ADDENDUM NO. 6

March 11, 2025

IPS: Joyce Kilmer New School 69 3421 N. Keystone Avenue Indianapolis, IN 46218

TO: ALL BIDDERS OF RECORD

This Addendum forms a part of and modifies the Bidding Requirements, Contract Forms, Contract Conditions, the Specifications, and the Drawings dated January 17, 2025, by Meticulous Design + Architecture. Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of Pages ADD 6-1 Through ADD 6-3, and attached Meticulous Design + Architecture Addendum No. 5, dated March 10, 2025, consisting of nine (9) Pages, Structural Clarifications, and Specification Sections: 034500 – Precast Architectural Concrete, 074213.23 – Metal Composite Material Wall Panels, 096519 – Resilient Tile Flooring, 096813 – Tile Carpeting, 099723 – Concrete and Masonry Color Treatment, 211000 – Water-Based Fire-Protection Systems, 230516 – Expansion Fittings and Loops for HVAC Piping, 323119 – Decorative Metal Fences and Gates, 323913.19 – Decorative Metal Bollards, Drawing Sheet Clarifications, and JQOL Addendum No. 5, consisting of 3 pates, and KBSO Consulting Addendum No. 6, dated March 10, 2025, consisting of 4 pages, and Addendum Drawings: CS-101, CG-102, CU-101, CU-504, L2.01, L2.02, L3.01, L3.02, L3.03, L3.05, L3.06, S100, S500, S501, A-111A, A-111B, A-112A, A-112B, A-121A, A-201, A-405, A-406, A-601, A-611, A-612, A-613, I-131A, I-131B, I-132A, I-132B, I-457 I-471, M-401, M-501, M-601, M-901, M-902, M-903, M-906, MH-111A, MH-112A, MH-112B, MH-113A, MH-113B, MP-111A, MP-111A, MP-111A, MP-112A, MP-112B, E-401, E-601, E-901, EP-111A, P-110A, P-110B P-111A-01, P-111B-01, P-401, P-501, P-602, P-901, FP-111A, FP-111B, FP-112A, FP-112B, FP-501.

A. <u>GENERAL CLARIFICATIONS:</u>

- 1. The details and specifications show a minimum manhole size of 4', and include a detail for INDOT inlets type E and F. Are these to be assumed the proper storm structure varieties? Yes, these are the proper storm structure varieties. We will review substitution requests if you prefer to use a different type.
- 2. Where does the 6" water line tie into an existing main? What size is this main? There is an existing 24" C.I. water line running north-south under Keystone Avenue. Coordinate with CEG for new connection or to possibly reuse existing taps.

B. SPECIFICATION SECTION 01 12 00 -MULTIPLE CONTRACT SUMMARY

B. BID CATEGORY NO. 2 – GENERAL TRADES

Add the following Specification Section:

Section 323913 - Decorative Metal Bollards

Add the following Clarifications:

- 17. Bid Cat 2 is responsible for installation of salvaged cast stone bollards.
- 18. Bid Cat 2 is responsible for the IPATOP-Arc Abrasion Resistant per Concrete Sidewalk detail on sheet CS 501.

C. <u>BID CATEGORY NO. 3 – PRECAST</u>

Add the following Clarification:

9. Bid Cat 3, Pre-cast: remove crane pad installation from Project specifics clarifications. This will be the responsibility of Bid Cat 15.

G. BID CATEGORY NO. 8 - PAINTING

Add the following Specification Section:

Section 99723 – Concrete and Masonry Color Treatment

L. <u>BID CATEGORY NO. 13 – PLUMBING & HVAC</u>

Add the following Specification Section:

Section 230516 – Expansion Fittings and Loops for HVAC

M. <u>BID CATEGORY NO. 14 – ELECTRICAL & TECHNOLOGY</u>

Add the following Clarifications:

- 7. Contractors shall be a minimum Silver level channel partner of Hanwha Techwin America and shall operate an office located within 2 twenty (20) mile radius of the project address.
- 8. All work specified herein shall be the responsibility of the Contractor. Contractors shall document a minimum of five years of experience in the fabrication, assembly and installation of systems of similar complexity as specified herein. The documentation shall include the names, locations and points of contact for at least three installations of the type and complexity specified herein. The contractors shall provide a brief overview of each system detailing what video security system was used; the amount of equipment installed; and certify that the system has been in operation for a minimum of 24 months.
- 9. The Contractor shall have a service facility and organization with staffing capable of providing comprehensive maintenance and service to the specified systems within 4 hours after being called, 24 hours per day and 7 days per week for the duration of any warranty or service contract.

- 10. The Contractor shall provide in-house engineering and project management capabilities consistent with the requirements of the work. The Contractor shall have a project manager and field supervisor in place which oversees the entire project till completion of the project. The assigned project manager will be responsible for coordination, scheduling, manpower, commissioning etc. of the project. The Contractor's field supervisor shall be present during the full duration of the project to oversee field installations and to coordinate with other trades to ensure progress on the project.
- 11. The Contractor shall provide factory certified technicians to work on any NVR or DVR installed on this project.
- 12. The Contractor must be familiar with local codes and contract conditions pertaining to this project.
- 13. The Contractor shall provide a minimum of two (2) training sessions of two (2) hours each with Owner's representatives. The training shall occur at the earliest time after project completion agreed upon between the Contractor and the Owner. The training shall cover operation, control, and maintenance of the entire video security camera system.

N. <u>BID CATEGORY NO. 15 – EARTHWORK/SITE UTILITIES</u>

Add the following Clarification:

10. Bid Cat 15 is responsible for the stone crane pad for use by Bid Cat 3.



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REQUESTS FOR SUBSTITUTION

1. At drawing L3.03 12" Border Timber.

Answer: Approved by IPS.

2. At drawing L3.01 PSS Tetherball.

Answer: Approved by IPS.

3. At specification SECTION 098433 SOUND-ABSORBING WALL UNITS to add Cardinal Acoustics as an approved manufacturer.

Answer: Yes, Cardinal Acoustics is approved.

4. At specification SECTION 105113 METAL LOCKERS to add Lockers Manufacturing as an approved manufacturer.

Answer: Yes, Lockers Manufacturing is approved.

5. At specification SECTION 116800 PLAY FIELD EQUIPMENT AND STRUCTURES to add Burke as an approved manufacturer.

Answer: Yes, Burke is approved.

6. At drawing A-003 detail EM 12.1 requested to change depth of relief from Scott System #117 Phoenix Limestone with 1 1/8" relief #109 Standard Fractured Fin with 3/4" Max Relief depth or an Apformliner #206 Standard Fractured Fin with 3/4" relief depth or a US Formliner model 2/30 B Havel with a relief depth less than 3/4" relief depth.

Answer: All 3 substitutions are approved.

QUESTIONS

1. Elevation 5 of A611 stands at 15'-6". This is not possible for 451T or 601T systems. They are too tall for the SF systems. We suggest using the 6" Curtain Wall systems on the frames on A611, 7 $\frac{1}{2}$ " system on A612.

Answer: Provide 6-inch deep frames at Elevations 4 and 5 on A-611. Provide 7 $\frac{1}{2}$ inch deep frames at all Elevations on A-612 and at Elevation 6 on A-613. Provide 4 $\frac{1}{2}$ frames at all other locations.

2. In the Art Room (1st Floor) + Music Room (2nd Floor) there are a series of openings that are not tagged, please clarify.

Answer: See revised sheet A-201

3. Please confirm that the chilled water system bypass valve is to be PICV.

Answer: This is correct.

- 4. Regarding the platforms below the stairs. Where does detail 9/A-510 occur?
 - a. It doesn't match the materials listed in 5/A405, 6/A-407, or 12/I-471. Answer: Provide Solid surface material for all horizontal and vertical surfaces.
- 5. Please confirm there are no Metal Lockers, despite there being a specification.

 Answer: There are Metal Lockers shown on the floor plan in Receiving 112 adjacent to Office 109. These are 2-tier lockers.
- 6. The documents show an extension on the outside of the storefront to make it 10". This will not work.

Answer: See Details 2, 3, and 4 on Sheet A-612.

7. Both storefront and curtain wall specifications call all ground floor glass to be laminated outboard up to 9'9". The specified exterior glass is gray outboard with high performance low E. Making the outboard laminated increases the overall insulated unit thickness to 1 5/16" which will not work with either the specified storefront system or the specified curtain wall system.

Answer: In lieu of using laminated glass on the outboard lite, provide ballistic film on the inside face of glass, equal to SafetyShield 800 PS SR as manufactured by Madico, Inc.

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8. On page G-000 in addendum #2, drawings 5.3 Com Check, A-701-A-803 are listed but I can't find these drawings anywhere. Please provide these drawings.

Answer: Was addressed in Addendum #4 section 5.3, sheets A-701-A-803 have been removed from the index.

- 9. Please provide a detail as to how tall the CMU walls are at doors 105A2 & 105A3. The reflected ceiling indicates a hard ceiling at 10'. Is there to be a cap above that?

 Answer: CMU wall shall extend to underside of deck minimum.
- 10. What castings are to be used for storm structures?

Answer: Storm sewer structure data tables have been added to sheet CU-504 that include castings.

11. The details and specifications show a minimum manhole size of 4', and include a detail for INDOT inlets type E and F. Are these to be assumed the proper storm structure varieties?

Answer: Yes, these are the proper storm structure varieties. We will review substitution requests if you prefer to use a different type.

- 12. Is there a water vault, valve, or post indicator required for the 6" water lead?

 Answer: Valves, etc. are located inside the mechanical room. There is a FDC located near Keystone on 35th Street.
- 13. Where does the 6" water line tie into an existing main? What size is this main?

 Answer: There is an existing 24" C.I. water line running north-south under Keystone Avenue. Coordinate with CEG for new connection or to possibly reuse existing taps.
- 14. Are extended coverage sprinklers acceptable?

Answer: Extended coverage sprinklers are acceptable where necessary.

15. Are semi-recessed or concealed type heads required? Notes D & E in the FP drawings and the specifications have conflicting notes.

Answer: Plan note D was removed and E was relabeled as D to resolve the conflict on Sheets FP-111A, FP-111B, FP-112A, and FP-112B.

16. Are we to follow the pipe schedule on drawing sheet FP-501 or Part 2 of spec. section 211000? The two areas have conflicting notes.

Answer: The specification was modified per our Addendum 6 section 211000 to resolve the conflict.

17. Are roll grooves acceptable for pipe sized 2.5" and less or will square cut grooves be required?

Answer: KBSO has no preference on groove style; this is left to the contractor's discretion.

- 18. Receiving room 112 and site eqp. Storage room 113 state to protect each area with dry type sprinkler heads.
 - a. Receiving room 112 opens into circulation 112A and is exposed to structure. This area cannot be protected by dry sidewall sprinkler heads alone due to its size. Does this area need to be protected by a dry pipe sprinkler system, or will the wet pipe sprinkler system be acceptable to cover these areas? Answer: This question was answered by the addition of the drypipe sprinkler system on drawing FP-111A.
 - b. Storage room 113 is exposed to structure. Due to this, dry sidewall sprinkler heads will be required to protect the area. However, sidewall spacing requirements for ordinary hazard spaces limit the spray pattern to 10'x10' for standard spray heads. The room is 11'-8" wide. Will extended coverage dry sidewalls be permitted to protect this room or will a dry system be required for this area?

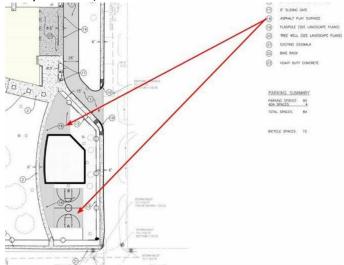
Answer: This question was answered by the addition of the drypipe sprinkler system on drawing FP-111A.

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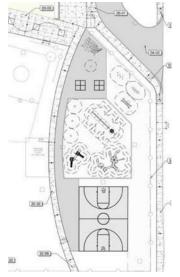
19. Alternate 2 says staining of precast panels is specified in Section 03 45 00. The precast stain is not specified in this section. Please provide a specification for staining of the precast panels.

Answer: See SECTION 099723 CONCRETE AND MASONRY COLOR TREATMENT.

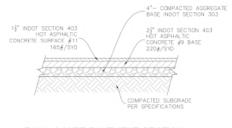
20. Asphalt Play surface, Sheet CS-101 Site Plan below



- a. Keynote #18 shows both areas being the same "Asphalt Play Surface."
- b. Sheet L2.02 Addendum #1 below



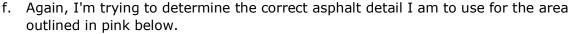
- c. The poche on this sheet differs from the Site Plan.
- d. I need to know if Keynote #18 is correct on sheet CS-101. Are both of these areas using the detail below?

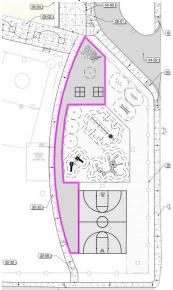


BALL COURT PAVEMENT SECTION

e. Or is the above detail for the Basketball Court only?

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Answer: Asphalt Play Surface: The asphalt area in the playground will match the asphalt profile of the basketball court per call out (18) on sheet CS-101. See details.

- 21. Please clarify that the following door frames are to be frame type 3, and not type 1:
 - a. 102, 105C1, 105C2, 119, 124A, 124B, 202B, 205A, 205B, 239A, 239B Answer: Yes, type 1 is frame type for those conditions, type 3 is for doors in precast or masonry openings.
- 22. The sidewalk running north/south on the west side of the site plan is indicated to be new and existing. Please clarify. Also, please clarify the sidewalk on the North side of the site that runs east/west along the road is to be existing, despite being bolded and appearing to be new. (I believe these are new, but the site plans indicate existing and new)

Answer: Sheet CS-101 has been revised to clarify the new sidewalk.

23. The roof specialties spec calls for the edge metal to be included in the membrane warranty. If this is the design intent please open the spec to allow for any membrane manufacturer approved edge metal fabricator as an acceptable fabricator.

Answer: Approved roof membrane manufacturers may provide approved edge metal fabrications that form part of the roofing system warranty.

a. The roof specialties spec calls for the colors to include a manufacturer's full range. There is a huge price difference between standard and premium colors. Usually a customer selects a standard color. So, if we include the cost of premium metal in our bid, it is likely the customer will not get the benefit of this added cost. It would be very helpful if the designer could review the standard colors and really decide before the bid if a custom or premium color was desired or not so we can bid accurately.

Answer: Color to be Black.

24. Please provide a spec for the ACM at the small entry canopies.

Answer: See SECTION 074213.23 METAL COMPOSITE MATERIAL WALL PANELS.

25. Fencing:

a. The specs don't call for an actual manufacturer, just a list of suppliers. Is it open to quote for aluminum manufacturer?

Answer: Yes.

b. It calls for a wide variety of gate operator manufacturers but not LiftMaster, who we use as a standard. Can we quote them?

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- Answer: No, operators are no longer required and all sliding gates are manually operated.
- c. In regards to the gate operators, I see them called out in the specs but not on the drawings or details. Are they actually needed?
 - Answer: No, operators are no longer required and all sliding gates are manually operated.
- d. For the fence detail, 2-rail is not commonly available in 6' and taller heights. It would have to be 3-rail.

Answer: 3-Rail is acceptable.

26. At Sheet S100:

- a. There is a MAT Foundation Schedule MAT 2.0 that is 2'-0" thick, however there is no callout on the drawings. The section cut for the elevator mat foundation shows a 1'-0" thick foundation. Please clarify.
 - Answer: Refer to sheet S100 FOUNDATION PLAN for MAT 2.0 foundation tag.
- b. Please provide section cuts for the walls at the courtyard outside the Mechanical Rooms. What are these walls to be constructed of?

Answer: Refer to sheet S100 FOUNDATION PLAN for wall geometry, wall tags, keynotes, foundation tags, and wall sections.

27. Sheet M-906:

- a. Radiation panels are shown on the Terminal Box Control Schematic, but there are none shown in the mechanical schedules or on the piping plans. Please advise.

 Answer: This portion of the schematic has been removed in Addendum #5.
- b. Hot Water Unit Heater Control Schematic note 3 references a line voltage thermostat, but there is a DDC points list shown. Please advise. Answer: This schematic is updated in Addendum #5.

SPECIFICATIONS

- 1. Revised Cover Sheet for Addendum No 5.
- 2. Revised 000110 TABLE OF CONTENTS
 - a. Revised SECTION 034500 AC PRECAST ARCHITECTURAL CONCRETE
 - b. Added SECTION 074213.23 METAL COMPOSITE MATERIAL WALL PANELS
 - c. Revised SECTION 096519 RESILIENT TILE FLOORING
 - d. Revised SECTION 096813 TILE CARPETING
 - e. Added SECTION 099723 CONCRETE AND MASONRY COLOR TREATMENT
 - f. Added SECTION 323119 DECORATIVE METAL FENCES AND GATES
 - g. Added SECTION 323913.19 DECORATIVE METAL BOLLARDS
- 3. Revised SECTION 034500 AC PRECAST ARCHITECTURAL CONCRETE
 - a. Revised Sample Panel quantities.
- 4. Added SECTION 074213.23 METAL COMPOSITE MATERIAL WALL PANELS
- 5. Revised SECTION 096519 RESILIENT TILE FLOORING
 - a. Changed manufacturer to Tarkett at Basis of Design.
- 6. Revised SECTION 096813 TILE CARPETING
 - a. Changed manufacturer to Tarkett at Basis of Design.
- 7. Added SECTION 099723 CONCRETE AND MASONRY COLOR TREATMENT
- 8. Revised SECTION 211000 WATER-BASED FIRE PROTECTION SYSTEM (WET PIPE)
 - a. Modified Part 2, paragraph 2.3, line C for pipe sizes.
- 9. Added SECTION 230516 EXPANSION FITTINGS AND LOOPS FOR HVAC
- 10. Added SECTION Name to Table of Contents 281600 INTRUSION DETECTION SYSTEM
- 11. Added SECTION 323913.19 DECORATIVE METAL BOLLARDS
- 12. Added SECTION 323119 DECORATIVE METAL FENCES AND GATES
 - a. Included at end of section:
 - i. Cutsheet for sliding gate lock GL1.
 - ii. Cutsheet for mounting hardware Lock Bracket.

