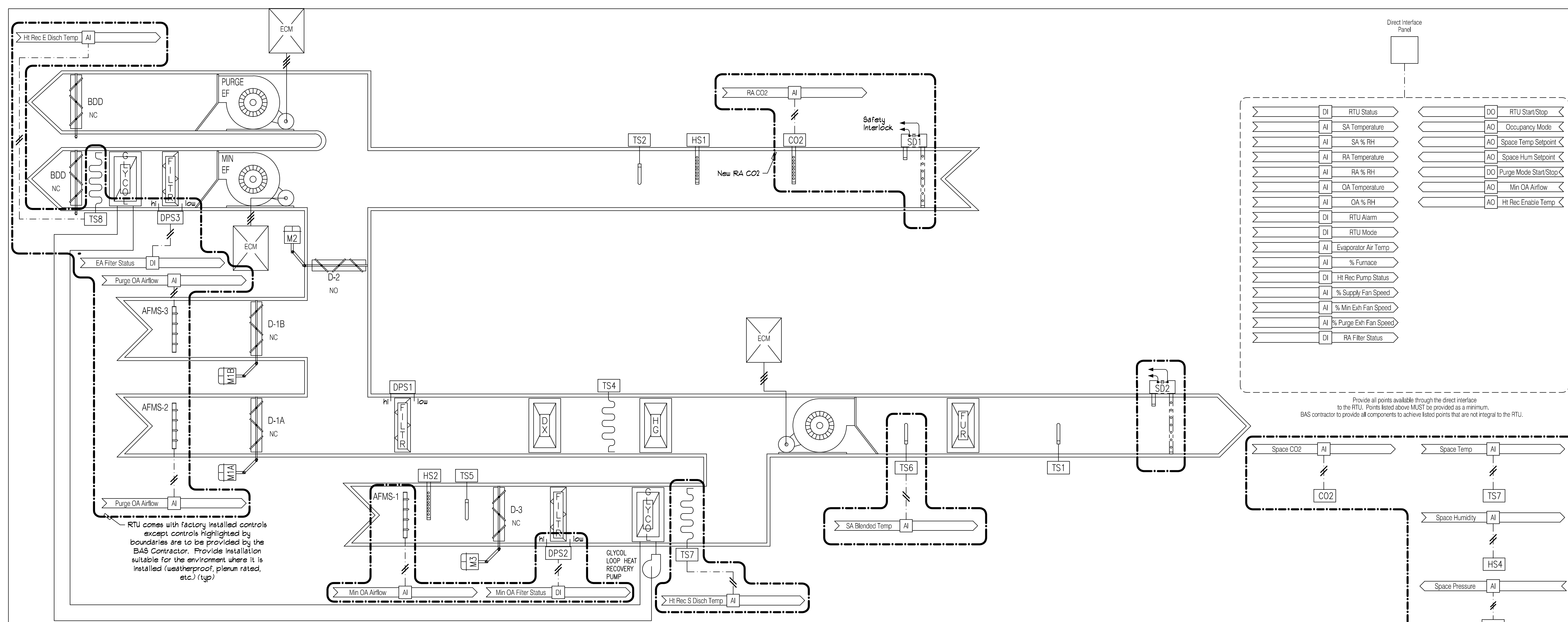
Sheet: **M104-MEP**



1 ROOF PLAN - KENWOOD (BUILDING C)
Scale: 1/4" = 1'-0"



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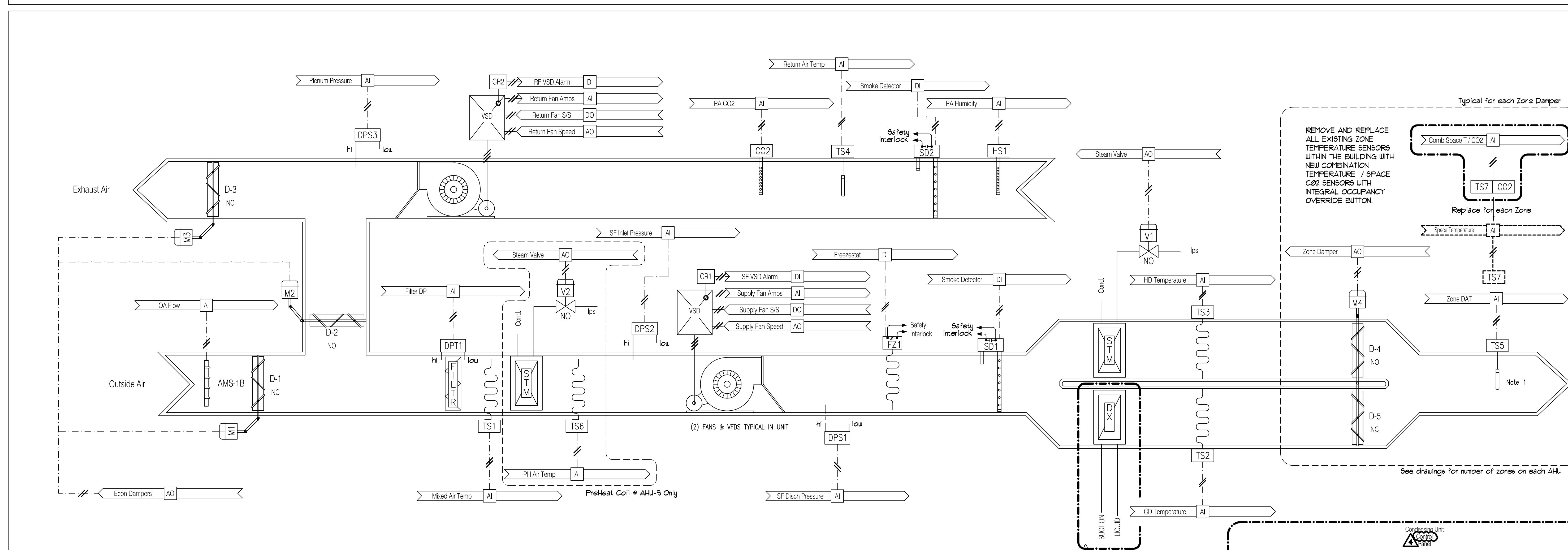


RTU-8 POOL DEHUMIDIFICATION UNIT

DI	AI	DO	AO	VP
RTU Status		RTU Start/Stop		
SA Temperature		Occupancy Mode		
SA %RH		Space Temp Setpoint		
RA Temperature		Space Hum Setpoint		
RA %RH		Purge Mode Start/Stop		
OA Temperature		Min OA Airflow		
OA %RH		Min OA Airflow		
RTU Alarm				
RTU Mode				
Evaporator Air Temp				
% Furnace				
HR Rec Pump Status				
% Supply Fan Speed				
% Min Exh Fan Speed				
% Purge Exh Fan Speed				
RA Filter Status				

POINTS LIST						
ADDRESS	POINT DESCRIPTOR	POINT TYPE			REMARKS	
		DI	AI	DO	VP	
	Smoke Detector	*				supply 4 return air
	RTU Alarm	*				Communication, sensor fault, compressor fault, freestatist, fan failure, power failure
	Supply Air Temp		*			
	SA Blend Air Temp		*			
	Return Air Temp		*			
	Return Air %RH		*			
	Return Air CO2		*			
	Outside Air Temp		*			
	Min OA Airflow		*			
	Purge OA Airflow		*			Typical for 2
	RTU 9/9		*			
	RTU Status	*				
	Supply Fan Speed		*			Typical for 2
	Exhaust Fan Speed		*			Dehumidification, cooling, heating, economizer, purge
	Occupancy Mode	*				
	Space Temp		*			
	Space Temp Setpoint		*			
	Space Humidity		*			
	Space Hum Setpoint		*			
	Space Pressure		*			
	Space CO2		*			
	Filter Status	*				Typical for 3 Banks
	HR Rec Pump Status	*				
	HR Rec 9 Disch T	*				
	HR Rec 8 Disch T	*				
	HR Rec 7 Disch T	*				

