# BID ADDENDUM 04

# BIDS ARE NOW DUE AT 2:00 PM ON THURSDAY DECEMBER 12, 2024

The items set forth herein, whether of omission, addition, substitution, or clarification are to be included in and form a part of the construction documents for the project listed above.

This Addendum consists of the following Parts:

Part 1	Divisions #0-1, Bidding and Contract Requirements	
Part 2	Technical Changes, Architectural, Structural, Civil & Abatement	
Part 3	Technical Changes, Plumbing, Mechanical and Electrical	Not Used
Part 4	Drawing Changes, Architectural / Civil / Abatement	
Part 5	Drawing Changes, Structural	Not Used
Part 6	Drawing Changes, Plumbing, Mechanical and Electrical	
Part 7	Clarifications	
Part 8	New Issues – List of Included Documents	

# PART 1 DIVISIONS #0-1, BIDDING AND CONTRACT REQUIREMENTS

1.1 002100 Replace the dates and times in sections 1.6A to be as follows:

# Bids Due: Thursday, December 12, 2024, 2:00 PM

- 1.2 004020 BID FORM CONTRACT #2 ABATEMENT
  - a. See revised Bid Form to include information for allowances.
- 1.3 012100 ALLOWANCES
  - a. See attached specification section for allowances. Allowance has been added for Contract #2 Abatement for re-insulation of piping upon completion of abatement work in the 1969 wing.

# PART 2 TECHNICAL CHANGES, ARCHITECTURAL, STRUCTURAL, CIVIL AND ABATEMENT

- 2.1 020800 ASBESTOS ABATEMENT SPECIFICATION
  - a. See attached REVISED Asbestos Abatement Specification There is additional abatement work required in the pipe trench and ceilings of the basement of the 1969 portion of the building underneath the existing administration wing (500 wing).

Abatement of mudded joints required in pipe trench, hallway, storage rooms and switchboard room in Ground Floor Area D. This work will require removal of the existing non ASB ceilings in these spaces by the Abatement Contractor.

Note: The pipe trench is approximately 3 feet wide, 4 feet height, with access points at the Switchboard Room B08 and Telephone Room B07.

- 2.2 064020 Interior Architectural Woodwork
  - a. 2.4 C1 The manufacturers name is "Hafele" not "Havele"
  - b. Add Part 2 products 2.1 Faculty Pantry area- Tag- Solid Surface SS3- Corian Stonique (countertop and splashes) and PL4- Formica Neutral twill #8826-58 (Vertical surfaces of cabinets)
- 2.3 074300 Fiber Cement Wall Panels
  - a. The basis of design 2.1-A shall be changed as follows:
    - 1. Panels 8MM (5/16") thickness. Maximum Size 10'x4' Panel size as required per elevations
    - 2. Colors Allow for 3 different colors from manufacturers standard selections
    - 3. Basis of Design Equitone Tectiva (smooth panels CM-1 and CM-2) and Equitone Linea (ribbed panels CM-3)
- 2.4 096609 Part 2 Products 2.1 Manufacturers
  - a. Manufacturers Wausau, B2. Color. Change the tile styles to the following: Field Tile- Pearl Series #TZP83

Accent 1- Prairie series- polished #TZG74 Trillium

Accent 2- Pearl series #TZP87

Accent 3-Traditional Series #TZ30 Crushed Ice

Accent #4- Sesto Series #SST16 Venere

Accent #5- Pearl Series # TZP 82.

# PART 4 DRAWING CHANGES, ARCHITECTURAL / CIVIL / ABATEMENT

- 4.1 DRAWING A310 Exterior Elevations New Addition
  - a. See attached revised Drawing A310 with Material CM-1 labeled throughout. Also, base of exterior wall at new addition correctly tagged as pre-cast PC-1. Additional modifications also clouded included clarifying that the aluminum fascia shall be factory painted aluminum in order to achieve two different colors for Al-1 and Al-2.
- 4.2 DRAWING A410 600 Wing Enlarged Plan
  - a. See attached revised Drawing A410 with modifications to flooring layout at the new addition.
- 4.3 DRAWING A441 Classroom Millwork Plan and Elevations
  - a. See details 7&8/A441 for millwork to be provided at Faculty Room 513. Millwork shall be provided for full length of wall as shown.
- 4.4 DRAWING A501D First Floor Finish Plan Part D
  - a. See attached A501D with revisions to floor pattern at corridor and classrooms of the 500-wing.
- 4.5 DRAWING A600A Ground Floor Ceiling Plan Part A&D
  - a. See attached A600A showing new ceilings in Ground Floor Part D. New ceilings required as the existing will need to be removed for abatement work in these areas.

- 4.6 DRAWING A805, A806, A807 Section Details
  - a. See attached revised Drawings A805, A806, and A807 with modifications for materials, dimensions, and detailing. Modifications include, but are not limited to, the pre-cast base of the new addition (eliminating the wallguard product), blocking at eaves, parapet clarifications, and material clarifications.
  - b. Detail 4/A807 Modifications to gutter assembly, fascia, and underside of canopy.
- 4.7 DRAWING L954A Landscape Plan Add Alternate
  - a. Omit notes referring to "Concrete Pavers". The plaza shall be poured concrete and the triangular pattern (approximately 5foot sized triangles) shall be achieved with decorative sawcuts in conjunction with required control/expansion joints.
- 4.8 DRAWINGS A250, A251, A252 Roof Details
  - a. Notes referring to the "anodized aluminum fascia" shall be modified to be painted aluminum (fluoropolymer kynar 500 finish). Roofing Contractor shall refer to elevations in A300 series for materials AL-1 and AL-2 tagged.

# PART 6 DRAWING CHANGES, PLUMBING, MECHANICAL AND ELECTRICAL

6.1 Attached please find the flowing revised Plumbing Drawings with modifications and/or additional information clouded:

Drawing P200A – Plumbing Ground Floor Plan Part A&D

Drawing P201D – Plumbing First Floor Plan Part D

- 6.2 Attached please find attached new Plumbing Drawing P602 Plumbing Details with riser diagram information.
- 6.3 Attached please find the flowing revised Mechanical Drawings with modifications and/or additional information clouded:

Drawing M200A – Mechanical Ground Floor Plan Part A&D

Drawing M200B - Mechanical Ground Floor Plan Part B

Drawing M201A – Mechanical First Floor Plan Part A

Drawing M201B - Mechanical First Floor Plan Part B

Drawing M201C - Mechanical First Floor Plan Part C

Drawing M202A - Mechanical Section Floor Plan Part A

Drawing M202B - Mechanical Second Floor Plan Part B

Drawing M210A – Mechanical Ground Floor Piping Plan Part A&D

Drawing M2111A – Mechanical First Floor Piping Plan Part A

Drawing M2111C – Mechanical First Floor Piping Plan Part C

Drawing M2111D – Mechanical First Floor Piping Plan Part D

Drawing M212A - Mechanical Second Floor Piping Plan Part A

6.4 Attached please find the flowing revised Electrical Drawings with modifications and/or additional information clouded:

Drawing E200A – Electrical Ground Floor Power Plan Part A&D

Drawing E201A - Electrical First Floor Power Plan Part A

Drawing E201C - Electrical First Floor Power Plan Part C

Drawing E201D - Electrical First Floor Power Plan Part D

Drawing E202A – Electrical Second Floor Power Plan Part A

Drawing E300A – Electrical Ground Floor Lighting Plan Part A&D

Drawing E300B - Electrical Ground Floor Lighting Plan Part B

Drawing E301D - Electrical First Floor Lighting Plan Part D

Drawing E302A - Electrical Second Floor Lighting Plan Part A

Drawing E302B - Electrical Second Floor Lighting Plan Part B

Drawing E702 – Electrical Equipment Schedules

Drawing E703 – Electrical Equipment Schedules

# PART 7 CLARIFICATIONS

- 7.1 Rooms 230A, 230B, 470A, 470B, 118 (Add Alt) and 120 (Add Alt) named "Strive Related Services", and Room 338 named "JAF Related Service", are the same as rooms referred to as "Collab" spaces elsewhere in the project.
- 7.2 At the base of the exterior wall of the new addition, the exterior finish shall be 1-1/2" thick Pre-Cast Stone Panels (PC-1 on the Elevations), grouted solid over 3.5 inches of rigid insulation. Disregard all notes referring to "2inch Wallguard Panel with Concrete Face". See attached revised A310, A805, A806 and A807 with the details/finishes at the exterior wall of the new addition.
- 7.3 At the corridors and stairs in all levels of the 1986 portion of the building, the existing paint is multicolor (sim. to "zolatone"). When painting over multicolor paint, the following work shall take place:
  - Remove any dust, oil, grease, wax, polish, mold, mildew stains, loose or peeling paint, and rust. Sand smooth new drywall surfaces and scuff sand or scrub other surfaces to dull them.
  - Use a primer similar to SP203 Acrylic Drywall Primer or SP97 Water base Multipurpose Bonding Primer. Before applying the paint, test the primer, paint, and surface for adhesion, compatibility, and performance.
- 7.4 RFI Question Reference 011000 Roofing Construction Contract, 5. New Work, note N.1 calls for the roofing contractor to "curb cut in". Does this only include the necessary roof removals to install the new curb?

  RFI Response Yes
- 7.5 RFI Question The contractor requiring the opening (in existing roof) should be responsible for the deck removals for their work.

  RFI Response This is the General Contractor Mechanical Contractor to install all new mechanical equipment. Roof mounted equipment installation shall be coordinated for location and building tie-in. Curb material will be provided by the Contractor providing the equipment (Mechanical Contractor or Owner). The roofing, insulation and curb cut in shall be by the Roofing Contractor, along with all necessary, waterproofing, etc. Any structural support modifications and building envelope penetrations will be by General Contractor.
- 7.6 RFI Question Reference 5/A806 & 4/A807, who owns providing and installing the builtin gutter blocking and sheathing? Is the gutter pitched, or is the roofer adding in tapered insulation?

RFI Response -

5/A806 - Roofing Contractor shall be responsible for gutter blocking and tapered roof

insulation at this gutter. Roofer shall provide the tapered insulation pitched to each end. 4/A807 – General Contractor shall be responsible for construction of this gutter assembly including the plywood and blocking, including the sloped plywood bottom. Roofing contractor shall be responsible for epdm, sheet metal fascia, cants, flashings, etc. The Roofing Contractor shall be responsible for aluminum brake metal that wraps 1'-9" underneath the canopy at the perimeter to ensure it matches the fascia material. GC to provide the plywood backing and framing for this aluminum material.

- 7.7 RFI Question Per spec section 011000, which contract is responsible for temporary heating/cooling/ventilation?
  RFI Response General Contractor On Page 011000-6 Temporary Heating, Cooling, and Ventilation: The General Contractor is responsible for temporary heating, cooling, and ventilation before permanent enclosure of building is complete and/or when a system is removed or otherwise disabled. The General Construction Contract is responsible for temporary heating, cooling, and ventilation after permanent enclosure of building is complete and Owner will pay electric utility-use charges.
- 7.8 RFI Question Please confirm each contract is responsible for their own dumpsters for demolition

  RFI Response General Contractor On Page 011000-6 Daily clean-up and disposal is required by the Contractor for the periods which that Contractor is performing work on site. Dumpsters will be provided by the General Construction contract for use by the prime contractors, recycling of materials will be instituted daily. Each trade will assign at least one person to the weekly general clean-up. Any Contractor not providing personnel will be "backcharged" for labor provided by the Construction Manager. Progress cleaning of its own areas on a daily basis.
- 7.9 RFI Question The project milestone schedule provided lists example Zone Build Rooms that started on 10/1/24 and running through 11/15/24 please confirm if this scope is to be included in the General Construction Contract.

  RFI Response This example zone is a visual representation of how the zones would be built. This total duration was used within the zones to schedule the entire project. This is an example and no work was intended in this example work zone schedule.
- 7.10 RFI Question Please confirm that the new concrete/site work in the courtyard area around Zone 1 and between zones 13 & 16/18 to be done on regular time?

  RFI Response Yes
- 7.11 RFI Question On the floor plan there are approximately 70 louvers, tagged L-1. However, no make or model was specify for L-1 on the equipment schedule. Please advise. RFI Response Louver L-1 is to be provided by Modine to serve UV-A,B & C and will be furnished by Trane and installed by the General Contractor
- 7.12 RFI Question Thermal break insulation "Spaceloft by Aspen Aerogels" as listed in spec section 074300 has been discontinued. Please provide an updated material to be used RFI Response Basis of Design shall be aerogel thermal blanket insulation Thermablok (thermablok.com) 1/4" thickness. These strips shall be placed behind vertical backup angles/furring of the rainscreen in order to create thermal break at exterior wall.
- 7.13 RFI Question Is cement board panel CM-1 used? It is listed in the legend in the A300 series but is not found as called out on the elevations.

- RFI Response See attached revised Drawing A310. CM-1 cement panels are utilized at the new addition.
- 7.14 RFI Queston The colors listed for the Cembrit panels do not coincide with the manufacturer's color choice. Please see the attached PDF for color selections and advise (sent as separate attachment to the email)
  RFI Response See modification to Basis of Design to Equitone in Part 2 of this Addendum. Contractor shall allow for 3 colors from manufacturers standard selections.
- 7.15 RFI Question Please confirm the general construction contract scope stops at the metal decking and all other scope above the metal decking is to be by the roofing contract.

  RFI Response Work above the metal decking by the GC would also include work at the parapets including CFMF framing, wood blocking, plywood behind fascias and soffits, gypsum board sheathing and batt insulation at parapets
- 7.16 RFI Question EIFS is listed in the spec book but does not appear in the A300 series materials legend. Is this used on the project? If so, please provide locations RFI Response There is no EIFS in this project. This spec section may be omitted.
- 7.17 RFI Question What door types are to be used in alternate #2 the demo plan shows them coming out on A952A but there is no mention of what their replacement is RFI Response Interior doors for Add Alternate #2A, 2B, 2C would be existing hollow metal frames to remain with new wood doors and hardware to be provided by Owner.
- 7.18 RFI Question What partition types are to be used to create Resource Room 118 & 120 in alternate #2B?

  RFI Response At the corridor, provide wall type '1C3' 1-hour fire rated wall with the two layers of sheetrock at the corridor side. Between the spaces provide wall type '0A3'
- 7.19 RFI Question Who is responsible for opening & closing existing ceilings for MEP trades? RFI Response MEP Trades will open/close ceiling tiles as needed for access to their scope of work (i.e. 2nd shift work). GC is responsible for permanent ceiling removal and installation. Gyp ceilings will be removed and replaced/patched by the GC (i.e bathrooms).
- 7.20 RFI Question There are diagonal lines in the ceilings at the underside of the new addition exterior canopy with diagonal lines running through it. What do these lines represent? RFI Response The diagonal lines represent the wood pattern / arrangement at the underside of the canopy. The heavier diagonal lines represent a gap (approximately 3 to 4 inches) between the wood ceiling assemblies. The 'M' light fixture is shown to be placed in this gap between the ceiling assemblies.
- 7.21 RFI Question Who is responsible for furnishing & installing televisions? Please provide specifications if they are to be furnished by the general construction contract RFI Response TVs / Monitors will be provided by the Owner for installation by the General Contractor. The General Contractor shall be responsible to coordinate with the owner for blocking in the walls for the support systems / hangers.
- 7.22 RFI Question Drawing L100 has a call out 1/L954B but L954B is not part of the set. Please advise RFI Response Disregard this tag, no elevation provided.

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7.23 RFI Question – Please provide joint detail for concrete pavers (site). Please provide better detail for planter borders.

RFI Response – Add Alternate #4 – In lieu of triangular concrete pavers, the courtyard shall be concrete sim. to detail 4/C103. The triangular pattern (approximately 5foot sized triangles) shall be achieved with decorative sawcuts in conjunction with required control/expansion joints. At planter borders for base bid and add alternate, the contractor shall provide a flush concrete curb, 6 inches width, minimum 12 inches deep, top of curb to align with finished plaza.

7.24 RFI Question – Please provide wooded bench manufacturer for exterior benches RFI Response – Basis of Design as follows:

Thomas-steele.com – Sawyer Bench, all Top of wall mount

Material: Embossed Recycled Plastic Birchwood, Finish: Powder Coated eSteel, Color: Midnight Blue

For triangular planters in front: (15 benches) 8-foot backed - SWB-8

For inside courtyard, instead of 4' lengths shown:

(4 benches) 8-foot flat - SWF-8

(7 benches) 6-foot flat - SWF-6

7.25 RFI Question – Could you please confirm if the AISC fabricator requirement can be waived for this project?

RFI Response – AISC fabricator requirement shall remain for this project.

7.26 RFI Question – After reviewing Addendum 2 milestone schedule, the drawing A203 roof replacement scope of work is split between the 2025 and 2026 summers. What sections of roof need to be completed in 2025? Which sections need to be done in 2026? Can all the roofing work be done in 2025 if the contractor is capable?

RFI Response – The intention is to split the roof into manageable sections/areas for completion during the summers work starting at Zone 2. An area defined by roof edge lines must be completed and watertight for the start of school. This will ensure new work is installed under the permanent roof come September 2025. As much work will be permitted in the summer of 2025 granted it does not affect other trades completion of their work, specifically the hazardous removal of Zones 8-15 and the building is watertight in work areas performed. This shall be coordinated and scheduled per the Contract.

7.27 RFI Question – Please confirm the roofing contract will be responsible for all temporary roofing/waterproofing at the roof level.

RFI Response – Per Specification Section 01 1000 page 17, the Roofing Contractor "shall be responsible for temp. roof protection during periods where new roof has yet to be installed, and existing roof has been removed. No new removals shall progress without proper watertightness has been established on removed area or planned/coordinate to progress."

- 7.28 RFI Question In spec section 011000 Multi Prime Contract Summary, Section 1.9c for demolition has a note that says "remove material not called out in demolition on the roof/fascia or of containing hazardous material". Can you elaborate on what the general construction contract is responsible for in terms of roof demo?
  - RFI Response Roofing Contractor is responsible for safety, protection, disposal and replacement of new roof.
- 7.29 RFI Question In spec section 011000 Multi Prime Contract Summary, Section 1.9d for

- temporary facilities, line W makes mention of a logistics plan. Is this available for our use? RFI Response No, this shall be submitted and coordinated during construction.
- 7.30 RFI Question Exterior & interior wall mockups are called out for in spec section 014330 but I do not find its location in the drawings. Please provide details if required. RFI Response In addition to mockups called for in the specifications, the General Contractor shall provide one exterior wall mockup of the new addition similar to section 4/A801, approximately 4 feet width and height as required to show different conditions (wall, window, soffit/fascia).
- 7.31 RFI Question Is detail 48 on A253 the detail for the new stair shown on detail 11/A701?

  RFI Response Detail 48/A253 is for roof stairs only. All existing interior stairs shall received new finishes, guard rails and hand rails per the details on A707. There are no new interior stairs in this project, all stairs shown are existing to be renovated.
- 7.32 RFI Question Do stairs get new sheetrock applied to the underside of the stair pans? Detail 2/A707 makes it appear that it might but is not clearly denoted RFI Response At existing stairs, new ACT shall be provided at landings as shown on ceiling plans. Existing sheetrock at underside of stair treads between stringers may remain and a new paint finish provided.
- 7.33 RFI Question Per RFI responses 7.10 & 7.11 issued in addendum #3, please confirm the roofing contract will be responsible for all AL-1 and AL-2 finishes at the exterior RFI Response Roofing contractor shall be responsible for AL-1 and AL-2 finishes and shall refer to A310 for locations. The GC responsible for providing plywood backing. AL-1 and AL-2 shall be factory painted two-coat kyner, two different colors to be selected by Architect.
- 7.34 RFI Question Parapet detail 8/A805 differs from details shown on A250, A251, A252. Which are correct?

  RFI Response Details on A250, A251, A252 for existing/revised eaves shall take precedence for detailing purposes. Repairs and filling of existing CMU top course referenced in these details shall be by the General Contractor.
- 7.35 RFI Question FRP is called out in 10/A806 but there is no FRP section in the spec book nor does it appear in the corresponding elevations elevations show PT-6 on the walls at the clerestory glass. Which should be included?

  RFI Response These walls shall be tile per elevations. See also revised A806 included in this addendum. There is no FRP in the Lobby area.

# PART 8 NEW ISSUES

1.	Specification 004020 – Bid Form Abatement	(6 Pages) 8.5x11
2.	Specification 012100 – Allowances	(3 Pages) 8.5x11
3.	Specification 020800 – Asbestos Abatement Procedures	(45 Pages) 8.5x11
4.	Drawing A310 – Exterior Elevations – New Entrance	(1 Page) 30x42
5.	Drawing A410 – 600-Wing Enlarged Plans	(1 Page) 30x42
6.	Drawing A441 – Classroom Millwork Plans and Elevations	(1 Page) 30x42
7.	Drawing A501D – First Floor Finish Plan Part D	(1 Page) 30x42

8. 9.	Drawing A600A – Ground Floor Ceiling Plan Part A&D Drawing A805 – Section Details	(1 Page) 30x42 (1 Page) 30x42
10. 11.	Drawing A806 – Section Details Drawing A807 – Section Details	(1 Page) 30x42 (1 Page) 30x42
12.	Drawing P200A – Plumbing Ground Floor Plan Part A&D	(1 Page) 30x42
13.	Drawing P201D – Plumbing First Floor Plan Part D	(1 Page) 30x42
14.	Drawing P602 – Plumbing Details	(1 Page) 30x42
15.	Drawing M200A – Mechanical Ground Floor Plan Part A&D	(1 Page) 30x42
16.	Drawing M200B – Mechanical Ground Floor Plan Part B	(1 Page) 30x42
17.	Drawing M201A – Mechanical First Floor Plan Part A	(1 Page) 30x42
18.	Drawing M201B – Mechanical First Floor Plan Part B	(1 Page) 30x42
19.	Drawing M201C – Mechanical First Floor Plan Part C	(1 Page) 30x42
20.	Drawing M202A – Mechanical Section Floor Plan Part A	(1 Page) 30x42
21.	Drawing M202B – Mechanical Second Floor Plan Part B	(1 Page) 30x42
22.	Drawing M210A – Mechanical Ground Floor Piping Plan Part A&D	(1 Page) 30x42
23. 24.	Drawing M2111A – Mechanical First Floor Piping Plan Part A Drawing M2111C – Mechanical First Floor Piping Plan Part C	(1 Page) 30x42 (1 Page) 30x42
2 <del>4</del> . 25.	Drawing M2111D – Mechanical First Floor Piping Plan Part D	(1 Page) 30x42
26.	Drawing M212A – Mechanical Second Floor Piping Plan Part A	(1 Page) 30x42
27.	Drawing E200A – Electrical Ground Floor Power Plan Part A&D	(1 Page) 30x42
28.	Drawing E201A – Electrical First Floor Power Plan Part A	(1 Page) 30x42
29.	Drawing E201C – Electrical First Floor Power Plan Part C	(1 Page) 30x42
30.	Drawing E201D – Electrical First Floor Power Plan Part D	(1 Page) 30x42
31.	Drawing E202A – Electrical Second Floor Power Plan Part A	(1 Page) 30x42
32.	Drawing E300A – Electrical Ground Floor Lighting Plan Part A&D	(1 Page) 30x42
33.	Drawing E300B – Electrical Ground Floor Lighting Plan Part B	(1 Page) 30x42
34.	Drawing E301D – Electrical First Floor Lighting Plan Part D	(1 Page) 30x42
35.	Drawing E302A – Electrical Second Floor Lighting Plan Part A	(1 Page) 30x42
36.	Drawing E302B – Electrical Second Floor Lighting Plan Part B	(1 Page) 30x42
37.	Drawing E702 – Electrical Equipment Schedules	(1 Page) 30x42
JÖ.	Drawing E703 – Electrical Equipment Schedules	(1 Page) 30x42

\*\*\*\* END OF BID ADDENDUM #4 \*\*\*\*

(Name of Bidder)

# **BID FORM**

FOR

**ORANGE ULSTER BOCES** 

ADDITIONS & ALTERATIONS TO EMANUEL AXELROD SPECIAL EDUCATION CENTER

# CONTRACT NO. 2 – ABATEMENT WORK

Owner Information: Orange Ulster BOCES 53 Gibson Road Goshen, New York 10924

Attn: Mark Coleman, Assistant Superintendent for Finance & Management

Project Location:
Orange Ulster BOCES – Gibson Road Campus
Emanuel Axelrod Education Center
53 Gibson Road
Goshen, New York 10924

- The Undersigned hereby declares that it has carefully examined all Bidding and Contract Documents and has inspected the actual location of Work, together with the local sources of supply, and has satisfied itself as to all quantities and conditions, and understands that in signing this Proposal, it waives all rights to plead any misunderstanding regarding the same.
- 2. The Undersigned further understands and agrees that it is to do, perform and complete all the Work in accordance with the Contract Documents and Contract and to accept in full compensation therefor, the amount of the Base Bid, modified by such additive or deductive alternatives, if any, as are accepted by the Owner.
- 3. In submitting this Bid, the Undersigned agrees:
  - a. To hold the Bid open for forty-five (45) days after Bid Opening.
  - b. To accept the provisions of the Instructions to Bidders.
  - c. To enter into and execute a Contract and the PLA within ten (10) days of the Notice of Award issue date, and to simultaneously furnish Performance and Labor and Material Bonds.
  - d. To enter into, become signatory to, and to abide by, the provisions of the Project Labor Agreement with the Hudson Valley Building and Construction Trades Council, AFLCIO and the signatory local unions. A copy of this Project Labor Agreement ("PLA") is included in the specifications as Section 007013.
  - e. To require any and all of its subcontractors of any tier on the Orange Ulster BOCES Additions and Alterations to Emanuel Axelrod Education Building Project to become signatory to, and to abide by, the PLA.
  - f. To commence the Work immediately upon receipt of Notice of Award.
- 4. The Undersigned agrees to the stated percentages for Changes in the Work in accordance with Invitation/Instructions to Bidders and Article 7 AIA 232-2019
- 5. The Undersigned agrees that the Work proposed herein will be Substantially Complete the dates indicated in specification Section 011000 "Summary" and in the Project Milestone Schedule following Section 011000.

(Name o	f Bidder
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- 6. By submission of this Bid, each Bidder and each person signing on behalf of any Bidder certifies, and in the case of a joint Bid, each party thereto certifies as to its own organization, under penalty of perjury, that to the best of the party's knowledge and belief:
  - a. the prices in this Bid have been arrived at independently without collusion, consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices, with any other Bidder or with any competitor,
  - b. unless otherwise required by law, the prices that have been quoted in this Bid have not been knowingly disclosed by the Bidder, and will not knowingly be disclosed by the Bidder prior to opening, directly or indirectly, to any other Bidder or to any competitor; and
  - c. no attempt has been made or will be made by the Bidder to induce any other person, partnership or corporation to submit or not to submit a Bid for the purpose of restricting competition.

A Bid shall not be considered for award, nor shall any award be made where a., b., and c. above have not been complied with, provided however, that if in any case the Bidder cannot make the foregoing certification, the Bidder shall so state and shall furnish, with the Bid, a signed statement which sets forth in detail the reasons therefor. Where a., b., and c. above have not been complied with, the Bid shall not be considered for award, nor shall any award be made unless the head of the purchasing unit of the political subdivision, public department, agency or official thereof to which the Bid is made, or his designee, determines that such disclosure was not made for the purpose of restricting competition.

The fact that a Bidder (a) has published price lists, rates or tariffs covering items being procured, (b) has informed prospective customers of proposed or pending publication of new or revised price lists for such items, or (c) has sold the same items to other customers at the same prices being Bid, does not constitute, without more, a disclosure within the meaning of this Section.

- 7. The Undersigned understands that the Owner reserves the right to accept or reject any or all Bids and to waive any informalities in the bidding.
- 8. The Undersigned acknowledges the receipt of the following addenda, but agrees that it is bound by all addenda whether or not listed herein:

Addendum Number	Date of Addendum

			(Name of Bidder
9.		BASE BID	
		All labor, material, services and equipment necessary for com on the Drawings and the Technical Specifications for Contract WORK:	
		\$	(in numbers)
			Dollars (in words)
10.		ALLOWANCES	
		In accordance with the terms and conditions of the Contract a 012100 "Allowances", the Drawings and the specific technical applicable, the undersigned agrees that the following allowance Base Bid quoted.	al section sections that are
		ALLOWANCE NO. 1- Include the sum of \$60,000.00 for re-ins Contract No. 2 – Abatement Work	sulation of existing piping
11.		ALTERNATES	
		The Undersigned agrees to provide all work in accordance w Specifications and the Drawings, and Section 012300 "Alterna of related coordination, modification, or adjustments for the fol	ites" and includes all costs
	1.	ADD ALTERNATE NO.1: EXTERIOR WINDOWS	
		ADD	Dollars (\$)
	2A.	ADD ALTERNATE NO.2A: GROUND FLOOR CLASSROO	DMS PART A
		ADD	Dollars (\$)
	2B.	ADD ALTERNATE NO.2B: GROUND FLOOR CLASSROO	DMS PART B
		ADD	Dollars (\$)

2C.	ADD ALTERNATE NO.2C: GROUND FLOOR CLASSRO	OMS PART C
	ADD	Dollars (\$)
3.	ADD ALTERNATE NO.3: RENOVATION OF EXISTING F	POOL AND ADJ. SPACES
	ADD	Dollars (\$)

# 12. SCHEDULE OF UNIT PRICES

CONTRACT NO. 2 - ABATEMENT WORK

The Undersigned agrees to perform all work as drawn and specified for the following items at the unit prices given. See Section 012200 "Unit Prices" for further information.

Unit Price HAZ-1 – Mudded Joint Fittings	\$/Each
Unit Price HAZ-2 – Pipe Insulation	\$/Lin. Ft
Unit Price HAZ-3 – ACT Ceiling Tiles	\$/Sq. Ft
Unit Price HAZ-4 – Floor Mastic	\$/Sq. Ft
Unit Price HAZ-5 – Exterior Caulking	\$/Lin. Ft

(BID FORM CONTINUES NEXT PAGE)

(Name of Bidder)

		(Name of Bidder)
13.	The Undersigned has attached the following docu A. 004100 Non-Collusive Affidavit B. 004200 Indemnification and Hold-Harmless C C. 004300 Certificate of Compliance with the Iral D. 004400 Sexual Harassment Written Policy an E. 004500 Bid Bond / Certified Check F. 004600, 004601, 004602, 004603, 0046004 S Document A305 and Exhibits A, B, C, and D	clause n Divestment Act d Training Certification
		(If Corporation,
Legal na	me of person, partnership, joint venture or corporation (please type)	affix corporate seal)
Addre	ss (please type)	_
Federa	al ID No. or Social Security No. (please type)	
Phone	No. (please type)	-
Name	and title of signer (please type)	-
Signat	ture	Date
If a Co	prporation	Address
	, PRESIDENT	
	, SECRETARY	
	, TREASURER	
If a Pa Name	artnership Addre	ess

		(Name of Bidder)
If a Joint Venture Name	Address	
If an Individual Name of Individual	Address	

See Specifications Sections 004100, 004200, 004300, 004400, 004500, 004600, 004601, 004602, 004603, and 004604 for additional forms to be included with bid proposal.

\*\*END OF BID FORM\*\*

#### SECTION 012100 - ALLOWANCES

#### PART 1 - GENERAL

## 1.1 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
- B. Types of allowances include the following:
  - 1. Lump-sum allowances.

# 1.2 DEFINITIONS

A. Allowance is a quantity of work or dollar amount established in lieu of additional requirements, used to defer selection of actual materials and equipment to a later date when additional direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.

# 1.3 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection, or purchase and delivery, of each product or system described by an allowance must be completed by the Owner to avoid delaying the Work.
- B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.

# 1.4 SUBMITTALS AND COORDINATION

- A. Submit proposals for purchase of products or systems included in allowances in the form specified for Change Orders.
- B. Coordinate and process submittals for allowance items in same manner as for other portions of the work.
- C. Coordinate allowance items with other portions of the work.
- D. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- E. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.

#### 1.5 ALLOWANCES FOR SPECIFIC WORK ELEMENTS

- A. Use the allowance for specific work elements only as directed for the Owner's purposes and only by Field Orders / Directive from the Architect that indicate amounts to be charged to the allowance. Overhead, profit, and Bond premium are not an allowable cost for work completed under allowance.
- B. Prime Contract related costs for products and equipment ordered by the Owner under the allowance for specific work elements are not part of the Contract Sum. These costs include delivery, installation, taxes (if applicable), insurance, equipment rental, and similar costs.
- C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
  - 1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.
- D. Field Orders authorizing use of funds from the allowance for specific work elements shall include all Prime Contract related costs. One or more of the following methods, which will be specified in the written directive, shall determine the value of the Work directed under this allowance.
  - 1. By applying the applicable price or prices set forth in the Contract Documents or by applying a Unit Price agreed to by both parties.
  - 2. By estimating the fair and reasonable cost of:
    - a. Labor including all wages, required wage supplements and insurance required by law (workers' compensation, social security, disability, unemployment, etc.) paid to or on behalf of foremen, workers and other employees below the rank of Prime Contract designated representative directly employed at the site.
    - b. Materials.
    - c. Equipment, excluding hand tools.
  - 3. The Owner reserves the right to utilize these methods provided it notifies the Prime Contract of its intent to do so prior to the time the Prime Contract is properly authorized to commence performance of such work.
  - 4. Time and Materials.
- E. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

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# PART 2 - PRODUCTS (Not Used)

#### PART 3 - EXECUTION

#### 3.1 EXAMINATION

A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

# 3.2 PREPARATION

A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

# 3.3 SCHEDULE OF ALLOWANCES

A. ALLOWANCE NO. 1: LUMP-SUM ALLOWANCE CONTRACT #2 ABATEMENT WORK

Include a lump-sum allowance of \$60,000.00 for reinsulating existing piping in the 1969 portion of the building above the ceilings, and in the 1969 wing pipe tunnel space below the current administration wing (500 wing) upon completion of the abatement work in these areas.

**END OF SECTION 012100** 

#### SECTION 02080 - ASBESTOS ABATEMENT PROCEDURES

AT: ORANGE ULSTER BOCES – AXELROD BUILDING

103 GIBSON ROAD GOSHEN, NY 10924

SED #44-90-00-00-0-009-036

OWNER: ORANGE ULSTER BOCES

53 GIBSON ROAD GOSHEN, NY 10924 PH. (845) 291-0100 FX. (845) 291-0129

CONSULTANT: QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC.

(QUES&T)

1376 ROUTE 9

WAPPINGERS FALLS, NEW YORK 12590

PH. (845) 298-6031 FX. (845) 298-6251

Design conforms to all applicable provisions of the NYS Uniform Fire Prevention and Building Code, NYS Energy Conservation Construction Code and Education Department Building Standards.

#### 1.01 DESCRIPTION

- A. All work under this contract shall be performed in strict accordance with the specifications and all applicable laws for asbestos removal projects. The Abatement Contractor shall furnish all labor, materials, supervision, services, insurance and equipment necessary for the complete and total removal of Asbestos-containing Materials (ACM) as described herein, in attachments to the specification, Job Specific Variance(s) and/or as directed by Bronxville Union Free School District (here-in-after the "Owner") and/or the Owners Representative(s) to support the to the following New Paltz Central School District project:
  - Orange Ulster BOCES 2023 Capital Improvements Project 103 Gibson Road Goshen, NY 10924 SED #44-90-00-00-009-036
- B. Abatement Contractor shall provide for personnel air monitoring to satisfy OSHA regulation 29 CFR Parts 1926.1101(f). All work performed shall be in strict accordance with applicable provisions and regulations promulgated under New York State Department of Labor, Industrial Code 56 (ICR-56).
- C. The Abatement Contractor shall satisfy the requirements for asbestos projects issued by the New York State Department of Labor concerning licensing and certification; notification; equipment; removal and disposal procedures; engineering controls; work area preparation; decontamination and clean-up procedures; and personnel air monitoring.
- D. The Abatement Contractor shall be responsible for submittal of asbestos project notification(s) and applicable fees to EPA and NYSDOL concerning this project. Project notification(s) shall be made for the cumulative total of ACM to be removed as required by ICR-56-3.4. Work practices for each individual work area established shall be consistent with the quantity of ACM contained within that work area as defined in ICR-56-2.
- E. The scope of work under this contract shall include the following:
  - 1. All asbestos-containing materials (ACM) shall be removed in accordance with these specifications. The Abatement Contractor is responsible for field verification of estimated quantities, locations and other site conditions that may affect work.
  - 2. All fixed objects remaining within the work area(s) shall be protected as required by Title 12 NYCRR Section 56-7.10(b) and as described in these specifications.
  - 3. The containerization, labeling, and disposal of all asbestos waste in accordance with applicable city, state and federal regulations and these specifications.
  - 4. The Abatement Contractor will be responsible for repairing all building components damaged during abatement including, but not limited to, ceiling tiles, ceiling finishes, wall finishes and/or floor finishes, etc.

- 5. The Abatement Contractor shall be responsible for any and all demolition required to access materials identified in scope of work and on associated drawings.
- 6. Concealed conditions that are exposed and may require additional work shall be brought to the attention of the Owner(s) immediately. The Abatement Contractor shall not abate these areas without a written notice to proceed. If the Abatement Contractor removes additional asbestos prior to the order to proceed the additional work will not be acknowledged.
- 7. Permissible working hours shall be Monday through Friday 7:00 A.M. to 4:00 P.M. with one (1) hour for lunch and/or as defined by the Owner. Holidays shall be considered weekends and not included for working days. Upon written approval from the Owner, the Abatement Contractor may work past these hours. The Abatement Contractor will incur any and all costs associated for work performed beyond the defined schedule including, but not limited to: abatement activities, project/air monitoring, custodial/staffing labor, overtime, mobilizations, etc.
- 8. Buildings will be turned over to the Abatement Contractor as is. At that time, all electrical services and HVAC systems in the proposed work areas will be shut down. Electricity and water supply will be maintained in the building for use by the Abatement Contractor. The Abatement Contractor is responsible for securing all power in the work area(s) and establishing all temporary GFCI hookups necessary to complete his work.
- 9. The Abatement Contractor shall remove identified asbestos-containing floor coverings to the building substrate beneath; in areas indicated. Subsequent to final air clearances, the substrate(s) shall be washed with a neutralizing agent to prepare the substrate to accept new floor covering and eliminate residual odors.
- 10. The Abatement Contractor must coordinate location of waste containers with the Facility and the Owner. Deliveries and storage of equipment must be coordinated with the Facility and the Owner.
- 11. All "Large" and "Small" asbestos abatement projects, as defined by 12 NYCRR56 shall not be performed while the building is occupied. The term "building" means a wing or major section of a building that can be completely isolated from the rest of the building with sealed non-combustible construction. The isolated portion of the building must contain exists that do not pass through the occupied portion(s) and ventilation systems must be physically separated and sealed at the isolation barriers.