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- iii. Cutsheet for Optional Emergency Exit button Request to Exit Station at student gate.
- 13. Added SECTION 323913.19 DECORATIVE METAL BOLLARDS

DRAWINGS

- 1. Revised sheet A-111A 01 FLOOR PLAN AREA A
 - a. Removed Reference to A-800 series sheets.
- 2. Revised sheet A-111B 01 FLOOR PLAN AREA B
 - a. Removed Reference to A-800 series sheets.
- 3. Revised sheet A-112A 02 FLOOR PLAN AREA A
 - a. Removed Reference to A-800 series sheets.
- 4. Revised sheet A-112B 02 FLOOR PLAN AREA B
 - a. Removed Reference to A-800 series sheets.
- 5. Revised sheet A-121A 01 FLOOR RCP AREA A
 - a. 2nd floor ceiling graphic adjustment
- 6. Revised sheet A-201 EXTERIOR ELEVATIONS
 - a. Added window tags
- 7. Revised sheet A-405 STAIR PLANS, SECTIONS AND DETAILS
 - a. Notation added for platform under the stairs.
- 8. Revised sheet A-406 STAIR PLANS, SECTIONS
 - a. Notation added for platform under the stairs.
- 9. Revised sheet A-601 DOOR AND FRAME SCHEDULE
 - a. Revised DOOR SCHEDULE, number of door panels from 1 to 2 at door 103
- 10. Revised sheet A-611 STOREFRONT ELEVATIONS
 - a. Note added to clarify Storefront & Curtainwall systems
- 11. Revised sheet A-612 STOREFRONT ELEVATIONS
 - a. Note added to clarify Storefront & Curtainwall systems
 - b. Revised detail 2, 3, & 4 to correctly display Curtain Wall framing
- 12. Revised sheet A-613 STOREFRONT ELEVATIONS
 - a. Note added to clarify Storefront & Curtainwall systems
- 13. Revised sheet I-131A 01 INTERIOR FINISH PLAN AREA A
 - a. Removed Reference to A-800 series sheets.
- 14. Revised sheet I-131B 01 INTERIOR FINISH PLAN AREA B
 - a. Finishes for Stair 141
- 15. Revised sheet I-132A 02 INTERIOR FINISH PLAN AREA A
 - a. Removed Reference to A-800 series sheets.
- 16. Revised sheet I-132B 02 INTERIOR FINISH PLAN AREA B
 - a. Finishes for Stair 141
- 17. Revised sheet I-457 INTERIOR ELEVATIONS & DETAILS
 - a. Elevations added for Stair 141
- 18. Revised sheet I-471 CASEWORK DETAILS
 - a. Notation added to detail 12
- 19. Revised sheet CS-101 SITE PLAN
 - a. Keynotes #11 and #21 removed
 - b. Revised keynotes to reflect new concrete sidewalk
- 20. Revised sheet CG-102 GRADING PLAN
 - a. Added additional spot elevations around playground
- 21. Revised sheet CU-101 UTILITY PLAN
 - a. Revised rim elevations for STR-201, STR-212, and STR-214
 - b. Revised invert elevations for STR-114 and STR-201
 - c. Second drain line from building added that connects to STR-203
 - d. Original drain line from building moved 6' south where it exits building
- 22. Revised sheet CU-504 UTILITY DETAILS
- a. Storm sewer structure data tables added that include structure type and casting
- 23. Revised sheet L2.01 MATERIAL LAYOUT
 - a. Added Optional exit button at the student sliding gate.

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- 24. Revised sheet L2.02 MATERIAL LAYOUT
 - a. Reference notes updated with Optional exit button for student gate.
- 25. Revised sheet L3.01 PLAYGROUND EQUIP.
 - a. Basketball goal added to material list and callout on drawing
- 26. Revised sheet L3.02 SITE DETAILS
 - a. Detail 3: Playground play mulch profile and ADA ramp updated.
 - b. Detail 5: Basketball hoop.
 - c. Detail 6: Tetherball.
 - d. Detail 7: USA map colors.
- 27. Revised sheet L3.03 SITE DETAILS
 - a. Detail 11: Update fence panel with 3 horizontal rails per basis of design.
- 28. Revised sheet L3.05 SITE DETAILS
 - a. Detail 1: Pedestrian gate detail updated.
 - b. Detail 8: Steel Bollard detail updated.
- 29. Revised sheet L3.06 SITE DETAILS
 - a. Detail 1: Optional Emergency Exit button for student sliding gate.
 - b. Detail 2: Reclaimed bollards.
- 30. Revised sheet S100 FOUNDATION PLAN
 - a. Interior demising wall between gymnasium and stage has been changed to an insulated 8" PC wall panel.
 - b. Top footing elevations have been adjusted near southeast entry to accommodate storm/sewer piping existing the building.
 - c. Added Foundation Plan Note 6 regarding precast plank insulation.
- 31. Revised sheet S500 FOUNDATION SCHEDULES, SECTIONS, & DETAILS
 - a. Added note to detail 9 regarding precast insulation.
- 32. Revised sheet S501 FOUNDATION SCHEDULES, SECTIONS, & DETAILS
 - a. Added note to details 8 and 9 regarding precast insulation.
- 33. Revised sheet E-401 ENLARGED ELECTRICAL PLANS
 - a. Shifted pump electrical connections to match new locations within boiler room.
 - b. Added flow and tamper switch for new fire protection zone.
 - c. Added receptacle for nitrogen generator.
 - d. Added electrical connection for air compressor.
- 34. Revised sheet E-601 ELECTRICAL SCHEDULES
 - a. Updated Panel 1L1 to reflect breaker updates.
- 35. Revised sheet E-901 ELECTRICAL ONE-LINE DIAGRAM
 - a. Revised schedule for 300A feeders.
- 36. Revised sheet EP-111A 01 FLOOR ELECTRICAL PLAN AREA A
 - a. Provided circuit for gym bleacher motor and control(s).
- 37. Revised sheet FP-111A 01 FLOOR FIRE SUPPRESSION PLAN -AREA A
 - a. Removed pipe sleeves through foundation footing and keynote #1
 - b. Added pipe sleeves through wall.
 - c. Removed General Note F.
 - d. Added dry sprinkler system to cover Receiving 112 and Site Equip Storage 113.
 - e. Added note calling for dry-barrel sprinkler heads in Vestibule 123.
 - f. Added notation for pipe riser to Sprinkler Zone #2.
 - g. Removed General Note D pertaining to semi-recessed sprinklers.
 - h. Revised square footage of Sprinkler Sone #1.
- 38. Revised sheet FP-111B 01 FLOOR FIRE SUPPRESSION PLAN -AREA B
 - a. Removed General Note F.
 - b. Removed General Note D pertaining to semi-recessed sprinklers.
- 39. Revised sheet FP-112A 02 FLOOR FIRE SUPPRESSION PLAN -AREA A
 - a. Removed General Note F.
 - b. Removed General Note D pertaining to semi-recessed sprinklers.
- 40. Revised sheet FP-112B 02 FLOOR FIRE SUPPRESSION PLAN -AREA B
 - a. Removed General Note F.
 - b. Removed General Note D pertaining to semi-recessed sprinklers.

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- 41. Revised sheet FP-501 FIRE PROTECTION DETAILS
 - a. Removed CPVC from Fire Protection Pipe Material Schedule.
 - b. Added Zone #3 and drain lines to Fire Suppression Piping Diagram.
- 42. Revised sheet M-401 MECHANICAL ENLARGED PLANS
 - a. Added reheat coil piping for AH-2.
 - b. Moved evaporator within boiler room, shifted other equipment accordingly.
 - c. Added louver L-2 over boiler room exterior door.
- 43. Revised sheet M-501 MECHANICAL DETAILS
 - a. Added details #23 and #24.
- 44. Revised sheet M-601 MECHANICAL SCHEDULES
 - a. Added reheat coil for AH-2.
 - b. Added louver L-2.
- 45. Revised sheet M-901 TEMPERATURE CONTROL DIAGRAMS
 - a. Removed sound attenuators from diagram.
- 46. Revised sheet M-902 TEMPERATURE CONTROL DIAGRAMS
 - a. Removed sound attenuators from diagram.
- 47. Revised sheet M-903 TEMPERATURE CONTROL DIAGRAMS
 - a. Removed sound attenuators from diagram.
- 48. Revised sheet M-906 TEMPERATURE CONTROL DIAGRAMS
 - a. Removed references to radiant heating from Terminal Box Control Schematic.
 - b. Updated Hot Water Unit Heater Control Schematic per bidder questions.
- 49. Revised sheet MH-111A 01 FLOOR MECHANICAL HVAC PLAN AREA A
 - a. Added keynote #3.
 - b. Added return to maintenance office and updated return branch ductwork.
 - c. Removed AH-6 return grille from Café.
- 50. Revised sheet MH-112A 02 FLOOR MECHANICAL HVAC PLAN AREA A
 - a. Updated keynotes #2, #3, and #5.
 - b. Added differential pressure sensor and keynote #8 to Gym.
 - c. Shifted combustion and flue for boilers.
- 51. Revised sheet MH-112B 02 FLOOR MECHANICAL HVAC PLAN AREA B
 - a. Added keynote #2.
- 52. Revised sheet MH-113A 03 FLOOR MECHANICAL HVAC PLAN AREA A
 - a. Added keynotes #1 and #2.
- 53. Revised sheet MH-113B 03 FLOOR MECHANICAL HVAC PLAN AREA B
 - a. Added keynote #1.
- 54. Revised sheet MP-111A 01 FLOOR MECHANICAL PIPING PLAN AREA A
 - a. Updated routing for chiller refrigerant lines.
 - b. Updated keynotes #3 and #4.
 - c. Updated boiler room layout.
- 55. Revised sheet MP-111B 01 FLOOR MECHANICAL PIPING PLAN AREA B
 - a. Added expansion loop.
 - b. Added keynote #5.
- 56. Revised sheet MP-112A 02 FLOOR MECHANICAL PIPING PLAN AREA A
 - a. Removed one thermostat from Media Center.
 - b. Updated keynote #2.
- 57. Revised sheet MP-112B 02 FLOOR MECHANICAL PIPING PLAN AREA B
 - a. Added expansion loop.
 - b. Added keynote #5.
- 58. Revised sheet P-110A FOUNDATION PLUMBING PLAN -AREA A
 - a. Re-routed Storm piping to new exit location.
 - b. Modified Storm piping elevations.
 - c. Added Sanitary Waste piping routing and elevations.
 - d. Added additional floor drains in mechanical room.
 - e. Added pipe sleeves through wall.
 - f. Removed pipe sleeve through foundation footing and keynote #1.
- 59. Revised sheet P-110B FOUNDATION PLUMBING PLAN -AREA B

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- a. Modified Storm piping routing and elevations.
- b. Modified Sanitary Waste piping routing and elevations.
- c. Added ECO to Storm and Sanitary Waste exits.
- 60. Revised sheet P-111A 01 FLOOR PLUMBING PLAN -AREA A
 - a. Added isolation valves to CSW and HW branches
 - b. Added HWR to HW branch.
 - c. Shifted FCO to avoid conflict with door
 - d. Shifted check valve and balancing valve to avoid conflict with wall.
 - e. Shifted CSW to EWC-1 to avoid conflict with Vent piping.
 - f. Adjusted visibility of Storm piping to RD.
 - g. Revised HWR sizing.
 - h. Added pipe sizes for HWR branches.
- 61. Revised sheet P-111B 01 FLOOR PLUMBING PLAN -AREA B
 - a. Added keynotes #8 and #9.
 - b. Added isolation valves to CW, CSW, and HW branches.
 - c. Added WCOs at base of Sanitary Waste and Storm risers.
 - d. Added pipe size tags.
 - e. Added ECO to Sanitary Waste and Storm exits.
 - f. Added TBV-1 and check valve.
- 62. Revised sheet P-401 PLUMBING ENLARGED PLANS
 - a. Changed floor drain callouts in Mechanical Room.
 - b. Added floor drain near mechanical pumps.
 - c. Relocated FD-2 to match boiler relocation.
 - d. Added isolation valves to CW branches.
 - e. Added isolation valves for gas piping.
 - f. Revised HWR pipe sizing and routing.
 - g. Removed designations for water heater system circulator pumps.
- 63. Revised sheet P-501 PLUMBING DETAILS
 - a. Revised Water Heater Piping Diagram.
 - b. Revised Water Softener Piping Diagram.
 - c. Revised Water Entrance Piping Detail.
- 64. Revised sheet P-602 PLUMBING SCHEDULES
 - a. Added fittings to the Plumbing Drainage Fitting Schedule.
 - b. Revised set temperature for TBV-1 to allow a delta T in the system.
 - c. Revised TET-1 specification.
 - d. Removed CP-2 and CP-3 from the schedule, as pumps are supplied with water heater
 - e. Added RPBP-3 to Plumbing Equipment Schedule.
- 65. Revised sheet P-901 PLUMBING DIAGRAMS
 - a. Added Natural Gas Piping Diagram.

END OF ADDENDUM

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SECTION 034500 (REVISED ADDENDUM #5) PRECAST ARCHITECTURAL CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

- 1. Precast architectural concrete units.
- 2. Mold materials.
- 3. Reinforcing materials.
- 4. Prestressing tendons.
- 5. Concrete materials.
- 6. Steel connection materials.
- 7. Accessories.
- 8. Grout materials.
- 9. Insulated panel materials.

B. Related Requirements:

- 1. Section 033000 "Cast-in-Place Concrete" site-cast concrete requirements and for installing connection anchors in concrete.
- 2. Section 051200 "Structural Steel Framing" for furnishing and installing connections attached to structural-steel framing.
- 3. Section 055000 "Metal Fabrications" for kickers and other miscellaneous steel shapes.
- 4. Section 071900 "Water Repellents" for water-repellent finish treatments.
- 5. Section 085113 "Aluminum Windows" for windows set into architectural precast concrete units.

1.2 DEFINITIONS

A. Design Reference Sample: Sample of approved architectural precast concrete color, finish, and texture, reviewed by Architect and approved by Owner.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

A. Product Data:

- 1. Precast architectural concrete unit design mixtures: Include compressive strength and water-absorption tests for each precast concrete mixture.
- 2. Mold materials.
- 3. Reinforcing materials.
- 4. Prestressing tendons.
- 5. Concrete materials.
- 6. Steel connection materials.
- 7. Accessories.
- 8. Grout materials.

- 9. Insulated panel materials.
- 10. Sealant materials.
- B. Design Mixtures: For each precast concrete mixture. Include compressive strength and waterabsorption tests.

C. Shop Drawings:

- 1. Detail fabrication and installation of architectural precast concrete units.
- 2. Indicate locations, plans, elevations, dimensions, shapes, and cross sections of each unit.
- 3. Indicate joints, reveals, drips, chamfers, and extent and location of each surface finish.
- 4. Indicate details at building corners.
- 5. Indicate separate face and backup mixture locations and thicknesses.
- 6. Indicate type, size, and length of welded connections by AWS standard symbols. Detail loose and cast-in hardware and connections.
- 7. Indicate locations, tolerances, and details of anchorage devices to be embedded in or attached to structure or other construction.
- 8. Indicate locations, extent, and treatment of dry joints if two-stage casting is proposed.
- 9. Include plans and elevations showing unit locations, dimensions, erection sequences, and bracing plans for special conditions.
- 10. Indicate location of each architectural precast concrete unit by same identification mark placed on panel.
- 11. Indicate relationship of architectural precast concrete units to adjacent materials.
- 12. Indicate locations, type, dimensions, and details of facing units, including corner units, special shapes, joint treatment, and anchors.
- 13. Coordinate and indicate openings and inserts required by other trades.
- 14. If design modifications are proposed to meet performance requirements and field conditions, submit design calculations and indicate modified areas on Shop Drawings. Do not adversely affect the appearance, durability, or strength of units.
- D. Samples: Design reference samples for initial verification of design intent, for each type of finish indicated on exposed surfaces of architectural precast concrete units, in sets of three, representative of finish, color, and texture variations expected; approximately 12 by 12 by 2 inches.
 - 1. When other faces of precast concrete unit are exposed, include Samples illustrating workmanship, color, and texture of backup concrete as well as facing concrete.
 - 2. Samples for each textured face unit required, showing full range of color and texture expected. Include Sample showing color and texture of joint treatment.
 - a. Grout Samples for Initial Selection: Color charts consisting of actual sections of grout showing manufacturer's full range of colors.
 - b. Grout Samples for Verification: Showing color and texture of joint treatment.
- E. Sample Panels: After sample approval and before fabricating architectural precast concrete units, provide 4 sample panels, approximately 6' x 6', representing the anticipated color range of both colors and texture as well as control joints for review by Architect. Incorporate full-scale details of architectural features, finishes, textures, and transitions in sample panels.
 - 1. Locate panels where indicated or, if not indicated, as directed by Architect.
 - 2. The control joint pattern in the sample panels to be adjusted to locate at least 2 per panel where these joints are not thru-panel control or expansion joints.
 - 3. Damage part of an exposed-face surface for each finish, color, and texture, and

- demonstrate adequacy of repair techniques proposed for repair of surface blemishes.
- 4. Acceptable range sample tolerance based on control, including a premium color selection, should be anticipated to have an upper and lower boundary on pigment/finish variation of 2.5%.
- 5. After acceptance of repair technique, maintain one sample panel at manufacturer's plant and one at Project site as color and texture approval reference, in an undisturbed condition as a standard for judging the completed Work.
- 6. Maintain all sample panels during the course of construction or until instructed to have them removed by the Owner.
- F. Delegated Design Submittals: For architectural precast concrete indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
 - 1. Show governing panel types, connections, types of reinforcement, including special reinforcement, and concrete cover on reinforcement. Indicate location, type, magnitude, and direction of loads imposed on the building structural frame from architectural precast concrete.

1.5 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Provide locations, setting diagrams, templates, instructions, and directions, as required, for furnishing and installation of loose connection hardware and anchorage items to be embedded in or attached to other construction.
- B. Welding certificates.
- C. Source Quality-Control Reports: For aggregate.
- D. Field quality-control reports.

1.6 QUALITY ASSURANCE

- A. Fabricator Qualifications: A firm that assumes responsibility for engineering architectural precast concrete units to comply with performance requirements. This responsibility includes preparation of Shop Drawings and comprehensive engineering analysis by a qualified professional engineer.
 - 1. Designated at time of bidding as a PCI-certified plant for Category AC or designated as an APA-certified plant for production of architectural precast concrete products.
 - 2. Quality-Control Standard: For manufacturing procedures and testing requirements, quality-control recommendations, and dimensional tolerances for types of units required, comply with PCI MNL 117 and PCI MNL 135.
- B. Installer Qualifications: A precast concrete erector who has retained a "PCI-Certified Field Auditor" to conduct a field audit of a project in same category as this Project and who can produce an Erectors' Post-Audit Declaration.
- C. Testing Agency Qualifications: An independent testing agency, acceptable to authorities having jurisdiction, qualified in accordance with ASTM C1077 and ASTM E329 for testing indicated.
- D. Delegated Design Engineer Qualifications: A professional engineer who is legally qualified to

practice in state where Project is located and who is experienced in providing engineering services of the type indicated.