BILL OF MATERIAL				
DESIG	QTY	MODEL NO.	DESCRIPTION	MFG / REMARKS
TS1			Space Temperature Sensor	
HS4			Space Humidity Sensor	
DP6-2/3			Filter DP Switch	
DPT4			Space Pressure Sensor	
CO2			Space 4 RA CO2 Sensors	
SD-1/2			SA + RA Smoke Detectors	
APM6-1/2/3			OA Airflow Measuring Stations	



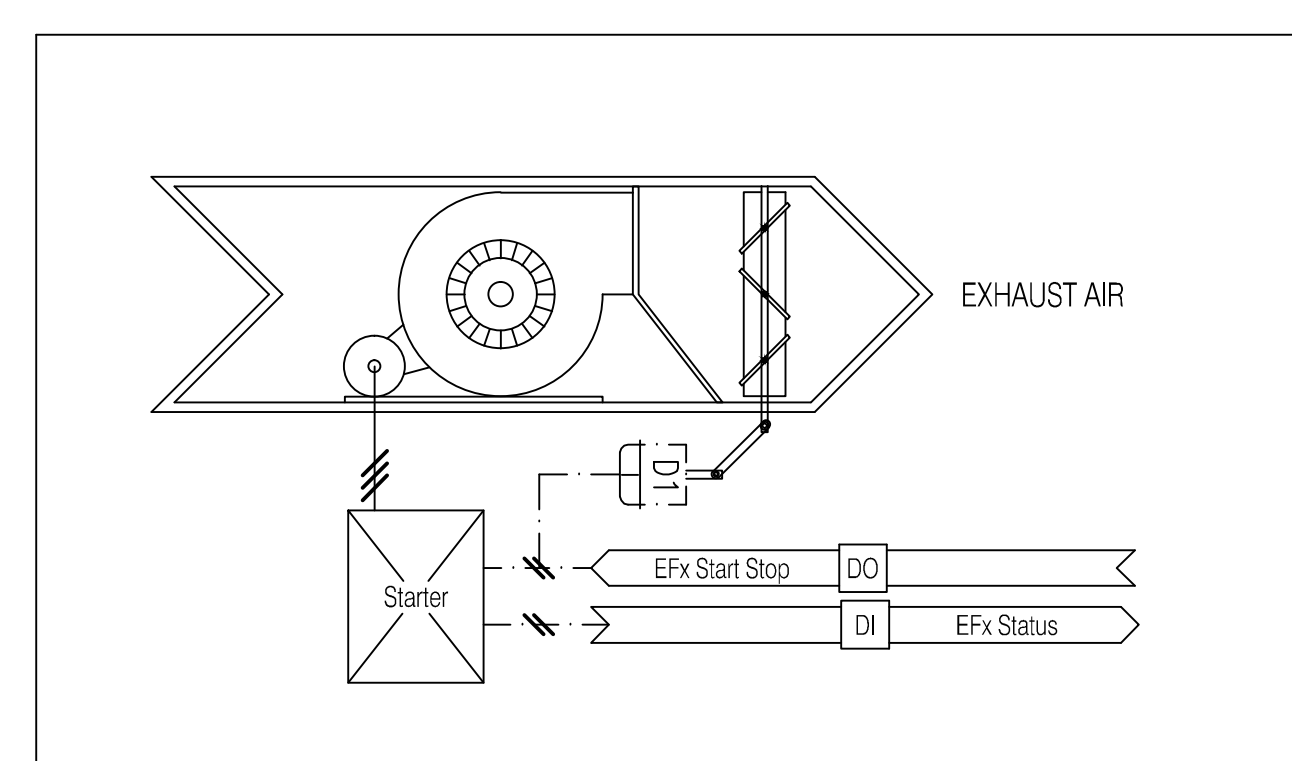
Multizone Package Unit (AHU-9, 10, 11)