## 1.02 PRE-CONTRACT SUBMITTALS

Within three (3) days after bids are opened, the three (3) apparent low bidders shall be required to submit the following documentation:

# A. Resume': Shall include the following:

- 1. Provide a list of projects of similar nature performed within the past two (2) years and include the dollar value of all projects. Provide project references to include owner, consultant, and air monitoring firms' name, contact person, address, and phone number, include location of project and date of completion.
- 2. Abatement Contractor license issued by New York State Department of Labor for asbestos work in accordance with ICR-56-3.
- 3. A list of owned equipment available to be used in the performance of the project.
- 4. The number of years engaged in asbestos removal.
- 5. An outline of the worker training courses, and medical surveillance program conducted by the Abatement Contractor.
- 6. A standard operating procedures manual describing work practices and procedures, equipment, type of decontamination facilities, respirator program, special removal techniques, etc.
- 7. Documentation to the satisfaction of the Owner pertaining to the Abatement Contractor's financial resources available to perform the project. Such data shall include, but not be limited to, the firm's balance sheet for the last fiscal year.

#### B. Citations/Violations/Legal Proceedings

- Submit a notarized statement describing any citations, violations, criminal charges, or legal proceedings undertaken or issued by any law enforcement, regulatory agency, or consultant concerning performance on previous asbestos abatement contracts. Briefly describe the circumstances citing the project and involved persons and agencies as well as the outcome of any actions.
- 2. Answer the question: "Has your firm or its agents been issued a Stop Work order on any project within the last two years?" If "Yes" provide details as discussed above.
- 3. Answer the question: "Are you now, or have you been in the past, a party to any litigation or arbitrations arising out of your performance on Asbestos Abatement Contracts?" If "Yes" provide details as discussed in 1. above.
- 4. Describe any liquidated damages assessed within the last two years.

# C. Preliminary Schedule

1. Provide a detailed schedule including work dates, work shift times, estimate of manpower to be utilized and the start and completion date for completion of each major

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work area.

#### 1.03 DOCUMENTATION

- A. The Abatement Contractor shall be required to submit the following and receive the Consultant's approval prior to commencing work on this project:
  - Provide documentation of worker training for each person assigned to the project. Documentation shall include copies of each workers valid New York State asbestos handler certificates (for those employees who may perform asbestos removal), documentation of current respirator fit test and current OSHA required training and medical examination.
  - 2. The attached "Asbestos Employee Medical Examination Statement" and "Asbestos Employee Training Statement" forms shall be completed, signed, and submitted for each worker assigned to the project. Records of all employee training and medical surveillance shall be maintained for at least forty (40) years. Copies of the records shall be submitted to the Consultant prior to commencement.
  - 3. The Abatement Contractor shall submit proof of a current, valid license issued by the New York State Department of Labor pursuant to the authority vested in the Commissioner by section 906 of the Labor Laws, and that the employees performing asbestos related work on this project are certified by the State of New York as required in Part 56 of Title 12 of the Official Compilation of Codes, Rules and Regulations of the State of New York latest edition. Copies of all licenses shall be submitted prior to the commencement of the project.
  - 4. The Abatement Contractor shall submit a written respiratory protection program meeting the requirements of 29 CFR 1910.134 to the Consultant.
  - 5. The name, address, social security number and NYS DOL certificate number of the person(s) who will supervise the asbestos project.
  - 6. The name and address of the deposit or waste disposal site or sites where the asbestos materials are to be deposited or disposed of. This site must be approved by the Owner. The manifesting procedure must also be specified.
  - 7. The name, address and New York State Dept. of Environmental Conservation ID Number of any transporters that are to be used to transport waste.
  - 8. A written Standard Operation Procedure (SOP) that is designed and implemented to maximize protection against human exposure to asbestos dust. The SOP shall take into consideration the workers, visitors, building employees, general public and environment. As a minimum the procedures must include the following:
    - a. Security for all work areas on an around-the-clock basis against unauthorized access.
    - b. Project organization chart including the phone numbers of at least two responsible persons who shall be authorized to dispatch men and equipment to the project in the event of an emergency; including weekends.

- c. Description of protective clothing and NIOSH approved respirators to be used.
- d. Description of all removal methods to be used, including HEPA air filtration and decontamination sequence with special emphasis on any procedure that may deviate from these specifications.
- e. A list of manufacturers' certificates stating that all vacuums, negative air filtration equipment, respirators and air supply equipment meet OSHA and EPA requirements.
- f. A list of all materials proposed to be furnished and used under this contract.
- g. Emergency evacuation procedures in the event of fire, smoke, or accidents such as injury from falling, heat exposure, electrical shock, etc.
- h. The name, address and ELAP number of the New York State Department of Health Certified Analytical Testing Laboratory the Contractor proposes to use for the OSHA monitoring.
- 9. A detailed plan, in triplicate, for the phasing of the project, division of work areas and location of decontamination facilities, waste containers and temporary office.
- 10. Work schedule, identifying firm dates and completion for actual areas. Bar chart or critical path chart indicating phases is required.
- B. The Abatement Contractor shall post their NYS DOL contractor's license and maintain a daily log documenting the dates and time of the following items within each personal decontamination unit:
  - 1. Meetings; purpose, attendants, discussion (brief)
  - 2. Sign-in and sign-out of all persons entering the work area including name, date, time, social security number, position or function and general description of daily activity.
  - 3. Testing of barriers and enclosure systems using smoke tubes prior to the beginning of abatement activities and at least once a day thereafter until satisfactory clearance air monitoring results have been achieved.
  - 4. Inspection of all plastic barriers, twice daily, by the asbestos supervisor.
  - 5. Loss of enclosure integrity; special or unusual events, barrier breaches, equipment failures, etc.
  - 6. Daily cleaning of enclosures.
  - 7. Personnel air monitoring test results for OSHA Compliance. Results shall be posted at the work site within 24 hours of testing and copies supplied to the Owner within five (5) days of testing. Abnormalities shall be supplied to the Owner immediately.
- C. Documentation with confirmation signature of Consultant's representative of the following shall be provided by the Abatement Contractor at the final closeout of the project.
  - 1. Testing of barriers and enclosure systems using smoke tubes shall be performed prior to

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the beginning of abatement activities and at least once a day thereafter until satisfactory clearance air monitoring results have been achieved.

- 2. Inspection of all plastic barriers.
- 3. Removal of all polyethylene barriers.
- 4. Consultant's inspections prior to encapsulation.
- Removal of waste materials.
- 6. Decontamination of equipment (list items).
- 7. Consultant's final inspection/final air tests.
- D. The Abatement Contractor shall provide records of <u>all</u> project information, to include the following which shall be submitted upon completion of the project and prior to approval of the Abatement Contractor's payment application:
  - 1. The location and description of the abatement project.
  - 2. The name, address, and social security number of the person(s) who supervised the asbestos project.
  - 3. Certified payroll documentation Pursuant to Article 8, Section 220 of the NYS Labor Law
  - 4. Copies of EPA/NYSDOL Asbestos Certificates for all Workers and Supervisors employed on the Project.
  - 5. Copies of Medical Approval and Respirator Fit-testing for all Asbestos Workers and Supervisors employed on the Project.
  - 6. Copies of Abatement Contractors Daily Sign-In Sheets & Logs for persons entering and leaving the work area. Title 12 NYCRR Part 56-7.3.
  - 7. Copies of Abatement Contractor's personal air sampling laboratory results.
  - 8. The amounts and type of asbestos materials that were removed, enclosed, encapsulated, or disturbed.
  - 9. The name and address of the deposit or waste disposal site or sites where the asbestos waste materials were deposited or disposed of and all related manifests, receipts and other documentation associated with the disposal of asbestos waste.
  - 10. The name and address of any transporters used to transport waste and all related manifests, receipts and other documentation associated with the transport of asbestos waste.
  - 11. All other information that may be required by state, federal or local regulations.
  - 12. Copy of the Supervisor's Daily Project Log of events as described in 1.03 B, above.

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# 1.04 NOTIFICATIONS AND PERMITS

- A. The Abatement Contractor shall be required to prepare and submit notifications to the following agencies at least ten (10) days prior to the commencement of the project:
  - Asbestos NESHAPS Contact
     U.S. Environmental Protection Agency
     NESHAPS Coordinator, Air Facilities Branch
     26 Federal Plaza
     New York, New York 10007
     (212) 264-7307
  - State of New York Department of Labor Division of Safety and Health Asbestos Control Bureau State Office Building Campus, Building 12, Room 454 Albany, New York 12240
  - 3. Owner(s): Orange Ulster BOCES

53 Gibson Road Goshen, NY 10924

ATTN: Kevin Sullivan – Director of Operations

Ph. (845) 291-0100 X10150

Fx. (845) 291-0129

E-mail. kevin.sullivan@ouboces.org

4. Owner's Representative(s): KG&D Architects, P.C.

285 Main Street

Mount Kisco, NY 10924 ATTN: Brian Mangan Ph. (914) 666-5900

E-mail. bmangan@kgdarchitects.com

5. Environmental Consultant(s): Quality Environmental Solutions & Technologies, Inc. (QuES&T)

1376 Route 9

Wappingers Falls, New York 12590

ATTN: Rudy Lipinski Ph. (845) 298-6031 Fx. (845) 298-6251

E-mail. rlipinski@qualityenv.com

- B. The notification shall include but not be limited to the following information:
  - 1. Name and address of Owner.
  - 2. Name, address, and asbestos handling license number of the Abatement Contractor.
  - 3. Address and description of the building, including size, age, and prior use of the building or area; the amount, in square feet or linear feet of asbestos material to be removed;

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room designation numbers or other local information where asbestos material is found, including the type of asbestos material (friable or non-friable).

- 4. Scheduled starting and completion dates for removal.
- 5. Methods to be employed in abating asbestos containing materials.
- 6. Procedures and equipment, including ventilating/exhaust systems, that will be employed to comply with the Code of Federal Regulation (CFR) Title 40, Part 61 of the U.S. Environmental Protection Agency.
- 7. The name and address of the carting company and of the waste disposal site where the asbestos waste will be deposited.

NOTE: Notifications shall be submitted using standard forms as may be used by the respective agency.

For DOL (NYS) include "Asbestos Project Notification" form (DOSH-483) with proper fee, if required. For EPA include "Notification of Demolition and Renovation"; 40 CFR Part 61.

- C. The Abatement Contractor shall secure any permits required by the city, town, county, or state that may be required and the cost for obtaining the permit shall be included in his base bid.
- D. The Abatement Contractor shall erect warning signs around the workspace at every point of potential entry into the work area in accordance with OSHA 1926.58k (2), (i). These signs shall bear the following information:

# DANGER ASBESTOS MAY CAUSE CANCER CAUSES DAMAGE TO LUNGS AUTHORIZED PERSONNEL ONLY

In addition, where the use of respirators and protective clothing is required in the regulated area under this section, the warning signs shall include the following:

# WEAR RESPIRATORS PROTECTION AND PROTECTIVE CLOTHING IN THIS AREA

- E. The Abatement Contractor shall post at entrances to the workplace and immediate adjacent areas, notifications to building occupants, which include the name and license number of the contractor, project location and size, amount and type of ACM, abatement procedures, dates of expected occurrence and name and address of the air monitor and laboratory in compliance with ICR 56-3.6.
- F. The Abatement Contractor shall post a list of emergency telephone numbers at the job site which shall include the Owner's Representative, police, emergency squad, local hospital, Environmental Protection Agency, N.Y. State Department of Labor, Occupational Safety and Health Administration and the local Department of Health.

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## 1.05 APPLICABLE STANDARDS

Except to the extent that more explicit or more stringent requirements are written directly into the contract documents, applicable standards of the construction industry have the same force and effects (and are made a part of contract documents by reference) as if copied directly into contract documents, or as if published copies were bound herewith. Resolution of overlapping and conflicting requirements, which result from the application of several different industry standards to the same unit of work, shall be by adherence to the most stringent requirement.

- A. Applicable standards listed in these Specifications form a part of this Specification and include, but are not necessarily limited to, standards promulgated by the following agencies and organizations:
  - 1. ANSI:

American National Standards Institute 1430 Broadway New York, New York 10018

#### ASHRAE:

American Society for Heating, Refrigerating and Air Conditioning Engineers 1791 Tullie Circle NE Atlanta, Georgia 30329

## 3. ASTM:

American Society for Testing and Materials 1916 Race Street Philadelphia, Pennsylvania 19103

#### 4. CFR

Code of Federal Regulations Available from Government Printing Office Washington, District of Columbia 20402

## 5. CGA

Compressed Gas Association 1235 Jefferson Davis Highway Arlington, Virginia 22202

# 6. CS

Commercial Standard of NBS (US Dept. of Commerce)
Government Printing Office

#### 7. EPA

Environmental Protection Agency, Region II 26 Federal Plaza New York, New York 10007 Asbestos Coordinator - Room 802 (212) 264-9538 Part 61, Sub-Parts A & B National Emission Standard for Asbestos

#### 8. FEDERAL SPECS

Federal Specification (General Services Administration) 7th and D Street, SW Washington, District of Columbia 20406

#### 9. NBS

National Bureau of Standards (US Department of Commerce) Gaithersburg, Maryland 20234

#### 10. NEC

National Electrical Code (by NFPA)

#### 11. NFPA

National Fire Protection Association Batterymarch Park Quincy, Massachusetts 02269

#### 12. NIOSH

National Institute for Occupational Safety and Health 26 Federal Plaza New York, New York 10007

#### 13. NYSDOH

New York State Department of Health Bureau of Toxic Substance Assessment Room 359 - 3rd Floor Tower Building Empire State Plaza Albany, New York 12237

#### 14. NYSDEC

New York State Department of Environmental Conservation Room 136 50 Wolf Road Albany, New York 12233-3245

# 15. NYSDOL

State of New York Department of Labor Division of Safety and Health Asbestos Control Program State Campus Building 12 Albany, New York 12240

## 16. OSHA

Occupational Safety and Health Administration (US Department of Labor) New York Regional Office - room 3445 1515 Broadway New York, New York 10036

17. UL

Underwriters Laboratories 333 Pfingsten Road Northbrook, Illinois 60062

- B. Federal Regulations: Those which govern asbestos abatement work or hauling and disposal of asbestos waste materials:
  - U.S. Department of Labor, Occupational Safety and Health Administration, (OSHA):
    - a. Asbestos Regulations
       Title 29, Part 1910, of the Code of Federal Regulations.
    - b. Respiratory ProtectionTitle 29, Part 1910, Section 134 of the Code of Federal Regulations.
    - c. Construction Industry
      Title 29, Part 1926, of the Code of Federal Regulations.
    - d. Access to Employee Exposure & Medical Records
       Title 29, Part 1910, Section 20 of the Code of Federal Regulations.
    - e. Hazard Communication
      Title 29, Part 1910, Section 1200 of the Code of Federal Regulations.
    - f. Specifications for Accident Prevention Signs and Tags
       Title 29, Part 1910, section 145 of the Code of Federal Regulations.
  - 2. U.S. Environmental Protection Agency (EPA):
    - a. Asbestos Hazard Emergency Response Act (AHERA) Regulation Asbestos Containing Materials in Schools Final Rule & Notice Title 40, Part 763, Subpart E of the Code of Federal Regulations.
    - Worker Protection Rule
       40 CFR Part 763, Subpart G, CPTS 62044, FLR 2843-9
       Federal Register, Vol. 50, No. 134, 7/12/85, P28530-28540
    - c. Regulation for Asbestos
      Title 40, Part 61, Subpart A of the Code of Federal Regulations
    - d. National Emission Standard for Asbestos
      Title 40, Part 61, Subpart M (Revised Subpart B) of the Code of Federal Regulations
    - e. Resource Conservation and Recovery Act (RCRA) 1976, 1980 Hazardous and Solid Waste Amendments (HSWA) 1984 Subtitle D, Subtitle C

- 3. U.S. Department of Transportation (DOT):
  - a. Hazardous Substances: Final Rule Regulation 49 CFR, Part 171 and 172.
- C. State Regulations: Those which govern asbestos abatement work or hauling and disposal of asbestos waste materials:
  - 1. New York State Department of Environmental Conservation (DEC) Regulations regarding waste collection registration. Title 6, Part 364 of the New York State Official Compilation of Codes, Rules and Regulations 6NYCRR 364.
  - New York State Right-To-Know Law
  - 3. New York State Department of Labor Asbestos Regulations Industrial Code Rule 56.
- D. Standards: Those which govern asbestos abatement work or hauling and disposal of asbestos waste materials:
  - 1. American National Standards Institute (ANSI)
    - a. Fundamentals Governing the Design and Operation of Local Exhaust Systems Publication Z9.2-79
    - b. Practices for Respiratory Protection Publication Z88.2-80
- E. Guidance Documents: Those that discuss asbestos abatement work or hauling, and disposal of asbestos waste materials are listed below only for the Abatement Contractor's information. These documents do not describe the work and are not a part of the work of this contract.

## EPA:

- 1. Guidance for Controlling Asbestos Containing Materials in Buildings (Purple Book) EPA560/5-85-024.
- Asbestos Waste Management Guidance EPA 530-SW-85-007.
- F. Patents and Royalties: The Abatement Contractor shall pay all royalties and/or license fees. The Abatement Contractor shall defend all suits and claims for infringement of any patent rights and save the Owner and Consultant harmless from loss including attorney fees on account thereof.

# 1.06 DEFINITIONS

As used in or in connection with these specifications the following are terms and definitions.

Abatement - Procedure to control release from asbestos material. This includes removal, encapsulation, and enclosure.

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- Aggressive sampling A method of sampling in which the person collecting the air sample creates activity by the use of mechanical equipment during the sampling period to stir up settled dust and simulate activity in that area of the building.
- AIHA The American Industrial Hygiene Association, 475 Wolf Ledges Parkway, Akron, Ohio 44311.
- Airlock A system for permitting entrance and exit while restricting air movement between a containment area and an uncontaminated area. It consists of two curtained doorways separated by a distance of at least three feet such that one passes through one doorway into the airlock, allowing the doorway sheeting to overlap and close off the opening before proceeding through the second doorway, thereby preventing flow-through contamination.
- Air sampling The process of measuring the content of a known volume of air collected during a specific period of time.
- Amended water Water to which a surfactant has been added.
- Approved asbestos safety program A program approved by the Commissioner of Health providing training in the various disciplines that may be involved in an asbestos project.
- Area air sampling Any form of air sampling or monitoring where the sampling device is placed at some stationary location.
- Asbestos Any naturally occurring hydrated mineral silicate separable into commercially usable fibers, including chrysotile (serpentine), amosite (cumingtonite-gunerite), crocidolite (riebeckite), tremolite, anthophyllite and actinolite.
- Asbestos contract An oral or written agreement contained in one or more documents for the performance of work on an asbestos project and includes all labor, goods, and service.
- Asbestos handler An individual who installs, removes, applies, encapsulates, or encloses asbestos or asbestos material, or who disturbs friable asbestos. Only individuals certified by NYS Department of Labor shall be acceptable for work under this specification.
- Asbestos handling certificate A certificate issued by the Commissioner of Labor of the State of New York, to a person who has satisfactorily completed an approved asbestos safety program.
- Asbestos project Work undertaken by a contractor which involves the installation, removal, encapsulation, application or enclosure of any ACM or the disturbance of friable ACM.
- Asbestos Safety Technician (AST) Individual designated to represent the Consultant, perform third party monitoring and perform compliance monitoring at the job site during the asbestos project.

- Asbestos waste material Asbestos material or asbestos contaminated objects requiring disposal.
- Authorized visitor The building owner, his or her representative or any representative of a regulatory or other agency having jurisdiction over the project.
- Background level monitoring A method used to determine ambient airborne concentrations inside and outside of a building or structure prior to starting an abatement project.
- Building owner The person in whom legal title to the premises is vested unless the premises are held in land trust, in which instance Building Owner means the person in whom beneficial title is vested.
- Clean room An uncontaminated area or room that is a part of the personal decontamination enclosure with provisions for storage of persons' street clothes and protective equipment.
- Cleanup The utilization of HEPA vacuuming to control and eliminate accumulations of asbestos material and asbestos waste material.
- Clearance air monitoring The employment of aggressive sampling techniques with a volume of air collected to determine the airborne concentration of residual fibers upon conclusion of an asbestos abatement project.
- Commissioner Commissioner of the New York State Department of Labor.
- Contractor A company, unincorporated association, firm, partnership or corporation and any owner or operator thereof, which engages in an asbestos project or employs persons engaged in an asbestos project.
- Curtained doorway A device that consists of at least three overlapping sheets of plastic over an existing or temporarily framed doorway. One sheet shall be secured at the top and left side, the second sheet at the top and right side, and the third sheet at the top and the left side. All sheets shall have weights attached to the bottom to ensure that the sheets hang straight and maintain a seal over the doorway when not in use.
- Decontamination enclosure system A series of connected rooms, separated from the work area and from each other by air locks, for the decontamination of persons, materials, equipment, and authorized visitors.
- Encapsulant (sealant) or encapsulating agent A liquid material that can be applied to asbestos material and which prevents the release of asbestos from the material by creating a membrane over the surface.
- Enclosure The construction of airtight walls, ceilings and floors between the asbestos material and the facility environment, or around surfaces coated with asbestos materials, or any other appropriate procedure that prevents the release of asbestos materials.

- Equipment room A contaminated area or room that is part of the personal decontamination enclosure system with provisions for the storage of contaminated clothing and equipment.
- Fixed object A unit of equipment, furniture or other fixture in the work area which cannot be readily removed from the work area.
- Friable Asbestos Material That condition of crumbled, pulverized, powdered, crushed, or exposed asbestos capable of being released into the air by hand pressure.
- Friable material containment The encapsulation or enclosure of any friable asbestos material.
- Glovebag technique A method for removing asbestos material from heating, ventilating, and air conditioning (HVAC) ducts, piping runs, valves, joints, elbows, and other nonplanar surfaces in a noncontained work area. The glovebag assembly is a manufactured device consisting of a glovebag constructed of at least six mil transparent plastic, two inward-projecting longsleeve gloves, which may contain an inward projecting waterwand sleeve, an internal tool pouch, and an attached, labeled receptacle or portion for asbestos waste. The glovebag is constructed and installed in such a manner that it surrounds the object or area to be decontaminated and to contain all asbestos fibers released during the abatement process.
- HEPA filter A high efficiency particulate air filter capable of trapping and retaining 99.97 percent of particulate greater than 0.3 microns equivalent aerodynamic diameter.
- HEPA vacuum equipment Vacuuming equipment with a high efficiency particulate air filtration system.
- Holding area A chamber in the waste decontamination enclosure located between the washroom and an adjacent uncontaminated area.
- Homogeneous work area A site within the abatement work area that contains one type of asbestos material and where one type of abatement is used.
- Large asbestos project An asbestos project involving the installation, removal, disturbance, enclosure, or encapsulation of 160 square feet or more of asbestos or asbestos material or 260 linear feet or more of asbestos or asbestos material.
- Minor asbestos project An asbestos project involving the installation, removal, disturbance, enclosure, or encapsulation of 10 square feet or less of asbestos or asbestos material, or 25 linear feet or less of asbestos or asbestos material.
- Movable object A unit of equipment, furniture or fixture in the work area that can be readily removed from the work area.
- Negative air pressure equipment A local exhaust system equipped with HEPA filtration. The system shall be capable of creating and maintaining a negative pressure differential between the outside and the inside of the work area.
- Non-asbestos material Any material containing one percent or less asbestos by weight.

Occupied area - Any frequented portion of the work site where abatement is not taking place.

Outside air - The air outside the building or structure.

Personal air monitoring - A method used to determine an individual's exposure to airborne contaminants. The sample is collected outside the respirator in the person's breathing zone.

Plasticize - To cover floors, walls, ceilings, and other surfaces with 6 mil fire retardant plastic sheeting as herein specified.

Project - Any form of work performed in connection with the abatement of asbestos or alteration, renovation, modification or demolition of a building or structure that may disturb asbestos or asbestos material.

Removal - The stripping of any asbestos material.

Repair - Corrective action using required work practices to control fiber release from damaged areas.

Respiratory protection - Respiratory protection required of licensed asbestos workers and authorized visitors in accordance with the applicable laws.

Satisfactory clearance air monitoring results - For all post- abatement samples, airborne concentrations of total fibers that are less than 0.01 fibers per cubic centimeter or background levels, whichever are greater, using phase contrast microscopy (PCM).

Shower room - A room between the clean room and the equipment room in the personal decontamination enclosure with hot and cold running water controllable at the top and arranged for complete showering during decontamination.

Small asbestos project - An asbestos project involving the installation, removal, disturbances, enclosure, or encapsulation of more than 10 and less than 160 square feet of asbestos or asbestos material of more than 25 and less than 260 linear feet of asbestos or asbestos material.

Staging area - The area near the waste transfer airlock where containerized asbestos waste has been placed prior to removal from the work area.

Surfactant - A chemical wetting agent added to water to improve its penetration.

Visible emissions - An emission of particulate material that can be seen without the aid of instruments.

Washroom - A room between the work area and the holding area in the waste decontamination enclosure system, where equipment and waste containers are wet cleaned and/or HEPA vacuumed.

Waste decontamination enclosure system - An area, consisting of a washroom and a holding area, designated for the controlled transfer of materials and equipment.

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Wet cleaning - The process of eliminating asbestos contamination from surfaces, equipment, or other objects by using cloths, mops, or other cleaning tools.

Work area - Designated rooms, spaces, or areas where asbestos abatement takes place.

Work site - Premises where asbestos abatement is taking place.

Work Surface - Substrate surface from which asbestos-containing material has been removed.

# 1.07 UTILITIES, SERVICE AND TEMPORARY FACILITIES

- A. The Owner shall make available to the Abatement Contractor all reasonable amounts of water and electrical power at no charge.
- B. The Abatement Contractor shall provide, at his own expense, all electrical, water, and waste connections, extensions, and construction materials, supplies, etc. All connections must be approved in advance by the Owner and all work relative to the utilities must be in accordance with the applicable building codes.
- C. The Abatement Contractor shall provide scaffolding, ladders and staging, etc. as necessary to accomplish the work of this contract. The type, erection and use of all scaffolding, ladders, and staging, etc. shall comply with all applicable OSHA provisions.
- D. All connections to the Owner's water system shall include reduced pressure backflow protection or double check and double gate valves. Valves shall be temperature and pressure rated for operation of the temperatures and pressures encountered. After completion of use, connections and fittings shall be removed without damage or alteration to existing water piping and equipment. Leaking or dripping valves shall be piped to the nearest drain or located over an existing sink or grade where water will not damage existing finishes or equipment.
- E. The Abatement Contractor shall use only heavy-duty abrasion resistant hoses with a pressure rating greater than the maximum pressure of the water distribution system to provide water to each work area and to each decontamination unit. Provide fittings as required to allow for connection to existing wall hydrants or spouts, as well as temporary water heating equipment, branch piping, showers, shut-off nozzles, and equipment. All water must be shut off at the end of each shift.
- F. The Abatement Contractor shall provide service to decontamination unit electrical subpanel with minimum 60 amp, 2 pole circuit breaker or fused disconnect and ground-fault circuit interrupters (GFCI), reset button and pilot light, connected to the building's main distribution panel. Subpanel and disconnect shall be sized and equipped to accommodate all electrical equipment required for completion of the work. This electrical subpanel shall be used for hot water heater, PAPR battery recharging and air sampling pumps.

- G. The Abatement Contractor shall provide UL rated 40-gallon electric hot water heater to supply hot water for the decontamination unit shower. Activate from 30-amp circuit breaker on the electrical subpanel located within the decontamination unit. Provide with relief valve compatible with water heater operation; relief valve down to drip pan on floor with type L copper. Wiring of the hot water heater shall be in compliance with NEMA, NEC, and UL standards.
- H. The Abatement Contractor shall provide identification warning signs at power outlets, which are other than 110-120-volt power. Provide polarized outlets for plug-in type outlets, to prevent insertion of 110-120 plugs into higher voltage outlets. Dry transformers shall be provided where required to provide voltages necessary for work operations. All outlets or power supplies shall be protected by ground fault circuit interrupter (GFCI) at the power source.
- The Abatement Contractor shall use only grounded extension cords; use "hard-service" cords where exposed to abrasion and traffic. Use single lengths or use waterproof connectors to connect separate lengths of electric cords, if single lengths will not reach areas of work.
- J. The Abatement Contractor shall provide general service incandescent lamps of wattage indicated or required for adequate illumination; Protect lamps with guard cages or tempered glass enclosures; Provide exterior fixtures where fixtures are exposed to moisture.
- K. The Abatement Contractor shall provide temporary heating or air conditioning as necessary to maintain comfortable working temperatures inside and immediately outside the work areas. Heating and A/C equipment shall have been tested and labeled by UL, FM or another recognized trade association related to the fuel being used. Fuel burning heaters shall not be used inside containment areas. The Contractor shall also provide a comfortable working environment for occupied areas that are impacted by the asbestos removal.
- L. The Abatement Contractor shall comply with recommendations of the NFPA standard in regard to the use and application of fire extinguishers. Locate fire extinguishers where they are most convenient and effective for their intended purpose but provide not less than one extinguisher in each work area, equipment room, clean room and outside the work area.

#### 1.08 REMOVAL OF FIXTURES

- A. In locations where the Abatement Contractor is directed to dispose of fixtures, he shall either decontaminate the fixtures and dispose of them as non-asbestos containing materials or he shall place them in an appropriate container and dispose of them as asbestos containing material.
- B. In locations where the Abatement Contractor is directed to remove and reinstall fixtures, the fixtures shall be removed, decontaminated, labeled, protected with plastic, and stored by the contractor in a location as directed by the Owner.

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C. Upon completion of the asbestos removal and upon receiving satisfactory clearance air monitoring results, all items to be replaced shall be restored to their original location and reinstalled by the Abatement Contractor.

#### PART 2 - PRODUCTS

#### 2.01 MATERIALS AND EQUIPMENT

#### A. GENERAL REQUIREMENTS

- 1. Materials shall be stored off the ground, away from wet or damp surfaces and under protective cover to prevent damage or contamination.
- 2. Damaged or deteriorating materials shall not be used and shall be removed from the premises.
- 3. Power tools used to drill, cut into, or otherwise disturb asbestos material shall be equipped with HEPA filtered local exhaust ventilation.
- 4. The Abatement Contractor shall make available to authorized visitors, ladders and/or scaffolds of sufficient dimension and quantity so that all work surfaces can be easily and safely reached for inspection. Scaffold joints and ends shall be sealed with tape to prevent incursion of asbestos. Scaffolds and ladders shall comply with all applicable codes.

#### B. PLASTIC BARRIERS (POLYETHYLENE)

- 1. In sizes and shapes to minimize the number of joints.
  - a. Six mil. (.006") fire-retardant for vertical protection (walls, entrances, and openings).
  - b. Six mil. (.006") fire-retardant for horizontal protection (fixed equipment) and heating grilles.
  - c. Six mil. (.006") reinforced fire-retardant for floors of decon units.
- Provide two (2) layers over all roof, wall, and ceiling openings. Floor penetrations shall be sealed with a rigid material prior to plasticizing to prevent tripping and fall hazards. All seams within a layer shall be separated by a minimum distance of six feet and sealed airtight. All seams between layers shall be staggered.
- 3. Barrier Attachment Commercially available duct tape (fabric or paper) and spray-on adhesive. Duct tape shall be capable of sealing joints of adjacent sheets of plastic, facilitating attachment of plastic sheets to finished or unfinished surfaces of dissimilar materials and adhering under both dry and wet conditions.

#### C. SIGNS

1. Danger signs shall be provided and shall conform to 29 CFR 1926.1101 and be 14" x 20". These signs shall bear the following information:

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# DANGER ASBESTOS MAY CAUSE CANCER CAUSES DAMAGE TO LUNGS AUTHORIZED PERSONNEL ONLY

In addition, where the use of respirators and protective clothing is required in the regulated area under this section, the warning signs shall include the following:

#### WEAR RESPIRATORS PROTECTION AND PROTECTIVE CLOTHING IN THIS AREA

#### D. DANGER LABELS AND TAPE

1. Labels shall be affixed to any asbestos contaminated material in accordance with the requirements of 29 CFR 1910.1200 (f) of OSHA's Hazard Communication Standard, and shall contain the following information:

## DANGER CONTAINS ASBESTOS FIBERS AVOID BREATHING DUST CANCER AND LUNG DISEASE HAZARD

 A label shall be affixed on each container of asbestos waste in accordance with the requirements of 49 CFR Parts 171 and 172, Hazardous Substances; Final Rule (U.S. Department of Transportation), and shall contain the following information:

#### RQ HAZARDOUS SUBSTANCE SOLID, NOS, ORM-E, NA 9188 (ASBESTOS)

 A label shall be affixed on each container of asbestos waste in accordance with the requirements of 40 CFR Part 61.150, NESHAP; Asbestos; Final Rule (USEPA) and shall contain the name of the waste generator and the location at which the waste was generated.

NOTE: All containers marked as above (1, 2 and 3) shall be disposed of as asbestos waste.

4. Provide 3" red barrier tape printed with black lettering "DANGER ASBESTOS REMOVAL". Locate barrier tape across all corridors, entrances, and access routes to asbestos work area.

#### E. PROTECTIVE EQUIPMENT

1. Respiratory Requirements

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- a. Where fiber levels permit, and in compliance with regulatory requirements, Powered Air Purifying Respirators are the minimum allowable respiratory protection permitted to be utilized during removal operations.
- b. Where not in violation of NIOSH, OSHA, and any other regulatory requirements, the Abatement Contractor shall provide the following minimum respiratory protection to the maximum use concentrations indicated:

MSHA/NIOSH Approved Respiratory Protection	Maximum Use Concentration
Half-Mask Air Purifying with HEPA Filters	10x PEL
Full-Facepiece Air Purifying HEPA Filters and Quantitative Fit Test	10x PEL
Powered Air Purifying (PAPR), Loose fitting Helmet or Hood, HEPA Filter	25x PEL
Powered Air Purifying (PAPR), Full Facepiece, HEPA Filter	50x PEL
Supplied Air, Continuous Flow Loose fitting Helmet or Hood	25x PEL
Supplied Air, Continuous Flow Full Facepiece, HEPA Filter	50x PEL
Full Facepiece-Supplied Air Pressure Demand, HEPA Filter	100x PEL
Full Facepiece-Supplied Air Pressure Demand, with Aux. SCBA, Pressure Demand or Continuous Flow	>100x PEL

- 2. Disposable Clothing -"Tyvek" manufactured by Dupont or approved equal.
- 3. NIOSH approved safety goggles to protect eyes.
- 4. Polyethylene bags, 6 mil. (.006") thick (use double bags).

NOTE: Workers must wear disposable coveralls and respirator masks at all times while in the work area. Contaminated coveralls or equipment must be left in the work area and not worn into other parts of the building.

#### F. TOOLS AND EQUIPMENT

- 1. Airless Sprayer An airless sprayer, suitable for application of encapsulating material, shall be used.
- 2. Scaffolding Scaffolding, as required to accomplish the specified work, shall meet all applicable safety regulations.
- 3. Transportation Equipment Transportation equipment, as required, shall be suitable for loading, temporary storage, transport and unloading of contaminated waste without exposure to persons or property. Watertight, hard wall containers shall be provided to retain and dispose of any asbestos waste material with sharp-edged components that may tear plastic bags or sheeting. The containers shall be marked with danger labels.
- 4. Surfactant Wetting Agents "Asbestos-Wet" Aquatrols Corp. of America or approved equal and shall be non-carcinogenic.
- 5. Portable (negative air pressure) asbestos filtration system by Micro-Trap or approved equal.
- 6. Vacuum, HEPA type equal to "Nilfisk" #GA73, or "Pullman/Holt" #75 ASA.
- 7. Amended Water Sprayer The water sprayer shall be an airless or other low-pressure sprayer for amended water application.
- 8. Other Tools and Equipment The Abatement Contractor shall provide other suitable tools for the stripping, removal, encapsulation, and disposal activities including but not limited to: hand-held scrapers, nylon brushes, sponges, rounded edge shovels, brooms, and carts.

#### PART 3 - EXECUTION

#### 3.01 PRE-ABATEMENT WORK AREA PREPARATION

- A. The work area shall be vacated by the occupants prior to work area preparation and not reoccupied until satisfactory clearance air monitoring results have been achieved.
- B. Caution signs shall be posted at all locations and approaches to a location where airborne concentrations of asbestos may exceed ambient background levels. Signs shall be posted that permit a person to read the sign and take the necessary protective measures to avoid exposure.
- C. Shut down and lock out electric power to all work areas. The Abatement Contractor shall provide temporary power and lighting and ensure safe installation of temporary power sources and equipment used where high humidity and/or water shall be sprayed in accordance with all applicable codes. All power to work areas shall be brought in from outside the area through a ground-fault interrupter at the source.
- D. Isolate the work area HVAC system.

- E. The personnel decontamination enclosure system shall be installed or constructed prior to preparatory work in the work area and in particular before the disturbance of asbestos material. The waste decontamination enclosure system shall be installed or constructed prior to commencement of abatement activities.
- F. Movable objects within the work area shall be pre-cleaned using HEPA filtered vacuum equipment and/or wet cleaning and such objects shall be removed from the work area to an uncontaminated location. If disposed of as asbestos waste material, cleaning is not required.
- G. Fixed objects and other items, which are to remain within the work area, shall be pre-cleaned using HEPA filtered vacuum equipment and/or wet cleaning. Such objects shall be enclosed with two layers of at least six mil plastic sheeting and sealed with tape.
- H. The work area shall be pre-cleaned using HEPA filtered vacuum equipment and/or wet cleaning. Methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters, shall be prohibited. Asbestos material shall not be disturbed during pre-cleaning.
- I. Isolation barriers that seal off all openings, including windows, corridors, doorways, ducts, and any other penetrations of the work area, shall be constructed using two layers of at least six mil fire-retardant plastic sheeting sealed with tape. Also, all seams in mechanical system components that pass through the work area shall be sealed. Doorways and corridors, which shall not be used for passage during work, shall also be sealed.
- J. Removal of mounted objects. After isolation barriers are in place, objects such as light fixtures, electrical track, alarm systems, ventilation equipment and other items not previously sealed, shall be double sealed with six mil fire-retardant plastic sheeting. Localized HEPA filtered vacuum equipment shall be used during fixture removal to reduce asbestos dispersal.
- K. Individual roof and floor drains shall be sealed watertight using two layers of 6-mil fire-retardant plastic sheeting and tape prior to plasticizing. Openings in floor shall be fully covered with plywood sheeting secured to the floor in such a way as to minimize a tripping hazard prior to plasticizing.
- L. Emergency and fire exits from the work area shall be maintained or alternate exits shall be established according to all applicable codes.
- M. Adequate toilet facilities shall be supplied by the Abatement Contractor and shall be located either in the clean area of the personnel decontamination enclosure or shall be readily accessible to the personnel decontamination enclosure.
- 3.02 LARGE ASBESTOS PROJECT PERSONNEL DECONTAMINATION ENCLOSURE SYSTEM (ICR 56-7.5)
  - A. The personnel decontamination enclosure shall be constructed prior to preparatory work in the work area and in particular before the disturbance of asbestos material.