- E. Welding Qualifications: Qualify procedures and personnel in accordance with the following welding codes:
 - 1. AWS D1.1/D1.1M.
 - 2. AWS D1.4/D1.4M.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver architectural precast concrete units in such quantities and at such times to limit unloading units temporarily on the ground or other rehandling.
- B. Support units during shipment on nonstaining shock-absorbing material.
- C. Store units with adequate dunnage and bracing, and protect units to prevent contact with soil, prevent staining, and prevent cracking, distortion, warping, or other physical damage.
- D. Place stored units so identification marks are clearly visible, and units can be inspected.
- E. Handle and transport units in a manner that avoids excessive stresses that cause cracking or damage.
- F. Lift and support units only at designated points indicated on Shop Drawings.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design architectural precast concrete units.
- B. Design Standards: Comply with ACI 318 and design recommendations of PCI MNL 120 applicable to types of architectural precast concrete units indicated.
- C. Structural Performance: Provide architectural precast concrete units and connections capable of withstanding the following design loads within limits and under conditions indicated:
 - 1. Loads: As indicated.
 - Design precast concrete units and connections to maintain clearances at openings, to allow for fabrication and construction tolerances, to accommodate live-load deflection, shrinkage and creep of primary building structure, and other building movements as follows:
 - a. Upward and downward movement of 1/2 inch.
 - 3. Thermal Movements: Provide for in-plane thermal movements resulting from annual ambient temperature changes of 120 deg F.

2.2 PRECAST ARCHITECTURAL CONCRETE UNITS

A. Provide unit types as indicated on Drawings, including insulated wall panels.

- B. Fabricators: Subject to compliance with requirements, provide products by one of the following:
 - 1. Coreslab.
 - 2. deAM-RON Building Systems, LLC.
 - 3. GATE Precast Company.
 - 4. Wells Concrete.
- C. Source Limitations: Obtain precast architectural concrete units from single fabricator.

2.3 MOLD MATERIALS

- A. Molds: Rigid, dimensionally stable, nonabsorptive material, warp and buckle free, that provides continuous and true precast concrete surfaces within fabrication tolerances indicated; nonreactive with concrete and suitable for producing required finishes.
- B. Form Liners: Units of face design, texture, arrangement, and configuration to match those used for precast concrete design reference sample. Provide solid backing and supports to keep form liners in place during concrete placement. Use with manufacturer's recommended form-release agent that does not bond with, stain, or adversely affect precast concrete surfaces and does not impair subsequent surface or joint treatments of precast concrete.
 - Face Pattern: Ribbed.
- C. Form-Release Agent: Commercially produced form-release agent that does not bond with, stain, or adversely affect precast concrete surfaces and does not impair subsequent surface or joint treatments of precast concrete.
- D. Surface Retarder: Chemical-set retarder, capable of temporarily delaying final hardening of newly placed concrete mixture to depth of reveal specified.

2.4 REINFORCING MATERIALS

- A. Reinforcing Bars: ASTM A615/A615M, Grade 60, deformed.
- B. Low-Alloy-Steel Reinforcing Bars: ASTM A706/A706M, deformed.
- C. Steel Bar Mats: ASTM A184/A184M, fabricated from ASTM A615/A615M, Grade 60 or ASTM A706/A706M, deformed bars, assembled with clips.
- D. Deformed-Steel Welded-Wire Reinforcement: ASTM A1064/A1064M, flat sheet.
- E. Supports: Suspend reinforcement from back of mold. Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcement in place may only be used if they are not visible in the finished face.

2.5 PRESTRESSING TENDONS

- A. Prestressing Strand: ASTM A416/A416M, Grade 270, uncoated, seven-wire, low-relaxation strand.
 - 1. Coat unbonded post-tensioning strand with post-tensioning coating and sheath with polypropylene tendon sheathing in compliance with ACI 423.7. Include anchorage devices and coupler assemblies.

- B. Unbonded Post-Tensioning Strand: ASTM A416/A416M, Grade 270 (Grade 1860), 7-wire, low-relaxation strand with corrosion inhibitor coating conforming to ACI 423.7 Specification for Unbonded Single-Strand Tendon Materials, with polypropylene tendon sheathing. Include anchorage devices.
- C. Post-Tensioning Bars: ASTM A722/A722M, uncoated high-strength steel bars.

2.6 CONCRETE MATERIALS

- A. Portland Cement: ASTM C150/C150M, Type I or Type III.
 - 1. For surfaces exposed to view in finished structure, use gray or white cement, of same type, brand, and mill source.
 - a. Standard gray cement is acceptable for use where not exposed to view.
- B. Supplementary Cementitious Materials:
 - 1. Fly Ash: ASTM C618, Class C or F, with maximum loss on ignition of 3 percent.
 - 2. Metakaolin: ASTM C618, Class N.
 - 3. Silica Fume: ASTM C1240, with optional chemical and physical requirement, white.
 - 4. Ground Granulated Blast-Furnace Slag: ASTM C989/C989M, Grade 100 or 120.
- C. Normal-Weight Aggregates: Except as modified by PCI MNL 117, ASTM C33/C33M, with coarse aggregates complying with Class 5S. Stockpile fine and coarse aggregates for each type of exposed finish from a single source (pit or quarry) for Project.
 - 1. Face-Mixture-Coarse Aggregates: Selected, hard, and durable; free of material that reacts with cement or causes staining; to match approved finish sample.
 - a. Gradation: Uniformly graded.
 - 2. Face-Mixture-Fine Aggregates: Selected, natural or manufactured sand compatible with coarse aggregate; to match approved finish sample.
- D. Coloring Admixture: ASTM C979/C979M, synthetic or natural mineral-oxide pigments or colored water-reducing admixtures, temperature stable, and nonfading..
- E. Water: Potable; free from deleterious material that may affect color stability, setting, or strength of concrete and complying with chemical limits of PCI MNL 117 and ASTM C1602/C1602M.
- F. Air-Entraining Admixture: ASTM C260/C260M, certified by manufacturer to be compatible with other required admixtures.
- G. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and to not contain calcium chloride, or more than 0.15 percent chloride ions or other salts by weight of admixture.
 - 1. Water-Reducing Admixtures: ASTM C494/C494M, Type A.
 - 2. Retarding Admixture: ASTM C494/C494M, Type B.
 - 3. Water-Reducing and -Retarding Admixture: ASTM C494/C494M, Type D.
 - 4. Water-Reducing and -Accelerating Admixture: ASTM C494/C494M, Type E.
 - 5. High-Range, Water-Reducing Admixture: ASTM C494/C494M, Type F.
 - 6. High-Range, Water-Reducing and -Retarding Admixture: ASTM C494/C494M, Type G.
 - 7. Plasticizing Admixture: ASTM C1017/C1017M, Type I.

- 8. Plasticizing and Retarding Admixture: ASTM C1017/C1017M, Type II.
- 9. Corrosion-Inhibiting Admixture: ASTM C1582/C1582M.

2.7 STEEL CONNECTION MATERIALS

- A. Carbon Steel Shapes and Plates: ASTM A36/A36M.
- B. Carbon Steel-Headed Studs: ASTM A108, Grades 1010 through 1020, cold finished, AWS D1.1/D1.1M, Type A or Type B, with arc shields and with minimum mechanical properties of PCI MNL 117, Table 3.2.3.
- C. Carbon Steel Plate: ASTM A283/A283M, Grade C.
- D. High-Strength, Low-Alloy Structural Steel: ASTM A572/A572M.
- E. Carbon Steel Structural Tubing: ASTM A500/A500M, Grade B or Grade C.
- F. Deformed-Steel Wire or Bar Anchors: ASTM A1064/A1064M or ASTM A706/A706M.
- G. Carbon Steel Bolts and Studs: ASTM A307, Grade A, or ASTM F1554, Grade 36; carbon steel, hex-head bolts and studs; carbon steel nuts, ASTM A563; and flat, unhardened steel washers, ASTM F844.
- H. High-Strength Bolts, Nuts, and Washers: ASTM F3125/F3125M, Grade A325, Type 1, heavy-hex steel structural bolts; ASTM A563, Grade DH, heavy-hex carbon steel nuts; and ASTM F436/F436M, Type 1, hardened carbon steel washers.
- Zinc-Coated Finish: For exterior steel items, steel in exterior walls, and items indicated for galvanizing, apply zinc coating by hot-dip process in accordance with ASTM A123/A123M or ASTM A153/A153M.
 - 1. For steel shapes, plates, and tubing to be galvanized, limit silicon content of steel to less than 0.03 percent or to between 0.15 and 0.25 percent, or limit sum of silicon and 2.5 times phosphorous content to 0.09 percent.
 - 2. Galvanizing Repair Paint: High-zinc-dust-content paint with dry film containing not less than 94 percent zinc dust by weight, and complying with MIL-P-21035B or SSPC-Paint 20.
- J. Shop-Primed Finish: Prepare surfaces of nongalvanized-steel items, except those surfaces to be embedded in concrete, in accordance with requirements in SSPC-SP 3, and shop-apply lead-and chromate-free, rust-inhibitive primer, complying with performance requirements in MPI 79 in accordance with SSPC-PA 1.
- K. Welding Electrodes: Comply with AWS standards.

2.8 STAINLESS STEEL CONNECTION MATERIALS

- A. Stainless Steel Plate: ASTM A240/A240M or ASTM A666, Type 304, Type 316, or Type 201.
- B. Stainless Steel Bolts and Studs: ASTM F593, Alloy Group 1 or 2) hex-head bolts and studs; ASTM F594, Alloy Group 1 or 2 stainless steel nuts; and flat, stainless steel washers.
 - 1. Lubricate threaded parts of stainless steel bolts with an antiseize thread lubricant during

assembly.

C. Stainless Steel-Headed Studs: ASTM A276/A276M, Alloy 304 or Alloy 316, with minimum mechanical properties of PCI MNL 117, Table 3.2.3.

2.9 ACCESSORIES

- A. Bearing Pads: Provide one of the following for architectural precast concrete units as recommended by precast fabricator for application:
 - 1. Elastomeric Pads: AASHTO M 251, plain, vulcanized, 100 percent polychloroprene (neoprene) elastomer, molded to size or cut from a molded sheet, Type A durometer hardness of 50 to 70, ASTM D2240, minimum tensile strength 2250 psi, ASTM D412.
 - 2. Random-Oriented-Fiber-Reinforced Elastomeric Pads: Preformed, randomly oriented synthetic fibers set in elastomer; Type A durometer hardness of 70 to 90, ASTM D2240; capable of supporting a compressive stress of 3000 psi with no cracking, splitting, or delaminating in the internal portions of pad. Test one specimen for every 200 pads used in Project.
 - 3. Cotton-Duck-Fabric-Reinforced Elastomeric Pads: Preformed, horizontally layered cotton-duck fabric bonded to an elastomer; Type A durometer hardness of 80 to 100, ASTM D2240; in compliance with AASHTO LRFDBDS, Division II, Section 18.10.2; or with MIL-C-882E.
 - 4. Frictionless Pads: PTFE, glass-fiber reinforced, bonded to stainless or mild-steel plate, or random-oriented-fiber-reinforced elastomeric pads; of type required for in-service stress.
 - 5. High-Density Plastic: Multimonomer, nonleaching, plastic strip.
- B. Reglets Specified Elsewhere: Specified in Section 076200 "Sheet Metal Flashing and Trim."
- C. Precast Accessories: Provide clips, hangers, high-density plastic or steel shims, and other accessories required to install architectural precast concrete units.

2.10 GROUT MATERIALS

- A. Sand-Cement Grout: Portland cement, ASTM C150/C150M, Type I, and clean, natural sand, ASTM C144 or ASTM C404. Mix at ratio of 1 part cement to 2-1/2 to 3 parts sand, by volume, with minimum water required for placement and hydration. Water-soluble chloride ion content is to be less than 0.06 percent by weight of cement when tested in accordance with ASTM C1218/C1218M.
- B. Nonmetallic, Nonshrink Grout: Packaged, nonmetallic, noncorrosive, nonstaining grout containing selected silica sands, portland cement, shrinkage-compensating agents, plasticizing and water-reducing agents, complying with ASTM C1107/C1107M, Grade A for dry pack and Grades B and C for flowable grout, and of consistency suitable for application within a 30-minute working time. Water-soluble chloride ion content is to be less than 0.06 percent by weight of cement when tested in accordance with ASTM C1218/C1218M.
- C. Epoxy-Resin Grout: Two-component, mineral-filled epoxy resin; ASTM C881/C881M, of type, grade, and class to suit requirements.

2.11 INSULATED PANEL MATERIALS

A. Provide board insulation with regularly spaced holes at connector placement locations.

- B. Extruded Polystyrene Board Insulation: ASTM C578, Type IV, 1.55 lb/cu. ft. square edges; with thickness of 3 inches.
- C. Wythe Connectors: Bent galvanized reinforcing bars or galvanized welded-wire trusses manufactured to connect wythes of precast concrete panels.

2.12 CONCRETE MIXTURES

- A. Prepare design mixtures for each type of precast concrete required.
 - 1. Use a single design mixture for units with more than one major face or edge exposed.
 - 2. Where only one face of unit is exposed, use either a single design mixture or separate mixtures for face and backup.
- B. Limit use of fly ash and ground granulated blast-furnace slag to 20 percent of portland cement by weight; limit metakaolin and silica fume to 10 percent of portland cement by weight.
- C. Design mixtures may be prepared by a qualified independent testing agency or by qualified precast plant personnel at architectural precast concrete fabricator's option.
- D. Limit water-soluble chloride ions to maximum percentage by weight of cement permitted by ACI 318 or PCI MNL 117 when tested in accordance with ASTM C1218/C1218M.
- E. Normal-Weight Concrete Mixtures: Proportion face and backup mixtures or full-depth mixtures, at fabricator's option by either laboratory trial batch or field test data methods in accordance with ACI 211.1, with materials to be used on Project, to provide normal-weight concrete with the following properties:
 - 1. Compressive Strength (28 Days): 5000 psi minimum.
 - 2. Maximum Water-Cementitious Materials Ratio: 0.45.
- F. Water Absorption: Six percent by weight or 14 percent by volume, tested in accordance with ASTM C642, except for boiling requirement.
- G. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having an air content complying with PCI MNL 117.
- H. When included in design mixtures, add other admixtures to concrete mixtures in accordance with manufacturer's written instructions.

2.13 FABRICATION OF MOLDS

- A. Molds: Accurately construct molds, mortar tight, of sufficient strength to withstand pressures due to concrete-placement operations and temperature changes and for prestressing and detensioning operations. Coat contact surfaces of molds with release agent before reinforcement is placed. Avoid contamination of reinforcement and prestressing tendons by release agent.
 - 1. Place form liners accurately to provide finished surface texture indicated. Provide solid backing and supports to maintain stability of liners during concrete placement. Coat form liner with form-release agent.
- B. Maintain molds to provide completed architectural precast concrete units of shapes, lines, and dimensions indicated, within fabrication tolerances specified.

- 1. Form joints are not permitted on faces exposed to view in the finished Project.
- 2. Edge and Corner Treatment: Uniformly chamfered.

2.14 FABRICATION OF PRECAST ARCHITECTURAL CONCRETE

- A. Cast-in Anchors, Inserts, Plates, Angles, and Other Anchorage Hardware: Fabricate anchorage hardware with sufficient anchorage and embedment to comply with design requirements. Accurately position for attachment of loose hardware, and secure in place during precasting operations. Locate anchorage hardware where it does not affect position of main reinforcement or concrete placement.
 - 1. Weld-headed studs and deformed bar anchors used for anchorage in accordance with AWS D1.1/D1.1M and AWS C5.4.
- B. Furnish loose hardware items, including steel plates, clip angles, seat angles, anchors, dowels, cramps, hangers, and other hardware shapes for securing architectural precast concrete units to supporting and adjacent construction.
- C. Cast-in reglets, slots, holes, and other accessories in architectural precast concrete units, as indicated on the Drawings.
- D. Cast-in openings larger than 10 inches in any dimension. Do not drill or cut openings or prestressing strand without Architect's approval.
- E. Reinforcement: Comply with recommendations in PCI MNL 117 for fabricating, placing, and supporting reinforcement.
 - 1. Clean reinforcement of loose rust and mill scale, earth, and other materials that reduce or destroy the bond with concrete. When damage to epoxy-coated reinforcing exceeds limits specified in ASTM A775/A775M, repair with patching material compatible with coating material and epoxy coat bar ends after cutting.
 - 2. Accurately position, support, and secure reinforcement against displacement during concrete-placement and consolidation operations. Completely conceal support devices to prevent exposure on finished surfaces.
 - 3. Place reinforcing steel and prestressing strands to maintain at least 3/4-inch minimum concrete cover. Increase cover requirements for reinforcing steel to 1-1/2 inches when units are exposed to corrosive environment or severe exposure conditions. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position while placing concrete. Direct wire tie ends away from finished, exposed concrete surfaces.
 - 4. Install welded-wire reinforcement in lengths as long as practicable. Lap adjoining pieces at least one full mesh spacing and wire tie laps, where required by design. Offset laps of adjoining widths to prevent continuous laps in either direction.
- F. Reinforce architectural precast concrete units to resist handling, transportation, and erection stresses and specified in-place loads.
- G. Prestress tendons for architectural precast concrete units by either pretensioning or post-tensioning methods. Comply with PCI MNL 117.
 - 1. Delay detensioning or post-tensioning of precast, prestressed architectural concrete units until concrete has reached its indicated minimum design release compressive strength as established by test cylinders cured under same conditions as concrete unit.
 - 2. Detension pretensioned tendons either by gradually releasing tensioning jacks or by heat-

- cutting tendons, using a sequence and pattern to prevent shock or unbalanced loading.
- 3. If concrete has been heat cured, detension while concrete is still warm and moist to avoid dimensional changes that may cause cracking or undesirable stresses.
- 4. Protect strand ends and anchorages with bituminous, zinc-rich, or epoxy paint to avoid corrosion and possible rust spots.
- H. Comply with requirements in PCI MNL 117 and requirements in this Section for measuring, mixing, transporting, and placing concrete. After concrete batching, no additional water may be added.
- I. Place face mixture to a minimum thickness after consolidation of the greater of 1 inch or 1.5 times the maximum aggregate size, but not less than the minimum reinforcing cover specified.
- J. Place concrete in a continuous operation to prevent cold joints or planes of weakness from forming in precast concrete units.
 - 1. Place backup concrete mixture to ensure bond with face-mixture concrete.
- K. Thoroughly consolidate placed concrete by internal and external vibration without dislocating or damaging reinforcement and built-in items, and minimize pour lines, honeycombing, or entrapped air voids on surfaces. Use equipment and procedures complying with PCI MNL 117.
 - 1. Place self-consolidating concrete without vibration in accordance with PCI TR-6. Ensure adequate bond between face and backup concrete, if used.
- L. Comply with PCI MNL 117 for hot- and cold-weather concrete placement.
- M. Identify pickup points of architectural precast concrete units and orientation in structure with permanent markings, complying with markings indicated on Shop Drawings. Imprint or permanently mark casting date on each architectural precast concrete unit on a surface that does not show in finished structure.
- N. Cure concrete, in accordance with PCI MNL 117, by moisture retention without heat or by accelerated heat curing using low-pressure live steam or radiant heat and moisture. Cure units until compressive strength is high enough to ensure that stripping does not have an effect on performance or appearance of final product.
- O. Discard and replace architectural precast concrete units that do not comply with requirements, including structural, manufacturing tolerance, and appearance, unless repairs comply with requirements in PCI MNL 117 and Architect's approval.