DI	AI	DO	AO	VP	
CR1		SF VSD Alarm			
		Return Fan Amps			
		Return Fan SPS			
		Return Fan Speed			
		SF VSD Alarm			
		Return Fan 9/9			
		Return Fan Speed			
		Return Fan Amps			
		RF VSD Alarm			
		Smoke Detector	*		Typical for SA + RA
		Freestatist	*		
		Mixed Air Temp	*		
		Return Air Temp	*		
		Return Air CO2	*		
		Filter DP	*		AHU-9 only
		PH Temperature	*		
		CO2 Temperature	*		
		HD Temperature	*		
		CD Temp Reset	*		to condensing unit
		PH Steam Valve	*		AHU-9 only
		HD Steam Valve	*		
		Econ Dampers	*		
		RA Humidity	*		
		Plenum Pressure	*		Typical for (2/8A + RA
		CU Enable/Disable	*		
		CU Alarm	*		
		CU Comp Status	*		Typical for each Comp
		Hot Gas Bypass	*		Typical for each Valve
		Space Temp	*		Typical for each Zone
		Zone DAT	*		Typical for each Zone
		Zone CO2	*		Typical for each Zone
		Zone Damper	*		Typical for each Zone

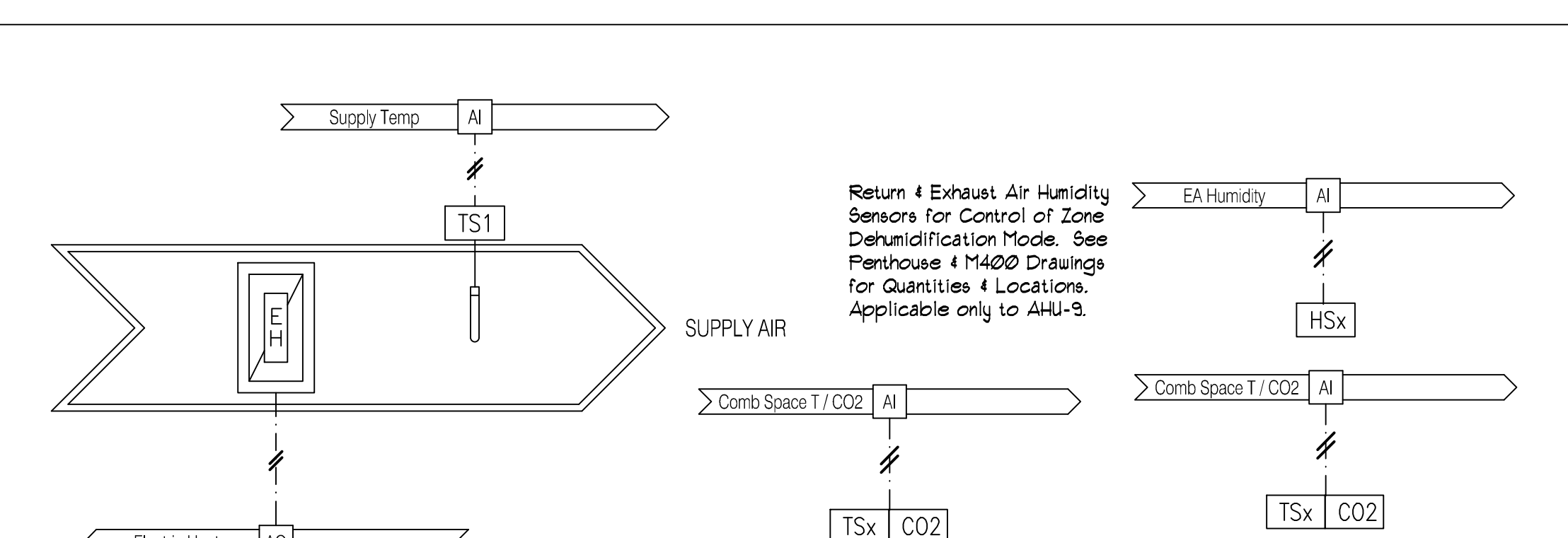
POINTS LIST						
ADDRESS	POINT DESCRIPTOR	POINT TYPE			REMARKS	
		DI	AI	DO	VP	
	Supply Fan 9/9		*			
	Supply Fan Speed		*			
	Supply Fan Amps		*			
	SF VSD Alarm	*				
	Return Fan 9/9		*			
	Return Fan Speed		*			
	Return Fan Amps		*			
	RF VSD Alarm	*				
	Smoke Detector	*				Typical for SA + RA
	Freestatist	*				
	Mixed Air Temp	*				
	Return Air Temp	*				
	Return Air CO2	*				
	Filter DP	*				AHU-9 only
	PH Temperature	*				
	CO2 Temperature	*				
	HD Temperature	*				
	CD Temp Reset	*				to condensing unit
	PH Steam Valve	*				AHU-9 only
	HD Steam Valve	*				
	Econ Dampers	*				
	RA Humidity	*				
	Plenum Pressure	*				Typical for (2/8A + RA
	CU Enable/Disable	*				
	CU Alarm	*				
	CU Comp Status	*				Typical for each Comp
	Hot Gas Bypass	*				Typical for each Valve
	Space Temp	*				Typical for each Zone
	Zone DAT	*				Typical for each Zone
	Zone CO2	*				Typical for each Zone
	Zone Damper	*				Typical for each Zone