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- Construction and use of personnel decontamination enclosure systems shall be in accordance with ICR-56 and any Applicable or Site-Specific Variances utilized on this project. Such systems may consist of existing rooms outside of the work area, if the layout is appropriate, that can be enclosed is plastic sheeting and are accessible from the work area. When this situation does not exist, enclosure systems may be constructed out of metal, wood, or plastic support.
- 2. The personnel decontamination enclosure system shall consist of a clean room, a shower room, and an equipment room, in series, separated from each other and from the work area by three airlocks.
- 3. There shall be one shower per six full shift abatement persons calculated on the basis of the largest shift.
- 4. The personnel decontamination enclosure system shall be fully framed, sheathed for safety and constructed to prevent unauthorized entry.
- 5. Personnel decontamination enclosure systems constructed at the work site shall utilize at least six mil fire-retardant opaque plastic sheeting. At least two layers of six mil fire-retardant reinforced plastic sheeting shall be used for the flooring of this area.
- 6. All prefabricated decontamination units shall be completely decontaminated and sealed prior to separation and removal from the work area. Mobile decontamination units shall remain in place until satisfactory clearance results have been attained.
- 7. The clean room shall be sized to accommodate all authorized persons. Benches, lockers, and hooks shall be provided for street clothes. Shelves for storing respirators shall also be provided. Clean clothing, replacement filters for respirators, towels and other necessary items shall be provided. The clean room shall not be used for the storage of tools, equipment, or materials. It shall not be used for office space. A lockable door shall be provided to permit access to the clean room from outside the work area or enclosure. It shall be used to secure the work area and decontamination enclosure during off-shift hours.
- 8. The shower room shall contain one or more showers. Each shower head shall be supplied with hot and cold water adjustable at the tap. The shower enclosure shall be constructed to ensure against leakage of any kind. Uncontaminated soap, shampoo and towels shall be available at all times. Shower water shall be drained, collected and filtered through a system with at least 5.0-micron particle size collection capability. A system containing a series of several filters with progressively smaller pore sizes shall be used to avoid rapid clogging of the filtration system by large particles. Filtered wastewater shall be discharged in accordance with applicable codes. Contaminated filters shall be disposed of as asbestos waste. The shower room shall be constructed in such a way that travel through the decontamination unit shall be through the shower.
- 9. The equipment room shall be used for the storage of equipment and tools after decontamination using a HEPA filtered vacuum and/or wet cleaning. A one-day supply of replacement filters, in sealed containers, for HEPA vacuums and negative pressure ventilation equipment, extra tools, containers of surfactant and other materials and equipment that may be required during the abatement project may also be stored here. A walk-off pan filled with water shall be located in the work area just outside the

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equipment room for persons to clean foot covering when leaving the work area. A drum lined with a labeled, at least six mil plastic bag is required for collection of clothing and shall be located in this room. Contaminated footwear and work clothes shall be stored in this area.

#### 3.03 WASTE DECONTAMINATION ENCLOSURE SYSTEM (ICR 56-7.5)

#### A. General Requirements

- 1. A waste decontamination enclosure system shall consist of the following:
  - a. A washroom/cleanup room shall be constructed with an airlock doorway to the work area and another airlock doorway to the holding area.
  - b. The holding area shall be constructed with an airlock doorway to the washroom/cleanup room and another lockable door to the outside.
- 2. Where there is only one egress from the work area, the holding area of the waste decontamination enclosure system may branch off from the equipment decontamination room, which doubles as a waste washroom, of the personnel decontamination enclosure.
- 3. The waste washroom shall be equipped with a drain installed to collect water and deliver it to the shower drain where it shall be filtered through a system with at least 5.0-micron particle size collection capability. A system containing a series of several filters with progressively smaller pore sizes shall be used to avoid rapid clogging of the filtration system by large particles. Filtered wastewater shall be discharged in accordance with applicable codes. Contaminated filters shall be disposed of as asbestos waste.
- 4. The waste washroom shall be constructed in such a way that travel through the rooms shall be through the waste washroom.

#### 3.04 WORK AREA ENTRY AND EXIT PROCEDURES

- A. The following procedures shall be followed throughout the asbestos abatement project until satisfactory clearance air monitoring results have been achieved:
  - 1. All persons shall enter and exit the work area through the personnel decontamination enclosure system.
  - 2. All persons who enter the work area or an enclosure shall sign the entry/exit log, located in the clean room, upon every entry and exit.
  - 3. All persons, before entering the work area, or an enclosure shall read and be familiar with all posted regulations, personal protection requirements, including work area entry and exit procedures, and emergency procedures. The entry/exit log headings shall indicate, and the signatures shall be used to acknowledge, that these have been reviewed and understood by all persons prior to entry.
  - 4. All persons shall proceed first to the clean room, remove all street clothing, store these items in clean sealable plastic bags or lockers and don coveralls, head covering, foot

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covering and gloves. All persons shall also don NIOSH approved respiratory protection. Clean respirators and protective clothing shall be utilized by each person, for each separate entry into the work area. Respirators shall be inspected prior to each use and tested for proper seal using quantitative or qualitative fit checks.

- 5. Persons wearing designated personal protective equipment shall proceed from the clean room through the shower room to the equipment room, where necessary tools are collected and any additional clothing shall be donned, before entry into the work area.
- 6. Before leaving the work area, all persons shall remove gross contamination from the outside of respirators and protective clothing by brushing, wet cleaning, and/or HEPA vacuuming.
- 7. Persons shall proceed to the equipment room where all coveralls, head covering, foot covering, and gloves shall be removed. Disposable clothing shall be deposited into labeled containers for disposal. Reusable contaminated clothing, footwear, head gear and gloves shall be stored in the equipment room when not being used in the work area.
- 8. Still wearing respirators, persons shall proceed to the shower area, clean the outside of the respirator and the exposed face area under running water prior to removal of the respirator, and then fully and vigorously shower and shampoo to remove residual asbestos contamination. Respirators shall be washed thoroughly with soap and water. Some types of respirators will require slight modification of these procedures. An airline respirator with HEPA filtered disconnect protection shall be disconnected in the equipment room and worn into the shower. A powered air-purifying respirator facepiece shall be disconnected from the filter/power pack assembly prior to entering the shower.
- After showering and drying, all persons shall proceed to the clean room and don clean personal protective equipment if returning to the work area or street clothing if exiting the enclosure.
- 3.05 EQUIPMENT AND WASTE CONTAINER DECONTAMINATION & REMOVAL PROCEDURES
  - A. The following procedures shall be followed throughout the asbestos abatement project until satisfactory clearance air monitoring results have been achieved.
    - External surfaces of contaminated containers and equipment shall be cleaned by wet cleaning and/or HEPA vacuuming in the work area before moving such items into the waste decontamination enclosure system airlock by persons assigned to this duty. These work area persons shall not enter the airlock.
    - 2. These contaminated items shall be removed from the airlock by persons stationed in the washroom during waste removal operations. These washroom persons shall remove gross contamination from the exterior of their respirators and protective clothing by brushing, HEPA vacuuming and/or wet cleaning.
    - 3. Once in the waste decontamination enclosure system, external surfaces of contaminated containers and equipment shall be cleaned a second time by wet cleaning.

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- 4. The cleaned containers of asbestos material and equipment are to be dried of any excessive pooled or beaded liquid, placed in uncontaminated plastic bags or sheeting and sealed airtight.
- 5. The clean recontainerized items shall be moved into the airlock that leads to the holding area. The washroom persons shall not enter this airlock or the work area until waste removal is finished for that period.
- 6. Containers and equipment shall be moved from the airlock and into the holding area by persons dressed in clean personal protective equipment, who have entered from uncontaminated areas.
- 7. The cleaned containers of asbestos material and equipment shall be placed in watertight carts with doors or tops that shall be closed and secured. These carts shall be held in the holding area pending removal. The carts shall be wet cleaned and/or HEPA vacuumed at least once each day.
- 8. The exit from the decontamination enclosure system shall be secured to prevent unauthorized entry.
- 9. Where the waste removal enclosure is part of the personnel decontamination enclosure, waste removal shall not occur during shift changes or when otherwise occupied. Precautions shall be taken to prevent short circuiting and cycling of air outward through the shower and clean room.
- 10. Containers labeled with Asbestos hazard warnings shall not be used to dispose of non asbestos waste.

#### 3.06 ENGINEERING CONTROLS

#### A. Ventilation.

- 1. The Abatement Contractor shall employ HEPA equipped vacuums or negative air pressure equipment for ventilation as required.
- 2. All negative air pressure equipment ventilation units shall be equipped with HEPA filtration. The Contractor shall provide a manufacturer's test certificate for each unit documenting the capability of trapping and retaining 99.97 percent of asbestos fibers greater than 0.3 microns equivalent aerodynamic diameter.
- 3. A power supply shall be available to satisfy the requirements of the total of all ventilating units.
- 4. On electric power failure, abatement shall stop immediately and shall not resume until power is restored and exhaust units are operating fully. On extended power failure, longer than one hour, the decontamination facilities, after the evacuation of all persons from the work area, shall be sealed airtight.
- 5. If extending the exhaust of the ventilation units 50 feet from the building would result in an exhaust location either in the road, blocking driveway access to the facility or within 50 feet of other buildings, a second unit will be run in series with the primary unit.

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### 3.07 MAINTENANCE OF DECONTAMINATION ENCLOSURE SYSTEMS AND WORK AREA BARRIERS

#### A. GENERAL REQUIREMENTS

- 1. The Consultant must review and approve installation before commencement of work. Upon completion of the construction of all plastic barriers and decontamination system enclosures and prior to beginning actual abatement activities.
- 2. All plastic barriers inside the work area, in the personnel decontamination enclosure system, in the waste decontamination enclosure system and at partitions constructed to isolate the work area from occupied areas, shall be inspected by the asbestos supervisor at least twice daily. The barriers shall be inspected before the start of and following the completion of the day's abatement activities. Inspections and observations shall be documented in the project log.
- 3. Damage and defects in the barriers and/or enclosure systems shall be repaired immediately upon discovery and prior to resumption of abatement activities.
- 4. At any time during the abatement activities, if visible emissions are observed outside of the work area of if damage occurs to the barriers, work shall be stopped, repairs made, and visible residue immediately cleaned up using HEPA vacuuming methods prior to the resumption of abatement activities.
- 5. The Abatement Contractor shall HEPA vacuum and/or wet clean the waste decontamination enclosure system and the personnel decontamination enclosure system at the end of each day of abatement activities.

#### 3.08 HANDLING AND REMOVAL PROCEDURES

The Abatement Contractor may utilize existing provisions of ICR-56, Applicable Variances or a Site-Specific Variance, approved by the Owner's Consultant, to permit the conduct of this work.

#### 3.09 ABATEMENT PROCEDURES

#### A. AIR SAMPLING - By Owner

- 1. Air sampling and analysis shall be conducted according to the requirements of Subpart 56-4 before the start, during and after the completion of the asbestos removal project.
- 2. In addition to the requirements of Subpart 56-4, air monitoring shall be conducted in accordance with any approved job specific variance(s) or applicable variance utilized.
- 3. Clearance samples may be analyzed using PCM to maintain compliance with ICR-56.
- 4. If applicable, clearance samples will be analyzed using TEM to maintain compliance with ICR-56 and 40 CFR 763.90[i].
- B. The provisions of the Applicable Variances or a Job Specific Variance shall apply only in those areas where approval has been granted by the NYS DOL and the Contractor has

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obtained concurrence from the Owner's Consultant. All other applicable provisions of Industrial Code Rule 56-1 through 56-12 shall be complied with.

- C. A copy of the NYS DOL Job Specific or Applicable Variance, if applicable, shall be conspicuously posted at the work area(s).
- D. The Abatement Contractor shall construct a decontamination unit at the work site. The Abatement Contractor shall, as a minimum, comply with the requirements of 29 CFR 1926.1101(j); Hygiene facilities and practices for employees.

#### 3.10 ENCAPSULATION PROCEDURES

The following procedures shall be followed to seal in non-visible residue, after obtaining satisfactory clearance air monitoring results, while conducting lockdown encapsulation on any surfaces which were the subject of removal or other remediation activities:

- A. Only encapsulants rated as acceptable or marginally acceptable on the basis of Battelle Columbus Laboratory test procedures and rating requirements developed under the 1978 USEPA contract shall be used for lockdown encapsulation.
- B. Sealants considered for use in encapsulation shall first be tested to ensure that the sealant is adequate for its intended use. A section of the work surface shall be evaluated following this initial test application of the sealant to quantitatively determine the sealant's effectiveness in terms of penetrating and locking down the asbestos fibers. The American Society of Testing and Materials (ASTM) Committee E06.21.06E on Encapsulation of Building Materials has developed a guidance document to assist in the selection of an encapsulant.
- C. The encapsulant solvent or vehicle shall not contain a volatile hydrocarbon.
- D. Encapsulants shall be applied using airless spray equipment.
  - 1. Spraying is to occur at the lowest pressure range possible to minimize fiber release from encapsulant impact at the surface. It shall be applied with a consistent horizontal or vertical motion.
- E. Encapsulation shall be utilized as a surface sealant once all asbestos containing materials have been removed in a work area. In no event shall encapsulant be applied to any surface that was the subject of removal or other remediation activities prior to obtaining satisfactory clearance air monitoring.

#### 3.11 CLEANUP PROCEDURES

- A. The following cleanup procedures shall be required.
  - Cleanup of accumulations of loose asbestos material shall be performed whenever enough loose asbestos materials have been removed to fill a single leak tight container of the type commensurate with the material properties. In no case shall cleanup be performed less than once prior to the close of each working day. Asbestos material shall be kept wet until cleaned up.

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- 2. Accumulations of dust shall be cleaned off all surfaces on a daily basis using HEPA vacuum cleaning methods.
- 3. Decontamination enclosures shall be HEPA vacuumed at the end of each shift.
- 4. Accumulations of asbestos waste material shall be containerized utilizing HEPA vacuums or rubber or plastic dust pans, squeegees, or shovels. Metal shovels shall not be used to pick up or move waste.
- 5. Excessive water accumulation or flooding in the area shall require work to stop until the water is collected and disposed of properly.
- B. The following cleanup procedures shall be required after completion of all removal activities.
  - All accumulations of asbestos waste material shall be containerized utilizing HEPA vacuums or rubber or plastic dustpan, squeegees or shovels. Metal shovels shall not be used to pick up or move waste. HEPA vacuums shall be used to clean all surfaces after gross cleanup.
  - 2. Cleaning. All surfaces in the work area shall be HEPA vacuumed. To pick up excess liquid and wet debris, a wet purpose shop vacuum may be used and shall be decontaminated prior to removal from the work area.
  - 3. Windows, doors, HVAC system vents and all other openings shall remain sealed. Decontamination enclosure systems shall remain in place and be utilized.
  - 4. All containerized waste shall be removed from the work area and the holding area.
  - 5. All tools and equipment shall be decontaminated and removed from the work area.
  - 6. A final visual inspection and clearance air monitoring, as per the schedule for air sampling and analysis, shall be conducted.
  - 7. The isolation barriers and decontamination unit shall be removed only after satisfactory clearance air monitoring results have been achieved.

#### 3.12 SAFETY MONITORING - CONSULTANT:

The Consultant will designate an Asbestos Safety Technician (AST) to represent the Owner during the removal program. The AST must be on the job site at all times during abatement work. Absolutely no abatement or preparation work will occur without the presence of the AST.

The AST will conduct four (4) milestone inspections.

- 1. Pre-commencement inspection shall be conducted as follows:
  - a. Notification in writing to the Consultant shall be made by the Abatement Contractor to request a pre-commencement inspection at least 48 hours in advance of the desired date of inspection. This inspection shall be requested prior to beginning preparatory work in another work area.

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- b. The AST shall ensure that:
  - i. The job site is properly prepared and that all containment measures are in place.
  - ii. The designated supervisor shall present to the inspector a valid supervisor's license issued by the New York Department of Labor.
  - iii. All workers shall present to the inspector a valid handler's license issued by the New York Department of Labor.
  - iv. Measures for the disposal of removed asbestos material are in place and shall conform to the adopted standards.
  - v. The Abatement Contractor has a list of emergency telephone numbers at the job site which shall include the monitoring firm employed by the Owner and telephone numbers for fire, police, emergency squad, local hospital, and health officer.
- c. If all is in order, the AST shall issue a written notice to proceed in the field. If the job site is not in order, then any needed corrective action must be taken before any work is to commence. Conditional approvals shall not be granted.

Progress inspection shall be conducted as follows:

- a. Primary responsibility for ensuring that the abatement work progresses in accordance with these technical specifications and regulatory requirements rests with the Abatement Contractor. The AST shall continuously be present to observe the progress of work and perform required tests.
- b. If the AST observes irregularities at any time, he shall direct such corrective action as may be necessary. If the Abatement Contractor fails to take the corrective action required, or if the Abatement Contractor or any of their employees habitually and/or excessively violate the requirements of any regulation, then the AST shall inform the Owner who shall issue a Stop Work Order to the Abatement Contractor and have the work site secured until all violations are abated.

Clean-up inspections shall be conducted as follows:

- a. Notice for clean-up inspection shall be requested by the Abatement Contractor at least 24 hours in advance of the desired date of inspection.
- b. The clean-up inspection shall be conducted prior to the removal of any isolation or critical barriers and before final air clearance monitoring.
- c. The AST shall ensure that:
  - i. The work site has been properly cleaned and is free of visible asbestos containing material and debris.
  - ii. All removed asbestos has been properly placed in a locked secure container outside of the work area.

- d. If all is in order, the AST shall issue a written notice of authorization to remove surface barriers from the work area. All isolation barriers shall remain in place until satisfactory clearance air sampling has been completed.
- 4. Clearance Visual Inspection shall be conducted after the removal of non-critical plastic sheeting. The AST shall insure that:
  - a. The work area is free of all visible asbestos or suspect asbestos debris and residue.
  - b. All waste has been properly bagged and removed from the work area.
  - c. Should clearance visual inspection identify residual debris, as determined by the AST, the Abatement Contractor is responsible for recleaning the area at his own cost and shall bear all costs of reinspection until acceptable levels are achieved.
- B. The Abatement Contractor shall be required to receive written approval before proceeding after each milestone inspection.

#### 3.13 PERSONNEL AIR MONITORING – CONTRACTOR (29 CFR 1926.1101)

- A. Personnel air monitoring shall be provided to determine both short-term (STEL) and full shift during when abatement activities occur. Personnel sampling shall be performed in each work area in order to accurately determine the concentrations of airborne asbestos to which workers may be exposed.
- B. The Abatement Contractor shall have a qualified "Competent Person" (as specified in 29 CFR 1926 OSHA) to conduct personnel air monitoring.
- C. The laboratory performing the air sample analysis shall be certified by NYS DOH ELAP and approved by the consultant.
- D. Personnel air monitoring test results for OSHA Compliance. Results shall be posted at the work site within 24 hours of testing and copies supplied to the Owner within five (5) days of testing. Abnormalities shall be supplied to the Owner immediately.

#### 3.14 CLEARANCE AIR MONITORING

- A. Air samples will be collected in and around the work areas at the completion of abatement activities.
- B. Clearance samples may be analyzed using PCM to maintain compliance with ICR-56.
- C. If applicable, clearance samples will be analyzed using TEM to maintain compliance with ICR-56 and 40 CFR part 763 "Asbestos-Containing Materials in Schools; Final Rule and Notice" section 763.90.

#### D. \*\*\*RETESTING\*\*\*

Should clearance air monitoring yield fiber concentrations above the "Clearance" criteria of either 0.01 fibers per CC and/or background levels (PCM) –OR- seventy (70) structures per square millimeter (TEM/AHERA), the Abatement Contractor is responsible for recleaning the area at his own cost and shall bear all costs associated with the retesting of

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the work area(s) including monitoring labor, sampling, analysis, etc. until such levels are achieved.

#### 3.15 RESPIRATORY PROTECTION REQUIREMENT

- A. Respiratory protection shall be worn by all individuals inside the work area from the initiation of the asbestos project until all areas have successfully passed clearance air monitoring in accordance with these specifications. The Abatement Contractor shall keep available at all times two PAPR's with new filters and charged batteries for use by authorized visitors.
- B. All respiratory protection shall be MSHA/NIOSH approved in accordance with the provisions of 30 CFR Part II. All respiratory protection shall be provided by the Abatement Contractor and used by workers in conjunction with the written respiratory protection program.
- C. The Abatement Contractor shall provide respirators that meet the requirements of 29 CFR Parts 1910 and 1926.
  - Full facepiece Type C supplied-air respirators operated in pressure demand mode equipped with an auxiliary self- contained breathing apparatus, operated in pressure demand or continuous flow, shall be worn during gross removal, demolition, renovation and/or other disturbance of ACM whenever airborne fiber concentrations inside the work area are greater than 10.0 f/cc.
  - 2. Full facepiece Type C supplied-air respirators operated in pressure demand mode with HEPA filter disconnect protection shall be work during gross removal, demolition, renovation and/or other disturbance of ACM with an amphibole content and/or whenever airborne fiber concentrations inside the work area are equal to or greater than 0.5 f/cc and less than or equal to 10.0 f/cc.
  - 3. Full facepiece powered air-purifying respirators (PAPR) equipped with HEPA filters shall be worn during the removal, encapsulation, enclosure, repair and/or other disturbance of friable ACM if airborne fiber concentrations inside the work area are less than 0.5 f/cc. A supply of charged replacement batteries, HEPA filters and flow test meter shall be available in the clean room for use with powered air-purifying respirators. HEPA filters shall be changed daily or as flow testing indicates change is necessary. Any Type C supplied-air respirator operated in continuous flow, with HEPA filter disconnect protection, may be substituted for a powered air-purifying respirator.
  - 4. Loose fitting helmets or hoods with powered air-purifying respirators (PAPR) equipped with HEPA filters may be worn during the removal, encapsulation, enclosure, repair and/or other disturbance of friable ACM if airborne fiber concentrations inside the work area are less than 0.25 f/cc. A supply of charged replacement batteries, HEPA filters and flow test meter shall be available in the clean room for use with powered air-purifying respirators. HEPA filters shall be changed daily or as flow testing indicates change is necessary. Any Type C supplied-air respirator operated in continuous flow may be substituted for a powered air-purifying respirator.
  - 5. Half-mask or full-face air-purifying respirators with HEPA filters shall be worn only during the preparation of the work area and final clean up procedures provided airborne fiber

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concentrations inside the work area are less than 0.1 f/cc.

- 6. Use of single use dust respirators is prohibited for the above respiratory protection.
- D. Workers shall be provided with personally issued and individually marked respirators. Respirators shall not be marked with any equipment that will alter the fit of the respirator in any way. Only waterproof identification markers shall be used.
- E. The Abatement Contractor shall ensure that the workers are qualitatively or quantitatively fit tested by an Industrial Hygienist initially and every six months thereafter with the type of respirator he/she will be using.
- F. Whenever the respirator design permits, workers shall perform the positive and negative air pressure fit test each time a respirator is worn. Powered air-purifying respirators shall be tested for adequate flow as specified by the manufacturer.
- G. No facial hair, which interferes with the face-to-mask sealing surface, shall be permitted to be worn when wearing respiratory protection that requires a mask-to-face seal.
- H. Contact lenses shall not be worn in conjunction with respiratory protection.
- I. If a worker wears glasses, a spectacle kit to fit their respirator shall be provided by the Abatement Contractor at the Abatement Contractor's expense.
- J. Respiratory protection maintenance and decontamination procedures shall meet the following requirement:
  - 1. Respiratory protection shall be inspected and decontaminated on a daily basis in accordance with OSHA 29 CFR 1910.134(b); and
  - 2. HEPA filters for negative pressure respirators shall be changed after each shower; and
  - 3. Respiratory protection shall be the last piece of worker protection equipment to be removed. Workers must wear respirators in the shower when going through decontamination procedures; and
  - 4. Airline respirators with HEPA filtered disconnect shall be disconnected in the equipment room and worn into the shower. Powered air-purifying respirator facepieces shall be worn into the shower. Filtered/power pack assemblies shall be decontaminated in accordance with manufacturers' recommendations; and
  - 5. Respirators shall be stored in a dry place and in such a manner that the facepiece and exhalation valves are not distorted; and
  - 6. Organic solvents shall not be used for washing of respirators.
- K. No visitors shall be allowed to enter the contaminated area if they do not have their medical certification and training certificate. Authorized visitors shall be provided with suitable PAPR respirators and instructions on the proper use of respirators whenever entering the work area.

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#### 3.16 DISPOSAL OF WASTE

#### A. APPLICABLE REGULATIONS

- 1. All asbestos waste shall be stored, transported, and disposed of as per, but not limited to, the following Regulations:
  - a. NYS Code Rule 56
  - U.S. Department of Transportation (DOT)
     Hazardous Substances
     Title 29, Part 171 and 172 of the code of Federal Regulations regarding waste collector registration
  - c. Regulations regarding waste collector registration Title 6, part 364 of the New York State Official Compilation of Codes, Rules and Regulations 6 NYCRR 364
  - d. USEPA NESHAPS 40 CRF 61
  - e. USEPA ASBESTOS WASTE MANAGEMENT GUIDANCE EPA/530-SW-85-007
- B. TRANSPORTER OR HAULER The Abatement Contractor shall bear full responsibility for proper characterization, transportation, and disposal of all solid or liquid waste, generated during the project, in a legal manner. The Owner shall approve all transportation and disposal methods.
  - 1. The Abatement Contractor's Transporter (hauler) and disposal site shall be approved by the Owner. The Abatement Contractor shall remove within 48 hours all asbestos waste from the site after completing the clean up.
  - 2. The Transporter must possess and present to the Owner's representative a valid New York State Department of Environmental Conservation Part 364 asbestos hauler's permit to verify license plate and permit numbers. The Owner's representative will verify the authenticity of the hauler's permit with the proper authority.
  - 3. The Abatement Contractor shall give 24-hour notification prior to removing any waste from the site. All waste shall be removed from the site only during normal working hours. No waste may be taken from the site without authorization from the Owner's representative.
  - 4. The Abatement Contractor shall have the Transporter give the date and time of arrival at the disposal site.
  - 5. The Transporter with the Abatement Contractor and Owner's consultant shall inspect all material in the transport container prior to taking possession of and signing the Waste Manifest. The Transporter shall not have any off-site transfers or be combined with any other off-site asbestos material.
  - 6. The Transporter must travel directly to the disposal site with no unauthorized stops.

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#### C. WASTE STORAGE CONTAINER

1. During loading and on-site storage, the asbestos waste container shall be labeled with EPA Danger signage:

## DANGER CONTAINS ASBESTOS FIBERS AVOID CREATING DUST CANCER AND LUNG DISEASE HAZARD

- 2. The NYS DEC Hauler's Permit number shall be on both sides and back of the container.
- 3. The Container will not be permitted to leave the site without the proper signage.
- 4. A copy of the completed waste manifest shall be forwarded directly to the Owner's Consultant by the disposal facility.
- 5. Packaging of Non-friable Asbestos. Use of an open top container shall require written request, by the Contractor, and written approval by the Owners Representative, and be performed in compliance with all applicable regulations.
  - a) A chute, if used, shall be air/dust tight along its lateral perimeter and at the terminal connection to the dumpster at ground level (solid wall and top container). The upper end of the chute shall be furnished with a hinged lid, to be closed when the chute is not being used.
  - b) The container shall be lined with a minimum of two (2) layers of 6 mil. Fire-retardant polyethylene draped loosely over the sides so as to facilitate being wrapped over the top of the load and sealed prior to transport from the site.
  - c) Prior to transport from the work site the Dumpster will be disconnected from the chute and sealed air/dust tight utilizing six mil plastic and tape. The waste material will be transported as an asbestos-containing material by appropriate legal methods.
- 6. Packaging Friable Asbestos.
  - a) The container shall be a solid wall, hard top and lockable container.
  - b) The container shall be locked upon arrival at the site to restrict access. Security shall be provided at the entrance to the container during the loading process and immediately locked upon completion.
  - c) The interior walls, floor and ceiling shall be lined with two (2) layers of 6 mil. Fire-retardant polyethylene.
  - d) The waste shall be loaded in such a manner as to protect the integrity of the individual waste packages.
  - e) Prior to transport from the work site the interior of the Dumpster will be sealed air/dust tight utilizing six mil plastic and tape. The waste material will be transported

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as asbestos-containing material by appropriate legal methods.

#### D. WASTE DISPOSAL MANIFEST

- 1. The Asbestos Waste Manifest shall be equivalent to the "Waste Shipment Record" included in 40 CFR 61. A copy of the Contractor's manifest shall be reviewed by the Owner's Consultant and shall be the only manifest used.
- 2. The Manifest shall be verified by the Owner's Consultant indicating that all the information and amounts are accurate, and the proper signatures are in place.
- 3. The Manifest shall have the signatures of the Abatement Contractor and the Transporter prior to any waste being removed from the site.
- 4. The Manifest shall be signed by the Disposal Facility owner or operator to certify receipt of asbestos containing materials covered by the manifest.
- 5. A copy of the completed manifest shall be provided by the Abatement Contractor to the Owner's Consultant and remain on site for inspection.
- Abatement Contractor shall maintain a waste disposal log which indicates load number, date and time left site, container size, type of waste, quantity of waste, name of hauler, NYS DES permit number, trailer and tractor license number, and date manifest was returned to Consultant.
- 7. The Disposal Facility owner or operator shall return a signed copy of the Waste Manifest directly to:

Orange Ulster BOCES
103 Gibson Road
Goshen, New York 10924
ATTN: Kevin Sullivan

- 8. Copies of the completed Waste Manifest are to be sent by the disposal facility to the Hauler and Abatement Contractor.
- 9. Submit signed dump tickets and manifests with final payment request.
- 10. Final payment request will not be honored without signed dump ticket or manifests accounting for all asbestos waste removed from the site.

#### E. VIOLATIONS OF SPECIFICATIONS

1. Violations of the safety, hygiene, environmental, procedures herein, any applicable federal, state, or local requirements or failure to cooperate with the Owner's representative shall be grounds for dismissal and/or termination of this contract.

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#### F. VIOLATIONS OF NO SMOKING POLICY

1. The Federal Pro Children Act of 1994 prohibits School District Officials from smoking in any buildings or on the grounds that are property of the School District. The District shall be considered smoke free. The School District strongly enforces its' No Smoking Policy. It is the Contractor's responsibility to inform all workers of this policy. Any worker(s) involved with this project that are found smoking or using tobacco products will be informed that they are in violation of the Federal and State Law and School Board Policy and will be removed from site.

3.17 LOCATION OF WORK ORANGE ULSTER BOCES – AXELROD BUILDING – 2023 CAPITAL IMPROVEMENTS

(Please see attached Drawings for approximate locations)

#### 1) Axelrod Building

- Asbestos Abatement Contractor responsible for total and complete removal and disposal
  of approximately 60 square feet of non-friable ACM Anti-Sweat Tar on the underside of
  metal sinks in Classrooms 402, 404, 406, 408, 410, 414, 416, 418, 420 & 422, as
  indicated on the abatement drawings.
- Asbestos Abatement Contractor responsible for total and complete removal and disposal of approximately 38,608 square feet of non-friable ACM Floor Tile & Mastic floor system down to the building substrate, as indicated on the abatement drawings. Asbestos Abatement Contractor responsible for leaving the building substrate in an acceptable state to accept the new flooring system. Asbestos Abatement Contractor is responsible for performing removals utilizing manual, wet methods to ensure total and complete removal of existing floor tile systems, including all associated layers, fillers, wood, etc. to building substrate(s). Subsequent to final air clearances, the substrate(s) shall be washed with a neutralizing agent to prepare the substrate to accept new coverings/finishes as well as eliminate residual odors.
- Asbestos Abatement Contractor responsible for total and complete removal and disposal
  of approximately 54,000 SF of ACM Suspended Ceiling Tiles and/or non-ACM
  Suspended Ceiling Tiles under ACM Mudded Joint Packing/Elbows/Fittings/Etc.
  throughout the entire 1969 section of the building.
- Asbestos Abatement Contractor responsible for total and complete removal and disposal
  of approximately 2,000 linear feet of friable ACM Mudded Joint
  Packing/Elbows/Fittings/Etc. above suspended ceiling tile system, and in all bathrooms
  throughout the entire 1969 section of the building.
- Asbestos Abatement Contractor responsible for removing one side of all wet walls within all bathrooms to identify all areas with ACM Mudded Joint Packing/Elbows/Fittings/Etc. Asbestos Abatement Contractor is also responsible for complete removal and disposal of all bathrooms' hard ceilings to locate and abate all ACM Mudded Joint Packing/Elbows/Fittings/Etc.
- Asbestos Abatement Contractor responsible for total and complete removal and disposal
  of approximately 130 linear feet of friable ACM Mudded Joint
  Packing/Elbows/Fittings/Etc. within the basement tunnel system and above the nonACM plaster ceiling in the basement hallway, storage and custodial closet in the
  administration wing of the 1969 section of the building.
- Abatement contractor responsible for demolition of the non-ACM plaster ceiling under containment.
- Abatement contractor is responsible removal of all fiberglass insulation in the above referenced areas and disposal as asbestos contaminated. Abatement contractor is responsible for provide and installing new fiberglass insulation.
- Asbestos Abatement Contractor responsible for total and complete removal and disposal
  of approximately 225 SF of ACM Cementitious Window Sills throughout the entire 1969
  section of the building. There are approximately 45 window sills. Abatement contractor
  responsible for all demolition and equipment to access and remove the window sills.
  Asbestos Abatement Contractor responsible for coordination with
  owner/architect/general contractor demolition and disposal while protecting the building
  from the weather.

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#### Location of Work Cont'd...

• Asbestos Abatement Contractor responsible for total and complete removal and disposal of approximately 4,800 square feet of non-friable ACM Built-Up Roofing system, from perimeter flashing, building flashing and equipment flashing and approximately 410 LF of non-friable ACM Caulk from building flashing termination bar. Asbestos Abatement Contractor responsible for performing removals utilizing manual, wet methods to ensure total and complete removal of existing Built-Up Roofing system and Caulking as indicated and and all associated layers, fillers, etc. to building substrate(s). Asbestos Abatement Contractor responsible for coordination with owner/architect/general contractor for phased abatement, demolition and disposal while protecting the building from the weather.

**END OF LOCATION OF WORK** 

#### 3.18 GENERAL

- A. The Abatement Contractor will be responsible for repairing all building components damaged during abatement including, but not limited to: ceiling tiles, ceiling finishes, wall finishes, floor finishes, etc.
- B. The Abatement Contractor shall be responsible for all demolition required to access materials identified in scope of work and on associated drawings.
- C. Concealed conditions that are exposed and may require additional work shall be brought to the attention of the Owner immediately. The Abatement Contractor shall not abate these areas without a written notice to proceed. Additional asbestos abatement performed prior to the order to proceed will not be acknowledged.
- D. The Abatement Contractor shall remove asbestos-containing floor covering to the building substrate beneath; in areas indicted. Subsequent to final air clearance the substrate shall be washed with a neutralizing agent to prepare the substrate to accept new floor covering and eliminate residual odors.
- E. Power tools used to drill, cut into, or otherwise disturb asbestos containing material shall be equipped with HEPA filtered local exhaust ventilation.
- F. The Abatement Contractor shall provide access to GFCI electrical power, required to perform the area air monitoring for this project, within and immediately adjacent to each work area.
- G. Unwrapped or unbagged ACM shall be immediately placed in an impermeable waste bag or wrapped in plastic sheeting.
- H. Coordinate all removal operations with the Owner.