2.15 FABRICATION OF INSULATED PANELS

- A. Cast, screed, and consolidate bottom concrete wythe supported by mold.
- B. Place insulation boards abutting edges and ends of adjacent boards. Insert wythe connectors through insulation holes and consolidate concrete around connectors in accordance with connector manufacturer's written instructions.
- C. Ensure bottom wythe and insulation layer are not disturbed after bottom wythe reaches initial set.

- D. Cast, screed, and consolidate top wythe to meet required finish.
- E. Maintain temperature below 150 deg F in bottom concrete wythe.

2.16 FABRICATION TOLERANCES

- A. Fabricate architectural precast concrete units to shapes, lines, and dimensions indicated so each finished unit complies with PCI MNL 117 PCI MNL 135 product tolerances as well as position tolerances for cast-in items.
- B. Fabricate architectural precast concrete units to shapes, lines, and dimensions indicated so each finished unit complies with the following product tolerances:
 - 1. Overall Height and Width of Units, Measured at the Face Exposed to View: As follows:
 - a. 10 ft. or under, plus or minus 1/8 inch.
 - b. 10 to 20 ft., plus 1/8 inch, minus 3/16 inch.
 - c. 20 to 40 ft., plus or minus 1/4 inch.
 - d. Greater Than 40 ft. (12 m): Each additional 10 ft., plus or minus 1/16 inch.
 - 2. Overall Height and Width of Units, Measured at the Face Not Exposed to View: As follows:
 - a. 10 ft. or under, plus or minus 1/4 inch.
 - b. 10 to 20 ft., plus 1/4 inch, minus 3/8 inch.
 - c. 20 to 40 ft., plus or minus 3/8 inch.
 - d. Greater Than 40 ft. (12 m): Each additional 10 ft., plus or minus 1/8 inch.
 - 3. Total Thickness or Flange Thickness: plus 1/4 inch, minus 1/8 inch.
 - 4. Rib Thickness: Plus or minus 1/8 inch.
 - 5. Rib to Edge of Flange: Plus or minus 1/8 inch.
 - 6. Distance between Ribs: Plus or minus 1/8 inch.
 - 7. Variation from Square or Designated Skew (Difference in Length of the Two Diagonal Measurements): Plus or minus 1/8 inch/72 inches or 1/2 inch total, whichever is greater.
 - 8. Length and Width of Block-outs and Openings within One Unit: Plus or minus 1/4 inch.
 - 9. Location and Dimension of Block-outs Hidden from View and Used for HVAC and Utility Penetrations: Plus or minus 3/4 inch.
 - 10. Dimensions of Haunches: Plus or minus 1/4 inch.
 - 11. Haunch Bearing Surface Deviation from Specified Plane: Plus or minus 1/8 inch.
 - 12. Difference in Relative Position of Adjacent Haunch Bearing Surfaces from Specified Relative Position: Plus or minus 1/4 inch.
 - 13. Bowing: Plus or minus L/360, maximum 1 inch.
 - 14. Local Smoothness: 1/4 inch/10 ft...
 - 15. Warping: 1/16 inch/12 inches from nearest adjacent corner.
- C. Position Tolerances: For cast-in items measured from datum line location, as indicated on Shop Drawings.
 - 1. Weld Plates: Plus or minus 1 inch.
 - 2. Tipping and Flushness of Plates: Plus or minus 1/4 inch.
 - 3. Dimensions of Architectural Features and Rustications: Plus or minus 1/8 inch.
 - 4. Inserts: Plus or minus 1/2 inch.
 - 5. Handling Devices: Plus or minus 3 inches.
 - 6. Reinforcing Steel and Welded-Wire Reinforcement: Plus or minus 1/4 inch where

- position has structural implications or affects concrete cover; otherwise, plus or minus 1/2 inch.
- 7. Reinforcing Steel Extending out of Member: Plus or minus 1/2 inch.
- 8. Prestressing Reinforcement: Plus or minus 1/4 inch, perpendicular to panel; plus or minus 1 inch, parallel to panel.
- 9. Location of Rustication Joints: Plus or minus 1/8 inch.
- 10. Location of Opening within Panel: Plus or minus 1/4 inch.
- 11. Location of Flashing Reglets: Plus or minus 1/4 inch.
- 12. Location of Flashing Reglets at Edge of Panel: Plus or minus 1/8 inch.
- 13. Reglets for Glazing Gaskets: Plus or minus 1/8 inch.
- 14. Electrical Outlets, Hose Bibs: Plus or minus 1/2 inch.
- 15. Location of Bearing Surface from End of Member: Plus or minus 1/4 inch.
- 16. Allowable Rotation of Plate, Channel Inserts, and Electrical Boxes: Two-degree rotation or 1/4 inch maximum, measured at perimeter of insert.
- 17. Position of Sleeve: Plus or minus 1/2 inch.
- 18. Location of Window-Washer Track or Buttons: Plus or minus 1/8 inch.

2.17 FINISHES

- A. Exposed faces to be free of joint marks, grain, and other obvious defects. Corners, including false joints to be uniform, straight, and sharp. Finish exposed-face surfaces of architectural precast concrete units to match approved mockups and as follows:
 - 1. Design Reference Sample: Coreslab sample provided to Architect.
 - 2. PCI's "Architectural Precast Concrete Color and Texture Selection Guide," of plate numbers indicated.
 - 3. As-Cast Surface Finish: Provide surfaces to match approved sample for acceptable surface, air voids, sand streaks, and honeycomb.
 - 4. Textured-Surface Finish: Impart by form liners or inserts.
- B. Finish exposed back surfaces of architectural precast concrete units with smooth, steel-trowel finish.
- C. Finish unexposed surfaces of architectural precast concrete units with as-cast finish.

2.18 SOURCE QUALITY CONTROL

- A. Quality-Control Testing: Test and inspect precast concrete in accordance with PCI MNL 117 requirements. If using self-consolidating concrete, also test and inspect in accordance with PCI TR-6, ASTM C1610/C1610M, ASTM C1611/C1611M, ASTM C1621/C1621M, and ASTM C1712.
- B. Owner will employ an independent testing agency to evaluate architectural precast concrete fabricator's quality-control and testing methods.
 - 1. Allow Owner's testing agency access to material storage areas, concrete production equipment, concrete placement, and curing facilities. Cooperate with Owner's testing agency and provide samples of materials and concrete mixtures as may be requested for additional testing and evaluation.
- C. Strength of precast concrete units is considered deficient if units fail to comply with ACI 318 requirements for concrete strength.

- D. Testing: Fabricator will employ an independent testing agency to obtain, prepare, and test cores drilled from hardened concrete to determine compressive strength in accordance with ASTM C42/C42M and ACI 318.
 - 1. A minimum of three representative cores to be taken from units of suspect strength, from locations directed by Architect.
 - 2. Test cores in an air-dry condition.
 - 3. Strength of concrete for each series of three cores is considered satisfactory if average compressive strength is equal to at least 85 percent of 28-day design compressive strength and no single core is less than 75 percent of 28-day design compressive strength.
 - 4. Report test results in writing on same day that tests are performed, with copies to Architect, Contractor, and precast concrete fabricator. Test reports include the following:
 - a. Project identification name and number.
 - b. Date when tests were performed.
 - c. Name of precast concrete fabricator.
 - d. Name of concrete testing agency.
 - e. Identification letter, name, and type of precast concrete unit(s) represented by core tests; design compressive strength; type of break; compressive strength at breaks, corrected for length-diameter ratio; and direction of applied load to core in relation to horizontal plane of concrete as placed.
- E. Patching: If core test results are satisfactory and precast concrete units comply with requirements, clean and dampen core holes and solidly fill with precast concrete mixture that has no coarse aggregate, and finish to match adjacent precast concrete surfaces.
- F. Defective Units: Discard and replace recast architectural concrete units that do not comply with acceptability requirements in PCI MNL 117, including concrete strength, manufacturing tolerances, and color and texture range. Chipped, spalled, or cracked units may be repaired, subject to Architect's approval. Architect reserves the right to reject precast units that do not match approved samples, sample panels, and mockups. Replace unacceptable units with precast concrete units that comply with requirements.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine supporting structural frame or foundation and conditions for compliance with requirements for installation tolerances, bearing surface tolerances, and other conditions affecting performance of the Work.
- B. Do not install precast concrete units until supporting cast-in-place concrete has attained minimum allowable design compressive strength and supporting steel or other structure is structurally ready to receive loads from precast concrete units.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF PRECAST ARCHITECTURAL CONCRETE UNITS

A. Install clips, hangers, bearing pads, and other accessories required for connecting architectural precast concrete units to supporting members and backup materials.

- B. Erect architectural precast concrete level, plumb, and square within specified allowable tolerances. Provide temporary supports and bracing as required to maintain position, stability, and alignment of units until permanent connections are completed.
 - 1. Install temporary steel or plastic spacing shims as precast concrete units are being erected. Tack weld steel shims to each other to prevent shims from separating.
 - 2. Maintain horizontal and vertical joint alignment and uniform joint width as erection progresses.
 - 3. Remove projecting lifting devices and grout fill voids within recessed lifting devices flush with surface of adjacent precast surfaces when recess is exposed.
 - 4. Unless otherwise indicated, maintain uniform joint widths of 3/4 inch.
- C. Connect architectural precast concrete units in position by bolting, welding, grouting, or as otherwise indicated on Shop Drawings. Remove temporary shims, wedges, and spacers as soon as practical after connecting and grouting are completed.
 - 1. Do not permit connections to disrupt continuity of roof flashing.
- D. Welding: Comply with applicable requirements in AWS D1.1/D1.1M and AWS D1.4/D1.4M for welding, welding electrodes, appearance, quality of welds, and methods used in correcting welding work.
 - 1. Protect architectural precast concrete units and bearing pads from damage by field welding or cutting operations, and provide noncombustible shields as required.
 - 2. Welds not specified to be continuous fillet welds use no less than the minimum fillet as specified by AWS.
 - 3. Clean weld-affected metal surfaces with chipping hammer followed by brushing and apply a minimum 4.0-mil- thick coat of galvanized repair paint to galvanized surfaces in accordance with ASTM A780/A780M.
 - 4. Visually inspect welds and remove, reweld, or repair incomplete and defective welds.
- E. At bolted connections, use lock washers, tack welding, or other approved means to prevent loosening of nuts after final adjustment.
 - 1. Where slotted connections are used, verify bolt position and tightness. For sliding connections, properly secure bolt but allow bolt to move within connection slot.
 - 2. For slip-critical connections, use one of the following methods to assure proper bolt pretension:
 - a. Turn-of-Nut: In accordance with RCSC's "Specification for Structural Joints Using High-Strength Bolts."
 - b. Calibrated Wrench: In accordance with RCSC's "Specification for Structural Joints Using High-Strength Bolts."
 - c. Twist-off Tension Control Bolt: ASTM F3125/F3125M, Grade 1852.
 - d. Direct-Tension Control Bolt: ASTM F3125/F3125M, Grade 1852.
 - 3. For slip-critical connections, use method and inspection procedure approved by Architect and coordinated with inspection agency.
- F. Grouting or Dry Packing Connections and Joints: Grout connections where required or indicated. Retain flowable grout in place until hard enough to support itself. Alternatively, pack spaces with stiff dry pack grout material, tamping until voids are completely filled. Place grout and finish smooth, level, and plumb with adjacent concrete surfaces. Promptly remove grout material from exposed surfaces before it affects finishes or hardens. Keep grouted joints damp

for not less than 24 hours after initial set.

3.3 ERECTION TOLERANCES

- A. Erect architectural precast concrete units level, plumb, square, and in alignment without exceeding the noncumulative erection tolerances of PCI MNL 135.
- B. Erect architectural precast concrete units level, plumb, square, and in alignment, without exceeding the following noncumulative erection tolerances:
 - 1. Plan Location from Building Grid Datum: Plus or minus 1/2 inch.
 - 2. Plan Location from Centerline of Steel: Plus or minus 1/2 inch.
 - 3. Top Elevation from Nominal Top Elevation: As follows:
 - a. Exposed Individual Panel: Plus or minus 1/4 inch.
 - b. Nonexposed Individual Panel: Plus or minus 1/2 inch.
 - 4. Support Elevation from Nominal Support Elevation: As follows:
 - a. Maximum Low: 1/2 inch.
 - b. Maximum High: 1/4 inch.
 - 5. Maximum Plumb Variation over the Lesser of Height of Structure or 100 ft. (30 m): 1 inch.
 - 6. Plumb in Any 10 ft. (3 m) of Unit Height: 1/4 inch.
 - 7. Maximum Jog in Alignment of Matching Edges: 1/4 inch.
 - a. Exposed Panel Relative to Adjacent Panel: 1/4 inch.
 - b. Nonexposed Panel Relative to Adjacent Panel: 1/2 inch.
 - c. Add 1/8-inch additional tolerance in the maximum jog for panels larger than 20 ft. per 10 ft. of additional height, up to a maximum tolerance of 1/2 inch.
 - 8. Joint Width (Governs over Joint Taper): Plus or minus 1/4 inch.
 - 9. Maximum Joint Taper: Plus or minus 3/8 inch but not more than 1/4 inch in 10 ft. length.
 - 10. Joint Taper in 10 ft. (3 m): 1/4 inch.
 - 11. Maximum Jog in Alignment of Matching Faces: 1/4 inch.
 - 12. Differential Bowing or Camber, as Erected, between Adjacent Members of Same Design: 1/4 inch.
 - 13. Opening Height between Spandrels: Plus or minus 1/4 inch.

3.4 REPAIR

- A. Repair architectural precast concrete units if permitted by Architect. Architect reserves the right to reject repaired units that do not comply with requirements.
- B. Mix patching materials and repair units so cured patches blend with color, texture, and uniformity of adjacent exposed surfaces and show no apparent line of demarcation between original and repaired work, when viewed in typical daylight illumination from a distance of 20 ft..
- C. Prepare and repair damaged galvanized coatings with galvanizing repair paint in accordance with ASTM A780/A780M.
- D. Wire brush, clean, and paint damaged prime-painted components with same type of shop primer.

E. Remove and replace damaged architectural precast concrete units when repairs do not comply with requirements.

3.5 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Tests and Inspections:
 - 1. Erection of loadbearing precast concrete members.
 - 2. Visually inspect field welds and test in accordance with ASTM E165/E165M or to ASTM E709 and ASTM E1444/E1444M.
 - 3. High-strength bolted connections are subject to inspections.
- C. Prepare test and inspection reports.
- D. Repair or remove and replace work where tests and inspections indicate that it does not comply with specified requirements.
- E. Additional testing and inspecting, at Contractor's expense, to be performed to determine compliance of replaced or additional work with specified requirements.

3.6 CLEANING

- A. Clean surfaces of precast concrete units exposed to view.
- B. Clean mortar, plaster, fireproofing, weld slag, and other deleterious material from concrete surfaces and adjacent materials immediately.
- C. Clean exposed surfaces of precast concrete units after erection and completion of joint treatment to remove weld marks, other markings, dirt, and stains.
 - 1. Perform cleaning procedures, if necessary, in accordance with precast concrete fabricator's recommendations. Protect other work from staining or damage due to cleaning operations.
 - 2. Do not use cleaning materials or processes that could change the appearance of exposed concrete finishes or damage adjacent materials.

END OF SECTION 034500

SECTION 074213.23 (ADDED ADDENDUM NO. 5) METAL COMPOSITE MATERIAL WALL PANELS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

- 1. Metal composite material (MCM) panels.
- 2. Metal composite material (MCM) system.

1.2 DEFINITIONS

- A. DBVC: Drained and back-ventilated cavity rainscreen system designed to drain and dry water entering cavity through drainage channels, weeps, and air ventilation.
- B. MCM: Metal composite material; cladding material formed by joining two thin metal skins to polyethylene or fire-retardant core and bonded under precise temperature, pressure, and tension.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

- A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of panel, system, and accessory.
 - 1. Metal composite material (MCM) panels.
 - 2. Metal composite material (MCM) system.

B. Shop Drawings:

- 1. Include fabrication and installation layouts of MCM system; details of edge conditions, joints, panel profiles, corners, anchorages, attachment assembly, trim, flashings, closures, accessories, and special details.
- 2. Accessories: Include details of flashing, trim, and anchorage, at a scale of not less than 1-1/2 inches per 12 inches.
- 3. Provide signed and sealed drawings, by a qualified design professional in Project jurisdiction, of MCM system showing compliance with performance requirements and design criteria identified for this Project.
- C. Samples for Verification: For each type of MCM panel and MCM system required, with factory-applied color finishes.
 - 1. MCM Panel: One sample, manufacturers' standard size.
 - 2. MCM System: 12 inches long by actual panel width, fabricated into panel systems indicated. Include fasteners, closures, and other MCM panel accessories.
- D. Qualification Statements: For manufacturer and Installer.
- E. Sample warranties.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For MCM panels.
- B. Warranty Documentation:
 - 1. Manufacturers' special warranties.
 - 2. Installer's special warranties.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5 years' experience.
- B. Fabricator Qualifications: Approved by MCM panel manufacturer.
- C. Installer Qualifications: Entity that employs installers and supervisors who are trained and approved by MCM system manufacturer.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver components, MCM panels, and other manufactured items so as not to be damaged or deformed. Package MCM panels for protection during transportation and handling.
- B. Unload, store, and erect MCM panels in a manner to prevent bending, warping, twisting, and surface damage.
- C. Stack MCM panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store MCM panels to ensure dryness, with positive slope for drainage of water. Do not store MCM panels in contact with other materials that might cause staining, denting, or other surface damage.
- D. Retain strippable protective covering on MCM panels during installation.

1.8 FIELD CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of MCM panels to be performed in accordance with manufacturers' written instructions and warranty requirements.

1.9 COORDINATION

A. Coordinate MCM panel installation with rain drainage work, flashing, trim, construction of soffits, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.10 WARRANTY

- A. Panel Integrity Warranty: Manufacturer agrees to repair or replace components of MCM panels that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures including rupturing, cracking, or puncturing.
 - b. Deterioration of metals and other materials beyond normal weathering.

- 2. Warranty Period: 10 years from date of Substantial Completion.
- B. Panel Finish Warranty: Manufacturer agrees to repair finish or replace MCM panels that show evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
 - Color fading more than 5 Hunter units when tested in accordance with ASTM D2244.
 - b. Chalking in excess of a No. 8 rating when tested in accordance with ASTM D4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
 - 2. Finish Warranty Period: 20 years from date of Substantial Completion.
- C. MCM System Warranty: System manufacturer's standard form in which manufacturer agrees to repair or replace components of MCM systems that fail in materials or workmanship within specified warranty period.
 - 1. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Structural Performance: MCM systems to withstand the effects of the following loads, based on testing in accordance with ASTM E330/E330M:
 - 1. Wind Loads: As indicated on Drawings.
 - 2. Other Design Loads: As indicated on Drawings.
 - 3. Deflection Limits: For wind loads, no greater than 1/240 of the span.
- B. Air Infiltration: Air leakage of not more than 0.06 cfm/sq. ft. when tested in accordance with ASTM E283/E283M at the following test-pressure difference:
 - 1. Test-Pressure Difference: 6.24 lbf/sq. ft.
- C. Water Penetration under Static Pressure: No water penetration when tested in accordance with ASTM E331 at the following test-pressure difference:
 - 1. Test-Pressure Difference: 6.24 lbf/sq. ft.
- D. Water Penetration under Dynamic Pressure: No water penetration when tested in accordance with AAMA 501.1 at the following test pressure:
 - 1. Test Pressure: 6.24 psf.
- E. Provide DBVC system with V-axis classification number greater than or equal to W-axis classification number in accordance with AAMA 509.
- F. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.
 - 1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.
- G. Fire Propagation Characteristics: MCM system passes NFPA 285 testing.