BILL OF MATERIAL				
DESIG	QTY	MODEL NO.	DESCRIPTION	MFG / REMARKS
TS1/3/6			Averaging Duct Temperature Sensor	
TS4_5			Duct Temperature Sensor	
DPT1			Differential Pressure Transmitter	
SD1/2			Smoke Detector	
CR1-2			Current Relay	
F21			Freestatist	
V1			Control Valve	
DI-3			Control Dampers	
D4/5			Zone Control Dampers	
M1-4			Damper Actuators	
TS1/CO2			Safety Interlock Control Relay	Typ for each Zone
HS1/x			Comp Space Temp/CO2 Sensor	
AMB1			Duct Humidity Sensor	
DP6/2/3			Pressure Switches	

DRAWING NOTES:
 1. Locate each Zone Damper DAT sensor a sufficient distance downstream of the zone dampers to ensure adequate mixing of the airstream.



Locker Rm Exhaust Fan with Motorized Damper (EF-36)



Duct Mounted Electric Reheat

POINTS LIST (PER MZ ZONE)						
ADDRESS	POINT DESCRIPTOR	POINT TYPE			REMARKS	
		DI	AI	DO	VP	
	Supply Temp		*			
	Return Exhaust Air Humidity Sensor for Control of Zone Dehumidification Mode. See Reinhouse 4/1300 Drawings for Quantities & Locations. Applicable only to AHU-9		*			
	Electric Heat	*				
	BA Humidity	*				
	Comb Space T / CO2	*				
	Comb Space T / CO2	*				
	TSx / CO2	*				
	TSx / CO2	*				

BILL OF MATERIAL				
DESIG	QTY	MODEL NO.	DESCRIPTION	MFG / REMARKS
TSx			Zone Temp Sensor	
TS1			Duct Temp Sensor	
HSx			Zone RA/EA Humidity Sensor	See Plans for Qty
Dx			Damper Actuators	
TSx/CO2			Comb Zone Temp/CO2 Sensor	



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 LINK + MECHANICAL PROJECT**
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2	02/08/24	ISSUED FOR BID
1	02/02/24	ISSUED FOR PERMIT

PBC Project Name: Kenwood Academy Link + Mechanical
 PBC Contract No: C1602R
 Project No: 05126
 Title: BAS CONTROL DIAGRAM

Sheet
M301-MEP

NOTE: CONTRACTOR SHALL VERIFY ALL EXISTING SITE CONDITIONS AND CHECK PROJECT DIMENSIONS