RETURN THIS EXECUTED FORM WITH COMPLETED BID SHEET **Asbestos Employee Medical Examination Statement Certificate of Worker Release Asbestos Employee Training Statement** CERTIFICATE OF WORKERS'S ACKNOWLEDGEMENT PROJECT NAME: Orange Ulster BOCES: Axelrod Building - 2023 Capital Improvements CONTRACTOR'S NAME: WORKING WITH ASBESTOS INVOLVES POTENTIAL EXPOSURE TO AIRBORNE ASBESTOS FIBERS. INHALING ASBESTOS FIBERS HAS BEEN LINKED WITH VARIOUS TYPES OF CANCER AND RESPIRATORY DISEASES. SMOKING CIGARETTES AND INHALATION OF ASBESTOS FIBERS INCREASES THE RISK THAT YOU WILL DEVELOP LUNG CANCER ABOVE THAT OF THE NON-SMOKING PUBLIC. The Contract for this project requires the Abatement Contracting Company to: 1) supply proper respiratory protection devices, and training on their use, to their employees; 2) provide training on safe work practices, and on use of the equipment used on the project, to their employees; and, 3) provide annual medical examinations to their employees meeting the requirements of 29 CFR 1926.1101. The Abatement Contracting Company's signature on this certificate, documents that these contractual obligations are fulfilled, and that you understand the information presented to you. \*\*\*\*\*\*DO NOT SIGN THIS FORM UNLESS YOU FULLY UNDERSTAND THIS INFORMATION\*\*\*\*\*\*\*\*\*\* RESPIRATORY PROTECTION: I have been trained in the proper use and limitations of the type of respiratory protection devices to be used on this project. I have reviewed the written respiratory protection program manual and a copy is available for my use. Respiratory protection equipment has been proved, by the Contractor, at no cost to TRAINING COURSE: I have been trained in the risks and dangers associated with handling asbestos, breathing asbestos dust, proper work procedures, personal protection and engineering controls. I have satisfactorily completed and Asbestos Safety Training Program for New York State and have been issued a New York State Department of Health Certificate of Asbestos Safety Training. MEDICAL EXAMINATION: I have satisfactorily completed a medical examination within the last 12 months that meets the OSHA requirement for an asbestos worker and included at least 1) medical history 2) pulmonary function 3) medical examination 4) approval to wear respiratory protection devises and may have included an evaluation of a chest x-ray. Signature:\_\_\_ SS#: \_\_\_Date:\_\_\_ RETURN THIS EXECUTED FORM WITH COMPLETED BID SHEET

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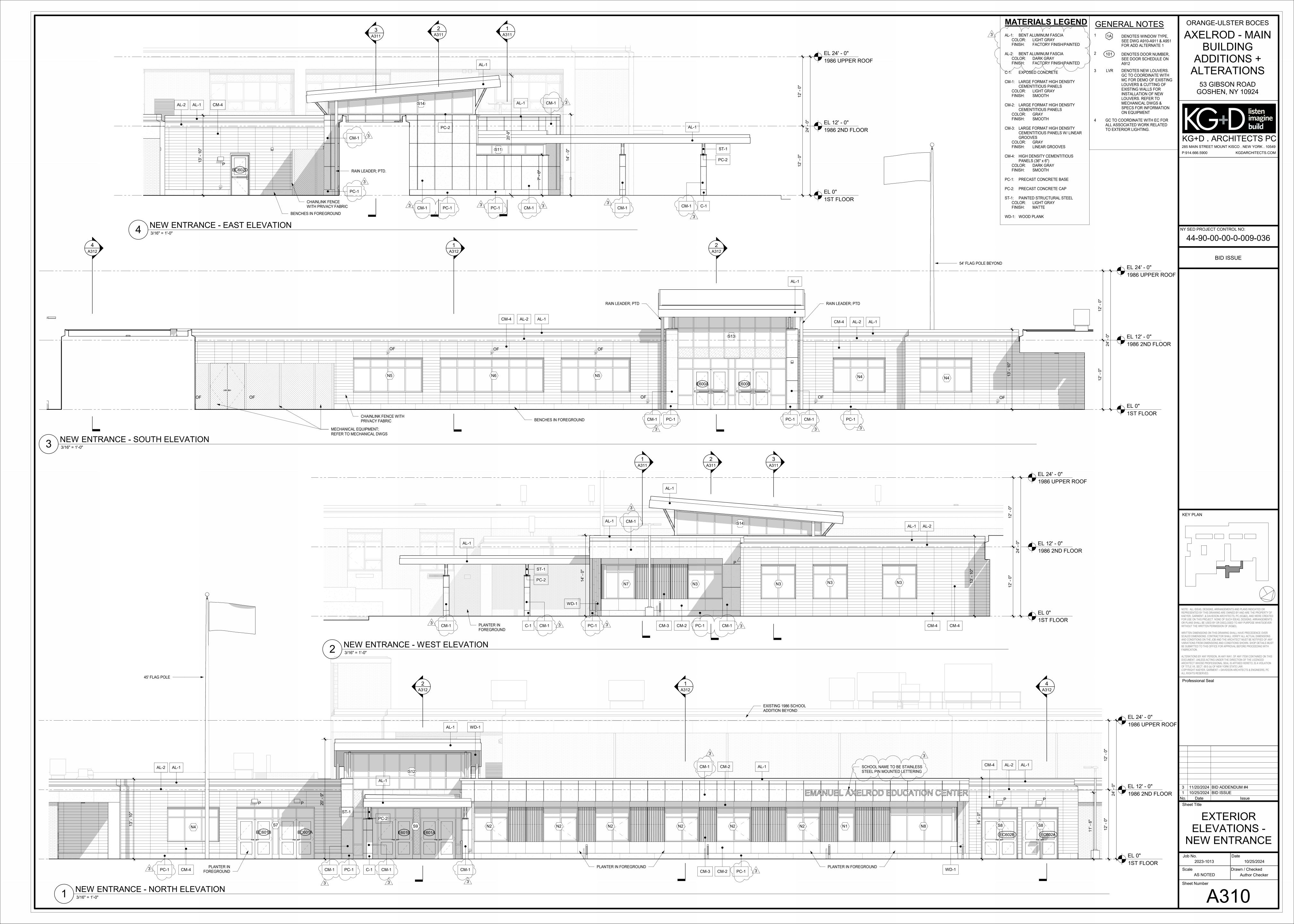
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RETURN THIS EXECUTED FOR	M WITH COMPLI	ETED BID SHEET	
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ESTIMATE OF	ACM QUANTITIES		
PROJECT NAME: Orange Ulster BOCES: Axelro	od Building – 2023	Capital Improvements	
EACH ABATEMENT CONTRACTOR SHALL NOTICE. A SIGNED AND DATED COPY OF TWITH THE ABATEMENT CONTRACTOR'S BID FTHE SOLE DISCRETION OF THE OWNER NON-RESPONSIVE AND RESULT IN DISQUALIBID ON THIS PROJECT.	HIS ACKNOWLED FOR THIS PROJEC , RESULT IN TH	GMENT SHALL BE SUBMITTI T. FAILURE TO DO SO MAY, A HE BID BEING CONSIDERI	ED AT ED
***********************************	*******	************	***
The linear and square footages listed within Contractor is required to visit the work location measurements within each listed location. The actual quantities determined, by them, at the specifications are for informational purposes of	s prior to bid subn he Abatement Con site walkthrough	nittal in order to take actual fic ntractor shall base their bid . Estimates provided in the	eld on se
Orders on this project.			de de de
***************************************	*********		***
Acknowledgment: I have read and understand the and understand that estimates provided in these shall not be considered a basis for Change Orders represents to the Owner that he/she has the aragreement on its behalf.	specifications are for on this project. The	or informational purposes only a e Abatement Contractor's signator	nd ory
Company Name:			
Type or Print			
BY: Signature	Title	 Date	
Print Name:			
*************************************	*******	**********	***
RETURN THIS EXECUTED FOR	M WITH COMPLI	ETED BID SHEET	
RETORIN TING EXECUTED FOR		-	

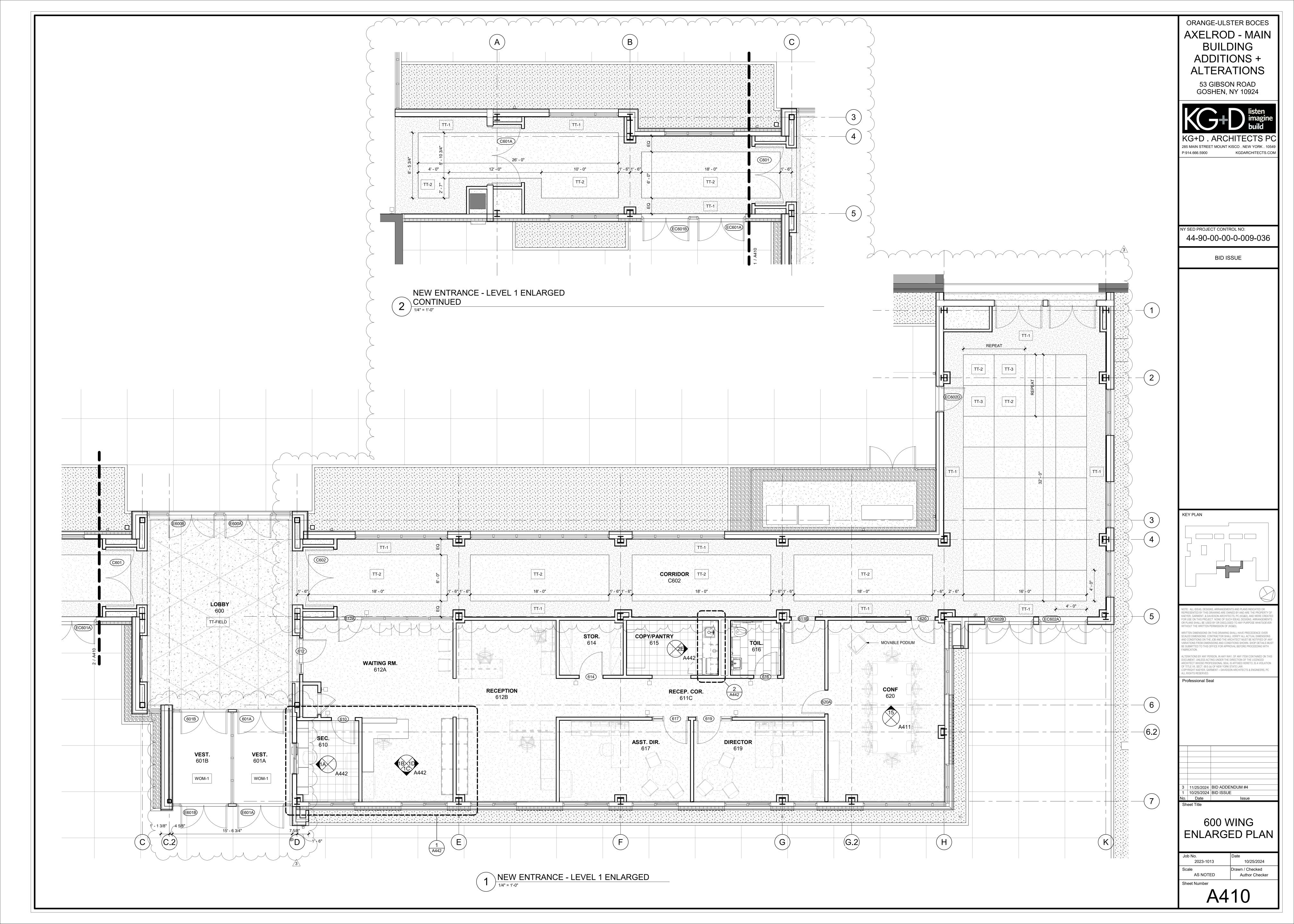
#### ASSOCIATED ASBESTOS REMOVAL LOCATION DRAWINGS

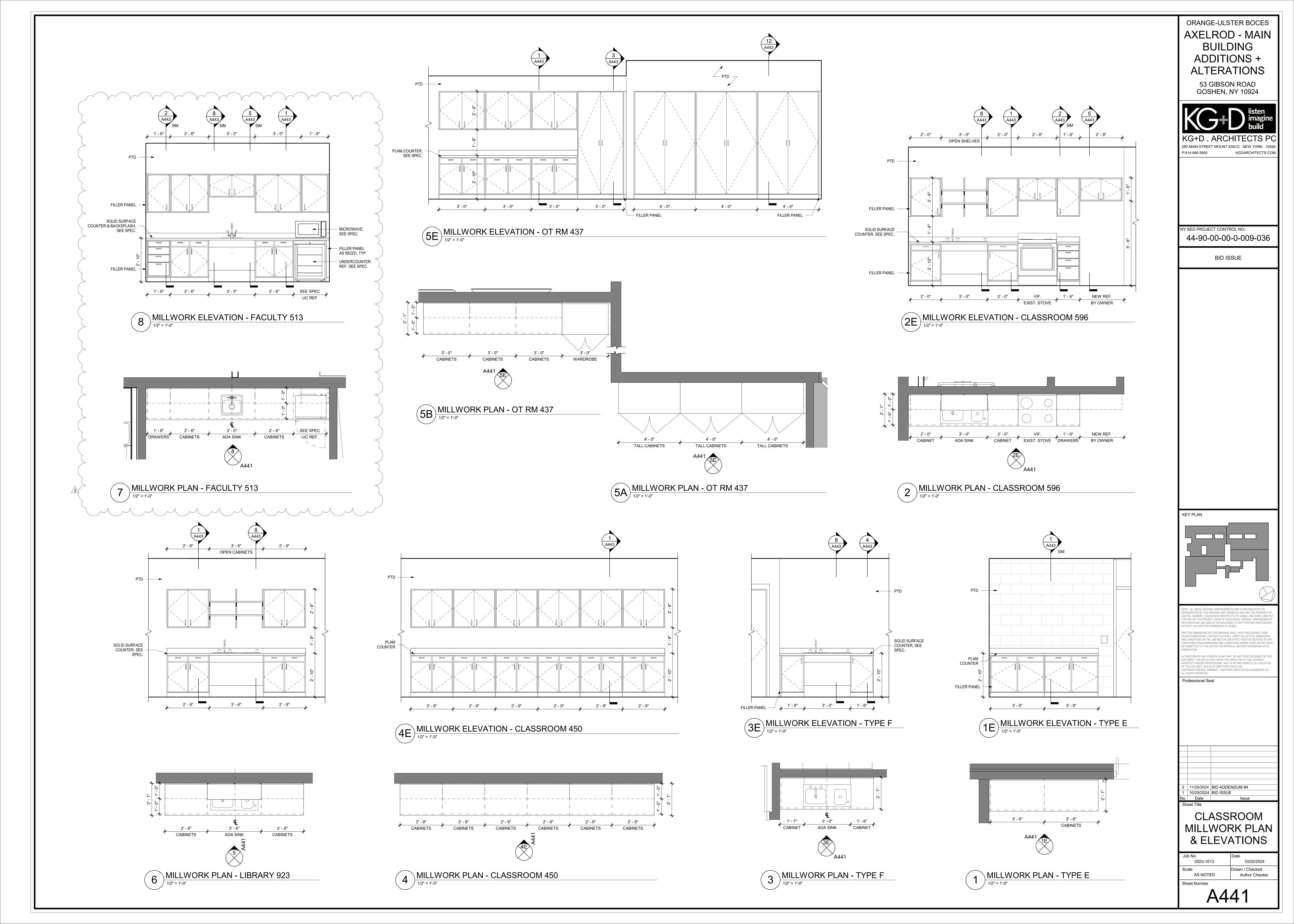
> Orange Ulster BOCES – Axelrod Building – 2023 Capital Improvements

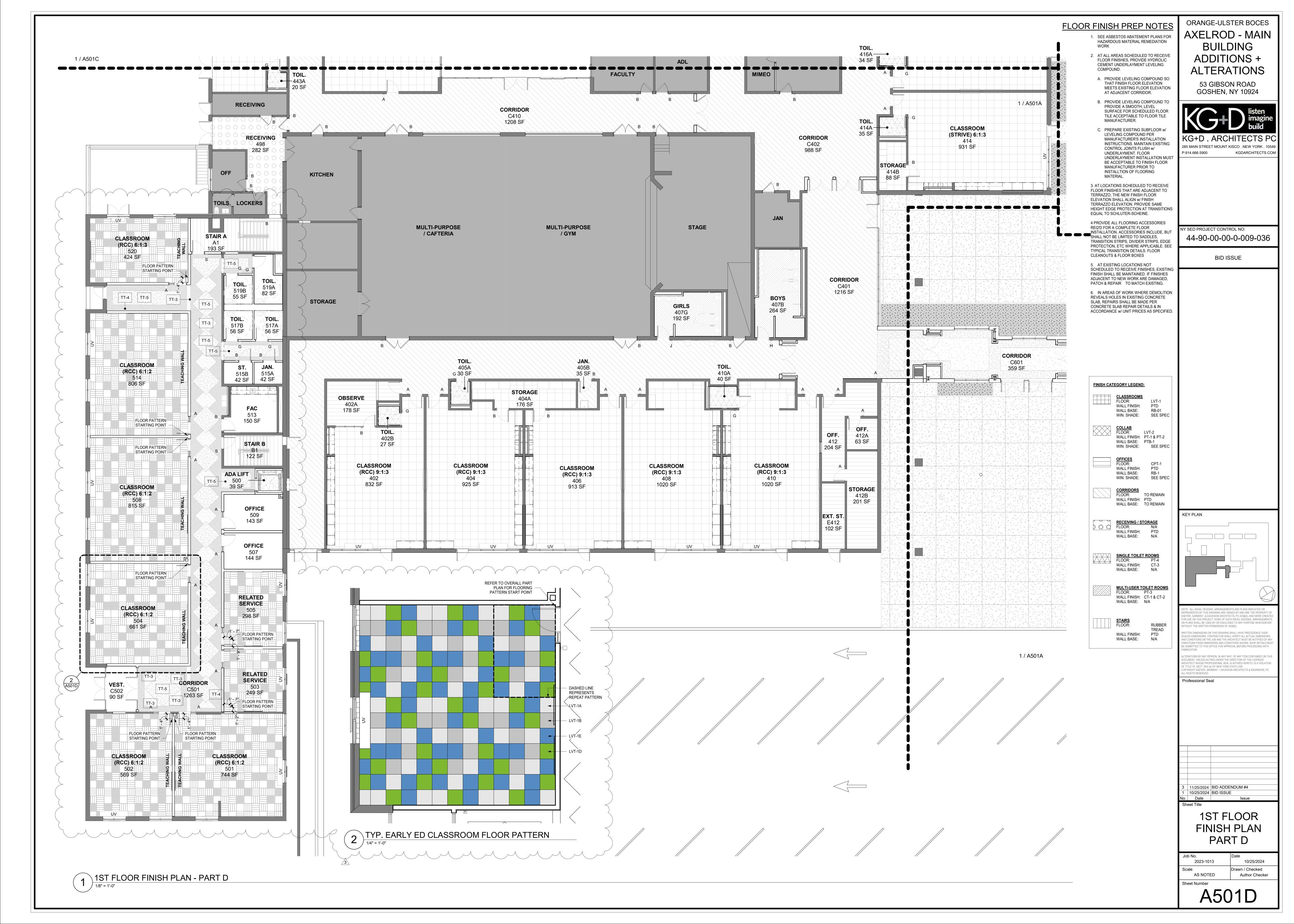
DRAWING #AA 150 – Ground Floor Removals DRAWING #AA 151 – 1<sup>st</sup> Floor Removals DRAWING #AA 152 – 2<sup>nd</sup> Floor Removals DRAWING #AA 153 – Roofing Removals

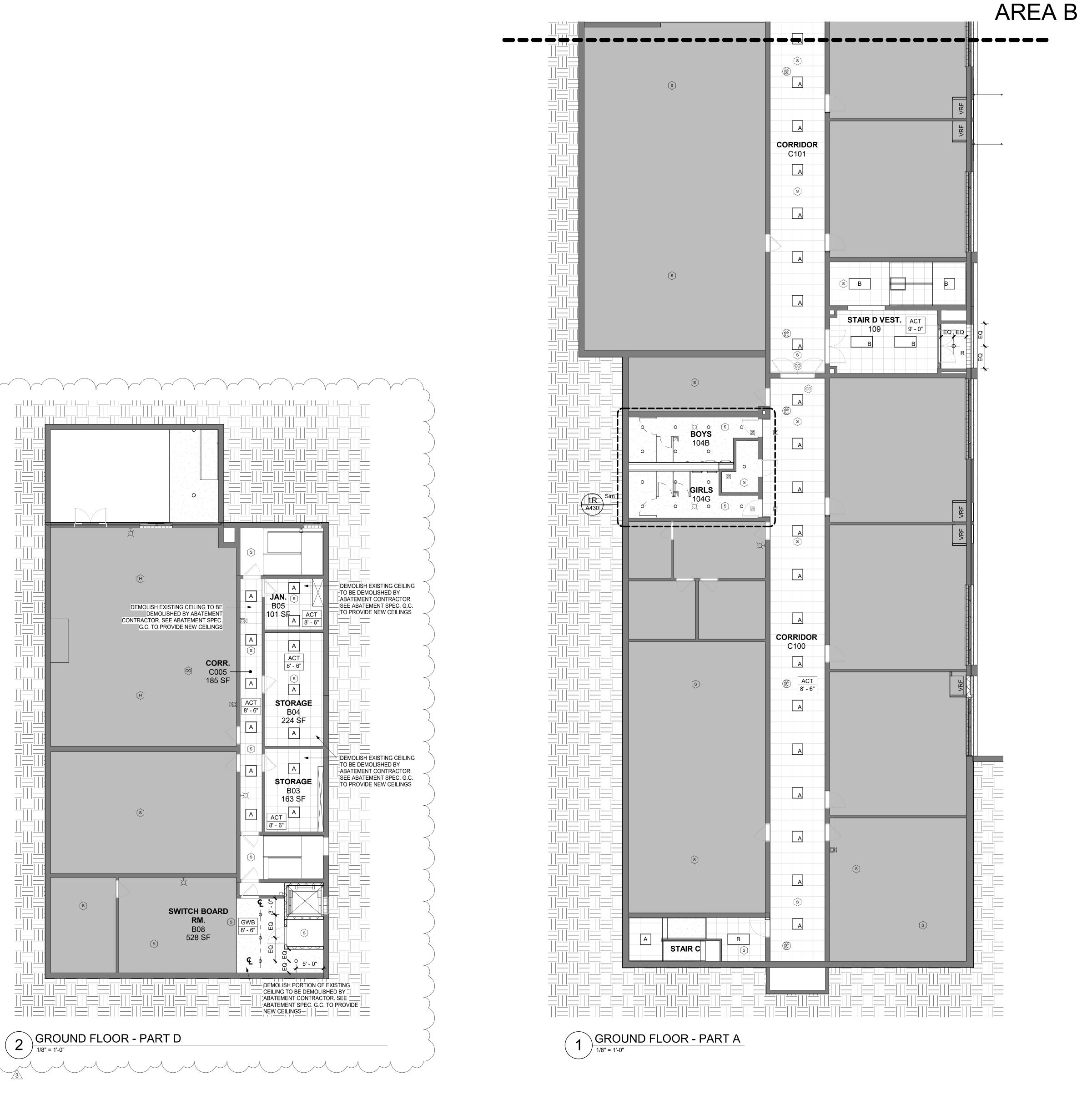
END OF SPECIFICATION SECTION 02080











B05

STORAGE B04 224 SF

STORAGE

163 SF

DEMOLISH PORTION OF EXISTING CEILING TO BE DEMOLISHED BY ABATEMENT CONTRACTOR. SEE  $\_$ -ABATEMENT SPEC. G.C. TO PROVIDE  $\_$ \_\_\_NEW CEILINGS-| | |\_\_\_| | |\_\_\_| | |\_\_

TO BE DEMOLISHED BY

DEMOLISH EXISTING CEILING TO BE

C005 -185 SF

**SWITCH BOARD** 

B08 528 SF

DEMOLISHED BY ABATEMENT CONTRACTOR. SEE ABATEMENT SPEC. G.C. TO PROVIDE NEW CEILINGS

**CEILING NOTES** 

DENOTES AREA OF NO
ARCHITECTURAL WORK, UNLESS
NOTED ELSEWHERE IN THE
DOCUMENTS - SEE M.E.P. DWGS.

2 CEILINGS GRIDS ARE TO BE CENTERED IN ROOM. ALL CEILING FIXTURES, INCLUDING EXIT SIGNS, HVAC REGISTERS, ARE TO BE CENTERED IN

CEILING TILES.

3 REFER TO ELECTRICAL DRAWINGS FOR

LIGHT FIXTURE SCHEDULE

EQUIPMENT SCHEDULES

5 FINISH SCHEDULE - SEE DWG. A50°

6 CEILING HEIGHTS SHOWN IN PLANS, SECTIONS, & DETAILS SHALL TAKE

PRECEDENCE OVER HEIGHTS

INDICATED ON SCHEDULES

4 ALL MECHANICAL & FIRE ALARM DEVICES ARE SHOWN FOR LOCATION PURPOSES. REFER TO FA AND M SERIES DRAWINGS FOR QUANTITIES &

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ORANGE-ULSTER BOCES

**AXELROD - MAIN** 

BUILDING

ADDITIONS +

**ALTERATIONS** 

53 GIBSON ROAD

GOSHEN, NY 10924

KGDARCHITECTS.COM

**CEILING LEGEND** 

<u>LIGHTING</u>

RECESSED SQUARE / RECTANGLE LIGHT IN ACT RECESSED CAN DOWNLIGHTS

RECESSED LINEAR LIGHTS RECESSED TRACK LIGHTS LINEAR PENDANT SURFACE MOUNTED LINEAR

WALL MOUNTED EXTERIOR LIGHT

LIGHTS

<u>MECHANICAL</u>

RECTANGULA REGISTER RECTANGULAR SUPPLY RECTANGULA REGISTER RECTANGULAR EXHAUST

LINEAR SUPPLY REGISTER

FIRE ALARM DEVICES SMOKE DETECTOR

CARBON MONOXIDE DETECTOR **HEAT DETECTOR** 

CEILING MOUNTED STROBE CEILING MOUNTED SPEAKER

**CEILING MOUNTED** STROBE / SPEAKER

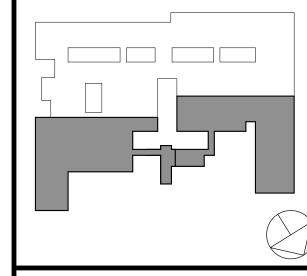
WALL MOUNTED STROBE WALL MOUNTED SPEAKER WALL MOUNTED STROBE / SPEAKER

44-90-00-00-0-009-036

**BID ISSUE** 

NY SED PROJECT CONTROL NO:

**KEY PLAN** 



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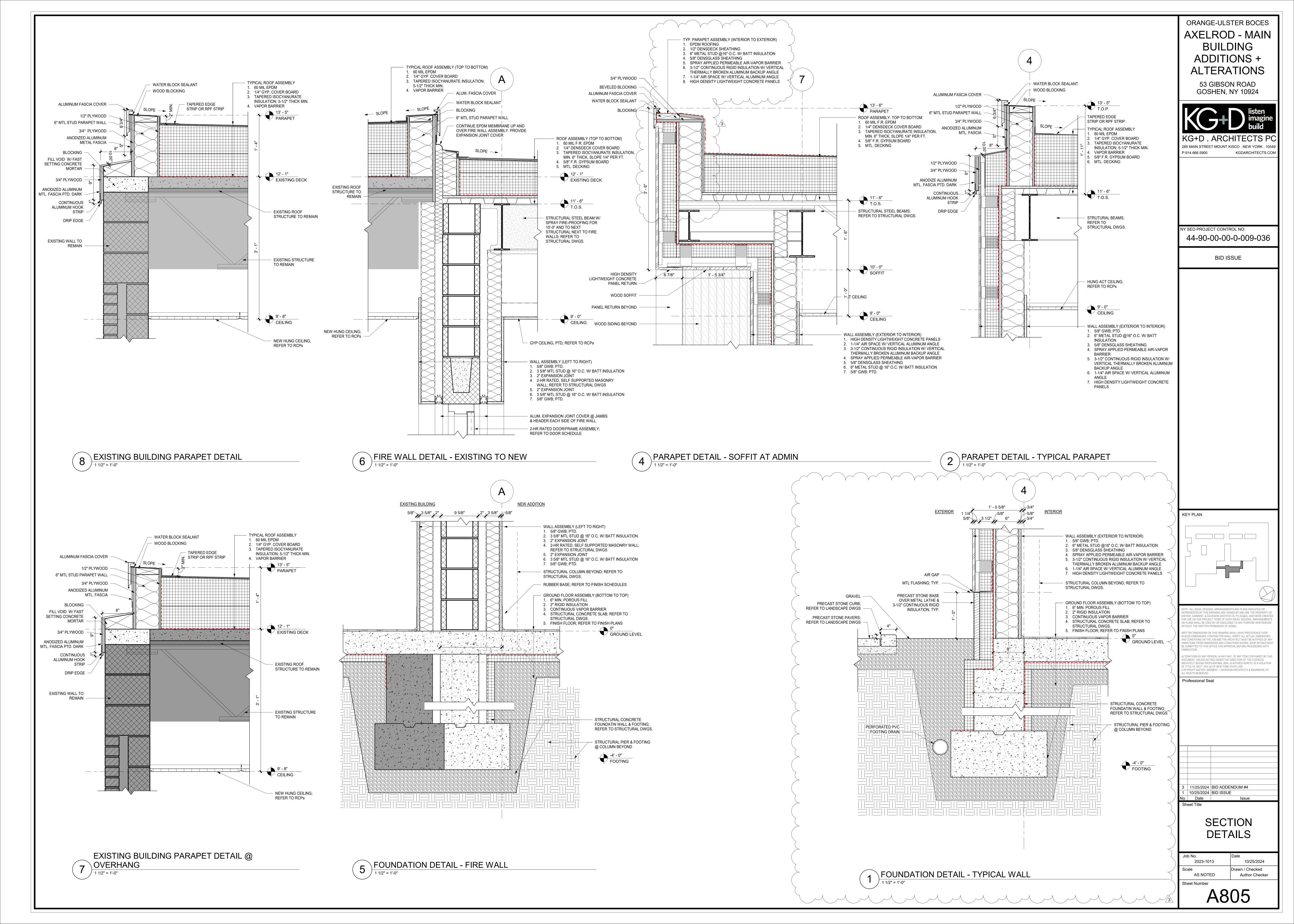
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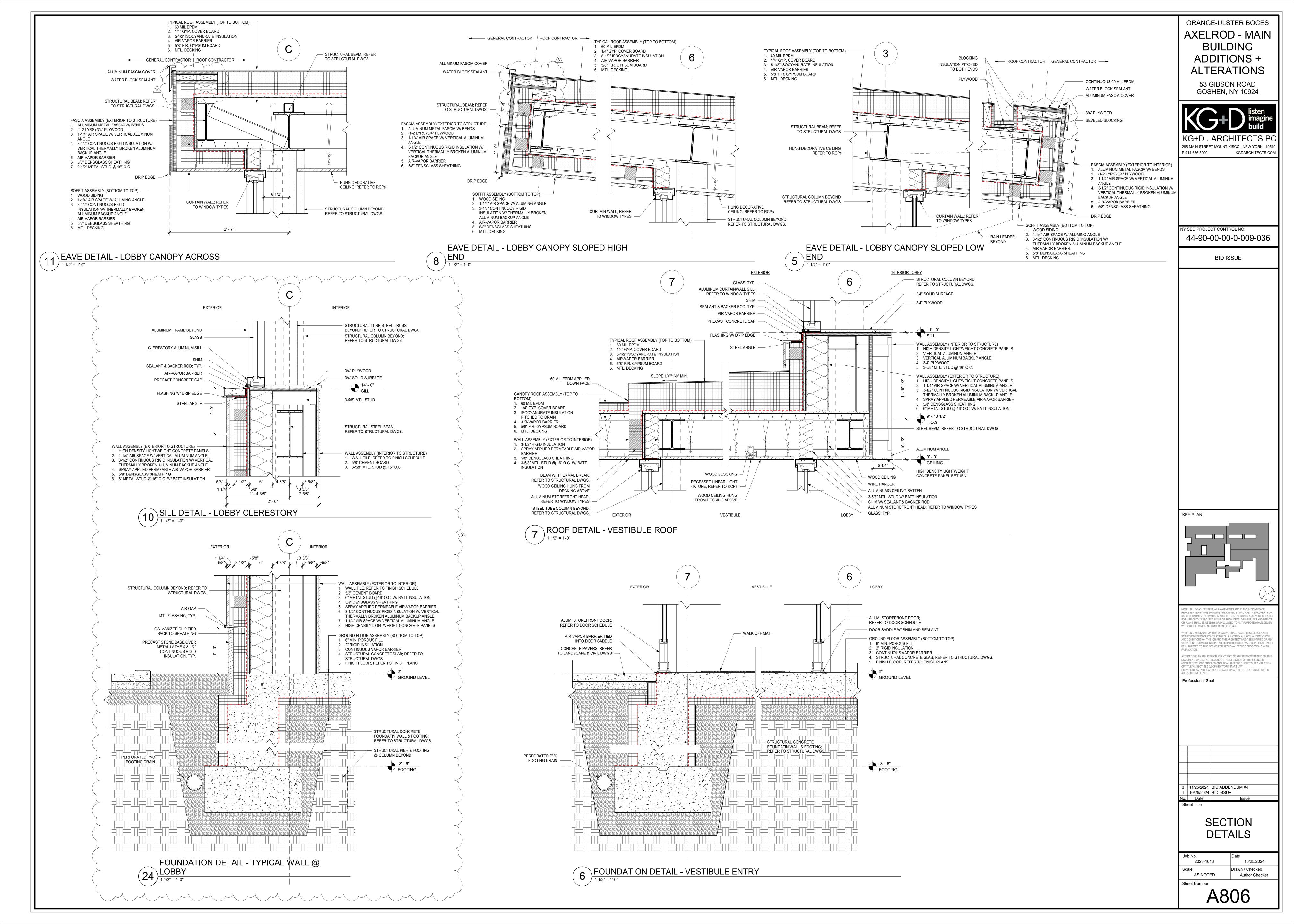
3 11/20/2024 BID ADDENDUM #4 1 10/25/2024 BID ISSUE

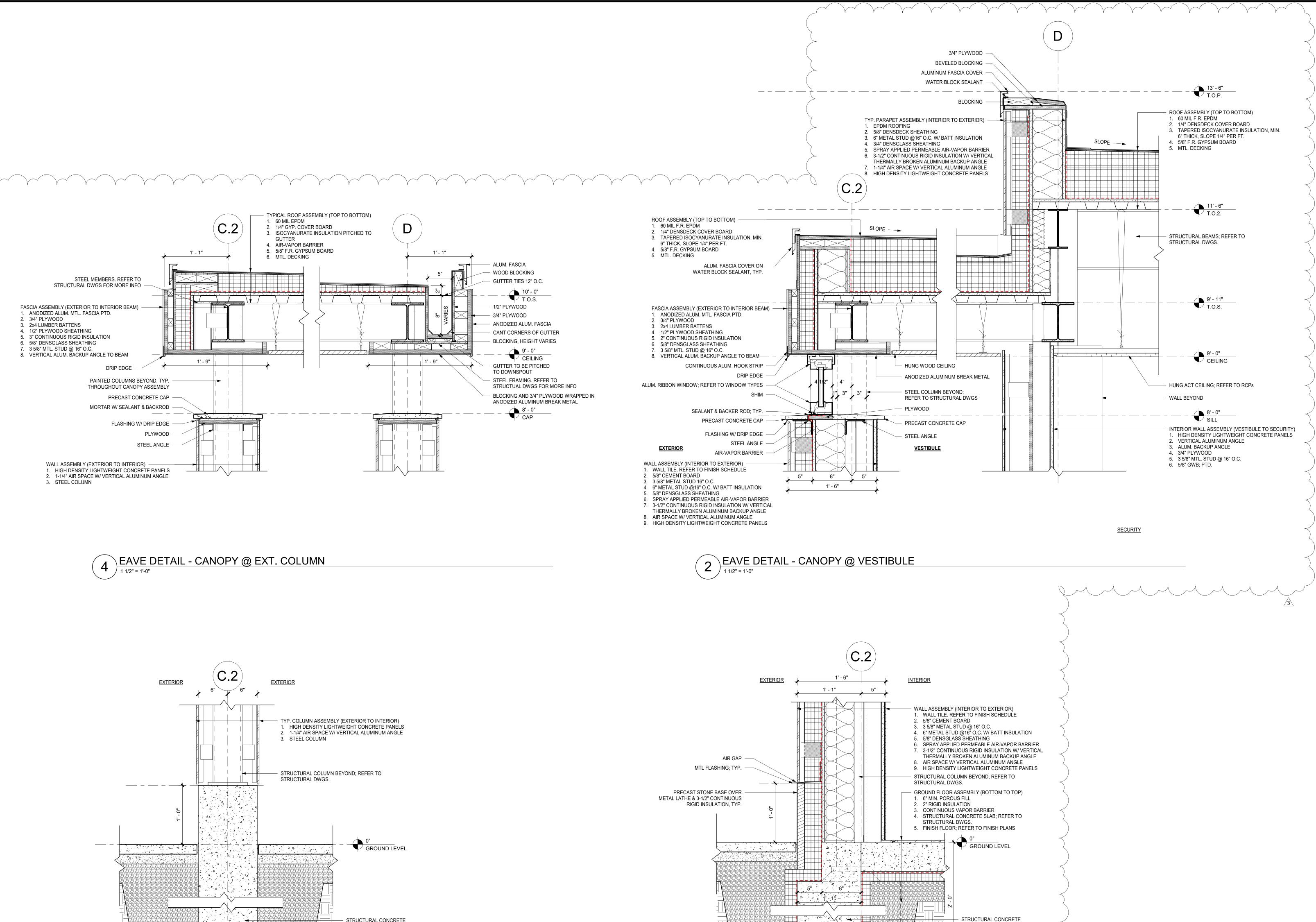
**GROUND FLOOR CEILING PLAN** PART A & D

10/25/2024 2023-1013 Drawn / Checked Scale AS NOTED Author Checker

A600A







PERFORATED PVC FOOTING DRAIN

\FOUNDATION DETAIL - VESTIBULE WING WALL

 STRUCTURAL CONCRETE FOUNDATIN WALL & FOOTING;

PERFORATED PVC\_

\FOUNDATION DETAIL - CANOPY EXT. COLUMN

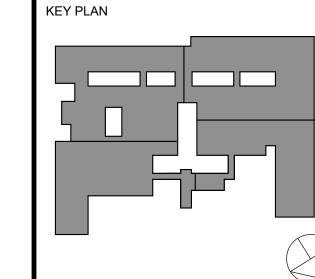
REFER TO STRUCTURAL DWGS.

ORANGE-ULSTER BOCES AXELROD - MAIN BUILDING ADDITIONS + **ALTERATIONS** 53 GIBSON ROAD GOSHEN, NY 10924

285 MAIN STREET MOUNT KISCO . NEW YORK . 10549 KGDARCHITECTS.COM P:914.666.5900

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FOUNDATIN WALL & FOOTING; REFER TO STRUCTURAL DWGS.

- STRUCTURAL PIER & FOOTING

@ COLUMN BEYOND

3 11/25/2024 BID ADDENDUM #4 10/25/2024 BID ISSUE

SECTION

**DETAILS** 10/25/2024 2023-1013

AS NOTED Author Checker

A807

Drawn / Checked

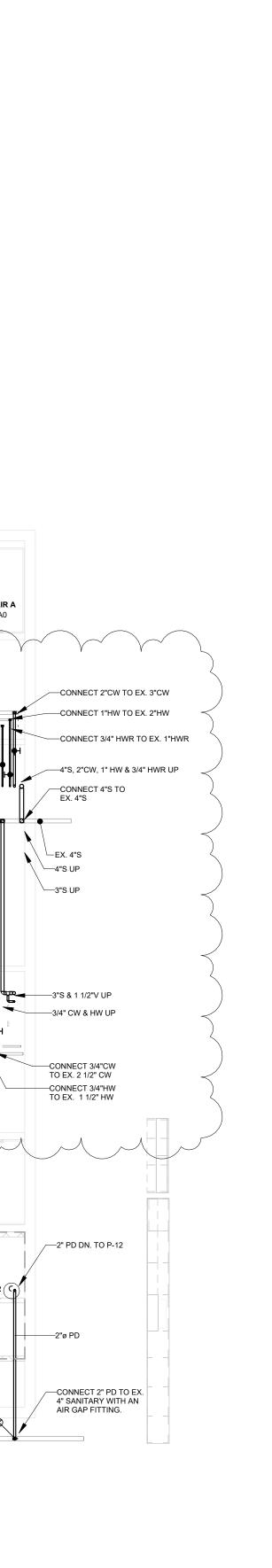
### # PLUMBING PLAN KEYED NOTES

- # DESCRIPTION (NOT ALL TAGS MAY APPEAR ON DRAWING)

  1 CONNECT WATER CLOSET TO EXISTING COLD WATER, SANITARY, AND VENT PIPING. EXTEND/MODIFY EXISTING PIPING AS REQUIRED. COORDINATE ALL WALL AND SLAB CUTTING AND PATCHING AS
- REQUIRED TO PERFORM WORK WITH GENERAL CONTRACTOR.

  CONNECT LAVATORY TO EXISTING COLD AND HOT WATER, SANITARY, AND VENT PIPING. EXTEND/MODIFY EXISTING PIPING AS REQUIRED. COORDINATE ALL WALL CUTTING AND PATCHING AS REQUIRED TO
- PERFORM WORK WITH GENERAL CONTRACTOR.

  3 CONNECT URINAL TO EXISTING COLD WATER, SANITARY, AND VENT PIPING. EXTEND/MODIFY EXISTING PIPING AS REQUIRED. COORDINATE ALL WALL AND SLAB CUTTING AND PATCHING AS REQUIRED TO PERFORM WORK WITH GENERAL CONTRACTOR.
- 4 CONNECT SINK TO EXISTING COLD AND HOT WATER, SANITARY, AND VENT PIPING. EXTEND/MODIFY EXISTING PIPING AS REQUIRED. COORDINATE ALL WALL CUTTING AND PATCHING AS REQUIRED TO PERFORM WORK WITH GENERAL CONTRACTOR.
- 5 CONNECT HOT WATER HEATER TO EXISTING COLD, HOT WATER, GAS AND FLUE PIPING. EXTEND/MODIFY PIPING AS REQUIRED FOR CONNECTION.
- 6 CONNECT WATER FOUNTAIN TO EXISTING COLD WATER, SANITARY, AND VENT PIPING. EXTEND/MODIFY EXISTING PIPING AS REQUIRED. COORDINATE ALL WALL CUTTING AND PATCHING AS REQUIRED TO PERFORM WORK WITH GENERAL CONTRACTOR.