2.2 METAL COMPOSITE MATERIAL (MCM) WALL PANELS

- A. Metal Composite Material (MCM) Wall Panels: Provide MCM panels fabricated from two metal facings bonded to a solid, extruded thermoplastic core.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. ALPOLIC
 - b. ALUCOBOND; 3A Composites USA, Inc
 - c. Arconic Architectural Products, LLC
 - d. Fairview Architectural
 - e. Sobotec
 - 2. Core: PE.
 - 3. Panel Thickness: 0.118 inch.
 - 4. Bond Strength: 22.5 in-lb/in. when tested for bond integrity in accordance with ASTM D1781.
 - 5. Fire Performance: Flame-spread index less than 25 and smoke-developed index less than 450, in accordance with ASTM E84 or UL 723.

B. MCM Panel Materials:

- 1. Aluminum-Faced Panels: ASTM B209/B209M alloy as standard with manufacturer, temper as required to suit finish and forming operations with 0.032-inch-thick, aluminum sheet facings.
 - a. Exterior Finish: Two-coat fluoropolymer.
 - 1) Color: To match Curtain Wall framing color.

2.3 METAL COMPOSITE MATERIAL (MCM) SYSTEM

- A. PER MCM System: Provide factory-formed and -assembled, MCM panels formed into profile for PER system installation, drained at horizontal joints and at base of wall. Include attachment assembly components, panel stiffeners, and accessories required for compartmentalized and weathertight system.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Fairview Architectural
 - b. NorthClad Rainscreen Solutions
 - c. SAF (Southern Aluminum Finishing Company, Inc.)
 - d. Sobotec
- B. DBVC MCM System: Provide factory-formed and -assembled, MCM panels formed into profile for DBVC system installation, drained at horizontal joints and at base of wall. Include attachment assembly components, panel stiffeners, and accessories required for weathertight system.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

- a. Citadel Architectural Products, Inc.
- b. Fairview Architectural
- c. NorthClad Rainscreen Solutions
- d. SAF (Southern Aluminum Finishing Company, Inc.)
- C. System Panel Depth: As indicated on drawings.
- D. Attachment Assembly Components: Manufacturer's standard formed from extruded aluminum.
- E. Labeling: Comply with labeling requirement of applicable building code.

2.4 ACCESSORIES

- A. Metal Subframing and Furring: ASTM C955 cold-formed, metallic-coated steel sheet ASTM A653/A653M, G90 hot-dip galvanized coating designation or ASTM A792/A792M, Class AZ50 aluminum-zinc-alloy coating designation unless otherwise indicated. Provide manufacturer's standard sections as required for support and alignment of MCM system.
- B. System Accessories: Provide components required for a complete, weathertight wall system including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of MCM panels unless otherwise indicated.
- C. Flashing and Trim: Provide flashing and trim formed from same material as MCM panels as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, bases, drips, sills, jambs, corners, endwalls, framed openings, rakes, fasciae, soffits, reveals, and fillers. Finish flashing and trim with same finish system as adjacent MCM panels.
- D. Panel Fasteners: Self-tapping screws designed to withstand design loads. Use gasketed or approved coated fasteners between dissimilar metals.
 - 1. Aluminum Panels: Use aluminum or stainless steel fasteners for surfaces exposed to the exterior; use aluminum or galvanized-steel fasteners for surfaces exposed to the interior.
- E. Panel Sealants: ASTM C920; elastomeric polyurethane or silicone sealant; of type, grade, class, and use classifications required to seal joints in MCM panels and remain weathertight; and as recommended in writing by MCM system manufacturer.

2.5 FABRICATION

- A. Fabricate and finish MCM panels at the factory, by panel manufacturer's standard procedures and processes, as necessary to fulfill indicated panel performance requirements demonstrated by laboratory testing.
- B. Shop-fabricate MCM systems and accessories by fabricator's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with requirements of MCM panel manufacturer, of indicated system profiles, and with dimensional and structural requirements.
 - 1. Fabricate panels to dimensions indicated on Drawings based on an assumed design temperature of 70 deg F. Allow for ambient temperature range at time of fabrication.

- 2. Formed MCM panel lines, breaks, and angles to be sharp and straight, with surfaces free from warp or buckle.
- 3. Fabricate panels with sharply cut edges and no displacement of face sheet or protrusion of core.
- 4. Fabricated Panel Tolerances: Shop-fabricate panels to sizes and joint configurations indicated on Drawings.
 - a. Width: Plus or minus 0.079 inch at 70 deg F.
 - b. Length: Plus or minus 0.079 inch at 70 deg F.
 - c. Squareness: Plus or minus 0.079 inch at 70 deg F.
- 5. Fabricate MCM panel joints with factory-installed captive gaskets or separator strips that provide a weathertight seal and prevent metal-to-metal contact, and that minimize noise from movements.
- 6. Attach routed-and-returned panel flanges to perimeter extrusions or panel clips with manufacturer's standard fasteners.
- C. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's written instructions and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.
 - 1. Form exposed sheet metal accessories that are without excessive oil-canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
 - 2. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints for additional strength.
 - 3. Seams for Other Than Aluminum: Fabricate nonmoving seams in accessories with flat-lock seams.
 - 4. Sealed Joints: Form non-expansion, but movable, joints in metal to accommodate sealant and to comply with SMACNA standards.
 - 5. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces of accessories exposed to view.
 - 6. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal recommended in writing by metal manufacturer.
 - a. Size: As recommended by SMACNA's "Architectural Sheet Metal Manual" or metal manufacturer for application, but not less than thickness of metal being secured.

2.6 FINISHES

- A. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- B. Appearance of Finished Work: Noticeable variations in same piece are unacceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- C. Coil-Coated Metal Finish:
 - 1. PVDF Fluoropolymer: AAMA 2605, two-coat fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

D. Anodized Aluminum Finish: Clear in accordance with AAMA 611, AA-M12C22A41, Class I, 0.018 mm or thicker.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, MCM system supports, and other conditions affecting performance of the Work.
 - 1. Examine wall framing to verify that girts, angles, channels, studs, and other structural panel support members and anchorage have been installed within alignment tolerances required by MCM system manufacturer.
- B. Examine roughing-in for components and assemblies penetrating MCM system to verify actual locations of penetrations relative to seam locations of MCM panels before installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF MCM SYSTEM

- A. General: Install MCM system in accordance with system manufacturer's written instructions in orientation, sizes, and locations indicated on Drawings. Install panels perpendicular to supports unless otherwise indicated. Anchor MCM system securely in place, with provisions for thermal and structural movement.
 - 1. Shim or otherwise plumb substrates receiving MCM system.
 - 2. Flash and seal MCM system at perimeter of all openings. Fasten with self-tapping screws.
 - 3. Install screw fasteners in predrilled holes.
 - 4. Locate and space fastenings in uniform vertical and horizontal alignment.
 - 5. Install flashing and trim as MCM system work proceeds.
 - 6. Align bottoms of MCM panels and fasten with blind rivets, bolts, or self-tapping screws. Fasten flashings and trim around openings and similar elements with self-tapping screws.
 - 7. Provide weathertight escutcheons for all items penetrating system.
 - 8. Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action as recommended in writing by MCM system manufacturer.
 - 9. Attach MCM panels to supports at locations, spacings, and with fasteners recommended by manufacturer to meet listed performance requirements.
- B. Attachment Assembly, General: Install attachment assembly required to support MCM panels and to provide a complete weathertight wall system, including tracks, drainage channels, anchor channels, perimeter extrusions, and panel clips.
 - 1. Install subframing, furring, and other panel support members and anchorages in accordance with ASTM C955.
 - 2. Install support system at locations, at spacings, and with fasteners recommended by MCM system manufacturer to meet listed performance requirements.
- C. DBVC MCM System: Install vertical drain channels and horizontal tracks at locations, at spacings, and with fasteners recommended by system manufacturer.

- 1. Attach MCM panels by interlocking panel clips into tracks.
- 2. Insert matching MCM spline into tracks at joint reveal locations.
- D. Install panels to allow individual panels to "free float" and be installed and removed without disturbing adjacent panels.
- E. Install accessories with positive anchorage to building and weathertight mounting and provide for thermal expansion. Coordinate installation with flashings and other components.
 - 1. Install accessory components required for a complete MCM system assembly including trim, copings, corners, seam covers, flashings, gaskets, fillers, closure strips, and similar items. Provide types indicated by MCM system manufacturer.
- F. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that are permanently watertight.
 - 1. Install exposed flashing and trim that is without buckling and tool marks and that is true to line and levels indicated, with exposed edges folded back to form hems. Install trim to fit substrates and to result in waterproof performance.
 - 2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 ft. with no joints allowed within 24 inches of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant (concealed within joints).

3.3 INSTALLATION TOLERANCES

A. Shim and align MCM panels within installed tolerance of 1/4 inch in 20 ft., non-accumulative, on level, plumb, and location lines as indicated, and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

3.4 CLEANING

- A. Remove temporary protective coverings and strippable films as MCM panels are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of installation, clean finished surfaces as recommended by MCM panel manufacturer. Maintain in a clean condition during construction.
- B. After installation, clear weep holes and drainage channels of obstructions, dirt, and sealant.

3.5 PROTECTION

A. Replace MCM panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 074213.23

SECTION 096519 (REVISED ADDENDUM #5) RESILIENT TILE FLOORING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Solid vinyl floor tile, Luxury Vinyl Tile Flooring.
 - 2. Homogenous Vinyl Plank Vinyl Tile Flooring with laser cut court lines.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For each type of resilient floor tile.
 - 1. Include floor tile layouts, edges, columns, doorways, enclosing partitions, built-in furniture, cabinets, and cutouts.
 - 2. Show details of special patterns.
 - 3. Locate all transitions between different flooring types.
- C. Samples for Initial Selection: For each type of floor tile indicated.
- D. Samples for Verification: Full-size units of each color and pattern of floor tile required.
 - 1. For heat-welding bead, manufacturer's standard-size Samples, but not less than 9 inches long, of each color required.
- E. Welded-Seam Samples: For seamless-installation technique indicated and for each floor covering product, color, and pattern required; with seam running lengthwise and in center of 6-by-9-inch Sample applied to a rigid backing and prepared by Installer for this Project.
- F. Product Schedule: For floor tile. Use same designations indicated on Drawings.

1.3 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance Data: For each type of floor tile to include in maintenance manuals.

1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Floor Tile: Furnish one box for every 50 boxes or fraction thereof, of each type, color, and pattern of floor tile installed.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are competent in techniques required by manufacturer for floor tile installation and seaming method indicated.
 - 1. Engage an installer who employs workers for this Project who are trained or certified by floor tile manufacturer for installation techniques required.
- B. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.
 - 1. Coordinate mockups in this Section with mockups specified in other Sections.
 - a. Size: Minimum 100 sq. ft. for each type, color, and pattern in locations directed by Owner/Architect.
 - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 - 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store floor tile and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F. Store floor tiles on flat surfaces.

1.8 FIELD CONDITIONS

- A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 60 deg F or more than 95 deg F and no more than 75% humidity, in spaces to receive floor tile during the following periods:
 - 1. 48 hours before installation.
 - 2. During installation.
 - 3. 48 hours after installation.
- B. After installation and until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 deg F or more than 95 deg F.
- C. Close spaces to traffic during floor tile installation.
- D. Close spaces to traffic for 48 hours after floor tile installation.
- E. Install floor tile after other finishing operations, including painting, have been completed.

PART 2 - PRODUCTS

2.1 SOLID VINYL FLOOR TILE

A. Basis-of-Design Product: Subject to compliance with requirements, provide Tarkett North America, Style Event LVT, as indicated on drawings. Contact Doug Edwards at Doug.Edwards@tarkett.com, (m): 317-443-9579.

- B. Tile Standard: ASTM F1700.
 - 1. Class: Surface-Decorated Vinyl Tile Class III, Printed Film Vinyl Tile.
 - 2. Type: B, Embossed Surface.
- C. Thickness: 3.0 mm (0.120 inches).
- D. Wear Layer Thickness: 30 mil (0.76 mm)
- E. Finish: Techtonic.
- F. Size: May vary by style/color. Reference Finish Key Specification on Drawing for sizes by style.
- G. Seamless-Installation Method: As indicated on the drawing Finish Key and Finish Plans.
- H. Colors and Patterns: Reference Drawing set for Finish Key Basis of Design and Finish Plans for finish schedule tags. Colors to be selected from manufacturer's full range of colors within the style designation.

2.2 RESILIENT FLOORING - ATHLETIC USE

- A. Homogeneous polymeric calendared layers with PVC wear layer. Techtonic polyurethane coating technology that is durable and resists scratching, abrasions, scuffing and staining.
- B. Basis-of-Design Product: Subject to compliance with requirements, provide Tarkett North America, Styles Latitude and Victory LVT, as indicated on drawings. Contact Doug Edwards at Doug.Edwards@tarkett.com, (m): 317-443-9579.
 - 1. Material: Meets ASTM F1700, Class III, Type B, performance standards for solid vinyl floor tile.
 - 2. Traffic-Surface Texture: Smooth.
 - 3. Plank Size: 6 inch x 48 inches
 - 4. Wear Thickness: .020 mil (.5 mm)
 - 5. Overall Thickness: .120" (3.0 mm)
 - 6. Color and Pattern of field and Borders: As selected by Architect from manufacturer's full range in the styles and patterns designated on the Finish Key Legend on the drawings. Gym floor color to be Pearl Maple.
 - 7. Court Lines: Interlayed custom cut court lines created in patterns directed on Floor plans. Colors to be selected in up to 5 colors from Tarkett, Victory Chroma Collection of colors.

2.3 INSTALLATION MATERIALS

- A. Trowelable Leveling and Patching Compounds: Latex-modified, portland-cement-based or blended hydraulic-cement-based formulation provided or approved by floor tile manufacturer for applications indicated.
- B. Adhesives: Water-resistant type recommended by floor tile and adhesive manufacturers to suit floor tile and substrate conditions indicated.
- C. Seamless-Installation Accessories:
 - 1. Heat-Welding Bead: Manufacturer's solid-strand product for heat welding seams.

- a. Colors: As selected by Architect from manufacturer's full range to contrast with floor tile.
- 2. Chemical-Bonding Compound: Manufacturer's product for chemically bonding seams.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
 - 1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of floor tile.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Prepare substrates according to floor tile manufacturer's written instructions to ensure adhesion of resilient products.
- B. Concrete Substrates: Prepare according to ASTM F710.
 - 1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
 - 2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by floor tile manufacturer. Do not use solvents.
 - 3. Alkalinity and Adhesion Testing: Perform tests recommended by floor tile manufacturer. Proceed with installation only after substrate alkalinity falls within range on pH scale recommended by manufacturer in writing, but not less than 5 or more than 9 pH.
 - 4. Moisture Testing: Perform tests so that each test area does not exceed 200 sq. ft., and perform no fewer than three tests in each installation area and with test areas evenly spaced in installation areas.
 - a. Relative Humidity Test: Using in-situ probes, ASTM F2170. Proceed with installation only after substrates have a maximum 70 percent relative humidity level measurement.
- C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.
- D. Do not install floor tiles until materials are the same temperature as space where they are to be installed.
 - 1. At least 48 hours in advance of installation, move resilient floor tile and installation materials into spaces where they will be installed.
- E. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient floor tile.

3.3 FLOOR TILE INSTALLATION

- A. Comply with manufacturer's written instructions for installing floor tile.
- B. Lay out floor tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half tile at perimeter.
 - 1. Lay tiles in pattern indicated on drawings or on Finish Key.
- C. Match floor tiles for color and pattern by selecting tiles from cartons in the same sequence as manufactured and packaged, if so numbered. Discard broken, cracked, chipped, or deformed tiles.
 - 1. Lay LVT tiles in direction with Finish Key Legend and as directed on Finish Plan Drawings.
- D. Scribe, cut, and fit floor tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames.
- E. Extend floor tiles into toe spaces, door reveals, closets, and similar openings. Extend floor tiles to center of door openings.
- F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor tiles as marked on substrates. Use chalk or other nonpermanent marking device.
- G. Adhere floor tiles to substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.
- H. Seamless Installation:
 - 1. Heat-Welded Seams: Comply with ASTM F1516. Rout joints and heat weld with welding bead to fuse sections permanently into a seamless flooring installation. Prepare, weld, and finish seams to produce surfaces flush with adjoining flooring surfaces.
 - 2. Chemically Bonded Seams: Bond seams with chemical-bonding compound to fuse sections permanently into a seamless flooring installation. Prepare seams and apply compound to produce tightly fitted seams without gaps, overlays, or excess bonding compound on flooring surfaces.

3.4 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protecting floor tile.
- B. Perform the following operations immediately after completing floor tile installation:
 - 1. Remove adhesive and other blemishes from surfaces.
 - 2. Sweep and vacuum surfaces thoroughly.
 - 3. Damp-mop surfaces to remove marks and soil.
- C. Protect floor tile from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.

- D. Floor Polish: LVT does NOT require floor polish, follow recommended flooring manufacturer written instructions for final finish on LVT.
- E. Cover floor tile until Substantial Completion.

END OF SECTION 096519

SECTION 096813 (REVISED ADDENDUM #5) TILE CARPETING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

- 1. Carpet tile.
- 2. Walk-off Tile

B. Related Requirements:

1. Section 096513 "Resilient Base and Accessories" and Section 096519 "Resilient Tile Flooring" for resilient wall base and accessories installed with carpet tile.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
 - 1. Review methods and procedures related to carpet tile installation including, but not limited to, the following:
 - a. Review delivery, storage, and handling procedures.
 - b. Review ambient conditions and ventilation procedures.
 - c. Review subfloor preparation procedures.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include manufacturer's written data on physical characteristics, durability, and fade resistance.
 - 2. Include manufacturer's written installation recommendations for each type of substrate.
- B. Shop Drawings: For carpet tile installation, showing the following:
 - 1. Columns, doorways, enclosing walls or partitions, built-in cabinets, and locations where cutouts are required in carpet tiles.
 - 2. Carpet tile type, color, and dye lot.
 - 3. Type of subfloor.
 - 4. Type of installation.
 - 5. Pattern of installation.
 - 6. Pattern type, location, and direction.
 - 7. Pile direction.
 - 8. Type, color, and location of insets and borders.
 - 9. Type, color, and location of edge, transition, and other accessory strips.
 - 10. Transition details to other flooring materials.
- C. Samples for Initial Selection: Manufacturer's standard color sheets, showing full range of available colors for each type of carpet tile.
 - 1. Include Samples of exposed edge, transition, and other accessory stripping involving color or finish selection.

- D. Samples for Verification: Actual sample of finished products for each of the following products and for each color and texture required. Label each Sample with manufacturer's name, material description, color, pattern, and designation indicated on Drawings and in schedules.
 - 1. Carpet Tile: Full-size Sample.
 - 2. Exposed Edge, Transition, and Other Accessory Stripping: 12-inch-long Samples.
- E. Product Schedule: For carpet tile. Use same designations indicated on Drawings.

1.4 INFORMATIONAL SUBMITTALS

- A. Product Test Reports: For carpet tile, for tests performed by a qualified testing agency.
- B. Qualification Statements: For Installer.
- C. Sample Warranties: For carpet tile.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For carpet tiles. Include the following:
 - 1. Methods for maintaining carpet tile, including cleaning and stain-removal products and procedures and manufacturer's recommended maintenance schedule.
 - 2. Precautions for cleaning materials and methods that could be detrimental to carpet tile.

1.6 MAINTENANCE MATERIAL SUBMITTALS.

- A. Extra Stock Material: Furnish extra materials, from the same production run, to Owner that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Carpet Tile: Full-size units equal to 5 percent of amount installed for each type indicated, but no fewer than 10 full-size units.

1.7 QUALITY ASSURANCE

A. Installer Qualifications: An authorized representative who is certified by the International Certified Floorcovering Installers Association at the Commercial I certification level.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Comply with CRI 104.

1.9 FIELD CONDITIONS

- A. Comply with CRI 104 for temperature, humidity, and ventilation limitations.
- B. Environmental Limitations: Do not deliver or install carpet tiles until spaces are enclosed and weathertight, wet-work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at levels planned for building occupants during the remainder of the construction period.
- C. Do not install carpet tiles over concrete slabs until slabs have cured and are sufficiently dry to

bond with adhesive and concrete slabs have pH range recommended in writing by carpet tile manufacturer.

D. Where demountable partitions or other items are indicated for installation on top of carpet tiles, install carpet tiles before installing these items.

1.10 WARRANTY

- A. Special Warranty for Carpet Tiles: Manufacturer agrees to repair or replace components of carpet tile installation that fail in materials or workmanship within specified warranty period.
 - 1. Warranty does not include deterioration or failure of carpet tile due to unusual traffic, failure of substrate, vandalism, or abuse.
 - 2. Failures include, but are not limited to, the following:
 - a. More than 10 percent loss of face fiber, edge raveling, snags, and runs. (Over 20 years.)
 - b. Loss of tuft-bind strength. (Not less than 20 years.)
 - c. Excess static discharge.
 - d. Delamination. (Not less than 20 years.)
 - e. Dimensional instability. (Not less than 20 years.)
 - 3. Warranty Period: 20 years from date of Substantial Completion.
 - 4. Include a Mold Resistant Warranty per ASTM E2471.

PART 2 - PRODUCTS

2.1 CARPET TILE

- 1. Basis-of-Design Product: Subject to compliance with requirements, provide products by Tarkett Commercial Flooring as indicated on the Drawings. Contact Doug Edwards at Doug.Edwards@tarkett.com, (m): 317-443-9579.
- B. Color: As selected by Architect from manufacturer's full range.
- C. Pattern: As indicated on Finish Key legend on drawings.
- D. Fiber Content: 100% Recycled Content Nylon or 100% Polyester
- E. Fiber Type: 100% Solution Dyed.
- F. Pile Characteristic: Level-loop pile.
- G. Pile Thickness: 0.14 inches for finished carpet tile.
- H. Total Weight: 18oz/yd2 for finished carpet tile.
- I. Primary Backing/Backcoating: Manufacturer's standard composite materials.
- J. Secondary Backing: Manufacturer's standard material.
- K. Backing System: GlasBac Backing.

- L. Size: Varies by manufacture.
- M. Applied Treatments:
 - 1. Soil-Resistance Treatment: Tarkett: Dynex SD.
 - 2. Antimicrobial Treatment: Tarkett: Manufacturer's standard.
- N. Performance Characteristics:
 - 1. Texture Appearance Retention Rating (TARR): Severe traffic, 4.0 minimum in accordance with ASTM D7330.
 - 2. Critical Radiant Flux Classification: Not less than 0.45 W/sq. cm in accordance with NFPA 253.
 - 3. Dry Breaking Strength: Not less than 100 lbf in accordance with ASTM D2646.
 - 4. Colorfastness to Crocking: Not less than 4, wet and dry, in accordance with AATCC 165.
 - 5. Colorfastness to Light: Not less than 4 after 60 AFU (AATCC fading units) in accordance with AATCC 16.3 Option 3.
 - 6. Electrostatic Propensity: 3.5 kV in accordance with AATCC 134.

2.2 INSTALLATION ACCESSORIES

- A. Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation provided or recommended in writing by carpet tile manufacturer.
- B. Adhesives: Water-resistant, mildew-resistant, nonstaining, pressure-sensitive types to suit products and subfloor conditions indicated, that comply with flammability requirements for installed carpet tile, and that are recommended in writing by carpet tile manufacturer for releasable installation. Must include antimicrobial treatment in the adhesive. Include warranty-sealer and releasable adhesive option.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for maximum moisture content, alkalinity range, installation tolerances, and other conditions affecting carpet tile performance.
- B. Examine carpet tile for type, color, pattern, and potential defects.
- C. Concrete Slabs: Verify that finishes comply with requirements specified in Section 033000 "Cast-in-Place Concrete" and that surfaces are free of cracks, ridges, depressions, scale, and foreign deposits.
 - 1. Moisture Testing: Perform tests so that each test area does not exceed 200 sq. ft. and perform no fewer than three tests in each installation area and with test areas evenly spaced in installation areas.
 - a. Anhydrous Calcium Chloride Test: ASTM F1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. in 24 hours.
 - b. Relative Humidity Test: Using in situ probes, ASTM F2170. Proceed with installation only after substrates have a maximum 75 percent relative humidity

- level measurement.
- c. Perform additional moisture tests recommended in writing by adhesive and carpet tile manufacturers. Proceed with installation only after substrates pass testing.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. General: Comply with CRI 104 and with carpet tile manufacturer's written installation instructions for preparing substrates.
- B. Use trowelable leveling and patching compounds, in accordance with manufacturer's written instructions, to fill cracks, holes, depressions, and protrusions in substrates. Fill or level cracks, holes and depressions 1/8 inch wide or wider, and protrusions more than 1/32 inch unless more stringent requirements are required by manufacturer's written instructions.
- C. Concrete Substrates: Remove coatings, including curing compounds, and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, without using solvents. Use mechanical methods recommended in writing by adhesive and carpet tile manufacturers.
- D. Broom and vacuum clean substrates to be covered immediately before installing carpet tile.

3.3 INSTALLATION

- A. General: Comply with CRI 104, Section 10, "Carpet Tile," and with carpet tile manufacturer's written installation instructions.
- B. Installation Method: As recommended in writing by carpet tile manufacturer.
- C. Maintain dye-lot integrity. Do not mix dye lots in same area.
- D. Maintain pile-direction patterns recommended in writing by carpet tile manufacturer.
- E. Cut and fit carpet tile to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings. Bind or seal cut edges as recommended in writing by carpet tile manufacturer.
- F. Extend carpet tile into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.
- G. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on carpet tile as marked on subfloor. Use nonpermanent, nonstaining marking device.
- H. Install pattern parallel to walls and borders.

3.4 CLEANING AND PROTECTION

- A. Perform the following operations immediately after installing carpet tile:
 - 1. Remove excess adhesive and other surface blemishes using cleaner recommended in

- writing by carpet tile manufacturer.
- 2. Remove yarns that protrude from carpet tile surface.
- 3. Vacuum carpet tile using commercial machine with face-beater element.
- B. Protect carpet tile against damage from construction operations and placement of equipment and fixtures during the remainder of construction period. Use protection methods indicated or recommended in writing by carpet tile manufacturer.

END OF SECTION 096813

SECTION 099723 (ADDED ADDENDUM NO. 5) CONCRETE AND MASONRY COLOR TREATMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Water Based Stain.
- B. Related Requirements:
 - 1. Section 034500 "PRECAST ARCHITECTURAL CONCRETE".

1.2 REFERENCES

A. ASTM C 744 - Standard Specification for Prefaced Concrete and Calcium Silicate Masonry Units.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Product characteristics.
 - 2. Include preparation requirements and application instructions.
 - 3. Storage and handling requirements and recommendations.
 - 4. Installation methods.
- B. Preliminary Samples: To be provided as required for the specific project.
- C. Verification Samples: To be provided on the specific materials to be treated when they are available in plant or on site.
- D. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

1.4 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Paint Products: 5 percent, but not less than 1 gal. of each material and color applied.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: An international manufacturer with a minimum of 20 years of experience in the production of the stains and coatings of type specified.
- B. Installer Qualifications: Installer licensed by Nawkaw to apply the stain products specified and with a minimum of three years documented experience in applying stains and coatings similar in type and scale to this Project.
- C. Environmental Regulations: The masonry stain material to be applied is in compliance with

federal, provincial and local environmental Volatile Organic Compounds (VOC) regulations.

- D. Mock-Up: Apply a minimum one square foot sample of each type of color application required.
 - 1. Finish areas designated by Architect.
 - 2. Prepare each sample in an area where it will be exposed to the same conditions as will be present on the building during curing.
 - 3. Samples should be viewed from a minimum distance of 20 feet.
 - 4. Do not proceed with remaining work until color and finish is approved by Architect.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and handle products in accordance with requirements of manufacturer.
- C. Store materials inside if possible, away from open flame. Store in a secure area to avoid tampering and contamination. Water-based materials must be kept from freezing.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.8 WARRANTY

- A. At project closeout, provide to Owner or Owner's Representative an executed copy of the manufacturer's standard limited warranty against manufacturing defects, outlining its terms, conditions, and exclusions from coverage.
 - 1. Duration: 25 years.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide NawTone Stain, as manufactured by Nawkaw Inc., which is located at: 170 Whitetail Way, Bogart, GA 30622; Toll Free Tel: 866-462-9529; Tel: 706-355-3217; Email: info@nawkaw.com; Web: http://www.nawkaw.com/ or comparable products by the following:
 - 1. PPG
 - 2. Sika
- B. Source Limitations: Obtain each paint product from single source from single manufacturer.

2.2 WATER-BASED STAIN

- A. NawTone (Formerly NECT-90):
 - 1. General: NawTone: high-quality, water-based, highly permeable acrylic stain. Mold, mildew, UV and weather resistant.

2. Properties:

- a. Viscosity: (72° F) 70°-90° KU.
- b. pH: 8.5-9.5
- c. Finish: flat
- d. Nonflammable (ASN/ZS 1530.3-1999)
- e. VOC: < 5 g/L (SCAQMDR 1168)
- f. Abrasion Resistance: excellent
- g. Freeze/Thaw Test (ASTM C216-86): exceeded
- h. Salt Attack Resistance (AS/NZS 4456.10): no blisters
- i. Water Vapor Transmission (ASTM E96-05) 0.337 g/hr m2
- j. Water Vapor Permeance (ASTM E96-05) 6.6x10-8 g/Pa s m2
- k. UV Resistant–Accelerated Weathering (ASTM G154:2000, ASTM G53-88, D2244-89) 2000 hrs: excellent.

3. Finish:

a. Color: Custom color.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Verify that new precast concrete panels have cured at least 21 days prior to applying NawTone.
- C. Verify that surfaces being color treated with NawTone have a neutral pH, are clean, dry and free of efflorescence.
- D. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- B. Clean surfaces thoroughly prior to installation. Allow surfaces to dry completely before applying coating.
- C. Verify that walls, masonry, concrete, stucco, block split faced/fluted and mortar that may have been treated with any form of chemical/acid wash are neutralized.
- D. Treat alkali or efflorescence with proper neutralizing compounds as recommended by masonry supplier before stain application.
- E. Before application, verify that the masonry walls have a neutral pH.
- F. Before application, verify that surface to be treated is clean, dry and contains no frozen water.
- G. Mix products as recommended immediately prior to application.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Apply stain using airless spray pump to help control airborne particles or overspray. If site conditions prohibit spray application, apply by hand; utilizing brushes and rollers.
- C. Do not proceed with work when ambient temperatures are less than 25 degrees F (-4 degrees C) or greater than 110 degrees F (43 degrees C).
- D. Allow manufacturer's specified drying time for each coat before applying next coat (if required).
- E. Verify color consistency. Recoat areas where blotches, blemishes or imperfections are present:

3.4 FIELD QUALITY CONTROL

A. Verify color consistency. Recoat any areas that are unacceptable.

3.5 PROTECTION

- A. Protect installed products until completion of project.
- B. Protect prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels as required.
- C. Protect shrubs, metal, wood trim, glass, asphalt and other building hardware during application from overspray.
- D. Do not permit mist (if spraying) or liquid to drift onto surrounding properties or parking lots.
- E. Touch-up, repair or replace damaged products before substantial completion.

END OF SECTION 099723

SECTION 211000 (REVISED ADDENDUM #5) WATER-BASED FIRE-PROTECTION SYSTEMS

PART 1 GENERAL

1.1 SUMMARY

- A. This Section includes the following fire-suppression piping inside the building:
 - Wet-pipe sprinkler systems.
- B. Related Sections include the following:
 - 1. Division 10 Section "Fire Extinguisher Cabinets" and "Fire Extinguishers" for cabinets and fire extinguishers.
 - 2. Division 28 Section "Fire Detection and Alarm" for alarm devices not specified in this Section.

1.2 GENERAL

- A. Provide all material, labor, engineering and operations for the installation of complete and operable fire protection systems as shown in the project scope and specified herein. All areas will be protected by a hydraulically calculated and designed system in accordance with NFPA Standards: NFPA 13, 14, and 24 current adopted editions; and the Indiana Fire Code and the Indiana Building Code 2014 Editions.
- B. Provide all equipment and materials including piping, valves, fittings, sprinkler heads, fire department connections, backflow preventer, pipe supports, specialties and accessories necessary for a complete and approved fire protection system.
- C. Provide a fire service main 5 ft out into the building, valves, hydrants, and components as described in the project scope and/or shown on the Drawings. Make all connections to utilities as required to serve the fire protection system.
- D. Fire Protection Contractor shall be completely responsible for the design, layout, submittals, installation, testing, certification and acceptance of the fire protection system by the Division of Fire and Building Safety.
- E. Fire Protection Contractor shall apply and pay for all permits and fees required for work under this section.
- F. Any damage to the work of others, to the building and/or property of others caused by leaks in the fire protection system is the responsibility of the fire protection contractor. The fire protection contractor shall pay for necessary replacement of work or damaged property during the installation period.

1.3 DEFINITIONS

- A. Underground Service-Entrance Piping: Underground service piping below the building.
- B. CPVC: Chlorinated polyvinyl chloride plastic.

1.4 SYSTEM DESCRIPTIONS

A. Wet-Pipe Sprinkler System: Automatic sprinklers are attached to piping containing water and that is connected to water supply. Water discharges immediately from sprinklers when they are opened. Sprinklers open when heat melts fusible link or destroys frangible device. Hose connections are included if indicated.

1.5 PERFORMANCE REQUIREMENTS

- A. Standard Piping System Component Working Pressure: Listed for at least 175 psig.
- B. Fire-suppression sprinkler system design shall be approved by authorities having jurisdiction.
 - 1. Margin of Safety for Available Water Flow and Pressure: 10 percent, including losses through water-service piping, valves, and backflow preventers.
 - 2. Sprinkler Occupancy Hazard Classifications:
 - a. Building Service Areas: Ordinary Hazard, Group 1.
 - b. Electrical / IT Equipment Rooms: Ordinary Hazard, Group 1.
 - c. General Storage Areas: Ordinary Hazard, Group 1.
 - d. Mechanical Equipment Rooms: Ordinary Hazard, Group 1.
 - e. Office and Public Areas: Light Hazard.
 - 3. Minimum Density for Automatic-Sprinkler Piping Design:
 - a. Light-Hazard Occupancy: 0.10 gpm over 1500-sq. ft. area.
 - b. Ordinary-Hazard, Group 1 Occupancy: 0.15 gpm over 1500-sq. ft. area.
 - 4. Maximum Protection Area per Sprinkler:
 - a. Office Spaces: 225 sq. ft.
 - b. Storage Areas: 130 sq. ft.
 - c. Mechanical Equipment Rooms: 130 sq. ft.
 - d. Electrical / IT Equipment Rooms: 130 sq. ft.
 - e. Other Areas: According to NFPA 13 recommendations, unless otherwise indicated.
 - 5. Total Combined Hose-Stream Demand Requirement: According to NFPA 13, unless otherwise indicated:
 - a. Light-Hazard Occupancies: 100 gpm for 30 minutes.
 - b. Ordinary-Hazard Occupancies: 250 gpm for 60 to 90 minutes.
 - 6. Flow Test Results: (dated 1/8/2024)

Address: 3500 Keystone Ave.

Total flow: 2,180 gpm

Static: 98 psi Residual: 94 psi 10,841 gpm at 20 psi

1.6 SUBMITTALS

- A. Product Data: For the following: (submittal must be marked to indicate which products will be used)
 - 1. Piping materials, including dielectric fittings, flexible connections, and sprinkler specialty fittings.
 - 2. Pipe hangers and supports, including seismic restraints.

- 3. Valves, including listed fire-protection valves, unlisted general-duty valves, and specialty valves and trim.
- 4. Sprinklers, escutcheons, and guards. Include sprinkler flow characteristics, mounting, finish, and other pertinent data.
- 5. Fire department connections, including type; number, size, and arrangement of inlets; caps and chains; size and direction of outlet; escutcheon and marking; and finish.
- 6. Alarm devices, including electrical data.

B. Shop Drawings:

- 1. Riser diagram, system layout showing all components, and the approval from the Division of Fire and Building Safety.
- C. Fire-hydrant flow test report and Hydraulic Calculations.
- D. Approved Sprinkler Piping Drawings: Working plans, prepared according to NFPA 13, that have been approved by authorities having jurisdiction, including hydraulic calculations, if applicable.
- E. Field Test Reports and Certificates: Indicate and interpret test results for compliance with performance requirements and as described in NFPA 13. Include "Contractor's Material and Test Certificate for Aboveground Piping" and "Contractor's Material and Test Certificate for Underground Piping."
- F. Welding certificates.
- G. Closeout Submittal: A closeout submittal for the fire protection system shall be submitted to the Owner after the system installation is complete and shall include as-built drawings, as-built hydraulic calculations, and Operation and Maintenance Manuals for the fire protection system. Note: These documents should reflect all changes made since the approval submittal.