EX. 2" HW —

STORAGE

CONNECT 3"S TO— EX. 4"S

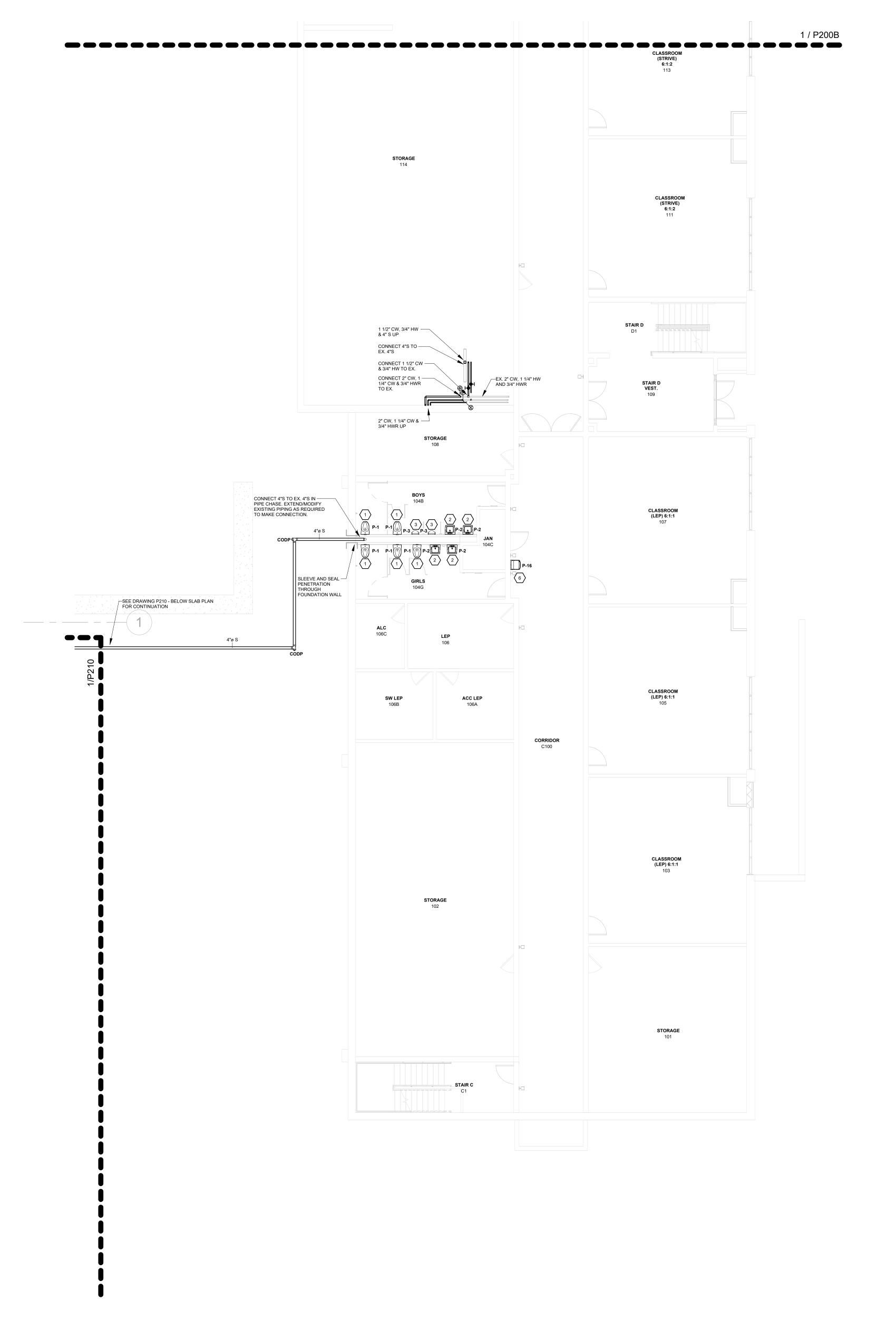
1/2" CW &1 1/2"S UP

RELOCATE EXISTING COLD, HOT WATER &
HOT WATER RECIRD PIPING IN THIS AREA
AS REQUIRED FOR INSTALLATION OF LIFT.

PLUMBING - GROUND FLOOR PLAN - PART D

1/8" = 1'-0"

EX. 1 1/2" HW



1 PLUMBING - GROUND FLOOR PLAN - PART A

ORANGE-ULSTER BOCES

AXELROD - MAIN

BUILDING

ADDITIONS +

ALTERATIONS

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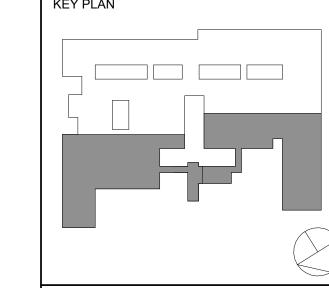


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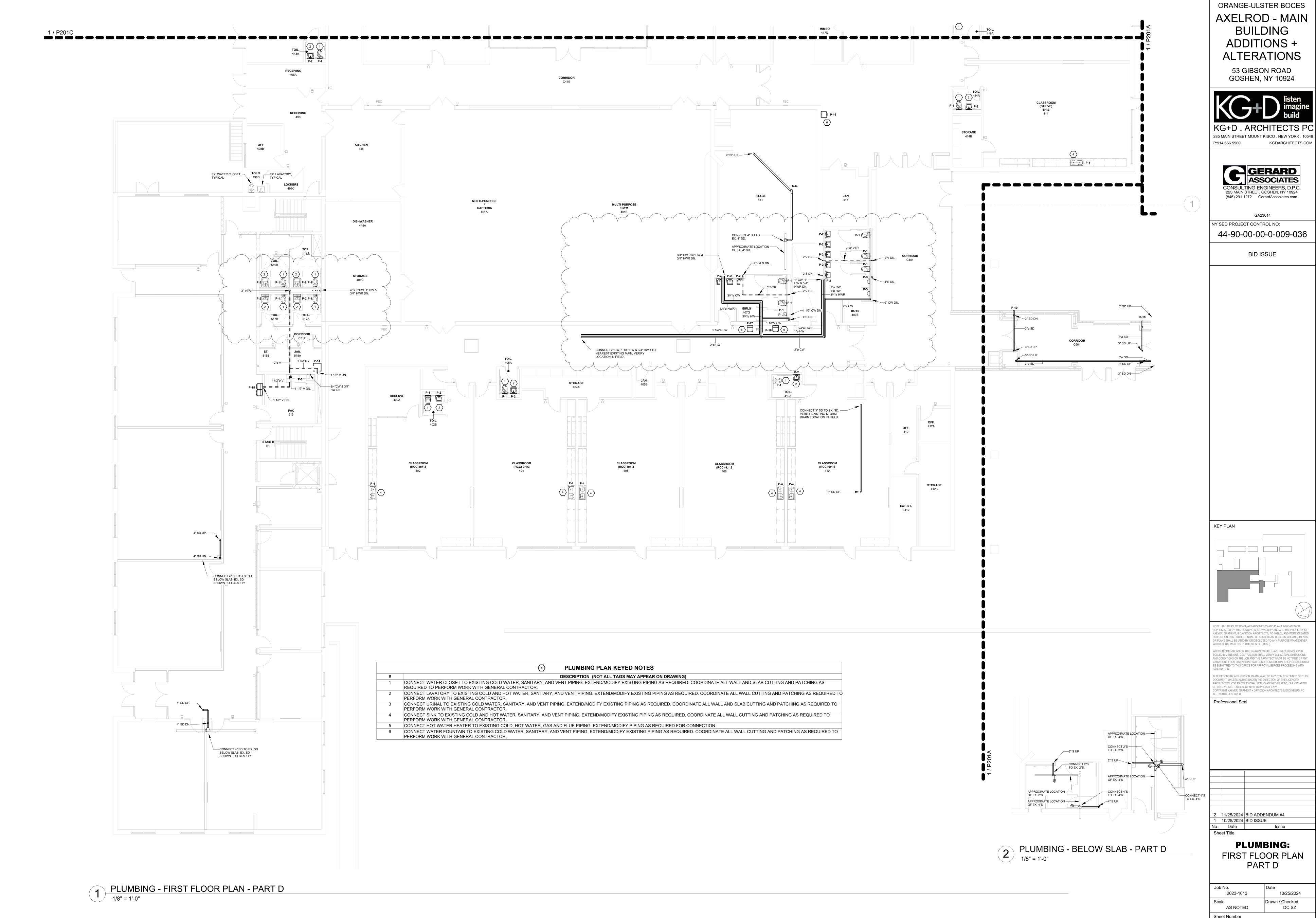
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2 11/25/2024 BID ADDENDUM #4
1 10/25/2024 BID ISSUE
No. Date Issue
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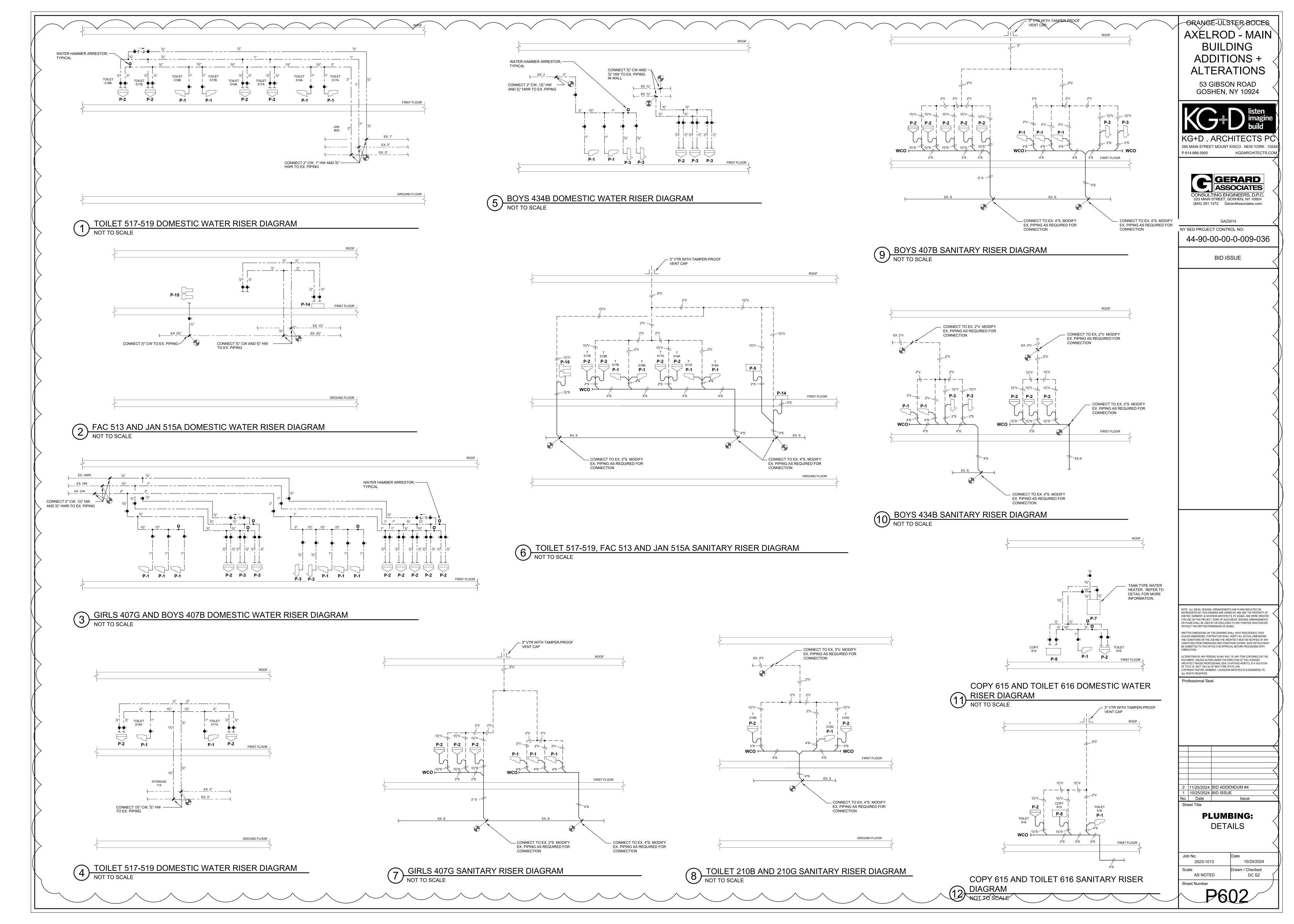
**PLUMBING:**GROUND FLOOR PLAN
PART A & D

| Job No. | Date | 10/25/2024 |
| Scale | Drawn / Checked | DC SZ |

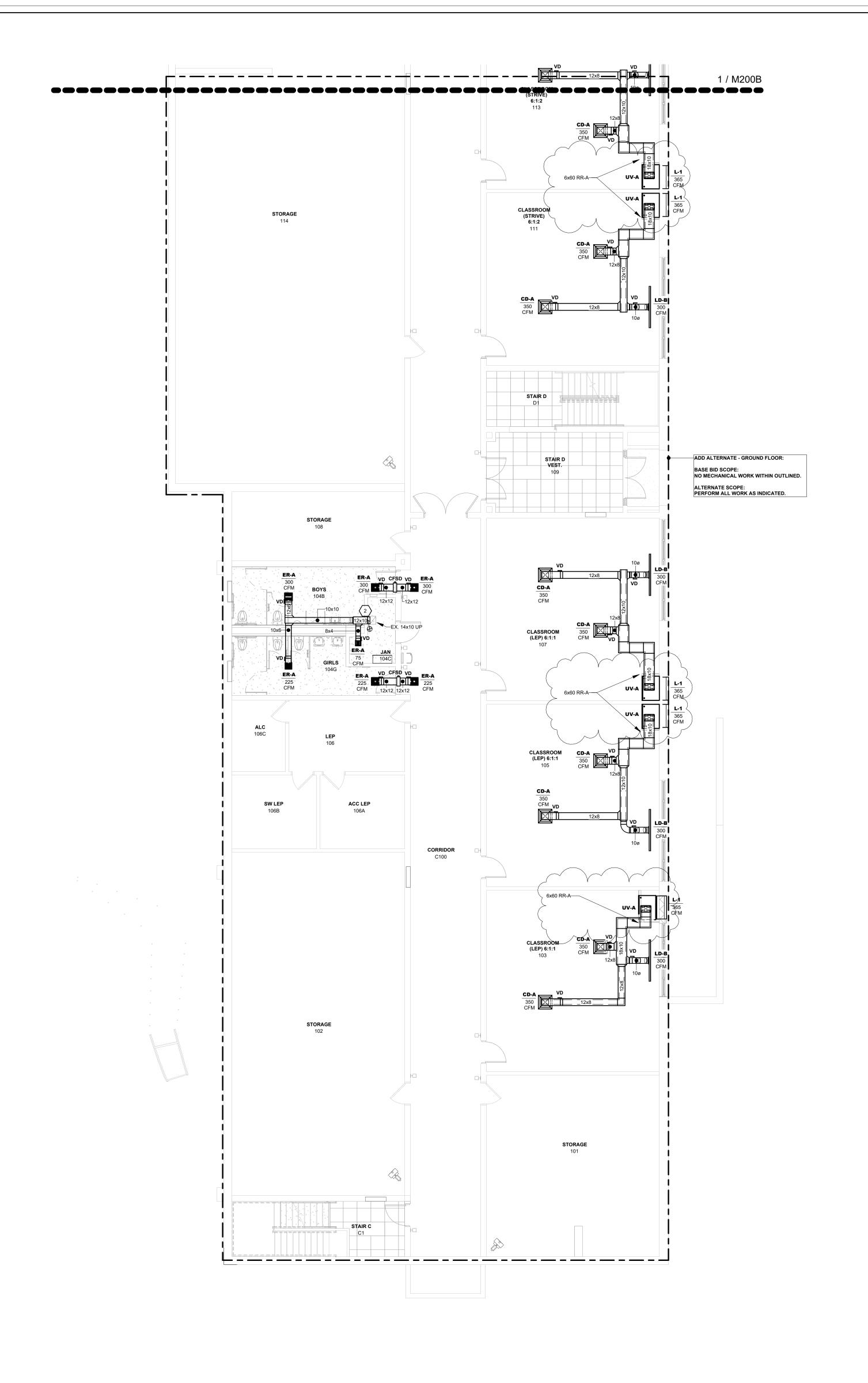
P200A



P201D



	⟨#⟩ MECHANICAL PLAN KEYED NOTES
#	DESCRIPTION (NOT ALL TAGS MAY APPEAR ON DRAWING)
1	CONNECT UNIT VENTILATOR TO EXISTING OUTSIDE AIR INTAKE LOUVER. PROVIDE WEATHER-TIGHT SEAL BETWEEN UNIT VENTILATOR AND EXTERIOR WALL
2	CONNECT EXHAUST DUCT TO EXISTING EXHAUST DUCT. EXTEND/MODIFY EXISTING DUCTWORK AS REQUIRED FOR CONNECTION.
3	CONNECT FAN COIL UNIT TO EXISTING CONDENSATE AND DUAL TEMPERATURE WATER SUPPLY AND RETURN PIPING. EXTEND/MODIFY EXISTING CONDENSATI AND DUAL TEMPERATURE WATER SUPPLY AND RETURN PIPING AS REQUIRED FOR INSTALLATION. CONNECT FAN COIL UNIT TO EXISTING OUTSIDE AIR INTAKE LOUVER. PROVIDE WEATHER-TIGHT SEAL BETWEEN FAN COIL UNIT AND EXTERIOR WALL.
4	EXISTING LOUVER. BALANCE TO 350 CFM
5	EXISTING LOUVER. BALANCE TO 460 CFM
7	EXISTING LOUVER - 20 CFM
8	CONNECT SUPPLY DUCT TO EXISTING SUPPLY DUCT. EXTEND/MODIFY EXISTING DUCTWORK AS REQUIRED FOR CONNECTION.



MECHANICAL - GROUND FLOOR PLAN - PART A

1/8" = 1'-0"

ORANGE-ULSTER BOCES

AXELROD - MAIN

BUILDING

ADDITIONS +

ALTERATIONS

53 GIBSON ROAD



GOSHEN, NY 10924



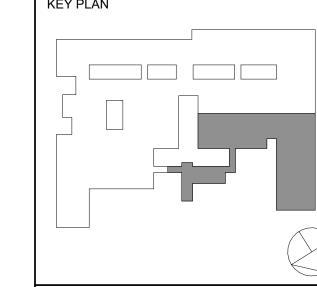
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MECHANICAL: GROUND FLOOR PLAN PART A & D

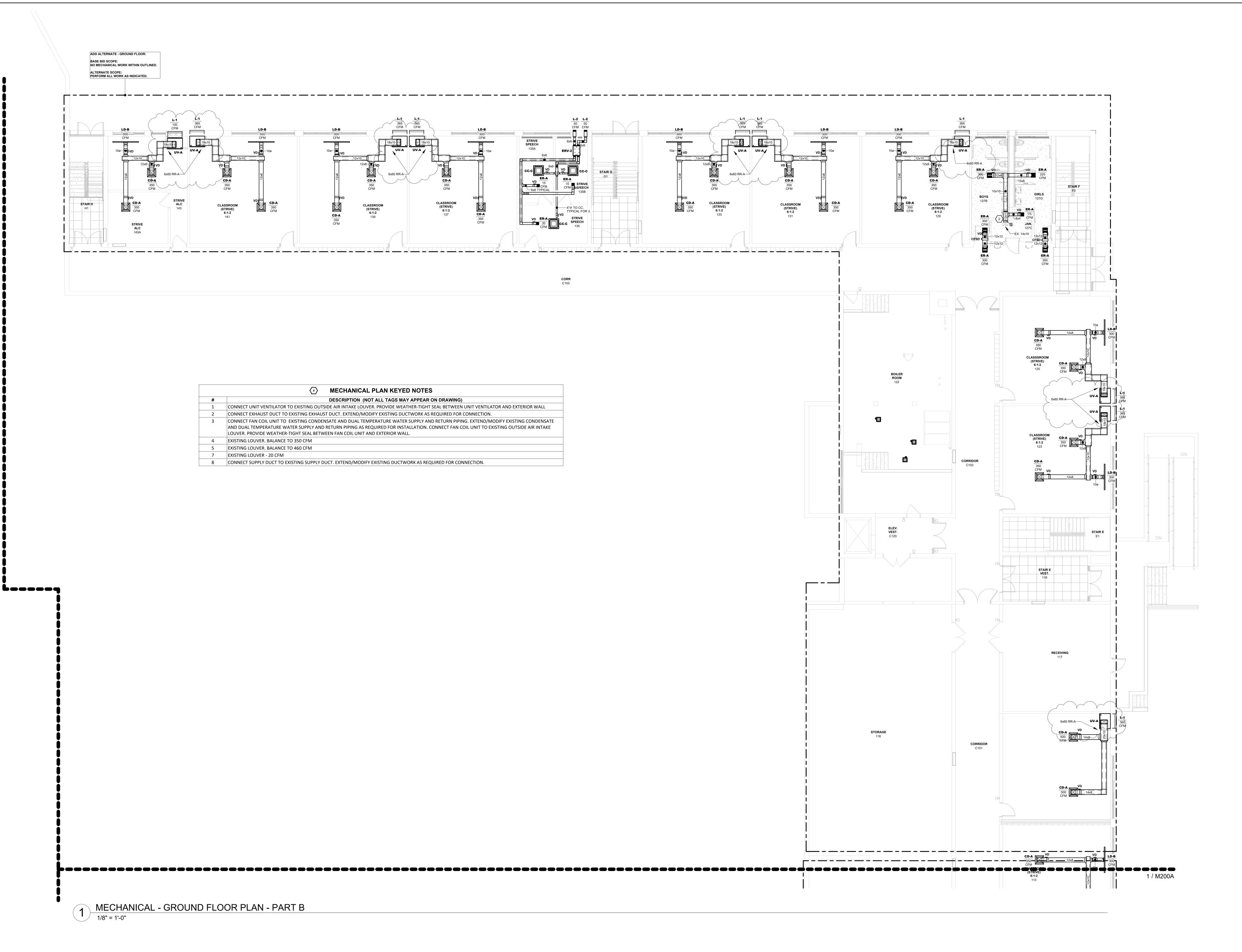
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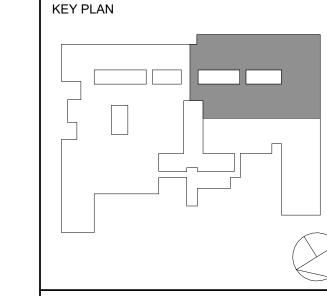
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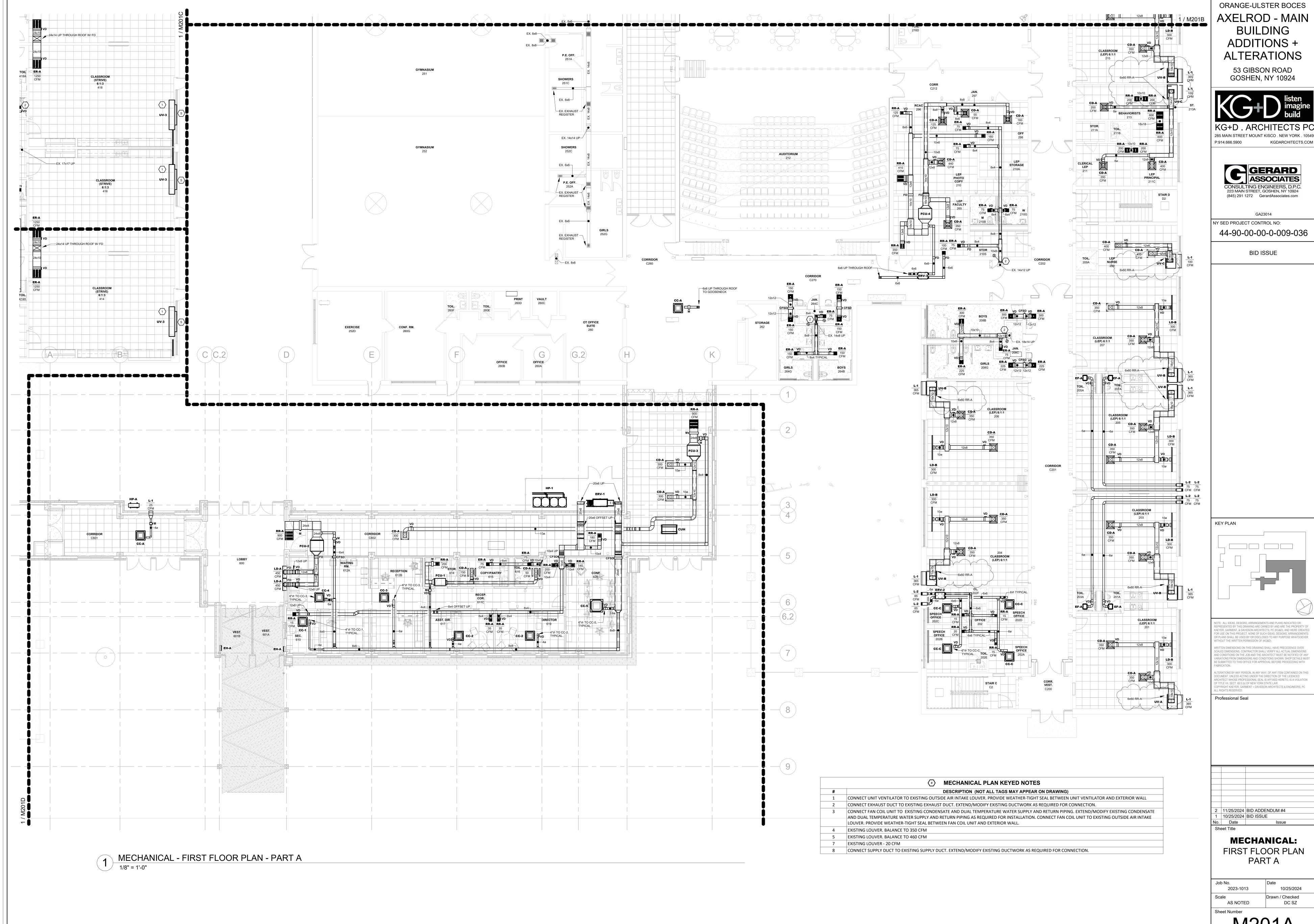
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No. Date Issue
Sheet Title

**MECHANICAL:**GROUND FLOOR PLAN
PART B

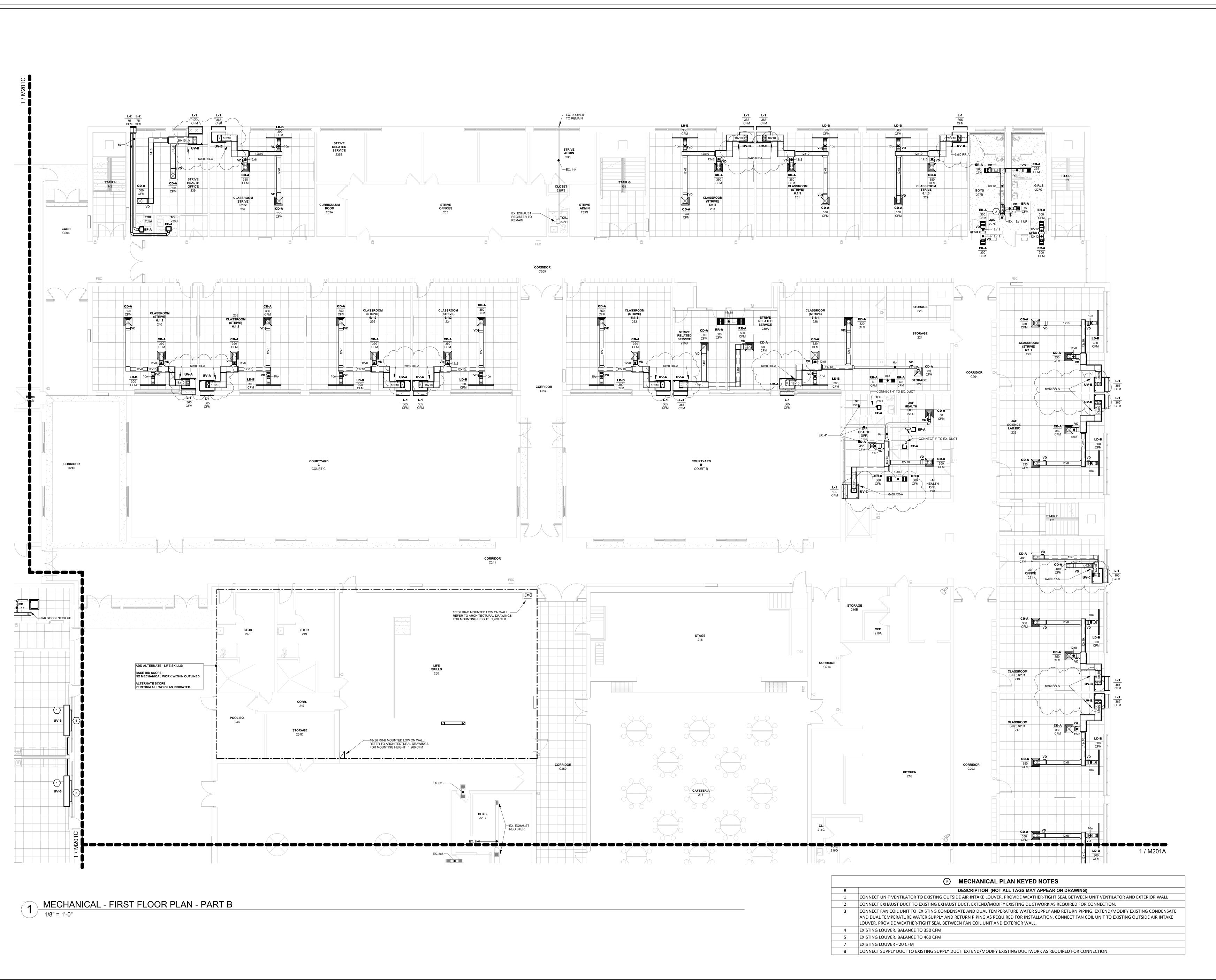
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Scale Drawn / Checked DC SZ

M200B



M201A







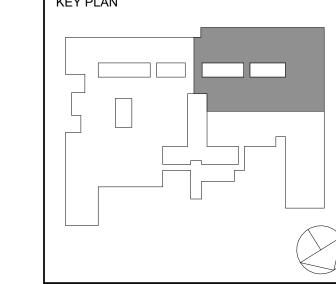
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**MECHANICAL:**FIRST FLOOR PLAN
PART B

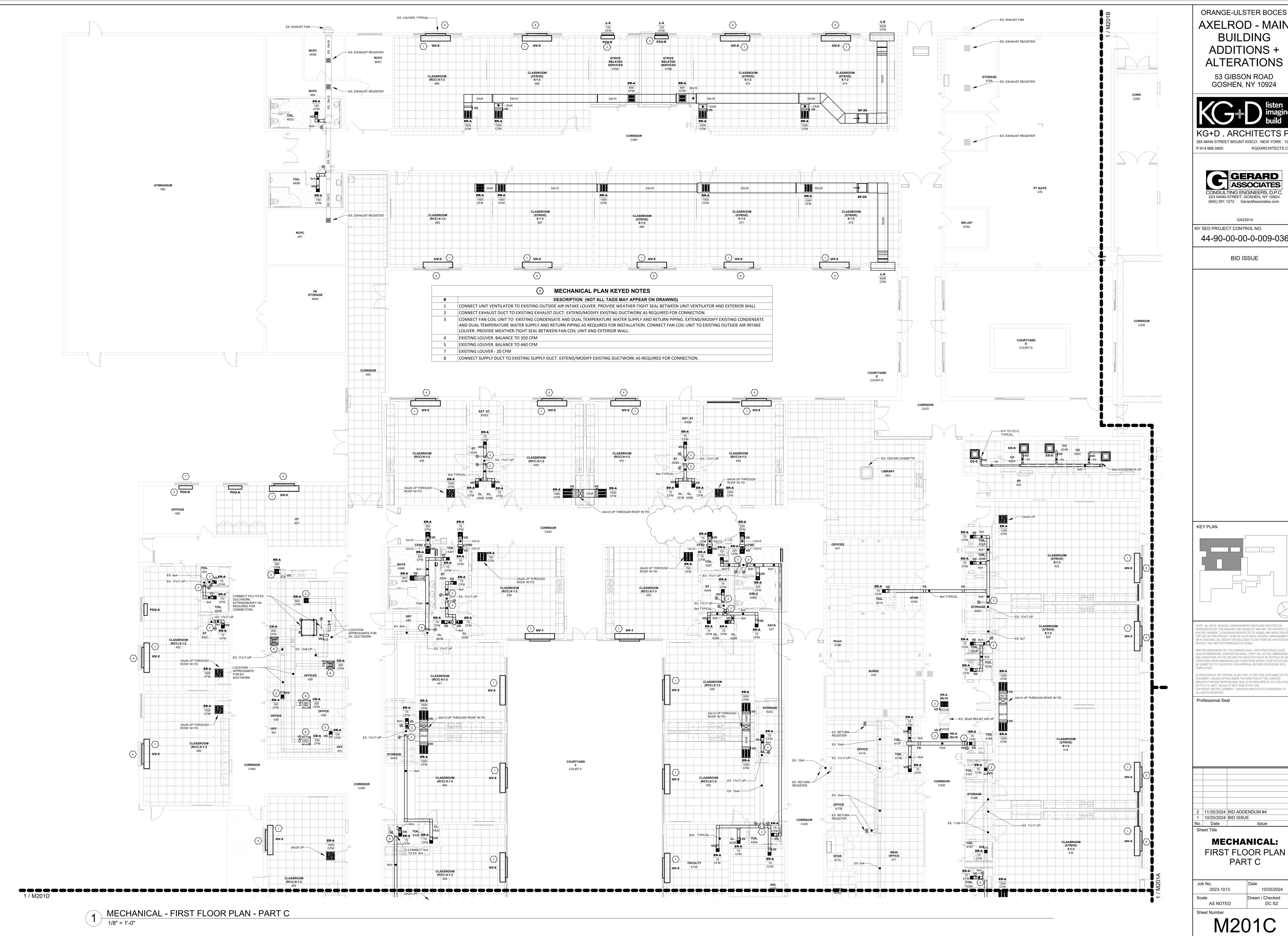
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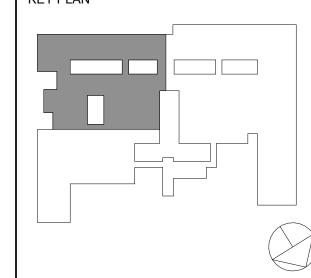


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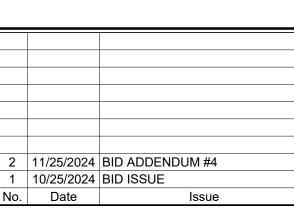


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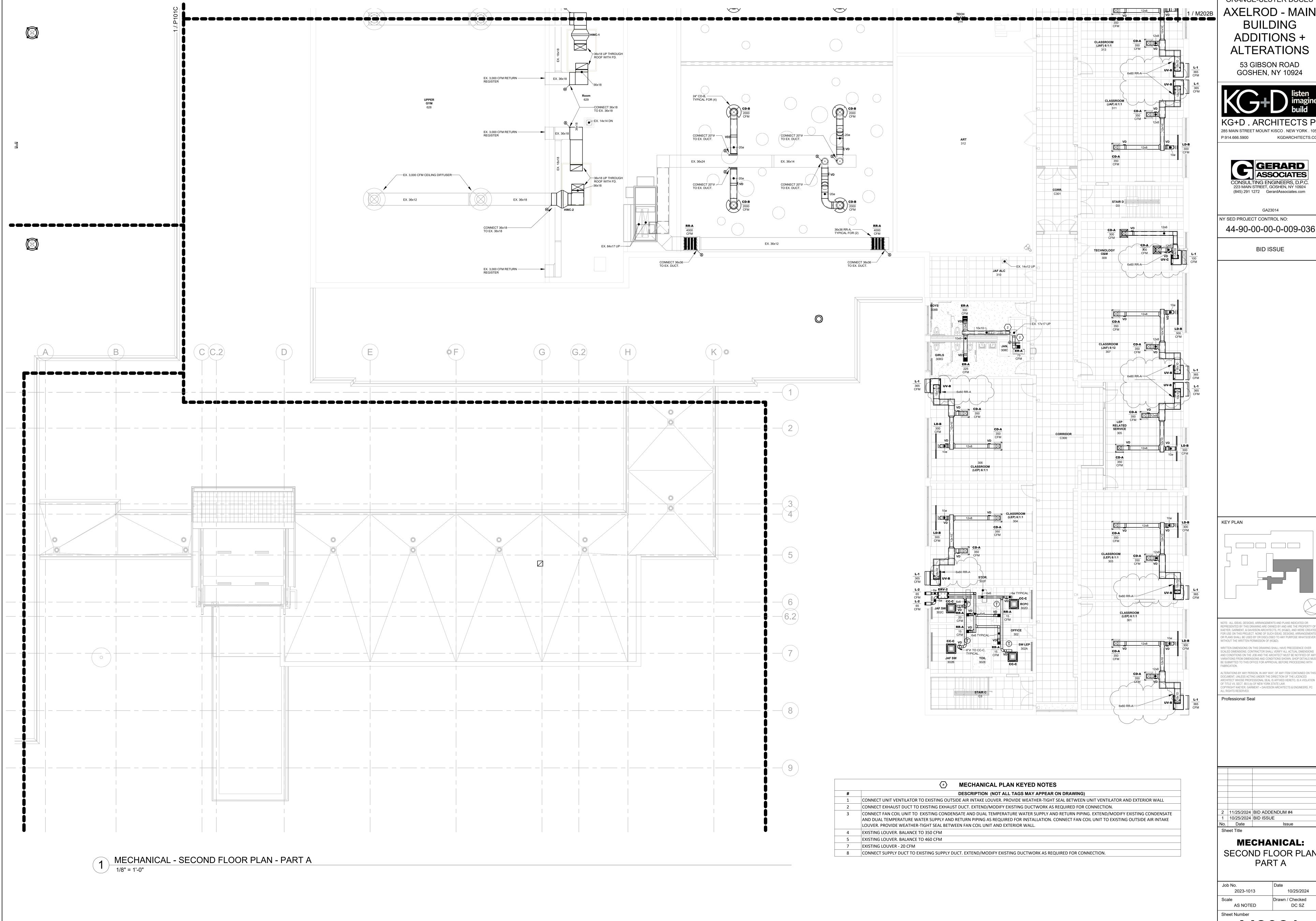