1.7 QUALITY ASSURANCE

A. Contractor Qualification:

- 1. Work shall be performed by a contractor regularly engaged in the design and installation of fire protection systems.
- Contractor's responsibilities include designing, fabricating, and installing fire-suppression systems and
 providing professional engineering services needed to assume engineering responsibility. Base calculations
 on results of fire-hydrant flow test.
 - a. Engineering Responsibility: Preparation of working plans, calculations, and field test reports by a qualified professional engineer (PE) or a certified level III-IV NICET engineer.

B. Regulatory Requirements:

- 1. System design, installation and materials shall comply with the following applicable regulating agencies and organizations which include, but not limited to the following:
 - a. Indiana Department of Homeland Security Division of Fire and Building Safety.
- 2. System design, installation and materials shall comply with applicable codes, standards, and regulations, which include, but not limited to the following:
 - a. Indiana Building Code
 - b. Indiana Fire Code
 - c. Applicable NFPA Codes and Standards

- 3. If there is conflict or discrepancy between referenced codes, standards or regulations and the Drawings and Specification, it is the Fire Protection Contractor's responsibility to notify the Engineer and the Owner in writing prior to installation.
- 4. Fire Protection Contractor shall assume full financial responsibility for the compliance with all applicable codes, standards, and regulations. This includes compliance for modification or extension of existing systems. All deficiencies shall be corrected at no additional cost to the Owner.

1.8 COORDINATION

Coordinate layout and installation of sprinklers with other construction that penetrates ceilings, including light A. fixtures, HVAC equipment, and partition assemblies.

PART 2 PRODUCTS

2.1 **MANUFACTURERS**

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
 - Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

2.2 **DUCTILE-IRON PIPE AND FITTINGS**

- A. Grooved-End, Ductile-Iron Pipe: AWWA C151, with factory- or field-formed, radius-cut-grooved ends according to AWWA C606.
 - 1. Grooved-Joint Piping Systems:
 - Manufacturers:
 - 1) Tyco.
 - 2) Grinnell.
 - 3) Victaulic.
 - Grooved-End Fittings: ASTM A 536, ductile-iron casting with OD matching ductile-iron-pipe b. OD and cement lining.
 - Grooved-End-Pipe Couplings: AWWA C606, gasketed fitting matching ductile-iron-pipe OD. c. Include ductile-iron housing with keys matching ductile-iron-pipe and fitting grooves, prelubricated rubber gasket with center leg, and steel bolts and nuts.
 - Grooved-End-Pipe Transition Coupling: UL 213 and AWWA C606, gasketed fitting with end d. matching ductile-iron-pipe OD and end matching steel-pipe OD. Include ductile-iron housing with key matching ductile-iron-pipe groove and key matching steel-pipe groove, prelubricated rubber gasket listed for use with housing, and steel bolts and nuts.
 - Grooved-End Transition Flange: UL 213, gasketed fitting with key for ductile-iron-pipe dimensions. e. Include flange-type, ductile-iron housing with rubber gasket listed for use with housing and steel bolts and nuts.

2.3 STEEL PIPE AND FITTINGS

- A. Threaded-End, Schedule 40 Steel Pipe: ASTM A 135, (hot-dip galvanized where indicated) and with factory- or field-formed threaded ends.
 - 1. Cast-Iron Threaded Flanges: ASME B16.1.
 - 2. Malleable-Iron Threaded Fittings: ASME B16.3.
 - 3. Gray-Iron Threaded Fittings: ASME B16.4.
 - 4. Steel Threaded Pipe Nipples: ASTM A 733, made of ASTM A 53/A 53M or ASTM A 106, Schedule 40, seamless steel pipe hot-dip galvanized where indicated. Include ends matching joining method.
 - 5. Steel Threaded Couplings: ASTM A 865 hot-dip galvanized-steel pipe where indicated.
- B. Grooved-End, Schedule 40 Steel Pipe: ASTM A 135, (hot-dip galvanized where indicated) and with factory- or field-formed, square-cut-grooved ends.
 - 1. Grooved-Joint Piping Systems:
 - Manufacturers:
 - 1) Victaulic.
 - 2) Tyco.
 - 3) Anvil.
 - 4) Grinnell.
 - 5) National.
 - b. Grooved-End Fittings: UL-listed, ASTM A 536, ductile-iron casting with OD matching steel-pipe OD.
 - c. Grooved-End-Pipe Couplings: UL 213 and AWWA C606, rigid pattern, unless otherwise indicated; gasketed fitting matching steel-pipe OD. Include ductile-iron housing with keys matching steel-pipe and fitting grooves, prelubricated rubber gasket listed for use with housing, and steel bolts and nuts.
- C. Grooved-End, Schedule 10 Steel Pipe: ASTM A 135, Schedule 10 in NPS 1-1/4 up to NPS 4; and NFPA 13-specified wall thickness in NPS 6 to larger; with factory- or field-formed, roll-grooved ends.
 - . Grooved-Joint Piping Systems:
 - a. Manufacturers:
 - 1) Victaulic.
 - 2) Tyco.
 - 3) Anvil.
 - 4) Grinnell.
 - 5) National.
 - b. Grooved-End Fittings: UL-listed, ASTM A 536, ductile-iron casting with OD matching steel-pipe OD.
 - c. Grooved-End-Pipe Couplings: UL 213 and AWWA C606, rigid pattern, unless otherwise indicated; gasketed fitting matching steel-pipe OD. Include ductile-iron housing with keys matching steel-pipe and fitting grooves, pre-lubricated rubber gasket listed for use with housing, and steel bolts and nuts.

2.4 SPRINKLER SPECIALTY FITTINGS

A. Sprinkler specialty fittings shall be UL listed or FMG approved, with 175-psig minimum working-pressure rating, and made of materials compatible with piping.

- B. Outlet Specialty Fittings:
 - 1. Manufacturers:
 - Tyco. a.
 - b. Anvil.
 - National. c.
 - Victaulic. d.
 - 2. Mechanical-T and -Cross Fittings: UL 213, ductile-iron housing with gaskets, bolts and nuts, and threaded, locking-lug, or grooved outlets.
 - 3. Snap-On and Strapless Outlet Fittings: UL 213, ductile-iron housing or casting with gasket and threaded outlet.
- C. Sprinkler Drain and Alarm Test Fittings: Cast- or ductile-iron body; with threaded or locking-lug inlet and outlet, test valve, and orifice and sight glass.
 - 1. Manufacturers:
 - Tyco. a.
 - b. Victaulic.
 - AGF. c.
 - Reliable. d.
- D. Sprinkler Branch-Line Test Fittings: Brass body with threaded inlet, capped drain outlet, and threaded outlet for sprinkler.
 - 1. Manufacturers:
 - Elkhart Brass a.
 - b. Potter-Roemer
 - Fire-End & Croker
- E. Sprinkler Inspector's Test Fitting: Cast- or ductile-iron housing with threaded inlet and drain outlet and sight glass.
 - Manufacturers:
 - Tyco. a.
 - b. AGF.
 - Victaulic.
- F. Flexible Sprinkler Connections: UL listed or FM approved.
 - Manufacturers:
 - a. Victaulic.
 - b. Easyflex.
 - c. Flexhead.
 - Aquaflex. d.
 - Sprinklerflex. e.
- 2.5 LISTED FIRE-PROTECTION VALVES
 - A. Valves shall be UL listed or FMG approved, with 175-psig minimum pressure rating.
 - B. Free-standing type Post Indicator Valves:
 - 1. Free-standing design, cast iron body, flanged connection, non-rising stem, 2" square wrench nut.
 - 2. Manufacturers:
 - Mueller

- b. Kennedy
- c. AVK
- C. Butterfly Valves: UL 1091.
 - 1. NPS 2 and Smaller: Bronze body with threaded ends.
 - a. Manufacturers:
 - 1) Victaulic.
 - 2) Tyco.
 - 3) Anvil.
 - 4) Kennedy.
 - 5) Milwaukee.
 - 6) NIBCO.
 - 7) Reliable.
 - 8) Viking.
 - 2. NPS 2-1/2 and Larger: Bronze, cast-iron, or ductile-iron body; wafer type or with flanged or grooved ends.
 - a. Manufacturers:
 - 1) Victaulic.
 - 2) Tyco.
 - 3) Anvil.
 - 4) Kennedy.
 - 5) Milwaukee.
 - 6) NIBCO.
 - 7) Reliable.
 - 8) Viking.
- D. Check Valves NPS 2 and Larger: UL 312, swing type, cast-iron body with flanged or grooved ends.
 - 1. Manufacturers:
 - a. Victaulic.
 - b. Tyco.
 - c. Anvil.
 - d. Kennedy.
 - e. Milwaukee.
 - f. NIBCO.
 - g. Reliable.
 - h. Viking.
- E. Gate Valves: UL 262, OS&Y type.
 - 1. NPS 2 and Smaller: Bronze body with threaded ends.
 - a. Manufacturers:
 - 1) Fivalco.
 - 2) Global Safety.
 - 3) Crane.
 - 4) Milwaukee.
 - 5) NIBCO.
 - 6) United Brass Works.
 - 2. NPS 2-1/2 and Larger: Cast-iron body with flanged ends.
 - a. Manufacturers:

- 1) American Cast Iron Pipe.
- 2) American Valve.
- 3) Clow Valve.
- 4) Crane.
- 5) Hammond.
- 6) Milwaukee.
- 7) Mueller.
- 8) NIBCO.
- 9) Tyco.
- 10) United Brass Works.
- 11) Watts.
- 12) Wilkins.
- 13) AVK.
- 14) Kennedy.
- F. Indicating Valves: UL 1091, with integral indicating device and ends matching connecting piping.
 - 1. Indicator: monitored, prewired, single-circuit, supervisory switch.
 - 2. NPS 2 and Smaller: Ball or butterfly valve with bronze body and threaded ends.
 - a. Manufacturers:
 - 1) Tyco.
 - 2) Milwaukee.
 - 3) Kennedy.
 - 4) NIBCO.
 - 5) Pratt, Henry.
 - 6) Victaulic.
 - 7) Reliable.
 - 8) Viking.
 - 9) Wilkins.
 - 3. NPS 2-1/2 and Larger: Butterfly valve with cast- or ductile-iron body; wafer type or with grooved ends.
 - a. Manufacturers:
 - 1) Tyco.
 - 2) Milwaukee.
 - 3) Kennedy.
 - 4) NIBCO.
 - 5) Pratt, Henry.
 - 6) Victaulic.
 - 7) Reliable.
 - 8) Viking.
 - 9) Wilkins.

2.6 UNLISTED GENERAL-DUTY VALVES

- A. Check Valves NPS 2 and Smaller: MSS SP-80, Type 4, Class 125 minimum, swing type with bronze body, nonmetallic disc, and threaded ends.
- B. Gate Valves NPS 2 and Smaller: MSS SP-80, Type 2, Class 125 minimum, with bronze body, solid wedge, and threaded ends.

C. Globe Valves NPS 2 and Smaller: MSS SP-80, Type 2, Class 125 minimum, with bronze body, nonmetallic disc, and threaded ends.

2.7 SPECIALTY VALVES

- A. Sprinkler System Control Valves: UL listed or FMG approved, cast- or ductile-iron body with flanged or grooved ends, and 175-psig minimum pressure rating.
 - Manufacturers:
 - Tyco. a.
 - b. Reliable.
 - Victaulic. c.
 - d. Viking.
 - 2. Alarm Check Valves: UL 193, designed for horizontal or vertical installation, with bronze grooved seat with O-ring seals, single-hinge pin, and latch design. Include trim sets for bypass, drain, electrical sprinkler alarm switch, pressure gages, retarding chamber, and fill-line attachment with strainer.
 - Drip Cup Assembly: Pipe drain without valves and separate from main drain piping.
 - Drip Cup Assembly: Pipe drain with check valve to main drain piping. b.
- B. Automatic Drain Valves: UL 1726, NPS 3/4, ball-check device with threaded ends.
 - 1. Manufacturers:
 - a. Tyco.
 - b. Grinnell.
 - c. Approved Equal.
- C. Double Check Assembly: ASSE 1018, UL listed and FM approved, suitable for continuous pressure application, OS&Y gate valves on inlet and outlet, test cocks, two (2) positive seating check valves, stainless steel body and trim.
 - Manufacturers: 1.
 - Ames a.
 - Wilkins b.
 - Watts c.
 - d. **FEBCO**
 - e. **BEECO**

2.8 **SPRINKLERS**

- A. Sprinklers shall be UL listed or FMG approved, with 175-psig minimum pressure rating.
- B. Manufacturers:
 - 1. Victaulic.
 - 2. Tyco.
 - 3. Globe.
 - 4. Firematic.
 - 5. Reliable.
 - 6. Viking.
- C. Automatic Sprinklers: With heat-responsive element complying with the following:
 - 1. UL 199, for nonresidential applications.

- 2. UL 1767, for early-suppression, fast-response applications.
- D. Sprinkler Types and Categories: Nominal 1/2-inch orifice for "Ordinary" temperature classification rating, unless otherwise indicated or required by application.
- E. Sprinkler types, features, and options as follows:
 - 1. Concealed ceiling sprinklers, including cover plate.
 - 2. Extended-coverage sprinklers.
 - 3. Pendent sprinklers.
 - 4. Pendant, dry-type sprinklers.
 - 5. Quick-response sprinklers.
 - 6. Recessed sprinklers, including escutcheon.
 - 7. Sidewall sprinklers.
 - 8. Sidewall, dry-type sprinklers.
 - 9. Upright sprinklers.
- F. Sprinkler Finishes: Chrome plated, bronze, and painted.
- G. Special Coatings: Wax, lead, and corrosion-resistant paint.
- H. Sprinkler Escutcheons: Materials, types, and finishes for the following sprinkler mounting applications. Escutcheons for concealed, flush, and recessed-type sprinklers are specified with sprinklers.
 - 1. Ceiling Mounting: One piece, flat, steel, match ceiling finish.
 - 2. Sidewall Mounting: One piece, flat, steel, match wall finish.
- I. Sprinkler Guards: Wire-cage type, including fastening device for attaching to sprinkler.

2.9 FIRE DEPARTMENT CONNECTIONS

- A. Manufacturers:
 - 1. Croker Fire.
 - 2. Potter-Roemer.
 - 3. Guardian.
- B. Exposed, Freestanding-Type, Fire Department Connection: UL 405, 175-psig minimum pressure rating; with corrosion-resistant-metal body, brass inlets with threads according to NFPA 1963 and matching local fire department sizes and threads, and bottom outlet with pipe threads. Include brass lugged caps, gaskets, and brass chains; brass lugged swivel connection and drop clapper for each hose-connection inlet; 18-inch-high, brass sleeve; and round, floor, brass escutcheon plate with marking "AUTO SPKR & STANDPIPE."
 - 1. Finish Including Sleeve: Polished chrome-plated.
- C. Exposed, Freestanding-Type, Fire Department Connection: UL 405, 175-psig minimum pressure rating; straight pattern Storz adapter with Storz cap, forged aluminum powder coat finish, galvanized steel elbow, and bottom outlet with pipe threads; identification plate with marking "AUTO SPKR & STANDPIPE."

2.10 ALARM DEVICES

A. Alarm-device types shall match piping and equipment connections.

- B. Water-Flow Indicator: UL 346, electrical-supervision, paddle-operated-type, water-flow detector with 250-psig pressure rating and designed for horizontal or vertical installation. Include two single-pole, double-throw circuit switches for isolated alarm and auxiliary contacts, 7 A, 125-V ac and 0.25 A, 24-V dc; complete with factory-set, field-adjustable retard element to prevent false signals and tamperproof cover that sends signal if removed.
 - Manufacturers:
 - a. Potter Electric.
 - b. System Sensor.
- C. Pressure Switch: UL 753, electrical-supervision-type, water-flow switch with retard feature. Include single-pole, double-throw, normally closed contacts, and design that operates on rising pressure and signals water flow.
 - 1. Manufacturers:
 - a. Potter Electric.
 - b. System Sensor.
- D. Electrically Operated Alarm: UL 464, with 6-inch- minimum- diameter, vibrating-type, metal alarm bell with redenamel factory finish and suitable for outdoor use.
 - 1. Manufacturers:
 - a. Potter Electric Signal Company.
 - b. System Sensor.
 - c. Tyco.
- E. Valve Supervisory Switch: UL 753, electrical, single-pole, double-throw switch with normally closed contacts. Include design that signals controlled valve is in other than fully open position.
 - 1. Manufacturers:
 - a. Potter.
 - b. System Sensor.
- F. Indicator-Post Supervisory Switch: UL 753, electrical, single-pole, double-throw switch with normally closed contacts. Include design that signals controlled indicator-post valve is in other than fully open position.
 - Manufacturers:
 - a. Potter Electric.
 - b. Tyco.

PART 3 EXECUTION

- 3.1 PREPARATION
 - A. The Fire Protection Contractor shall prepare hydraulic calculations for the design of the system. Hydraulic calculations shall include the volume in gallons of all systems installed.
 - B. Flow test data shall be used in the design of the system (static pressure, residual pressure and flowing GPM). Flow tests shall be performed by the Fire Protection Contractor and verified by the local fire department. Fire Protection Contractor assumes all cost associated with the flow test. Report test results promptly and in writing.
 - C. The submittal for the fire protection system must be approved before work may begin.

D. Inspect pipe and fittings for defects and clean all dirt and other foreign matter prior to installation. Damaged pipe and fittings will be rejected.

3.2 EARTHWORK

A. Refer to Division 31 Section "Earth Moving" for excavating, trenching, and backfilling.

3.3 EXAMINATION

A. Verification of conditions:

- 1. Examination shall be done before design approval and fabrication. Prefabrication is done at the Fire Protection Contractor's risk.
- 2. Examine the project site and become familiar with the actual project conditions under which the work will be performed.
- 3. Examine roughing-in for hose connections and to verify actual locations of piping connections before installation.
- 4. Examine walls and partitions for suitable thickness, fire and smoke rated construction, framing for hose cabinets, and other conditions where hose connections are to be installed.
- 5. Coordinate all work and placement of components with all other trades.
- 6. Verify all dimensions. Be responsible for all measurements, fitting and assembly of all work.
- 7. Modify design as required to integrate the actual project conditions, coordination and dimensions.
- 8. The Fire Protection Contractor shall be responsible for any redesign and refabricating.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.4 PIPING APPLICATIONS, GENERAL

- A. Shop weld pipe joints where welded piping is indicated.
- B. Do not use welded joints for galvanized-steel pipe.
- C. Flanges, flanged fittings, unions, nipples, and transition and special fittings with finish and pressure ratings same as or higher than system's pressure rating may be used in aboveground applications, unless otherwise indicated.
- D. Underground Service-Entrance Piping: Ductile-iron, mechanical-joint pipe and fittings with restraints.
- E. Underground Service-Entrance Piping: Ductile-iron, grooved-end pipe and fittings; grooved-end-pipe couplings; and grooved joints, with restraints.