**MECHANICAL:** FIRST FLOOR PLAN

PART C

10/25/2024 Drawn / Checked AS NOTED DC SZ

M201C

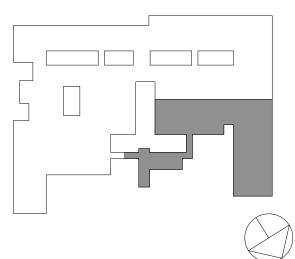


ORANGE-ULSTER BOCES **AXELROD - MAIN** ADDITIONS + **ALTERATIONS** 

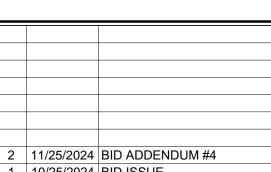




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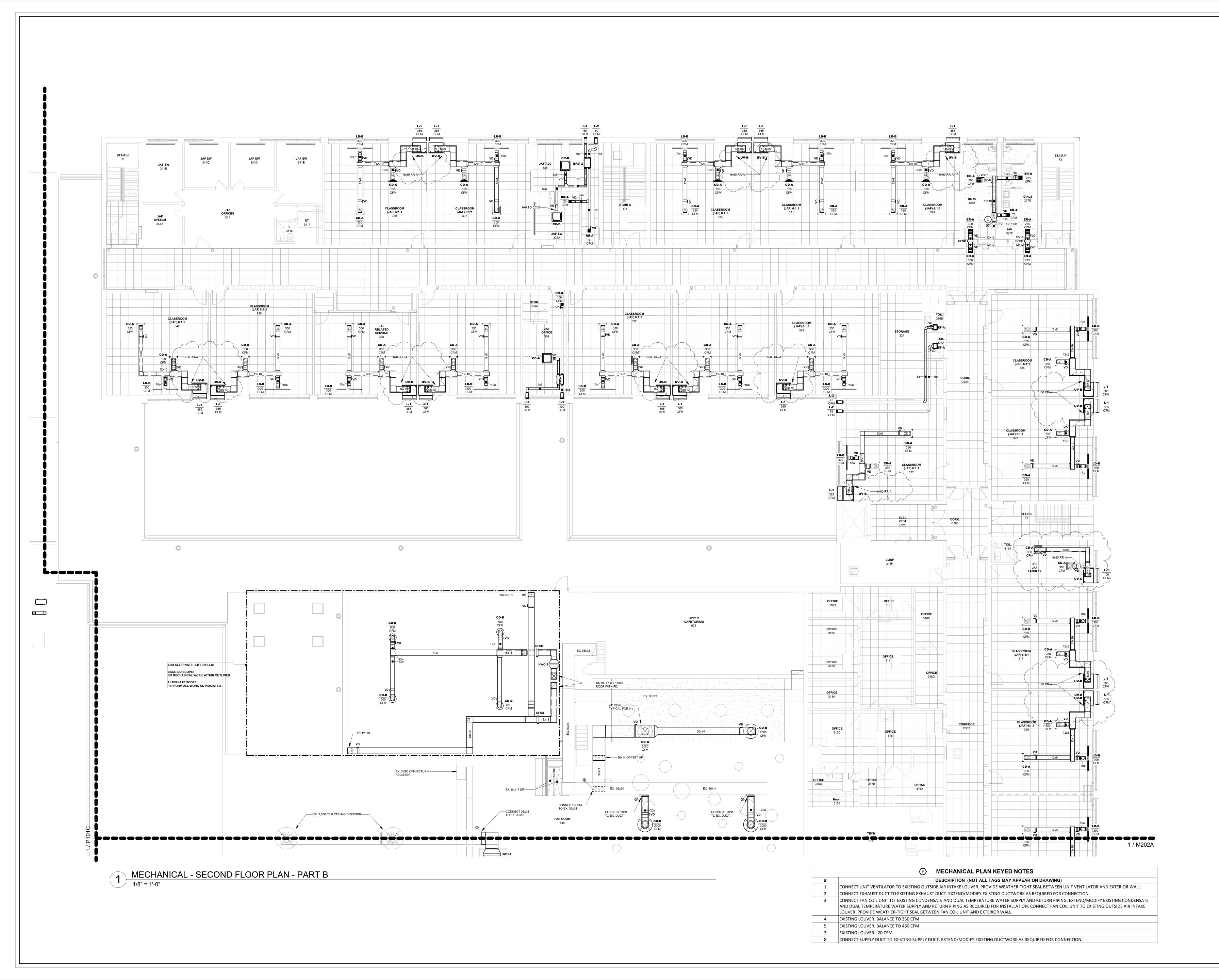


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**MECHANICAL:** SECOND FLOOR PLAN

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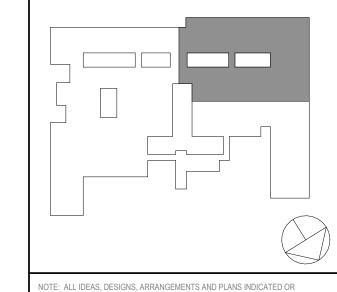
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KEY PLAN

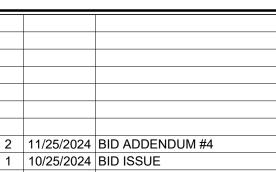


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1 10/25/2024 BID ISSUE

No. Date Issue

Sheet Title

MECHANICAL: SECOND FLOOR PLAN PART B

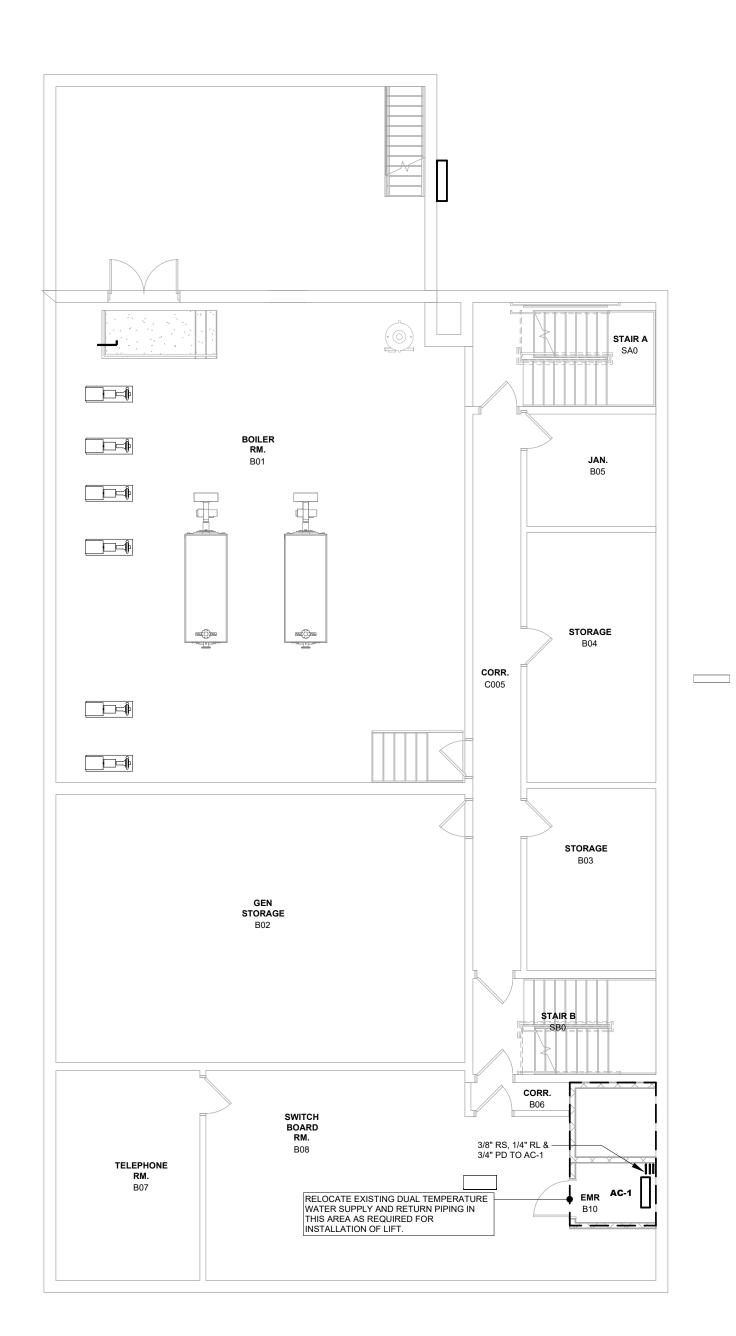
2023-1013 10/25/2024

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Sheet Number

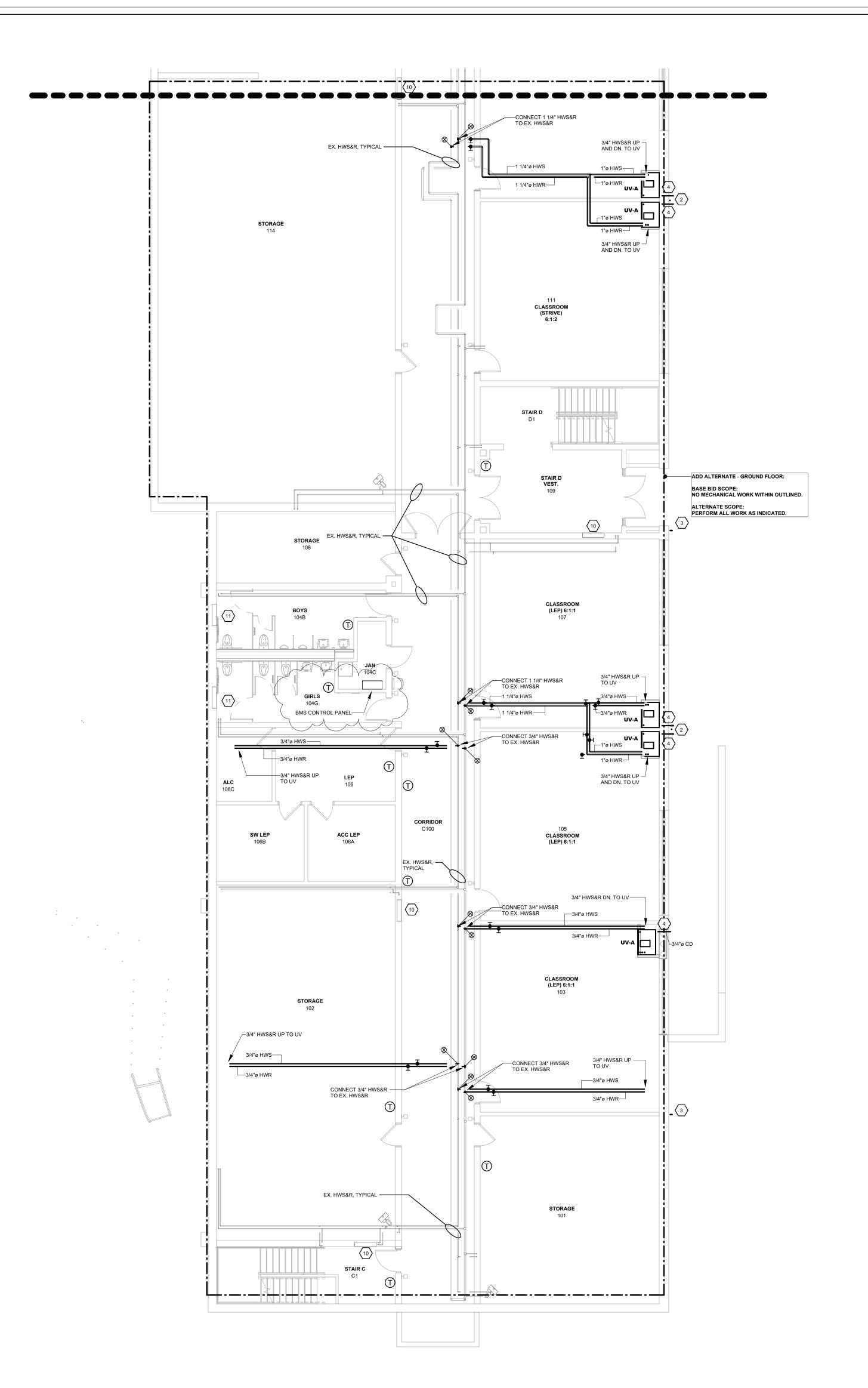
M202B

	MECHANICAL PIPING PLAN KEYED NOTES					
#	NOTE TEXT					
1	3/4" CD FROM UV THROUGH WALL. CORE DRILL HOLE AND SEAL PENETRATION WEATHER-TIGHT					
2	1 1/4" CD TERMINATE 2'-0" ABOVE GRADE WITH A 90° AND 45° ELBOW					
3	1" CD TERMINATE 2'-0" ABOVE GRADE WITH A 90° AND 45° ELBOW					
4	3/4" CD FROM UV THROUGH WALL. CORE DRILL HOLE AND SEAL PENETRATION WEATHER-TIGHT. TERMINATE 2" ABOVE GRADE					
5	CONNECT UNIT VENTILATOR TO EXISTING CONDENSATE AND DUAL TEMPERATURE WATER SUPPLY AND RETURN PIPING. EXTEND/MODIFY EXISTING CONDENSATE AND DUAL TEMPERATURE WATER SUPPLY AND RETURN PIPING AS REQUIRED FOR INSTALLATION.					
6	CONNECT FAN COIL UNIT TO EXISTING CONDENSATE AND DUAL TEMPERATURE WATER SUPPLY AND RETURN PIPING. EXTEND/MODIFY EXISTING CONDENSATE AND DUAL TEMPERATURE WATER SUPPLY AND RETURN PIPING AS REQUIRED FOR INSTALLATION.					
7	CUSTOM PIPE ENCLOUSRE. PIPE ENCLOSURE SHALL BE CONTINOUS FROM WALL TO UNIT EXTEND/MODIFY DUAL TEMPERATURE SUPPLY AND RETURN PIPING FROM PIPE CHAISE TO UV THROUGH PIPE ENCLOSURE.					
8	CUSTOM PIPE ENCLOSURE. PIPE ENCLOSURE SHALL BE CONTINOUS FROM WALL TO UNIT. EXTEND/MODIFY DUAL TEMPERATURE SUPPLY AND RETURN PIPING AS REQUIRED TO INSTALL PIPE ENCLOSURE.					
9	CONNECT UNIT VENTILATOR TO EXISTING CONDENSATE AND DUAL TEMPERATURE WATER SUPPLY AND RETURN PIPING. EXTEND/MODIFY EXISTING CONDENSATE AND DUAL TEMPERATURE WATER SUPPLY AND RETURN PIPING AS REQUIRED FOR INSTALLATION. COORDINATE SLAB CUTTING AND PATCHING REQUIRED FOR CONNECTION TO CONDENSATE PIPING.					
10	CONVECTOR HEATER 2-WAY CONTROL VALVE. EXTEND/MODIFY EXISTING HOT WATER PIPING AS REQUIRED TO INSTALL VALVE. REMOVE/REINSTALL ENCLOSURE AS REQUIRED. TIE INTO REPLACEMENT BUILDING MANAGEMENT SYSTEM. VERIFY CONTROL VALVE SIZE IN FIELD.					
11	FINNED TUBE RADIATION 2-WAY CONTROL VALVE. EXTEND/MODIFY EXISTING HOT WATER PIPING AS REQUIRED TO INSTALL VALVE. REMOVE/REINSTALL ENCLOSURE AS REQUIRED. TIE INTO REPLACEMENT BUILDING					



MANAGEMENT SYSTEM. VERIFY CONTROL VALVE SIZE IN FIELD.





MECHANICAL - GROUND FLOOR PIPING PLAN - PART A

1/8" = 1'-0"

AXELROD - MAIN
BUILDING
ADDITIONS +
ALTERATIONS
53 GIBSON ROAD

ORANGE-ULSTER BOCES

GOSHEN, NY 10924



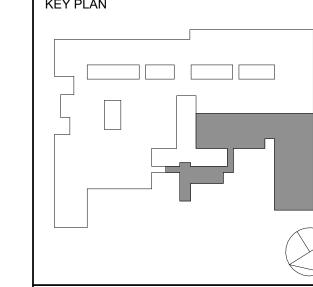


GA23014

NY SED PROJECT CONTROL NO:

44-90-00-00-0-009-036

BID ISSUE



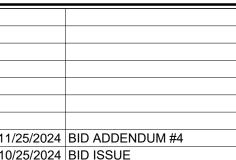
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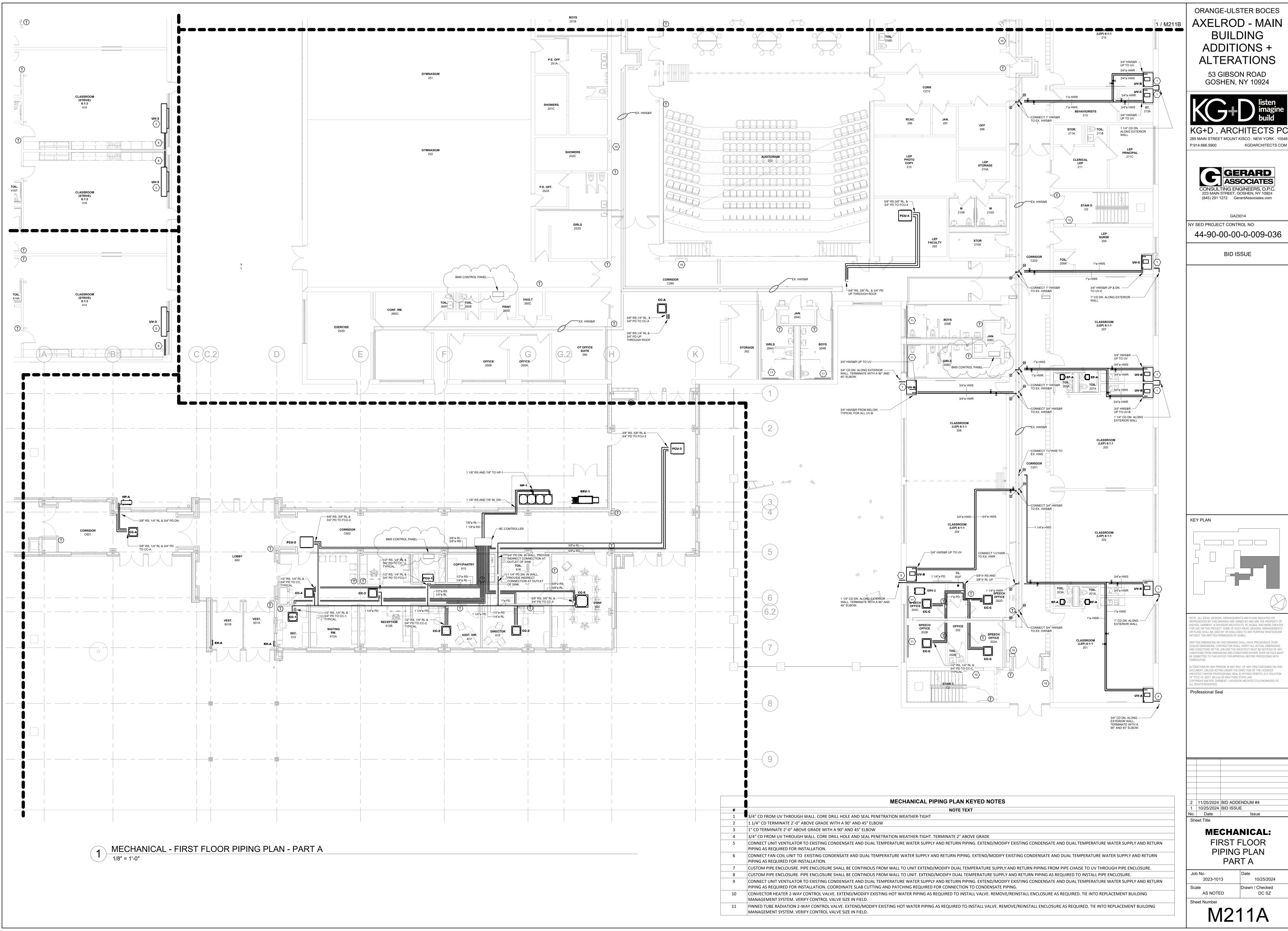
Professional Seal



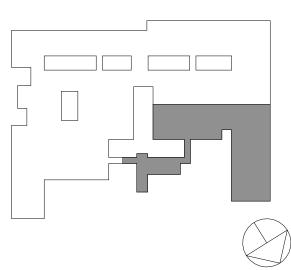
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1 10/25/2024 BID ISSUE
No. Date Issue
Sheet Title

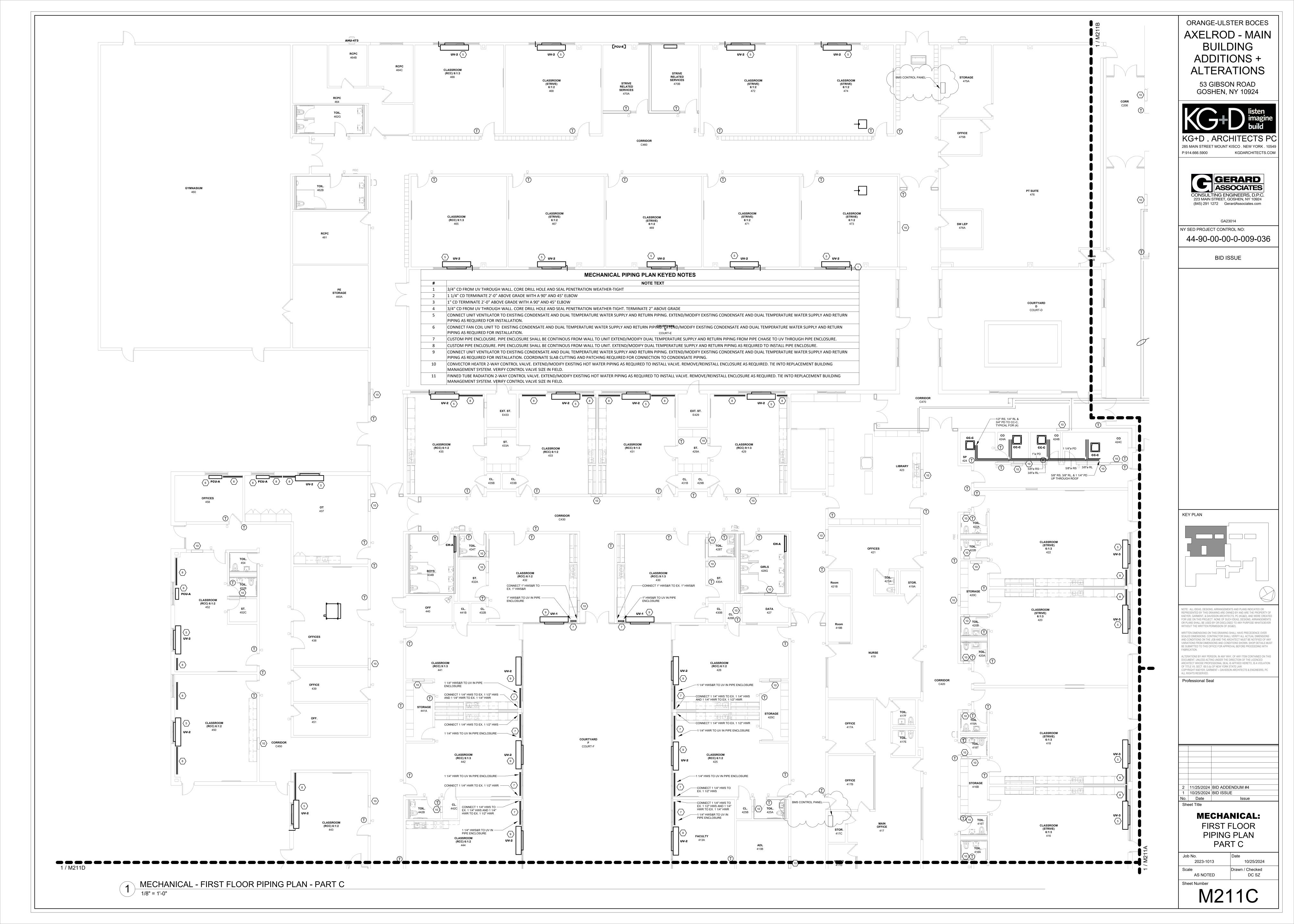
MECHANICAL:
GROUND FLOOR
PIPING PLAN
PART A & D

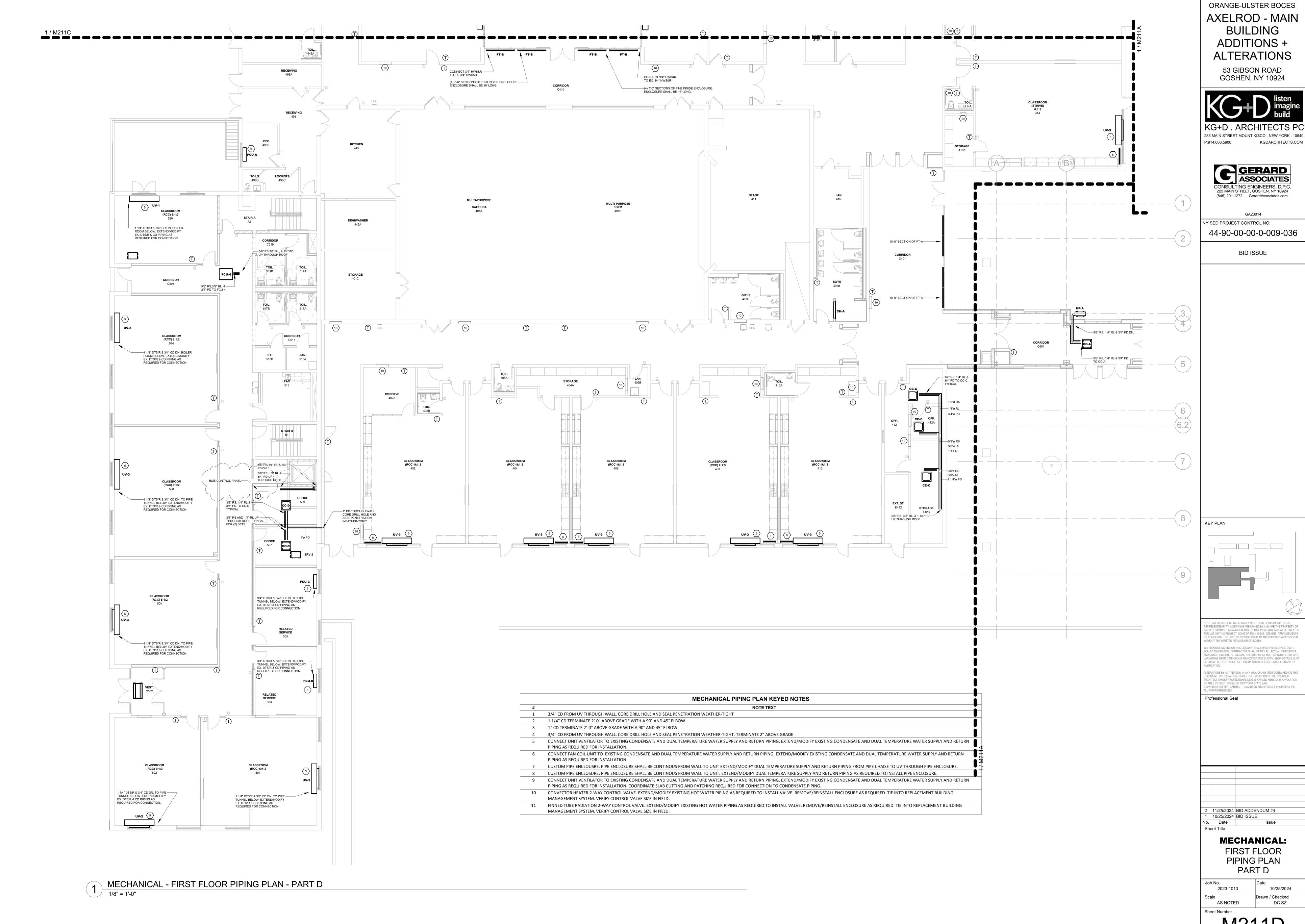
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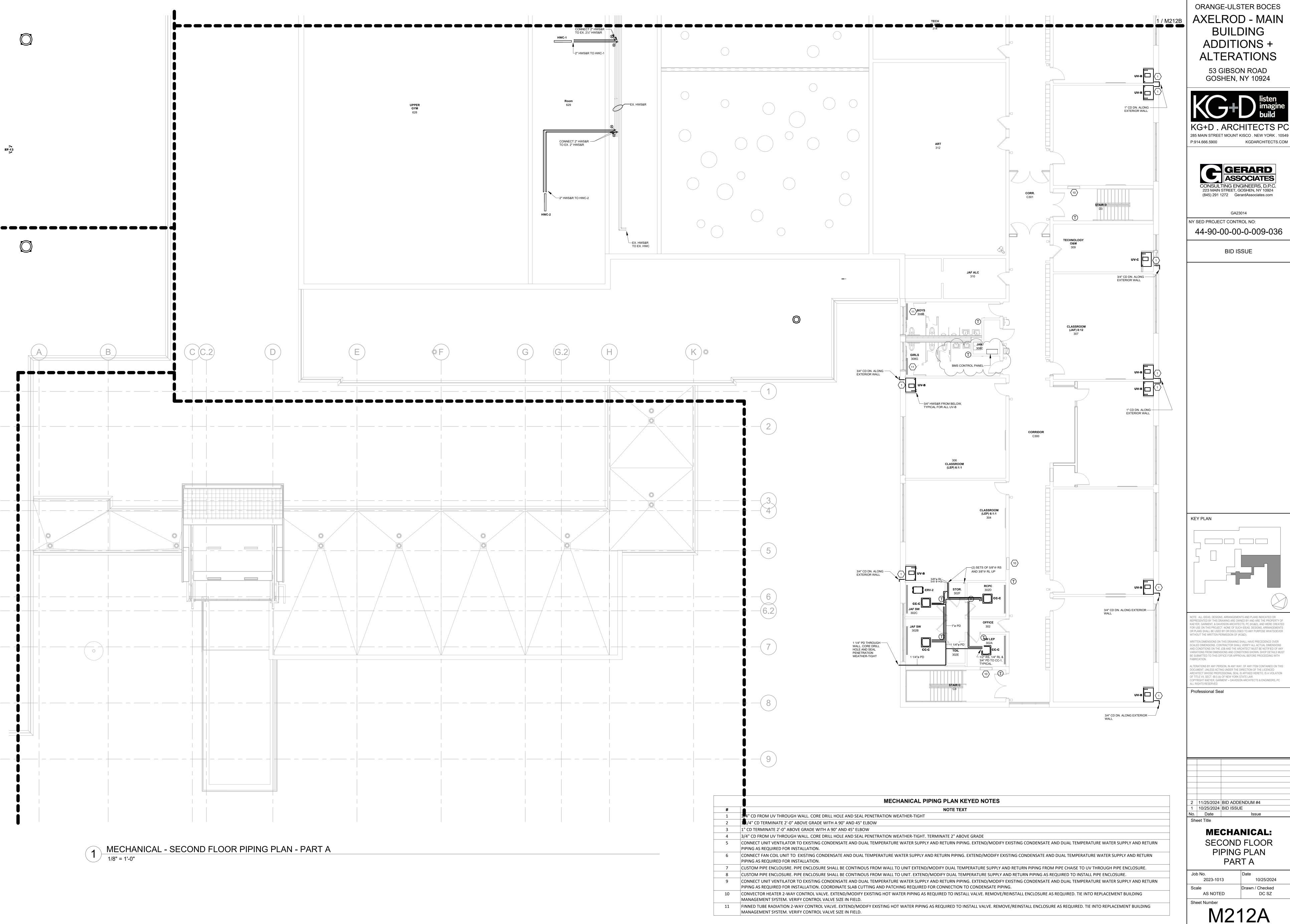








M211D

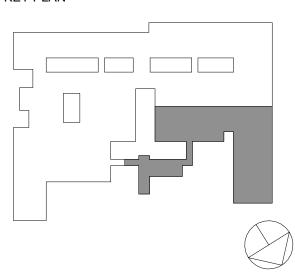


AXELROD - MAIN BUILDING ADDITIONS + ALTERATIONS





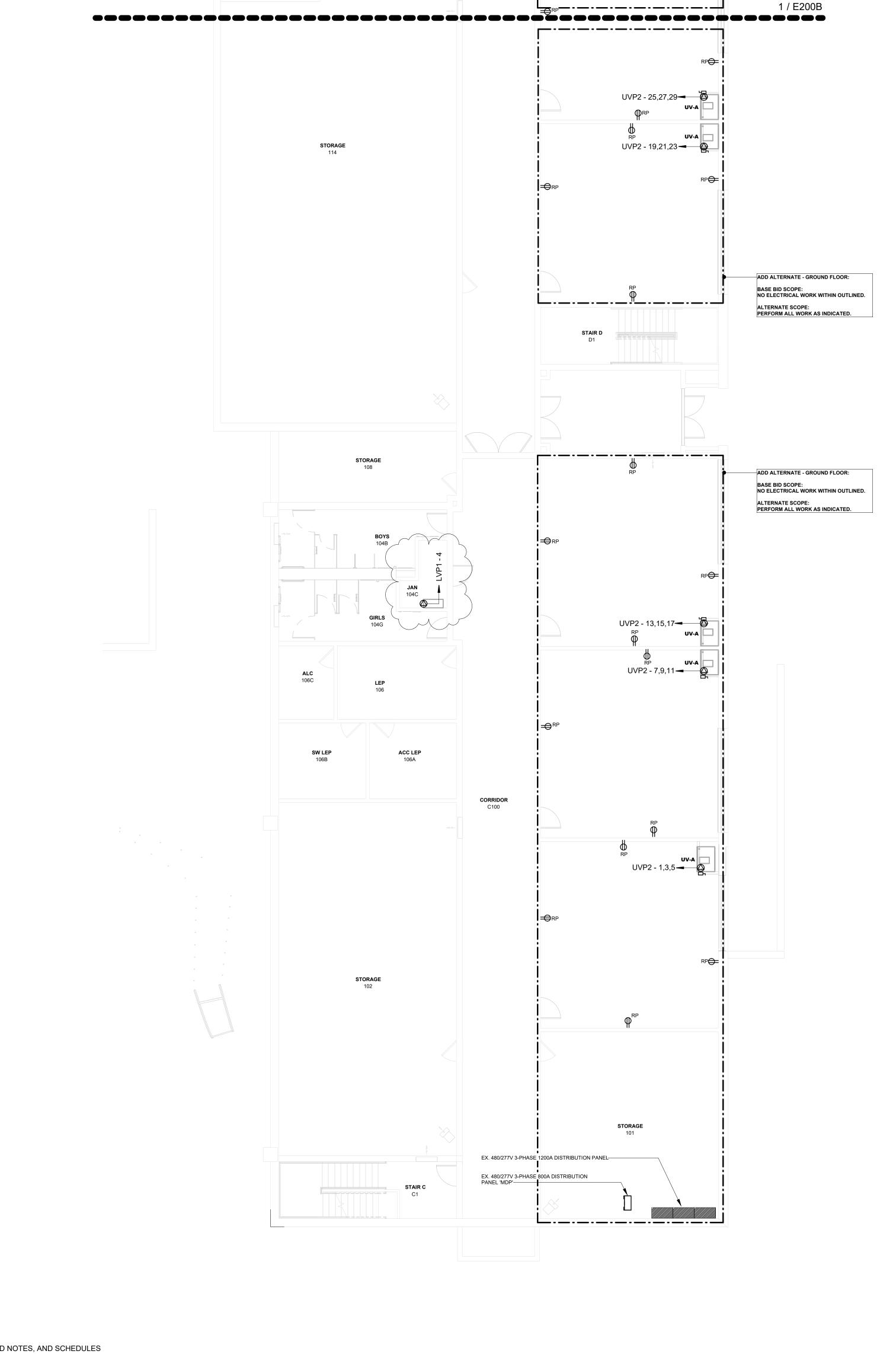
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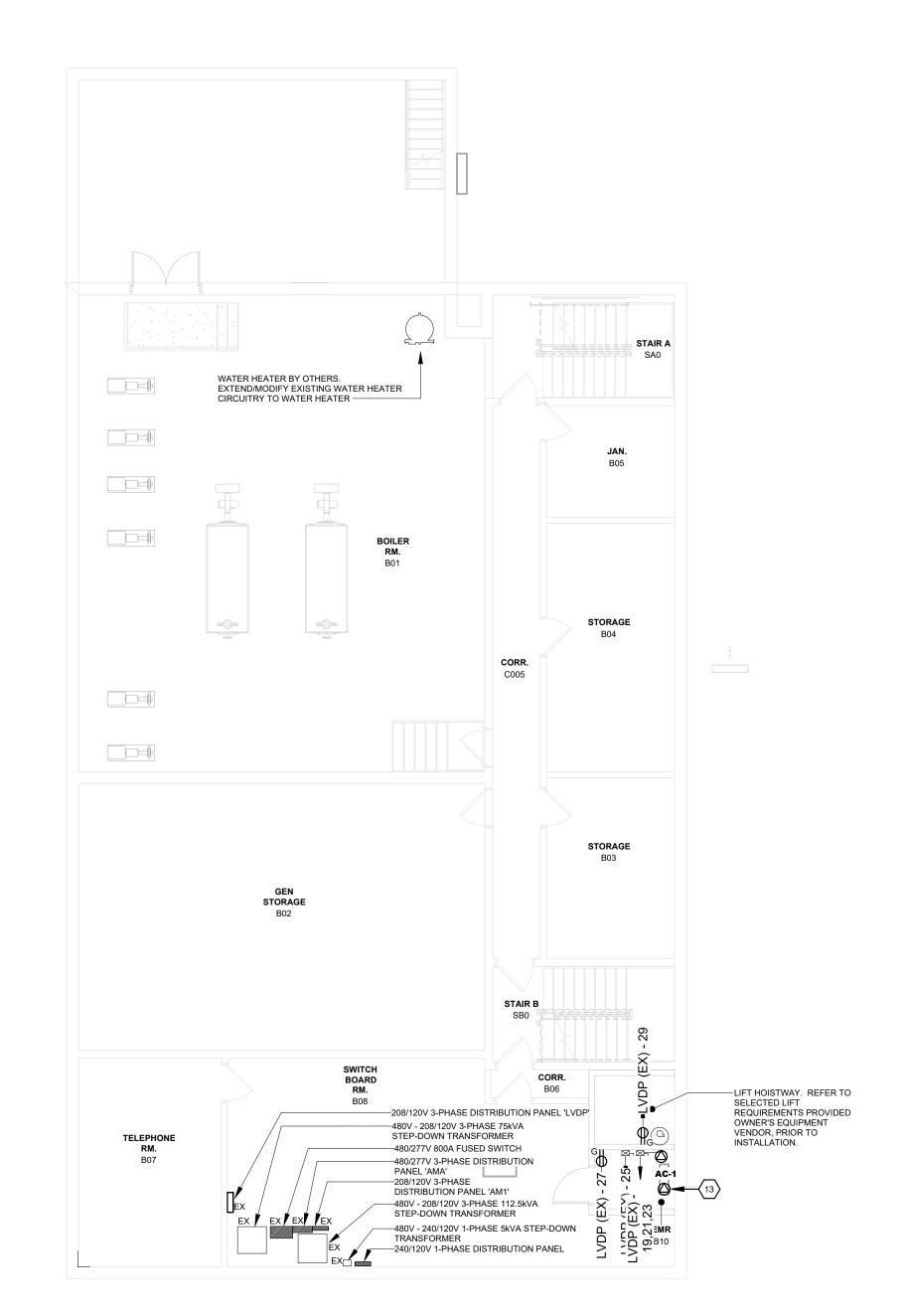


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SECOND FLOOR PIPING PLAN

10/25/2024 Drawn / Checked





KEYED NOTES:

REFER TO DEMOLITION, ELECTRICAL, AND LIGHTING KEYED NOTES, AND SCHEDULES ON SHEET E703

2 ELECTRICAL - GROUND FLOOR POWER PLAN - PART D

1/8" = 1'-0"

1 ELECTRICAL - GROUND FLOOR POWER PLAN - PART A

1/8" = 1'-0"

ORANGE-ULSTER BOCES

AXELROD - MAIN

BUILDING

ADDITIONS +

ALTERATIONS

53 GIBSON ROAD GOSHEN, NY 10924



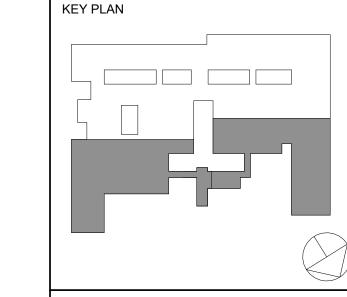


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44-90-00-00-0-009-036

BID ISSUE



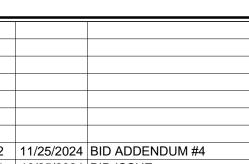
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2 11/25/2024 BID ADDENDUM #4
1 10/25/2024 BID ISSUE
No. Date Issue
Sheet Title

ELECTRICAL:
GROUND FLOOR
POWER PLAN
PART A & D

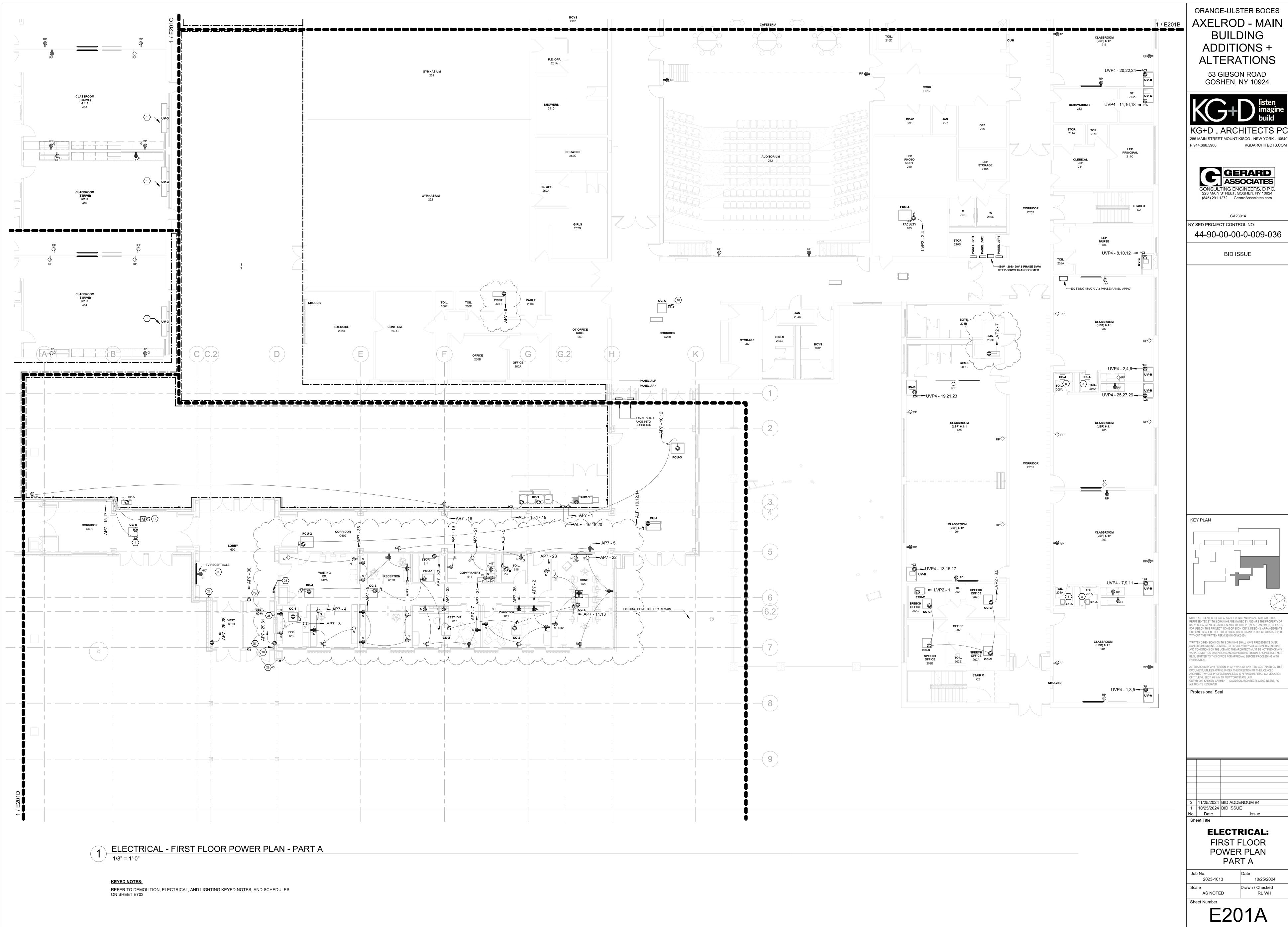
 Job No.
 Date

 2023-1013
 10/25/2024

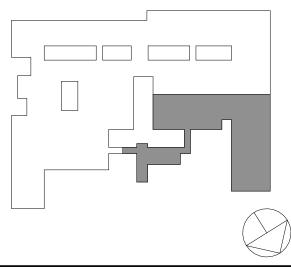
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 AS NOTED
 RL WH

E200A





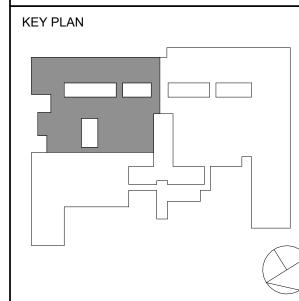




AXELROD - MAIN BUILDING ADDITIONS + ALTERATIONS

285 MAIN STREET MOUNT KISCO . NEW YORK . 10549 KGDARCHITECTS.COM

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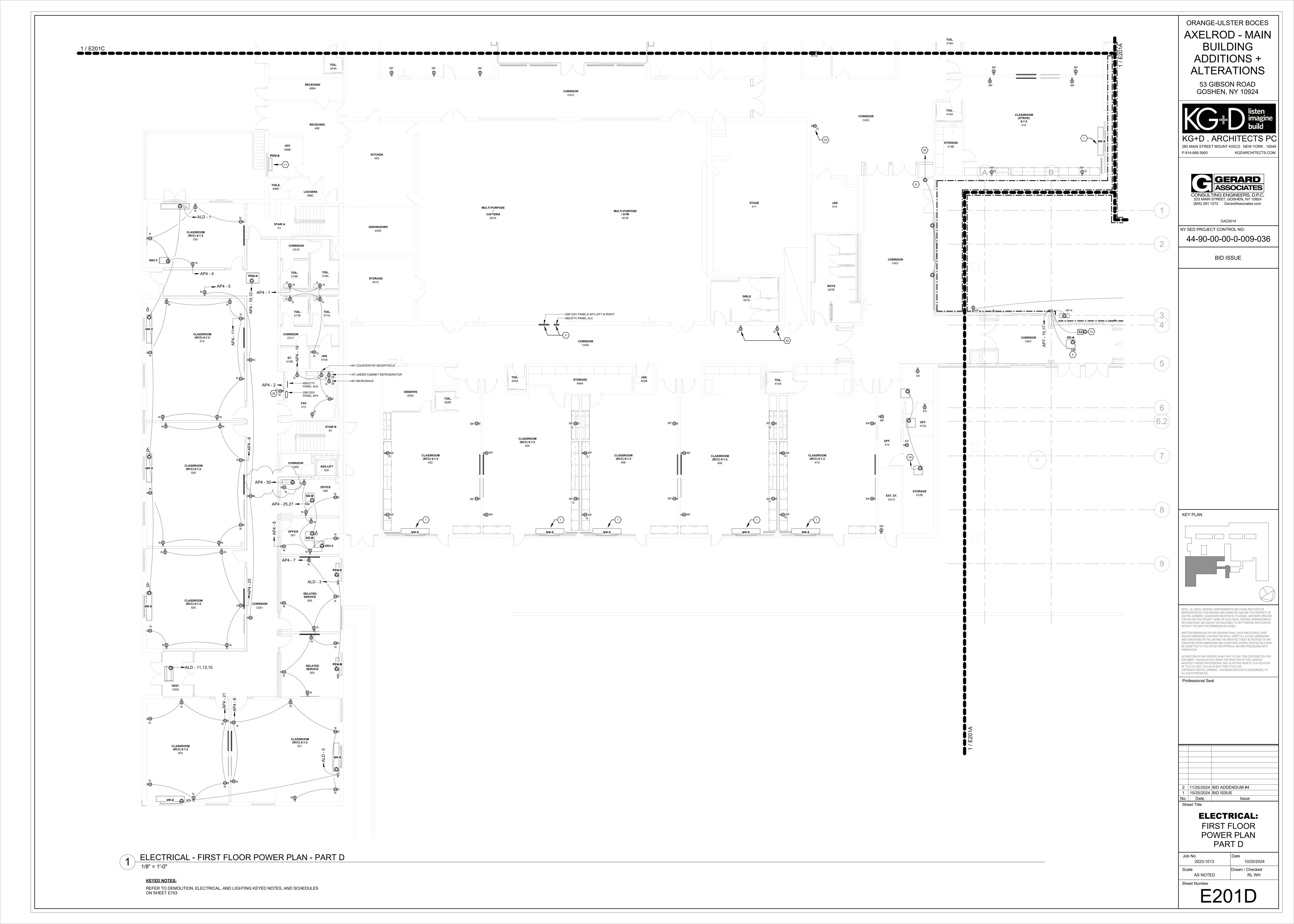


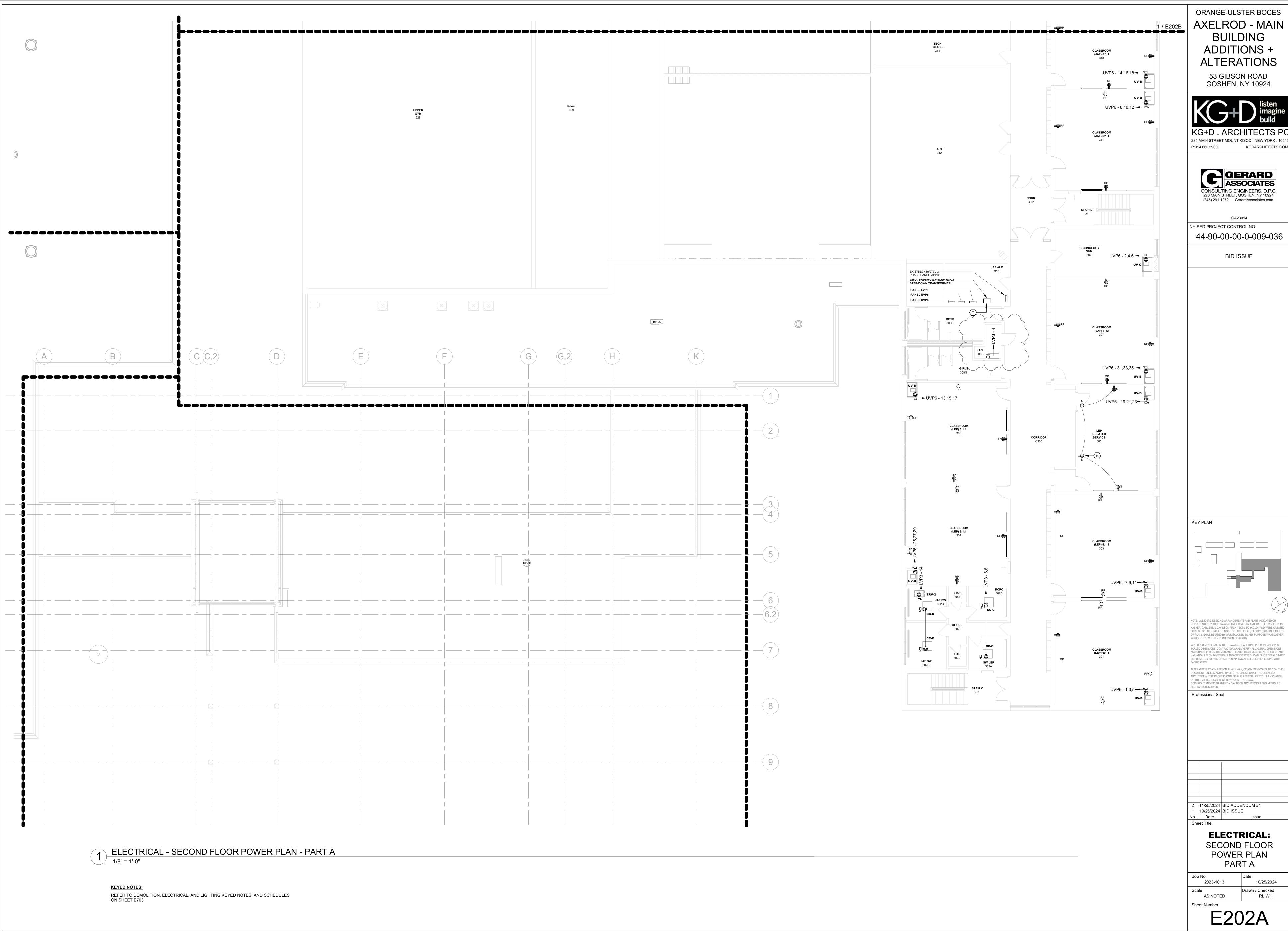
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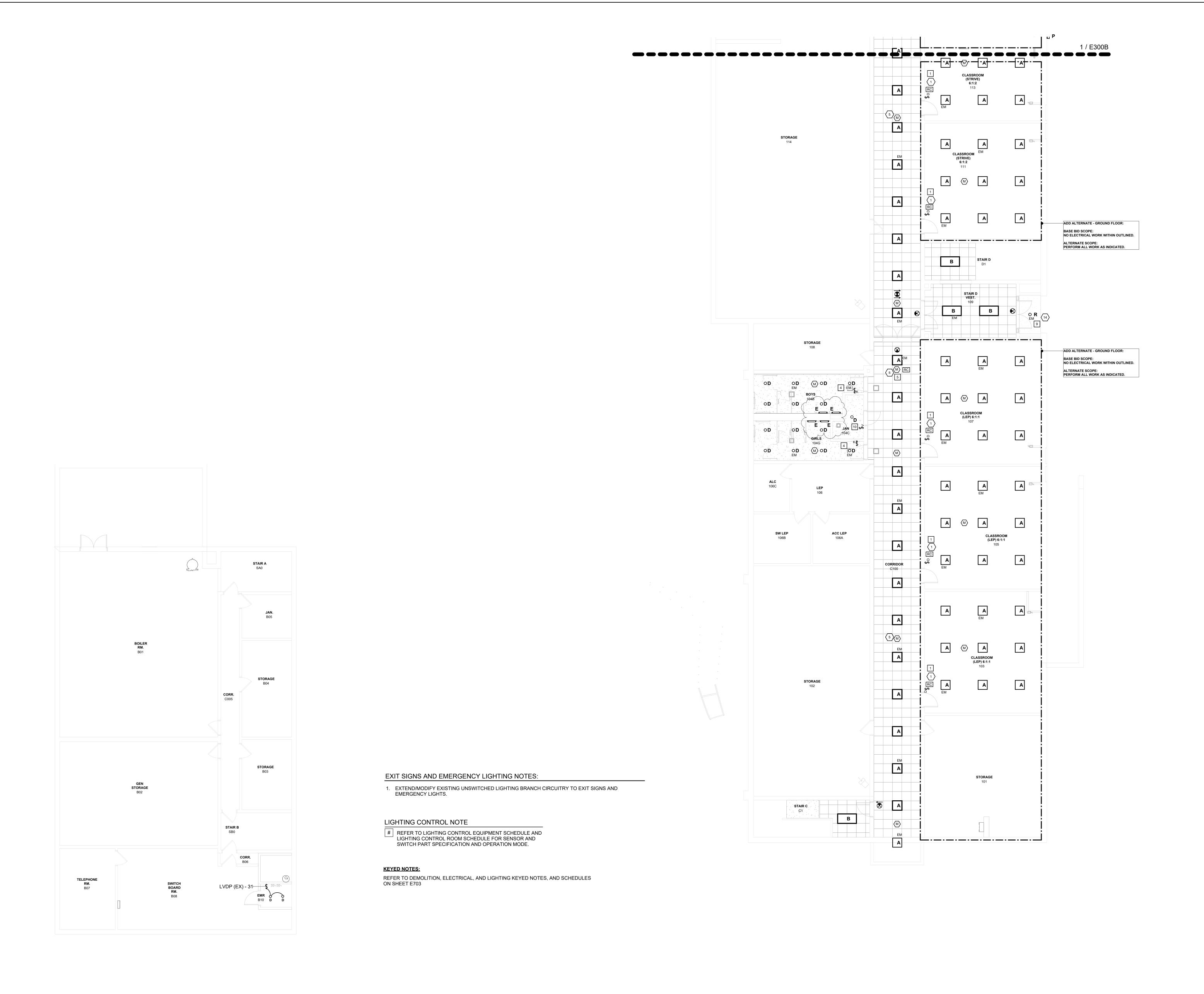
FIRST FLOOR POWER PLAN

Drawn / Checked









1 ELECTRICAL - GROUND FLOOR LIGHTING PLAN - PART A
1/8" = 1'-0"

ORANGE-ULSTER BOCES

AXELROD - MAIN
BUILDING
ADDITIONS +
ALTERATIONS

53 GIBSON ROAD



GOSHEN, NY 10924



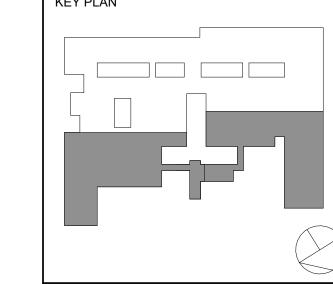
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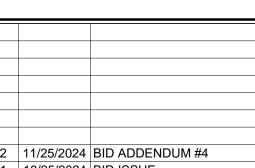
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2 11/25/2024 BID ADDENDUM #4
1 10/25/2024 BID ISSUE
No. Date Issue
Sheet Title

ELECTRICAL:
GROUND FLOOR
LIGHTING PLAN
PART A & D

 Job No.
 Date

 2023-1013
 10/25/2024

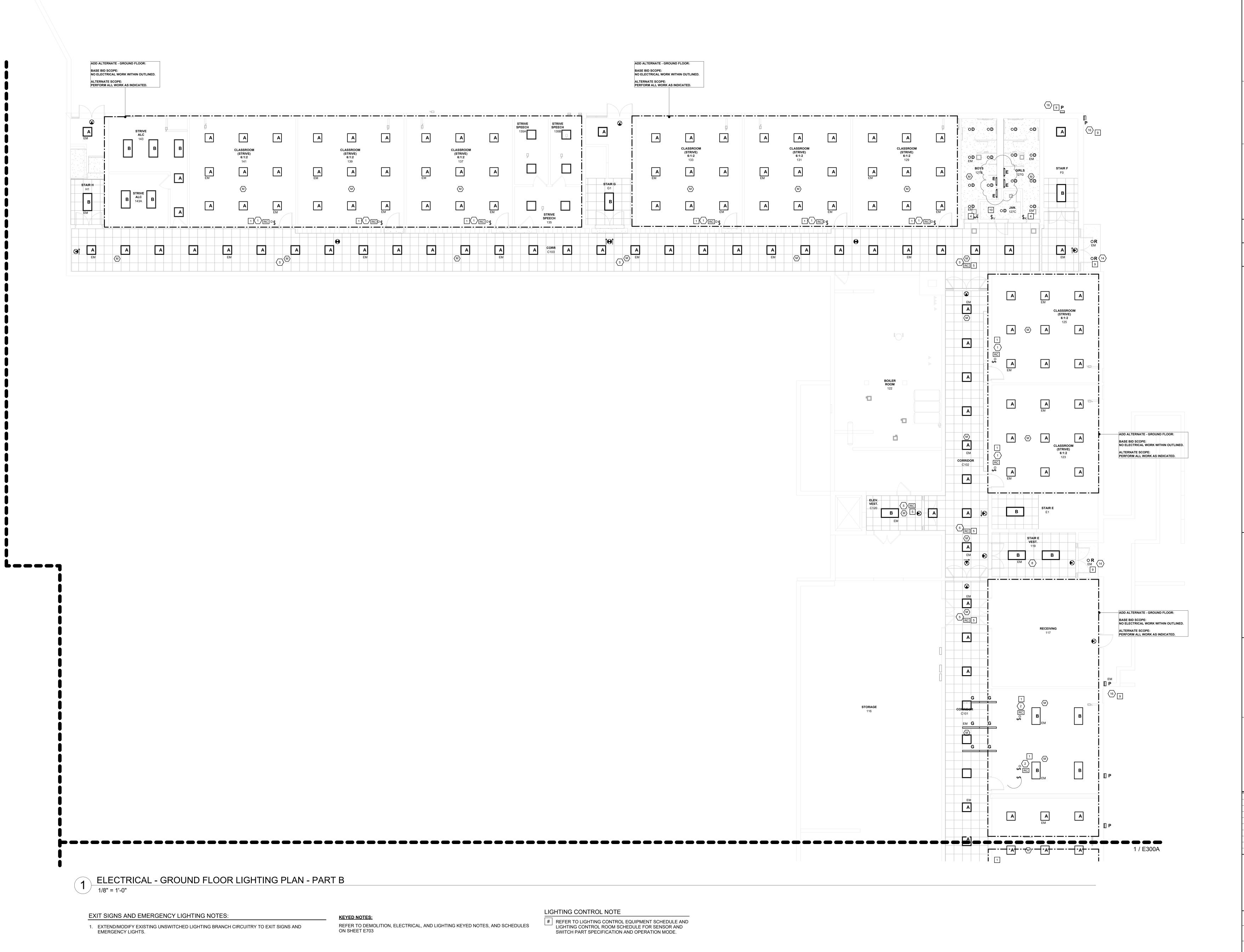
 Scale
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 AS NOTED
 RL WH

E300A

ELECTRICAL - GROUND FLOOR LIGHTING PLAN - PART D

1/8" = 1'-0"



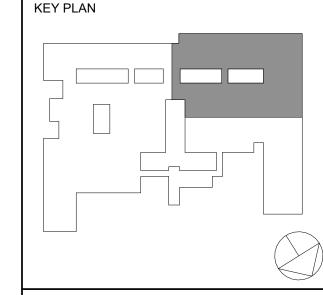




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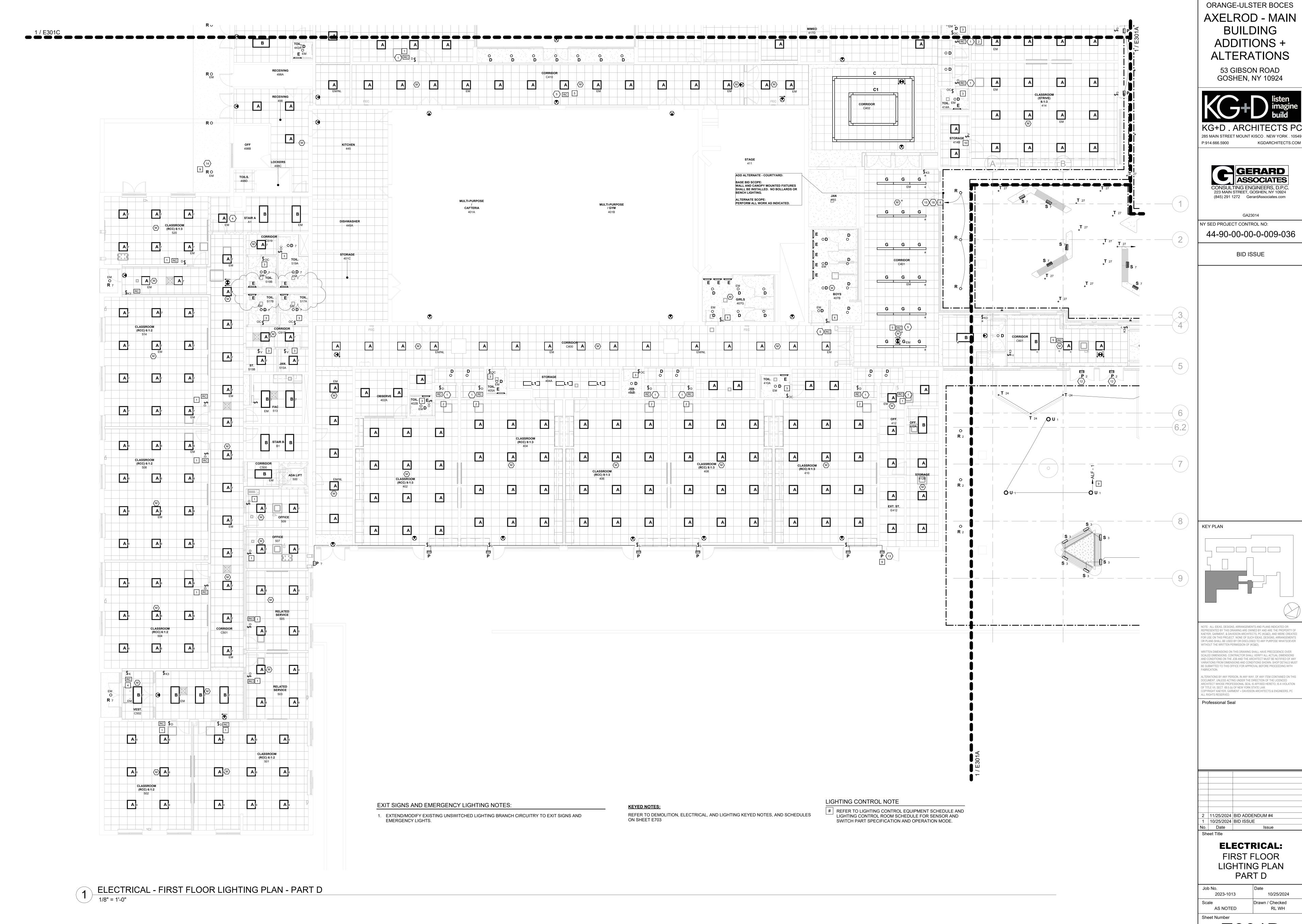
1 10/25/2024 BID ISSUE No. Date

**ELECTRICAL: GROUND FLOOR** LIGHTING PLAN

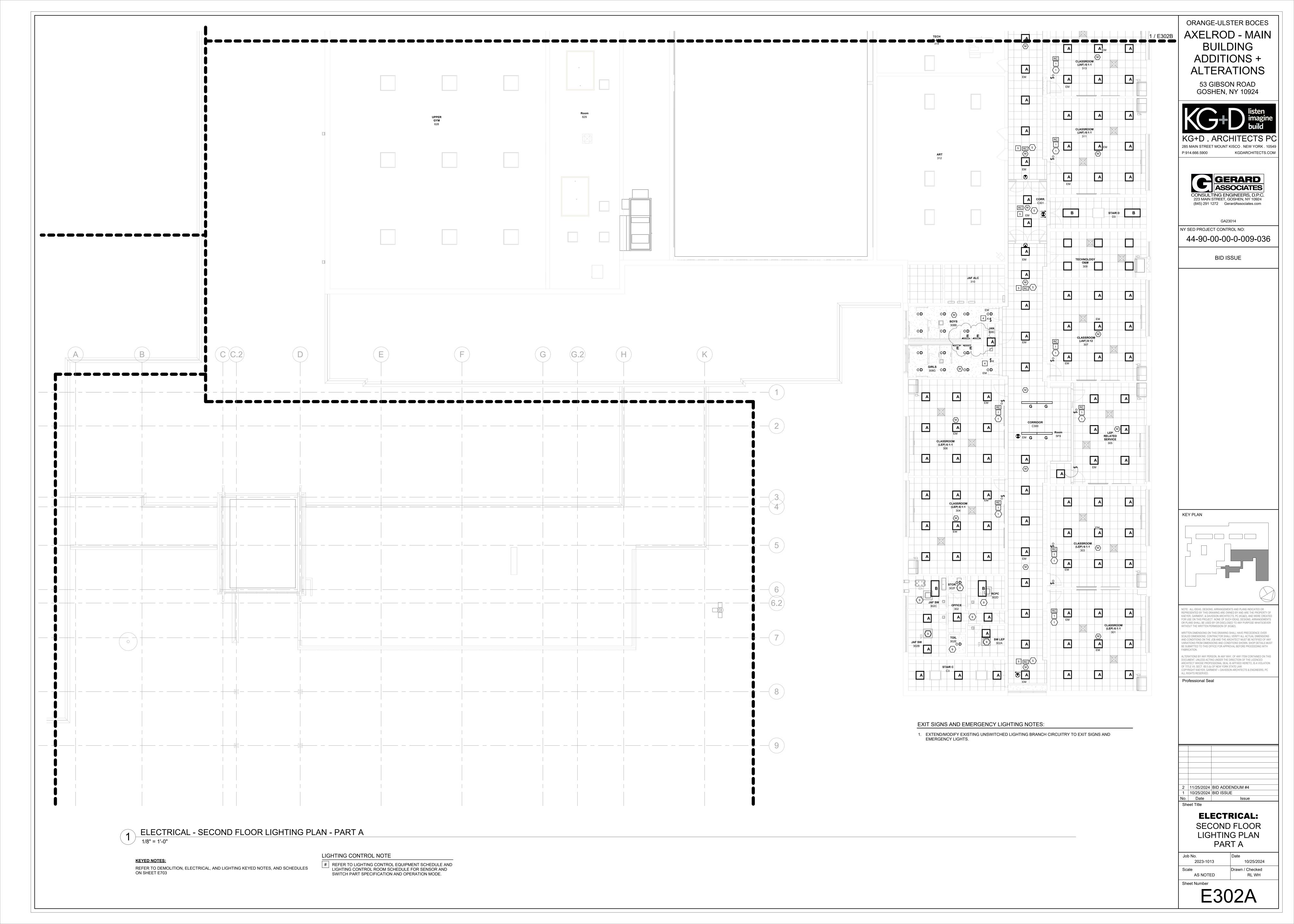
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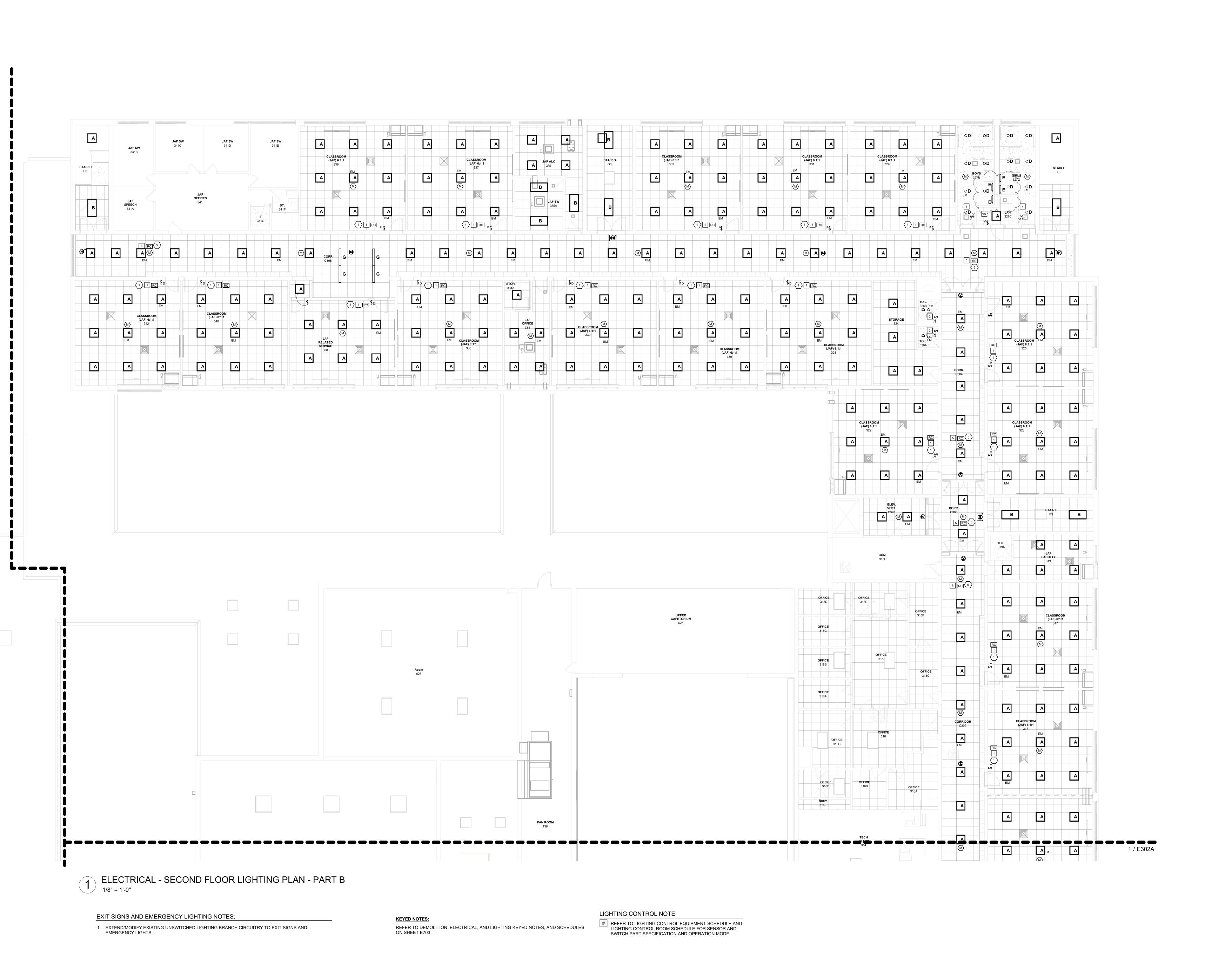
RL WH

E300B



E301D









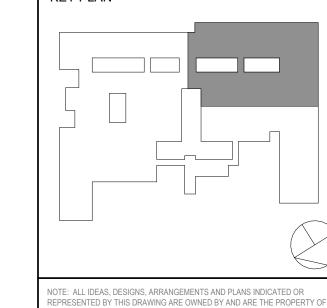
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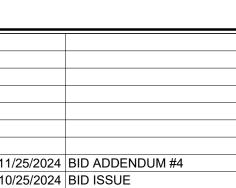
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2 11/25/2024 BID ADDENDUM #4 1 10/25/2024 BID ISSUE No. Date Issue

> ELECTRICAL: SECOND FLOOR LIGHTING PLAN

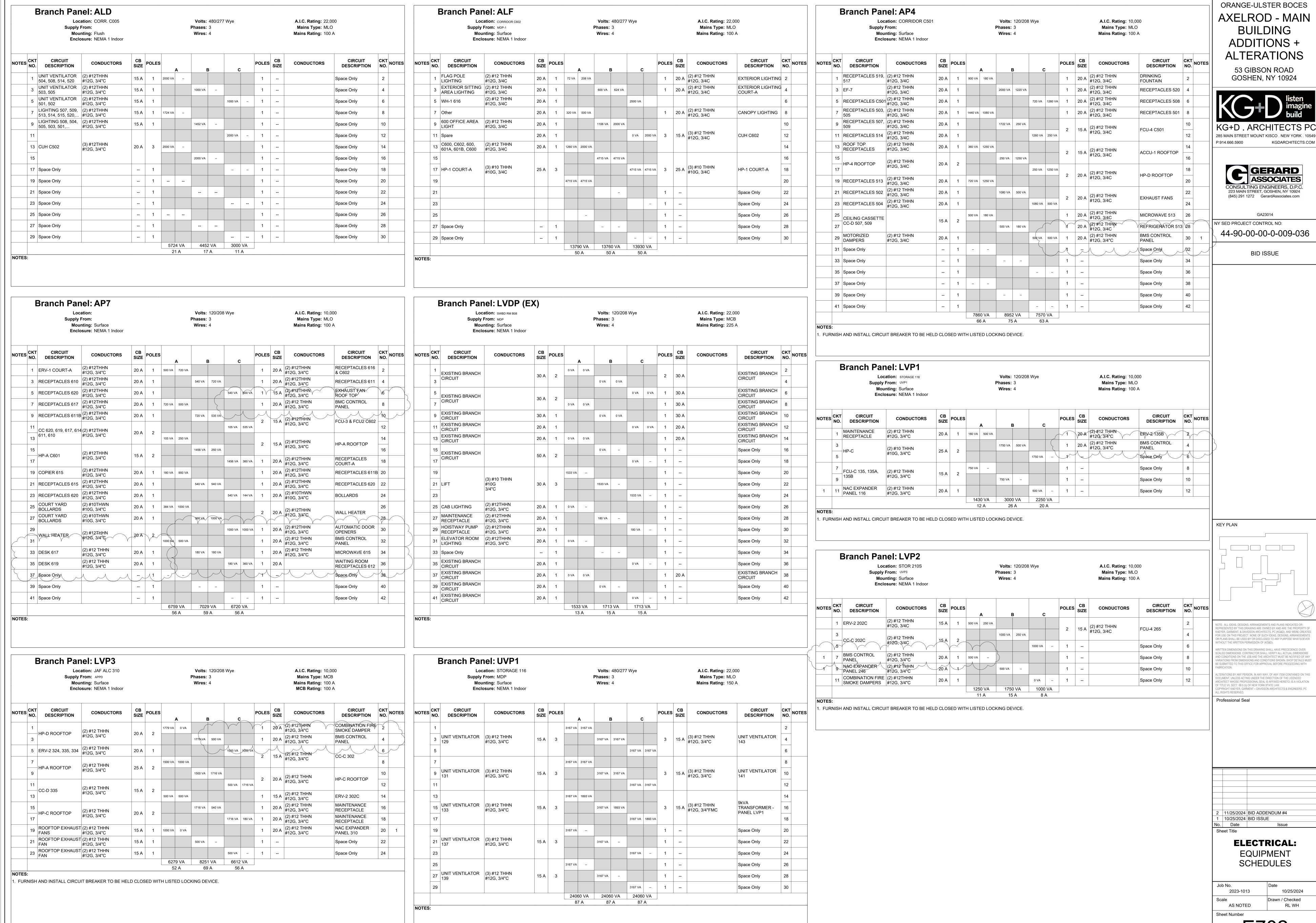
PART B

Job No.
2023-1013

Date
10/25/2024

Scale
AS NOTED
Drawn / Checked
RL WH
Sheet Number

E302B





E702

SYMBOL MANUFACTURER CATALOG#			DESCRIPTION
$\otimes$	SURE-LITES	LPX7SD	CEILING OR WALL MOUNTED L.E.D. EXIT SIGN WITH INTEGRAL BATTERY AND CHARGER FOR 90 MINUTE ILLUMINATION IN CASE OF POWER LOSS. SIGN SHALL CONTAIN SELF-DIAGNOSTICS. SIGN SHALL BE WIRED TO UNSWITCHED PHASE LEG OF INDICATED CIRCUIT. 120/277 VOLTS.
φ	HUBBELL	5362TR	DUPLEX RECEPTACLE, WITH METAL COVER PLATE, TAMPER-RESISTANT, HARD USE SPECIFICATION GRADE, 20 AMPERES, 125 VOLTS.
Φ <sub>G</sub>	HUBBELL	GF5362SG	DUPLEX RECEPTACLE WITH GFCI PROTECTION AND METAL COVER PLATE, HARD USE SPECIFICATION GRADE, 20 AMPERES, 125 VOLTS. FEED THROUGH FEATURE SHALL NOT BE UTILIZED. INSTALL GFCI TYPE RECEPTACLE AT EACH LOCATION SHOWN.
₱ <sub>wp</sub>	HUBBELL	GF5362SG	DUPLEX RECEPTACLE WITH GFCI PROTECTION AND WEATHERPROOF COVER, HARD USE SPECIFICATION GRADE, 20 AMPERES, 125 VOLTS.
#	HUBBELL	(2) 5362TR	(2) DUPLEX RECEPTACLES IN COMMON BOX (QUAD) WITH METAL COVER PLATE, HARD USE SPECIFICATION GRADE, 20 AMPERES, 125 VOLTS.
<b>⊕</b>	HUBBELL	(2) 5362TR	(2) DUPLEX RECEPTACLES IN STEEL FLOOR BOX (QUAD) WITH BRASS COVER PLATE WITH HOLD DOWN RECEPTACLE COVERS, HARD USE SPECIFICATION GRADE, 20 AMPERES, 125 VOLTS.
$\bigcirc$			HARDWIRED CONNECTION - WHERE EQUIPMENT OR APPLIANCE DOES NOT HAVE INTEGRAL DISCONNECTING MEANS, ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL INDEPENDANT DISCONNECT SWITCH.
4			UNFUSED DISCONNECT SWITCH - MECHANICAL AND PLUMBING EQUIPMENT SHALL BE PROVIDED WITH A DISCONNECT SWITCH BY OTHERS AND INSTALLED BY THIS CONTRACTOR. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR MORE INFORMATION. THIS CONTRACTOR SHALL FURNISH AND INSTALL A DISCONNECT SWITCH WHERE EQUIPMENT IS NOT PROVIDED BY OTHERS.
			FUSED DISCONNECT SWITCH - FURNISH WITH FUSE(S) LISTED FOR USE IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S SPECIFICATIONS.
M			MOTORIZED DAMPER BY OTHERS. THIS CONTRACTOR SHALL INSTALL 120VAC CIRCUITRY, AS REQUIRED.
'EM'			PROVIDE INTEGRAL OR REMOTE EMERGENCY BATTERY AND CHARGER FOR 90 MINUTES OF ILLUMINATION WITHOUT UTILITY POWER. BATTERY AND CHARGER SHALL BE WIRED TO UNSWITCHED PHASE LEG OF INDICATED CIRCUIT.
'NL'			CONTINUOUS LIGHTING (NIGHT LIGHT) SHALL BE CIRCUITED FIRECTLY FROM THE LIGHTING BRANCH CIRCUIT OR KEYED OPERATED SWITCH. FIXTURE SHALL NOT BE CONTROLLED BY A ROOM CONTORLLER OR OTHER AUTOMATED DEVICE.
'EX'			EXISTING WIRING DEVICE, LIGHT FIXTURE, OR EQUIPMENT TO REMAIN. EXTEND/MODIFY CIRCUITRY AS NECESSARY FOR EQUIPMENT TO REMAIN ACTIVE.
'RP'			EXISTING WIRING DEVICE TO BE REMOVED AND REPLACED IN KIND WITH NEW. EXTEND/MODIFY BRANCH CIRCUITRY, AS REQUIRED.
'N'			NEW WIRING DEVICE.

## **EQUIPMENT NOTES:**

- 1. CONTRACTOR SHALL VERIFY ALL EQUIPMENT MOUNTING HEIGHTS/TYPES AND LOCATIONS IN FIELD. CONTRACTOR SHALL VERIFY ALL EQUIPMENT COLORS AND FINISHES WITH ARCHITECT. COLOR CHOICES FOR SELECTION SHALL BE MANUFACTURER'S FULL
- RANGE OF STANDARD AND CUSTOM COLORS/FINISHES UNLESS OTHERWISE NOTED. 3. ALL RECEPTACLES, AND LINE VOLTAGE LIGHT SWITCHES SHALL BE LABELLED WITH CIRCUIT SOURCE AND NUMBER. REFER TO DETAIL.

25	EXTEND (2) #12 THHN, #12G IN 3/4"C FROM A 15A/2P CIRCUIT BREAKER LISTED FOR USE IN PANEL AP2 TO ROOFTOP EXHAUST FANS.
26	WATER FOUNTAIN RECEPTACLE SHALL BE CIRCUITED FROM A READILY ACCESSIBLE GFCI PROTECTED DEVICE IN ACCORDANCE WITH 2017 NEC.
27	AUTOMATIC DOOR OPERNER, BY OTHERS. THIS CONTRACTOR SHALL COORDINATE POWER CONNECTION TO DOOR ACTUATOR WITH OWNER'S EQUIPMENT INSTALLER.
28	AUTOMATIC DOOR OPERNER PUSH BUTTON, BY OTHERS. THIS CONTRACTOR SHALL FURNISH AND INSTALL 4X4 JUNCTION BOX WITH 3/4" CONDUIT AND DRAG LINE TO
	ACCESSIBLE LOCATION ABOVE FINISHED CEILING. CONTROLS WIRING SHALL BE BY OTHERS.
29	POST MOUNTED AUTOMATIC DOOR OPERNER PUSH BUTTON, BY OTHERS. THIS CONTRACTOR SHALL FURNISH AND INSTALL 4X4 JUNCTION BOX WITH 3/4" CONDUIT
	AND DRAG LINE TO ACCESSIBLE LOCATION ABOVE FINISHED CEILING. COORDINATE POST LOCATION WITH OTHER'S PRIOR TO INSTALLATION. CONTROLS WIRING SHALL
	BE BY OTHERS.
30	EXTEND (2) #12 THHN, #12G IN 3/4" C FROM A 20A/2P CIRCUIT BREAKER LISTED FOR US IN PANEL AP2 TO THERMOSTAT.
31	EXTEND (2) #12 THHN, #12G IN 3/4" C FROM A CIRCUIT BREAKER LISTED FOR USE IN PANEL PP1 TO EXHAUST FANS EF-25 & 26.
32	EXTEND (2) #12 THHN, #12G IN 3/4" C FROM A CIRCUIT BREAKER LISTED FOR USE IN NEAREST 120V PANEL TO LIFE SKILLS RECEPTACLES.
33	EXTEND (2) #12 THHN, #12G IN 3/4"C FROM A 20A/1P CIRCUIT BREAKER LISTED FOR USE IN PANEL AP3 TO DRINKING FOUNTAIN. RECEPTACLE SHALL BE CIRCUITED
	FROM A READILY ACCESSIBLE GFCI PROTECTED DEVICE IN ACCORDANCE WITH 2017 NEC.
34	EXTEND (2) #12 THHN, #12G IN 3/4"C FROM A 20A/1P CIRCUIT BREAKER LISTED FOR USE IN PANEL AP1 TO DRINKING FOUNTAIN. RECEPTACLE SHALL BE CIRCUITED
	FROM A READILY ACCESSIBLE GFCI PROTECTED DEVICE IN ACCORDANCE WITH 2017 NEC.
35	EXTEND (2) #12 THHN, #12G IN 3/4"C FROM A 20A/1P CIRCUIT BREAKER LISTED FOR USE IN PANEL B TO DRINKING FOUNTAIN. RECEPTACLE SHALL BE CIRCUITED FROM A
	READILY ACCESSIBLE GFCI PROTECTED DEVICE IN ACCORDANCE WITH 2017 NEC.
√ 36	EXTEND (2) #1/2 THHN, #12/G IN 3/4"C PROM A 20A/1P CIRCUIT BREAKER LISTED FOR USE IN PANEL APS TO EXHAUST FAN MOTORIZED DAMPERS.
37	EXTEND (2) #12 THHN, #12G IN 3/4"C FROM A 20A/1P CIRCUIT BREAKER LISTED FOR USE IN PANEL B TO EXHAUST FAN MOTORIZED DAMPERS.
38	EXTEND (2) #12 THHN, #12G IN 3/4"C FROM A 20A/1P CIRCUIT BREAKER LISTED FOR USE IN PANEL B TO BMS CONTROL PANEL.
39	EXTEND (2) #12 THHN, #12G IN 3/4"C FROM A 20A/1P CIRCUIT BREAKER LISTED FOR USE IN PANEL AP2 TO BMS CONTROL PANEL.

**#** POWER PLAN KEYED NOTES

7 EXTEND (3) #8 THHN, #10G IN 3/4"FMC FROM PRIMARY SIDE TO PANEL APPD. EXTEND (4) #3 THHN, #8G IN 1-1/4" FMC FROM SECONDARY SIDE TO PANEL LVP3.

10 ROOFTOP UNIT HP-A PROVIDES POWER TO INDOOR UNIT. EXTEND (3) #12 THWN, #12G IN 3/4"C FROM OUTDOOR UNIT TO INDOOR UNIT. ROUTE CONDUIT WITH

EXTEND/MODIFY EXISTING FAN COIL UNIT CIRCUITRY TO REPLACEMENT FAN COIL UNIT. COORDINATE CONNECTIONS WITH THE MECHANICAL CONTRACTOR.

13 ROOFTOP UNIT ACCU-1 PROVIDES POWER TO INDOOR UNIT. EXTEND (3) #12 THWN, #12G IN 3/4"C FROM OUTDOOR UNIT TO INDOOR UNIT. ROUTE CONDUIT WITH

21 | EXTEND (2) #12 THHN, #12G IN 3/4"C FROM A 15A/1P CIRCUIT BREAKER LISTED FOR USE IN PANEL AP3 TO ROOFTOP EXHAUST FANS. CONNECT 120V CIRCUITRY TO

23 EXTEND (2) #12 THHN, #12G IN 3/4"C FROM A 15A/1P CIRCUIT BREAKER LISTED FOR USE IN PANEL 'B' TO ROOFTOP EXHAUST FANS. CONNECT 120V CIRCUITRY TO

PANELBOARD ENCLOSURE. EXTEND/MODIFY EXISTING BRANCH CIRCUITRY TO NEW CIRCUIT BREAKERS.

5 EXTEND MODIFY EXISTING UNIT VENTILATOR BRANCH CIRCUIT TO ADDITIONAL FAN COIL UNITS IN COLAB 470A&B.

15 EXTEND (2) #12 THHN, #12G IN 3/4"C FROM A 20A/2P CIRCUIT BREAKER LISTED FOR USE IN PANEL AP2 TO FAN COIL UNITS.

18 EXTEND (2) #12 THHN, #12G IN 3/4"C FROM A 20A/2P CIRCUIT BREAKER LISTED FOR USE IN PANEL AP3 TO FAN COIL UNITS.

16 EXTEND (2) #12 THHN, #12G IN 3/4"C FROM A 20A/2P CIRCUIT BREAKER LISTED FOR USE IN PANEL AP2 TO HP-C ON ROOFTOP.

19 EXTEND (2) #12 THHN, #12G IN 3/4"C FROM A 20A/2P CIRCUIT BREAKER LISTED FOR USE IN PANEL AP3 TO HP-C ON ROOFTOP.

22 EXTEND (2) #12 THHN, #12G IN 3/4"C FROM A 15A/2P CIRCUIT BREAKER LISTED FOR USE IN PANEL AP3 TO ROOFTOP EXHAUST FANS.

24 EXTEND (2) #12 THHN, #12G IN 3/4"C FROM A 15A/2P CIRCUIT BREAKER LISTED FOR USE IN PANEL 'B' TO ROOFTOP EXHAUST FANS.

17 EXTEND (2) #12 THHN, #12G IN 3/4"C FROM A 20A/1P CIRCUIT BREAKER LISTED FOR USE IN PANEL AP2 TO ROOFTOP MAINTENANCE RECEPTACLE.

20 EXTEND (2) #12 THHN, #12G IN 3/4"C FROM A 20A/1P CIRCUIT BREAKER LISTED FOR USE IN PANEL AP3 TO ROOFTOP MAINTENANCE RECEPTACLE.

LOCATIONS WITH THE MECHANICAL CONTRACTOR.

PIPING. COORDINATE WITH THE MECHANICAL CONTRACTOR.

PIPING. COORDINATE WITH THE MECHANICAL CONTRACTOR.

PIPING. COORDINATE WITH THE MECHANICAL CONTRACTOR.

ASSOCIATED MOTORIZED DAMPER.

COORDINATE EQUIPMENT LOCATION WITH THE MECHANICAL CONTRACTOR.

FURNISH AND INSTALL 40A/3P CIRCUIT BREAKER LISTED FOR USE IN PANEL APPD

COORDINATE INSTALLATION OF EQUIPMENT WITH THE MECHANICAL CONTRACTOR.

14 EXTEND/MODIFY EXISTING RECEPTACLE BRANCH CIRCUITY TO ADDITIONAL RECEPTACLES.

TYP. FOR CLASSROOM UNIT VENTILATORS, EXTEND/MODIFY EXISTING BRANCH CIRCUITRY TO UNIT VENTILATOR AND DISCONNECT SWITCH. COORDINATE TERMINATION

PANELBOARD ENCLOSURE - FURNISH AND INSTALL RETRO-FIT PANELBOARD ASSEMBLY, CIRCUIT BREAKERS, GROUND BAR KIT, ETC AS REQUIRED IN THE EXISTING

OUTDOOR UNIT HP-A PROVIDES POWER TO INDOOR UNIT. EXTEND (3) #12 THWN, #12G IN 3/4"C FROM OUTDOOR UNIT TO INDOOR UNIT. ROUTE CONDUIT WITH

BRANCH CIRCUIT SHALL EXTEND TO LINE SIDE OF THERMOSTAT. EXTEND #12/2 TYPE MC CABLE W/ #12G TO BASEBOARD UNITS FT-A FROM LOAD SIDE OF THERMOSTAT

EXHAUST FAN BY OTHERS. EXTEND/MODIFY EXHAUST FAN BRANCH CIRCUITRY TO EXHAUST FAN. COORDINATE ELECTRICAL CONNECTIONS WITH THE MECHANICAL

MOTORIZED DAMPER FURNISHED AND INSTALLED BY OTHERS. FURNISH AND INSTALL 208V TO 24V TRANSFORMER, AND ELECTRICAL CONNECTIONS AS REQUIRED.

THERMOSTAT SHALL BE PERMITTED TO BE THE DISCONNECTING MEANS WHERE PROVIDED WITH IDENTIFIED "OFF" POSITION IN ACCORDANCE WITH 2017 NEC 424.20.

APPLIES TO SHEETS E200A - E203 ONLY

AND BUS BARS, AND PREPARE THE ENCLOSURE TO RECEIVE RETRO-FIT COMPONENTS.

DEVICES. SEPARATE AND LABEL BRANCH CIRCUITS OF DIFFERENT VOLTAGES AS REQUIRED.

FEEDERS AND BRANCH CIRCUITRY SHALL BE DEMOLISHED BACK TO SOURCE ELECTRICAL PANEL.

22 REMOVE AND REPLACE EXISTING RECEPTALCES IN KIND WITH NEW. EXTEND/MODIFY BRANCH CIRCUITRY AS REQUIRED.

DESCRIPTION

EXISTING LIGHT, WIRING DEVICE, FIRE ALARM DEVICE, OR EQUIPMENT TO REMAIN. EXTEND/MODIFY CIRCUITRY AS NECESSARY FOR EQUIPMENT TO

EXISTING LIGHT, WIRING DEVICE, FIRE ALARM DEVICE, OR EQUIPMENT TO BE

EXISTING LIGHT, WIRING DEVICE, FIRE ALARM DEVICE, OR EQUIPMENT TO BE DISCONNECTED, SECURED AND STORED DURING CONSTRUCTION. RELOCATE AND RECONNECT WHERE IDENTIFIED ON DRAWINGS DURING CONSTRUCTION.

DISCONNECTED RELOCATED AND RECONNECTED.

ELECTRICAL REMOVAL SCHEDULE

EFFECTED TRADES AND THE OWNER IN WRITING 5 DAYS PRIOR TO SHUTDOWNS.

REMOVAL OF UNIT VENTILATOR WITH THE MECHANICAL CONTRACTOR.

BRANCH CIRCUITRY TO REMAIN FOR INSTALLATION OF FUTURE DEVICE(S).

EXIT SIGN

DUPLEX RECEPTACLE, 120V

DISCONNECT SWITCH

SIMPLEX RECEPTACLE, 120V, 240V

DATA / COMMUNICATION DEVICE

HARD WIRED CONNECTION

2X2 / 2X4 LIGHT FIXTURE

LINEAR LIGHT FIXTURE

REMAIN ACTIVE.

RECESSED LIGHT FIXTURE

SMOKE / FIRE DETECTION DEVICE

MANUAL FIRE ALARM PULL STATION

FIRE ALARM NOTIFICATION DEVICE

MAGNETIC DOOR HOLDER

CARBON MONOXIDE DETECTOR

HEAT DETECTION DEVICE

TOGGLE SWITCH / LIGHTING CONTROL DEVICE

SYMBOL

H/L L

EXISTING CHALLENGER PANELBOARD. DOCUMENT AND TAG EXISTING BRANCH CIRCUIT CONDUCTORS TO REMAIN. DISCONNECT AND DEMOLISH PANELBOARD. PREPARE FEEDER AND BRANCH CIRCUIT CONDUCTORS

COORDINATE CLEARANCE BOUNDRIES WITH ARCHITECTURAL DRAWINGS. VERIFY DEMOLITION REQUIREMENTS IN FIELD. COORDINATE POWER, FIRE ALARM, AND DATA/COMMUNICATION DOWNTIMES WITH ALL

EXISTING FUSED SWITCH WITH INTERLOCK. DISCONNECT AND RELOCATE LINE SIDE TAP FEEDING 800A DISTRIBUTION PANEL 'AMA' TO THE LOAD SIDE OF SWITCH. DEMOLISH LOAD SIDE FEEDERS TO THE CTEC

POOL EQUIPMENT TO BE DEMOLISHED BY OTHERS. DEMOLISH ELECTRICAL CONNECTIONS, CONDUITS, CONDUCTORS, EQUIPMENT CONTROLLERS, DISCONNECT SWITCHES, CIRCUIT BREAKERS, ETC COMPLETE.

POOL ROOM. DEMOLISH ELECTRICAL DEVICES, LIGHT FIXTURES, EQUIPMENT CONNECTIONS, CONDUITS, CONDUCTORS, SURFACE MOUNTED DEVICE BOXES, ETC TO RENDER COMPLETE. FEEDERS AND BRANCH

DEMOLISH ELECTRICAL DEVICES, BOXES, LIGHT FIXTURES, LIGHTING CONTROLS, FIRE ALARM DEVICES, DATA/COMMUNICATION RECEPTACLES, EQUIPMENT CONNECTIONS, ETC TO RENDER THE AREA COMPLETE,

21 EXISTING FAN COIL UNIT TO BE DEMOLISHED. DISCONNECT, CAP, AND SECURE CONDUCTORS FROM FAN COIL UNIT. PREPARE CONDUIT AND CONDUCTORS TO BE RECONNECTED TO FUTURE EQUIPMENT.

TYP. FOR CAFETERIA AND AUDITORIUM LIGHT FIXTURES, DEMOLISH LIGHT FIXTURES, SWITCHES, MOUNTING HARDWARE, LIGHTING CONTROLS, AND CONTROL CIRCUITRY BACK TO CONTROL SWITCH(ES). LINE SIDE

UNIT VENTILATOR TO BE DEMOLISHED BY OTHERS. DEMOLISH BRANCH CIRCUITRY BACK TO NEAREST JUNCTION POINT AND PREPARE CONDUCTORS TO BE EXTENDED TO FUTURE UNIT VENTILATORS. COORDINATE

7 DEMOLISH RECEPTACLES, DATA OUTLETS, SWITCHES, LIGHT FIXTURES, ETC COMPLETE. PULL BACK BRANCH CIRCUITRY TO NEAREST JUCTION POINT ABOVE FINISHED CEILING HEIGHT FOR CONNECTION TO FUTURE

8 EXTEND / MODIFY EXISTING CONDUIT AND CIRCUIRTY FOR LINE VOLTAGE, LOW VOLTAGE, FIRE ALARM, TELECOMMUNICATIONS, ETC COMPLETE TO RENDER AREA CLEAR FOR HOIST LIFT TO BE INSTALLED.

BUILDING FROM AXELROD SERVICE DISCONNECT SWITCH AND CTEC INTERLOCK SWITCH CONNECTION. REFER TO POWER SCHEMATIC DETAIL AND NOTES FOR MORE INFORMATION.

AIR HANDLER TO BE DEMOLISHED BY OTHERS. DEMOLISH CONDUIT, CONDUCTORS, DISCONNECT SWITCH, CIRCUIT BREAKERS, ETC COMPLETE BACK TO SOURCE ELECTRICAL PANEL.

CIRCUITS SHALL BE DEMOLISHED BACK TO THE SOURCE ELECTRICAL PANEL. RECESSED ELECTRICAL DEVICE BOXES SHALL REMAIN FOR FUTURE USE, UNLESS NOTED OTHERWISE.

16 DEMOLISH EXISTING LIGHT FIXURES, EXIT SIGNS, LIGHTING CONTROL DEVICES, LIGHTING BRANCH CIRCUITRY BACK TO SOURCE ELECTRICAL PANEL, ETC TO RENDER COMPLETE.

23 DEMOLISH EXISTING CEILING MOUNTED LIGHT FIXTURES. CAP AND SECURE LIGHTING CONTROL CIRCUIT TO BE RECONNECTED TO NEW LIGHT FIXTURES DURING CONSTRUCTION.

18 AIR HANDLER TO BE DEMOLISHED BY OTHERS. DISCONNECT, CAP, AND SECURE CONDUCTORS AND CONDUIT FOR CONNECTION TO THE FUTURE EQUIPMENT.

WATER HEATER TO BE DEMOLISHED BY OTHERS. DISCONNECT, CAP AND SECURE LINE VOLTAGE CIRCUITRY FOR CONNECTION TO REPLACEMENT WATER HEATER.

EXHAUST FAN TO BE DEMOLISHED BY OTHERS. DISCONNECT, CAP AND SECURE CIRCUITRY FOR CONNECTION TO FUTURE EXHAUST FAN.

CONDUCTORS TO TERMINATE ON REPLACEMENT PANELBOARD.

TO TERMINATE ON REPLACEMENT PANELBOARD.

	# LIGHTING CONTROL ROOM SCHEDULE										
NOTE NUMBER	SWITCH	MOTION SENSOR	DAYLIGHT SENSOR	ROOM CONTROLLER	OPERATION MODE	DESCRIPTION					
1	CURRENT: NXSW-ORLO	CURRENT OMNIDT2000	N/A	CURRENT NXRC-1RD	MANUAL ON/AUTOMATIC OFF	(1) ZONE SYSTEM W/ (1) CEILING MOUNTED MOTION SENSOR & (1) WALL MOUNTED 4-BUTTON DIMMING SWITCH. 277V					
2	CURRENT: NXSW-ORLO, NXSW-OO	CURRENT OMNIDT2000	N/A	CURRENT NXRC-1RD	MANUAL ON/AUTOMATIC OFF	(1) ZONE SYSTEM W/ (1) CEILING MOUNTED MOTION SENSOR & (1) WALL MOUNTED 4-BUTTON DIMMING SWITCH, (1) WALL MOUNTED 2-BUTTON SWITCH. 277V					
3	CURRENT: HMTS1-N-WH	N/A	N/A	N/A	AUTOMATIC ON/AUTOMATIC OFF	WALL MOUNTED PASSIVE INFRARED, SINGLE RELAY, OCCUPANCY SWITCH, 277V.					
4	HUBBELL: 1221L (W/KEY HBL1209)	CURRENT OMNIDT500	N/A	CURRENT UVPP	AUTOMATIC ON/AUTOMATIC OFF	(1) ZONE SYSTEM W/ (1) CEILING MOUNTED MOTION SENSOR & (1) SINGLE POLE KEY OPERATED SWITCH. 277V					
5	HUBBELL: (2) 1223L, (1) 1224L (W/KEY HBL1209)	CURRENT OMNIDT2000 (QUANTITY BASED ON LIGHTING PLANS)	N/A	CURRENT UVPP	AUTOMATIC ON/AUTOMATIC OFF	(1) ZONE SYSTEM W/ CEILING MOUNTED MOTION SENSORS, THREE-WAY KEY OPERATED SWITCHES & FOUR-WAY KEY OPERATED SWITCHES (REFER TO LIGHTING PLAN FOR DEVICE QUANTITIES). 277V					
6	CURRENT: NXSW-OO	CURRENT ATD1600WRP	N/A	CURRENT NXRC-1RD	MANUAL ON/AUTOMATIC OFF	(1) ZONE SYSTEM W/ (3) WALL MOUNTED MOTION SENSOR & (3) WALL MOUNTED 2-BUTTON SWITCH. 277V					
8	INTERMATIC: EK4000, ET8215C	N/A	INTERMATIC EK4000	N/A	AUTOMATIC ON/AUTOMATIC OFF	(1) PHOTOSENSOR, (1) ASTRONOMIC 7-DAY PROGRAMABLE TIME CLOCK. 277V					
9	INTERMATIC: EK4000	N/A	INTERMATIC EK4000	N/A	AUTOMATIC ON/AUTOMATIC OFF	(1) PHOTOSENSOR 277V					
10	CURRENT: HMTS1-N-WH	N/A	N/A	N/A	MANUAL ON/AUTOMATIC OFF	WALL MOUNTED PASSIVE INFRARED, SINGLE RELAY, VACANCY SWITCH, 277V.					
11	CURRENT: NXSW-ORLO	CURRENT OMNIDT500	N/A	CURRENT NXRC-1RD	MANUAL ON/AUTOMATIC OFF	(1) ZONE SYSTEM W/ (1) CEILING MOUNTED MOTION SENSOR & (1) WALL MOUNTED 4-BUTTON DIMMING SWITCH. 277V					
12	HUBBELL: (2) 1223	CURRENT OMNIDT2000 (QUANTITY BASED ON LIGHTING PLANS)	N/A	CURRENT UVPP	AUTOMATIC ON/AUTOMATIC OFF	(1) ZONE SYSTEM W/ CEILING MOUNTED MOTION SENSORS, THREE-WAY (REFER TO LIGHTING PLAN FOR DEVICE QUANTITIES). 277V					
13	CURRENT: HMTS1-N-WH,1223	N/A	N/A	N/A	MANUAL ON/AUTOMATIC OFF	WALL MOUNTED PASSIVE INFRARED, SINGLE RELAY, VACANCY SWITCH, (1) THREE-WAY TOGGLE SWITCH. 277V.					

LIGHTING CONTROL EQUIPMENT SCHEDULE								
SYMBOL	MANUFACTURER	CATALOG#	DESCRIPTION					
\$	HUBBELL	1221	SINGLE POLE TOGGLE SWITCH WITH METAL COVER PLATE, EXTRA HEAVY DUTY INDUSTRIAL GRAD 20A, 125V/277V.					
<b>\$</b> <sub>3</sub>	HUBBELL	1223	THREE WAY TOGGLE SWITCH WITH METAL COVER PLATE, EXTRA HEAVY DUTY INDUSTRIAL GRADE 20A, 120V/277V.					
\$ <sub>D</sub>			WALL MOUNTED DIMMING LIGHT SWITCH WITH METAL COVER PLATE. REFER TO LIGHTING CONTROROM SCHEDULE FOR PART SPECIFICATION AND OPERATION MODE.					
\$oc			SINGLE POLE OCCUPANCY WALL SWITCH WITH METAL COVER PLATE. REFER TO LIGHTING CONTR ROOM SCHEDULE FOR PART SPECIFICATION AND OPERATION MODE. ALL SWITCHES SHALL BE LABELED WITH SOURCE AND CIRCUIT NUMBER.					
\$ <sub>V</sub>			SINGLE POLE VACANCY WALL SWITCH WITH METAL COVER PLATE. REFER TO LIGHTING CONTROL ROOM SCHEDULE FOR PART SPECIFICATION AND OPERATION MODE. ALL SWITCHES SHALL BE LABELED WITH SOURCE AND CIRCUIT NUMBER.					
\$м			LOW VOLTAGE MOMENTARY CONTACT LIGHT SWITCH WITH METAL COVER PLATE. REFER TO LIGHTING CONTROL ROOM SCHEDULE FOR PART SPECIFICATION AND OPERATION MODE.					
\$ <sub>K</sub>	HUBBELL	1221L	SINGLE POLE KEY OPERATED TOGGLE SWITCH, EXTRA DUTY INDUSTRIAL GRADE, 20A, 125V/277V. PROVIDE WITH OPERATING KEY.					
\$ <sub>K3</sub>	HUBBELL	1223L	3-WAY KEY OPERATED TOGGLE SWITCH, EXTRA DUTY INDUSTRIAL GRADE, 20A, 125V/277V. PROVID WITH OPERATING KEY.					
\$ <sub>K4</sub>	HUBBELL	1224L	4-WAY KEY OPERATED TOGGLE SWITCH, EXTRA DUTY INDUSTRIAL GRADE, 20A, 125V/277V. PROVID WITH OPERATING KEY.					
RC	CURRENT		CURRENT NX ROOM CONTROLLER. 120V/277V. REFER TO LIGHTING CONTROL ROOM SCHEDULE FOR FURTHER INFORMATION.					
$\langle M \rangle$	CURRENT	NXSW-OMNIDT	DUAL TECHNOLOGY (PIR/ULTRASONIC) CEILING MOUNTED LOW VOLTAGE (24V) DIGITAL PRESENCE DETECTOR FOR USE WITH NXRC AND UVPP . REFER TO LIGHTING CONTROL ROOM SCHEDULE FOR FURTHER INFORMATION.					
P	INTERMATIC	EK4000	EXTERIOR MOUNTED LINE VOLTAGE (120V) PHOTO SENSOR. REFER TO LIGHTING CONTROL ROOM					

	⟨#⟩ LIGHTING PLAN KEYED NOTES	APPLIES TO SHEETS E300A - E302B ONLY
#	DESCRIPTION	
1	EXTEND/MODIFY EXISTING LIGHTING BRANCH CIRCUIT TO ROOM CONTROLLER. EXTEN TO WALL SWITCH, AND OCCUPANCY SENSOR. REFER TO LIGHTING CONTROL DETAILS F	
2	EXTEND/MODIFY EXISTING LIGHTING BRANCH CIRCUIT FROM NEAREST JUNCTION POIN CONTROLLER. EXTEND LOW VOLTAGE CABLES TO WALL SWITCH, AND OCCUPANCY SEN CONTROL DETAILS FOR MORE INFORMATION. WHERE A JUNCTION POINT IS NOT AVAIL INSTALL A STEEL 4"X4" JUCTION BOX WITH STEEL COVER FOR ALL REQUIRED SPLICE COI	ISOR. REFER TO LIGHTING LABLE, FURNISH AND
3	EXTEND/MODIFY #12/2 THHN TYPE MC CABLE WITH #12G TO ADDITIONAL LIGHT FIXTU CONTROLLER.	RES FROM ROOM
4	EXTEND/MODIFY #12/2 THHN TYPE MC CABLE WITH #12G TO ADDITIONAL LIGHT FIXTU	RES.
5	TYPICAL FOR CORRIDOR LIGHT FIXTURES. EXTEND EXISTING LIGHTING BRANCH CIRCUIT EXISTING KEYED SWITCH TO ROOM CONTROLLER. EXTEND LOW VOLTAGE CABLES TO S REFER TO LIGHTING CONTROL DETAILS FOR MORE INFORMATION.	
6	EXTEND (2) #12 THHN, #12G IN 3/4"C FROM A 20A/1P CIRCUIT BREAKER LISTED FOR US SERVE LIGHT FIXTURES WITHIN COURTYARD-B, C, D, & E. FIXTURES SHALL BE ACTIVE 'O MOUNTED PHOTOCELL.	
7	EXTEND/MODIFY EXISTING LIGHTING CONTROL CIRCUITRY TO ADDITIONAL LIGHT FIXTU	IRES.
8	EXTEND/MODIFY #12/2 THHN TYPE MC CABLE WITH #12G TO ADDITIONAL LIGHT FIXTU	RE.
9	EXTEND/MODIFY EXISTING LIGHTING CIRCUITRY TO ADDITIONAL LIGHT FIXTURES	
10	EXTEND/MODIFY EXISTING LIGHTING BRANCH CIRCUIT FEEDER TO LINE SIDE OF ROOM	CONTROLLER.
11	CANOPY LIGHT FIXTURES SHALL BE CONTROLLED ACTIVE 'ON' BY PHOTOCELL, ACTIVE 'C' TIME CLOCK.	PFF' BY ASTRONOMIC
12	EXTERIOR WALL PACK LIGHT FIXTURES SHALL BE CONTROLLED ACTIVE 'ON' & 'OFF' BY R PHOTOCELL.	OOF MOUNTED
13	EXTERIOR WALL PACK LIGHT FIXTURES SHALL BE CONTROLLED ACTIVE 'ON' & 'OFF' BY R PHOTOCELL. EXTEND (2) #12 THHN, #12G IN 3/4"C FROM A 20A/1P CIRCUIT BREAKER L 'ALC' TO FEED THE EXTERIOR LIGHT FIXTURES AND PHOTOCELL.	
14	EXTERIOR DOWNLIGHT FIXTURES SHALL BE CONTROLLED ACTIVE 'ON' & 'OFF' BY ROOF EXTEND/MODIFY EXISTING LIGHTING BRANCH CIRCUITRY AS REQUIRED.	MOUNTED PHOTOCELL.
15	EXTERIOR FIXTURES SHALL BE CONTROLLED ACTIVE 'ON' AND 'OFF' BY A LISTED ASTRON COORDINATE MOUNTING LOCATION AND CONFIGUATION WITH OTHERS.	IOMIC TIME CLOCK.
16	TYPICAL, EXTERIOR WALL MOUNTED LIGHT FIXTURES SHALL BE CONTROLLED ACTIVE 'O MOUNTED PHOTOCELL. EXTEND/MODIFY EXISTING LIGHTING BRANCH CIRCUITRY AS R	
17	EXTEND (2) #12 THHN, #12G IN 3/4" EMT TO NEW 20A/1P BRANCH CIRCUIT BREAKER IN	I PANEL ALB.
18	EXTEND (2) #12 THHN, #12G IN 3/4" EMT TO NEW 20A/1P BRANCH CIRCUIT BREAKER IN	L DANIEL ALC

LIGHTING FIXTURE SCHEDULE										
TYPE MARK	DESCRIPTION	MANUFACTURER	CATALOG #	SOURCE	COLOR TEMPERATURE	WATTAGE	VOLTAGE	LUME		
А	2"X2" RECESSED DIRECT BACKLIT LED, INTEGRAL 0-10V DIMMING DRIVER, 80+CRI.	DAY-BRITE	2SBP3040L8CS-2-UNV-DIM	LED	SELECTABLE SET TO 3500K	33	277	359		
В	2"X4" RECESSED DIRECT BACKLIT LED, INTEGRAL 0-10V DIMMING DRIVER, 80+CRI.	DAY-BRITE	2SBP3550L8CS-4-UNV-DIM	LED	SELECTABLE SET TO 3500K	38	277	471		
С	6" RECESSED SLOT LED, 0-10V DIMMING DRIVER, 90+ CRI	FOCAL POINT	FSM6L-FL-375LF-35K-1C-UN V-CONTROLS-T1-OPTIONS- WH-28-0X18-0 R	LED	3500K	18.2	277	173		
C1	6" RECESSED SLOT LED, 0-10V DIMMING DRIVER, 90+ CRI	FOCAL POINT	FSM6L-FL-375LF-35K-1C-UN V-CONTROLS-T1-OPTIONS- WH-22-0X12-0 R	LED	3500K	18.2	277	173		
D	3.5" LOW PROFILE LED TRIMLESS DOWN LIGHT	FOCAL POINT	FLC3D-RO-SW-1900L-UNV-L Z1-IC-BH-LC3-RO-SW-1900L -35K-FL2-CD-WP	LED	3500K	22	277	190		
E	LED VANITY, 90+ CRI	SOLAVANTI LIGHTING	MLSSL-A1-B65.370-SP-30-44 -277	LED	3000K	6	277	480		
	4.5" CYLINDER PENDANT WITH DECORATIVE REVEAL, 0-10V DIMMING DRIVER, LED, 90+ CRI	FOCAL POINT	FLCY4-RD-RAL-2500L-35K-1 C-UNV-DSC-CONTRØLS- C72-DNTS-WFL-CD-PS	LED	3500K	35	277	221		
G	1.5" RECESSED LINEAR DIRECT LED, 0-10V DIMMING DRIVER, 90+ CRI	FOCAL POINT	FSM2LWL-FL-250LF-35K-1C- UNV-L11-XFN-WH- 16'	LED	3500K	13	277	100		
J2	2' DIAMETER RECESSED DIRECT LED, 90+ CRI	SKYDOME	FSDL22FLXP-935K1CUNV	LED	3500K	27	277	200		
J3	3' DIAMETER RECESSED DIRECT LED, 90+ CRI	SKYDOME	FSDL33FLXP-935K1CUNV	LED	3500K	49	277	400		
J4	4' DIAMETER RECESSED DIRECT LED, 90+ CRI	SKYDOME	FSDL44FLXP-935K1CUNV	LED	3500K	70	277	700		
K	SUSPENDED LINEAR 80/20 INDIRECT/DIRECT LED, 0-10V DIMMING DRIVER, 90+ CRI	FOCAL POINT	FOSS-FL80-750-35K-1C-UNV -LD1-G-CLV24-OPTIONS- 6'	LED	3500K	26	277	300		
М	1.5" RECESSED LINEAR DIRECT LED, 0-10V DIMMING DRIVER, 90+ CRI	FOCAL POINT	FSM1D-FL-PS8-450L-FL2-50 0LF-35K-1C-UNV-CONTROL S-XFW-OPTIONS-BK-6'	LED	3500K	17	277	300		
Р	WALL MOUNT WEDGE, TYPE 3 DISTRIBUTION, LED 70+CRI, INTERGRATED EMERGENCY BATTERY BACKUP COLD RATED.	SIGNIFY	GWM-A11-740-T3M-VOLTAG E-CONTROLS-OPTIONS- BZ	LED	4000K	52	277	873		
R	SLIM SURFACE 7" ROUND LED, 0-10V DIMMING DRIVER, 80+ CRI	SIGNIFY	S7R-80-35K-10-W-DIM	LED	3500K	14.7	277	100		
S	RECESSED WALL LUMINAIRE LED	BEGA	33059	LED	3000K	14.7	277	148		
Т	LED ROUND BOLLARD	LUMENS	HKY2225314	LED	3000K	8	120	55		
U	INGROUND LUMINAIRE LED	WE-EF	ETC140-GB	LED	4000K	24	277	351		

ORANGE-ULSTER BOCES APPLIES TO SHEETS E100A - E103 ONLY **DEMOLITION POWER KEYED NOTES** AXELROD - MAIN CONDENSING UNIT TO BE DEMOLISHED BY OTHERS. DEMOLISH CONDUIT, CONDUCTORS, DISCONNECT SWITCH, CIRCUIT BREAKERS, ETC COMPLETE BACK TO SOURCE ELECTRICAL PANEL. EXISTING FEDERAL PACIFIC PANELBOARD. THIS CONTRACTOR SHALL DOCUMENT EXISTING BRANCH CIRCUITS AND THEIR AMPACITY, TAG BRANCH CIRCUIT CONDUCTORS, DEMOLISH THE EXISTING CIRCUIT BREAKERS DEMOLISH PANELBOARD. DEMOLISH FEEDER CONDUCTORS TO SOURCE PANELBOARD IN THE ELECTRICAL ROOM BELOW. DEMOLISH CONDUIT TO NEAREST JUCTION POINT FOR FUTURE USE. PROVIDE NYLON DRAG **ALTERATIONS** EXISTING FEDERAL PACIFIC PANELBOARD. DOCUMENT AND TAG EXISTING BRANCH CIRCUIT CONDUCTORS TO REMAIN. DISCONNECT AND DEMOLISH PANELBOARD. PREPARE FEEDER AND BRANCH CIRCUIT

GOSHEN, NY 10924



KGDARCHITECTS.COM

P:914.666.5900

(845) 291 1272 GerardAssociates.com

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44-90-00-00-0-009-036

BID ISSUE

KEY PLAN

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2 11/25/2024 BID ADDENDUM #4 1 10/25/2024 BID ISSUE

**ELECTRICAL:** 

**EQUIPMENT** SCHEDULES

10/25/2024

Drawn / Checked AS NOTED

E703