3.5 SPRINKLER SYSTEM PIPING SCHEDULE – <u>SEE FIRE PROTECTION PIPE MATERIAL SCHEDULE ON</u> THE DRAWINGS

3.6 VALVE APPLICATIONS

- A. Drawings indicate valve types to be used. Where specific valve types are not indicated, the following requirements apply:
 - 1. Listed Fire-Protection Valves: UL listed and FMG approved for applications where required by NFPA 13.
 - a. Shutoff Duty: Use butterfly valves.
 - 2. Unlisted General-Duty Valves: For applications where UL-listed and FMG-approved valves are not required by NFPA 13.
 - a. Shutoff Duty: Use butterfly valves.
 - b. Throttling Duty: Use ball or globe valves.

3.7 JOINT CONSTRUCTION

- A. Threaded Joints: Comply with NFPA 13 for pipe thickness and threads. Do not thread pipe smaller than NPS 8 with wall thickness less than Schedule 40 unless approved by authorities having jurisdiction and threads are checked by a ring gage and comply with ASME B1.20.1.
- B. Grooved Joints: Assemble joints with listed coupling and gasket, lubricant, and bolts.
 - Ductile-Iron Pipe: Radius-cut-groove ends of piping. Use grooved-end fittings and grooved-end-pipe couplings.
 - 2. Steel Pipe: Square-cut or roll-groove piping as indicated. Use grooved-end fittings and rigid, grooved-end-pipe couplings, unless otherwise indicated.

3.8 SERVICE-ENTRANCE PIPING

- A. Install underground ductile iron service entrance piping according to NFPA 24 and with restrained joints.
- B. Underground piping must be completely flushed at a rate to achieve a velocity of 10 feet per second and hydrostatically tested at 200 psi or if working pressure is more than 150 psi, the working pressure plus 50 psi, for 2 hours.
- C. The fire protection contractor shall sterilize all piping upstream of the service entrance to the building per local utilities and authorities having jurisdiction.
- D. Connect fire suppression piping to water service piping of size and in location indicated for service entrance to building.

3.9 PIPING INSTALLATION

A. Locations and Arrangements: Drawing plans, schematics, and diagrams indicate general location and arrangement of piping. Install piping as indicated, as far as practical.

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- 1. Deviations from approved working plans for piping require written approval from authorities having jurisdiction. File written approval with Architect before deviating from approved working plans.
- B. The sprinkler system shall be zoned on a floor-by-floor basis.

- C. Provide a standpipe in each exit stairway in accordance with NFPA 14.
 - The standpipe system shall be hydraulically designed to provide the required minimum pressure and flowrate.
 - 2. Provide a 2-1/2" hose connection, 48" above floor at each intermediate floor landing in every required exit stairway, and at the highest landing of stairways with stairway access to the roof.
 - All standpipes shall be interconnected, provide an isolation valve for each riser. Provide drain valves with 3. hose connection at the low point of all standpipes downstream of the isolation valve.
- D. Use approved fittings to make changes in direction, branch takeoffs from mains, and reductions in pipe sizes.
- E. Install unions or grooved couplings adjacent to each control valve. Unions are not required on flanged devices or in piping installations using grooved joints.
- F. Install "Inspector's Test Connections" in sprinkler system piping, complete with shutoff valve, sized and located according to NFPA 13.
- G. Install sprinkler piping with drains for complete system drainage.
- H. Install ball drip valves to drain piping between fire department connections and check valves. Drain to floor drain or outside building.
- I. Install chrome plated and other finished components with care that marring does not occur to the finish.
- J. Install piping high enough to permit relocation of light fixtures without moving the ceiling grids where applicable.
- K. Conceal piping in finished areas unless otherwise shown on the Drawings.
- L. For wet systems, install vertical lines plumb and horizontal lines parallel to building lines.
- M. For dry systems, install horizontal piping pitched to low points and in a manner to make it possible to test and empty entire system. Provide valves at low point to facilitate system drainage.
- N. Install alarm devices in piping systems.
- 0. Hangers and Supports: Comply with NFPA 13 for hanger materials.
 - 1. Support piping from structure above with hangers.
 - 2. Sizing, spacing and installation shall be in accordance with NFPA 13, unless otherwise shown on the Drawings or specified herein.
 - 3. Comply with other sections related to Basic Mechanical Materials and Methods.
- P. Pipe Sleeves:
 - 1. Provide pipe sleeves for pipes passing through building walls and floors above grade.
 - 2. The annular space between pipe and sleeves shall be sealed with caulking or shall be fire stopped where required.
 - 3. Provide chrome plated escutcheons large enough to cover the pipe sleeve in exposed piping areas.

- Q. Install pressure gages on riser or feed main, at each sprinkler test connection, and at top of each standpipe. Include pressure gages with connection not less than NPS 1/4 and with soft metal seated globe valve, arranged for draining pipe between gage and valve. Install gauges to permit removal and install where they will not be subject to freezing.
- R. Fill wet-pipe sprinkler system piping with water, pressurize and test per NFPA 13.

3.10 VALVE INSTALLATION

- A. Install backflow preventer at service entrance lead-in.
- B. Install listed fire-protection valves, unlisted general-duty valves, specialty valves and trim, controls, and specialties according to NFPA 13 and authorities having jurisdiction.
- C. Install listed fire-protection shutoff valves supervised-open, located to control sources of water supply except from fire department connections. Install permanent identification signs indicating portion of system controlled by each valve.

3.11 ZONE CONTROL ASSEMBLY

A. Provide a zone control assembly for each sprinkler zone. Zone control assembly shall include supervised shut-off valve, pressure gauge, water flow indicator, test valve, drain valve, sight glass, and restricted orifice union of the proper size.

3.12 DRAINS

- A. Pipe drains to terminate at floor drains that can take a full flow drain test.
- B. If an acceptable floor drain is not available, terminate drain outside the building. Location of drain outside of the building shall be approved by Architect/Engineer. Drains terminating outside the building shall be equipped with a 1-1/2" NHS hose thread connection.

3.13 FIRE ALARM DEVICES

- A. Provide a waterflow switch for each sprinkler zone.
- B. Provide a valve supervisory switch for all water supply shut-off valves.

3.14 SPRINKLER APPLICATIONS

- A. Drawings indicate sprinkler types to be used. Where specific types are not indicated, use the following sprinkler types:
 - 1. Rooms without Ceilings: Upright sprinklers.
 - 2. Rooms with Suspended Ceilings: Recessed sprinklers.
 - 3. Rooms with Suspended Ceilings: Concealed sprinklers.
 - 4. Wall Mounting: Sidewall sprinklers.
 - 5. Spaces Subject to Freezing: Dry type sprinklers.
 - 6. Sprinkler Finishes:
 - a. Upright, Pendent, and Sidewall Sprinklers: Chrome plated in finished spaces exposed to view; rough bronze in unfinished spaces not exposed to view; wax coated where exposed to acids, chemicals, or other corrosive fumes.

- b. Concealed Sprinklers: Rough brass, with factory-painted finish color as selected by the Architect.
- c. Recessed Sprinklers: Bright chrome, with bright chrome escutcheon.
- d. Recessed Sprinklers: White, with white escutcheon.

3.15 SPRINKLER INSTALLATION

- A. Install sprinkler heads in accordance with the manufacturer's instructions. Heads shall be installed to satisfy all code requirements for head spacing.
- B. Install sprinklers in suspended ceilings, center sprinkler head in grid or lay-in ceilings in both directions. In areas with 2' x 4' ceiling tiles, centering using a 2' x 2' ceiling pattern may be acceptable, obtain written approval from the Architect.
- C. Coordinate locations of sprinkler heads with ceiling grid, diffusers, light fixtures and other obstructions. Provide additional sprinkler heads which may be required for the coordinated ceiling pattern and for centering, even though it may exceed the minimum code requirements. Show actual sprinkler head locations in the submittal and closeout submittal.
- D. Provide sprinkler head guards on all heads where they may be exposed or subject to damage.
- E. Protect finishes against scratches, dents and discoloration. Defective items will not be accepted.
- F. Only new sprinklers shall be installed. When sprinkler head has been removed from the piping for any reason, it shall not be reinstalled. Install new sprinkler head that matches the specifications of other sprinkler heads in the same compartment.
- G. Do not install pendent or sidewall, wet-type sprinklers in areas subject to freezing. Use dry-type sprinklers with water supply from heated space.

3.16 INSPECTOR'S TEST CONNECTION

A. Inspector's test connections shall be installed according to NFPA 13.

3.17 FIRE DEPARTMENT CONNECTION INSTALLATION

- A. Install free-standing-type, fire department connection. Coordinate location with Site/Civil Engineering Drawings.
- B. Install ball drip valve at each check valve for fire department connection. Pipe drain to floor drain or outside building.

3.18 CONNECTIONS

- A. Electrical Connections: Power wiring is specified in Division 26.
- B. Connect alarm devices to fire alarm.
- C. Ground equipment according to Division 26 Section "Grounding and Bonding for Electrical Systems."
- D. Connect wiring according to Division 26 Section "Low-Voltage Electrical Power Conductors and Cables."

E. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

3.19 LABELING AND IDENTIFICATION

- A. Install labeling and pipe markers on equipment and piping according to requirements in NFPA 13 and according to section 220553 IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT, section 2.3 PIPE LABELS.
 - 1. Pipe Label Color Schedule for Fire Protection Water Pipe:
 - a. Background Color: Red.
 - b. Letter Color: White.
- B. Install Hydraulic Calculations Placard on sprinkler riser per NFPA 13.
- C. Identify system components, wiring, cabling, and terminals. Comply with the requirements for identification specified in division 26 sections.
- D. Coordinate all piping labels to match style across all MEPF installations.
- E. Install information signs with required information for FDC and Standpipe flows.

3.20 PAINTING

A. All exposed fire protection piping shall be painted.

3.21 FIELD QUALITY CONTROL

- A. Perform the following field tests and inspections and prepare test reports:
 - 1. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.
 - 2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
 - 3. Energize circuits to electrical equipment and devices.
 - 4. Flush, test, and inspect sprinkler systems according to NFPA 13, "Systems Acceptance" Chapter.
 - 5. Coordinate with fire alarm tests. Operate as required.
 - 6. Verify that equipment hose threads are same as local fire department equipment.
- B. Report test results promptly and in writing to Architect and authorities having jurisdiction.

3.22 CLEANING AND PROTECTION

- A. Clean dirt and debris from sprinklers.
- B. Remove and replace sprinklers with paint other than factory finish.
- C. Protect sprinklers from damage until finishes are complete.
- D. Protect open pipe ends whenever work is suspended during contrition to prevent foreign material from entering.

3.23 DEMONSTRATION

- A. Testing and Acceptance: Perform all operational and acceptance tests required by NFPA 13. All tests shall be made in the presence of an Owner representative.
- B. Demonstration: The Fire Protection Contractor shall schedule time with the Owner to demonstrate the operation and maintenance of the systems.
- C. Demonstrate equipment, specialties, and accessories. Review operating and maintenance information.

END OF SECTION 211000

SECTION 230516 (ADDED ADDENDUM #5) EXPANSION FITTINGS AND LOOPS FOR HVAC PIPING

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

- 1. Slip-joint, packed expansion joints.
- 2. Metal, compensator Packless expansion joints.
- 3. Rubber union connector Packless expansion joints.
- 4. Flexible-hose Packless expansion joints.
- 5. Externally pressurized metal-bellows Packless expansion joints.
- 6. Alignment guides and anchors.
- 7. Pipe loops and swing connections.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Delegated-Design Submittal: For each anchor and alignment guide, including analysis data, signed and sealed by the qualified professional engineer responsible for their preparation.
 - 1. Design Calculations: Calculate requirements for thermal expansion of piping systems and for selecting and designing expansion joints, loops, and swing connections.
 - 2. Anchor Details: Detail fabrication of each anchor indicated. Show dimensions and methods of assembly and attachment to building structure.
 - 3. Alignment Guide Details: Detail field assembly and attachment to building structure.
 - 4. Schedule: Indicate type, manufacturer's number, size, material, pressure rating, end connections, and location for each expansion joint.

1.3 INFORMATIONAL SUBMITTALS

A. Welding certificates.

1.4 CLOSEOUT SUBMITTALS

Maintenance data.

1.5 QUALITY ASSURANCE

- A. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code Steel."
- B. Pipe and Pressure-Vessel Welding Qualifications: Qualify procedures and operators according to ASME Boiler and Pressure Vessel Code.

PART 2 PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Compatibility: Products shall be suitable for piping service fluids, materials, working pressures, and temperatures.
- B. Capability: Products to absorb 200 percent of maximum axial movement between anchors.

2.2 PACKED EXPANSION JOINTS

- A. Slip-Joint Packed Expansion Joints SJ-01:
- B. Manufactures:
 - 1. Hyspan
 - 2. Garlock
 - 3. Advanced Thermal Systems, Inc.
 - 4. Metraflex
 - 5. Standard: ASTM F 1007.
 - 6. Material: Carbon steel with asbestos-free PTFE packing.
 - 7. Design: With internal guide and injection ports for repacking under full system pressure. Housing shall be furnished with drain ports and lifting ring. Include drip connection if used for steam piping.
 - 8. Configuration: Single joint, Single joint with base and double joint with base class(es), unless otherwise indicated.
 - 9. Slip Tube for sizes NPS 1-1/2 (DN 40) through NPS 16 (DN 400): Schedule 80.
 - 10. Sliding Surface: 2 mil thick chrome finish.
 - 11. End Connections: Flanged or welded ends to match piping system.

2.3 PACKLESS EXPANSION JOINTS

- A. Metal, Compensator Packless Expansion Joints MCEJ-01
- B. Manufactures:
 - 1. Hyspan
 - 2. Garlock
 - 3. Advanced Thermal Systems, Inc.
 - 4. Metraflex.

Minimum Pressure Rating: 150 psig (1035 kPa), unless otherwise indicated.

Description: Totally enclosed, externally pressurized, multi-ply bellows isolated from fluid flow by an internal pipe sleeve and external housing.

Joint Axial Movement: 2 inches (50 mm) of compression and 1/2 inch (12 mm) of extend.

- 5. Configuration for Copper Tubing: Multi-ply, phosphor-bronze bellows with copper pipe ends.
 - a. End Connections for Copper Tubing NPS 2 (DN 50) and Smaller: Solder joint or threaded.
 - b. End Connections for Copper Tubing NPS 2-1/2 to NPS 4 (DN 65 to DN 100): Threaded.

- 6. Configuration for Steel Piping: Multi-ply, stainless-steel bellows; steel-pipe end connections; and carbon-steel shroud.
 - a. End Connections for Steel Pipe NPS 2 (DN 50) and Smaller: Threaded.
 - b. End Connections for Steel Pipe NPS 2-1/2 to NPS 4 (DN 65 to DN 100): Flanged, Threaded or Welded.
- C. Rubber Union Connector Expansion Joints RHEJ-01:
 - 1. Manufacturer:
 - 2. Metraflex
 - 3. Flexicraft
 - 4. U.S. Bellows, Inc.
 - 5. Mini-Flex Corporation
 - 6. Material: Twin reinforced-rubber spheres with external restraining cables.
 - 7. Minimum Pressure Rating: 150 psig at 170 deg F (1035 kPa at 77 deg C), unless otherwise indicated.
 - 8. End Connections for NPS 2 (DN 50) and Smaller: Threaded.
- D. Flexible-Hose Packless Expansion Joints FHEJ-01

Manufacturers:

- Metraflex
- 2. U.S. Bellows, Inc.
- 3. Flexicraft Industries
- 4. Mason Industries
- 5. Description: Manufactured assembly with inlet and outlet elbow fittings and two flexible-metal-hose legs joined by long-radius, 180-degree return bend or center section of flexible hose.
- 6. Flexible Hose: Corrugated-metal inner hoses and braided outer sheaths.
- 7. Expansion Joints for Copper Tubing NPS 2 (DN 50) and Smaller: Copper-alloy fittings with solder-joint end connections.
 - a. Bronze hoses and single-braid bronze sheaths with 450 psig at 70 deg F (3100 kPa at 21 deg C) and 340 psig at 450 deg F (2340 kPa at 232 deg C) ratings.
- 8. Expansion Joints for Copper Tubing NPS 2-1/2 to NPS 4 (DN 65 to DN 100): Copperalloy fittings with threaded end connections.
 - a. Stainless-steel hoses and single-braid, stainless-steel sheaths with 300 psig at 70 deg F (2070 kPa at 21 deg C) and 225 psig at 450 deg F (1550 kPa at 232 deg C) ratings.
- 9. Expansion Joints for Steel Piping NPS 2 (DN 50) and Smaller: Carbon-steel fittings with threaded end connections.
 - a. Stainless-steel hoses and single-braid, stainless-steel sheaths with 450 psig at 70 deg F (3100 kPa at 21 deg C) and 325 psig at 600 deg F (2250 kPa at 315 deg C) ratings.
- 10. Expansion Joints for Steel Piping NPS 2-1/2 to NPS 6 (DN 65 to DN 150): Carbon-steel fittings with flanged or welded end connections.
 - a. Stainless-steel hoses and single-braid, stainless-steel sheaths with 200 psig at 70 deg F (1380 kPa at 21 deg C) and 145 psig at 600 deg F (1000 kPa at 315 deg C) ratings.
- E. Externally Pressurized Metal-Bellows Packless Expansion Joints EPEJ-01
 - 1. Manufacturers:
 - 2. Metraflex

- 3. U.S. Bellows, Inc.
- 4. Hyspan
- 5. Senior Flexonics Pathway
- 6. Minimum Pressure Rating: 150 psig (1035 kPa), unless otherwise indicated.
- 7. Description:
 - a. Totally enclosed, externally pressurized, multi-ply, stainless-steel bellows isolated from fluid flow by an internal pipe sleeve.
 - b. Carbon-steel housing.
 - c. Drain plugs and lifting lug for the NPS 3 (DN 80) and larger.
 - d. Bellows shall have operating clearance between the internal pipe sleeves and the external shrouds.
 - e. Joints shall be supplied with a built-in scale to confirm the starting position and operating movement.
 - f. Joint Axial Movement: 4 inches (100 mm) of compression and 2 inches (50 mm) of extension.
- 8. Permanent Locking Bolts: Set locking bolts to maintain joint lengths during installation. Temporary welding tabs that are removed after installation in lieu of locking bolts are not acceptable.
- 9. End Connection Configuration: Flanged; one raised, fixed and one floating flange.

2.4 ALIGNMENT GUIDES AND ANCHORS

- A. Alignment Guides AG-01
 - 1. Metraflex
 - 2. Hyspan
 - 3. Flexonics
 - 4. Flexicraft
 - 5. Description: Steel, factory-fabricated alignment guide, with bolted two-section outer cylinder and base for attaching to structure; with two-section guiding slider for bolting to pipe.

B. Anchor Materials:

- 1. Steel Shapes and Plates: ASTM A 36/A 36M.
- 2. Bolts and Nuts: ASME B18.10 or ASTM A 183, steel hex head.
- 3. Washers: ASTM F 844, steel, plain, flat washers.
- 4. Mechanical Fasteners: Insert-wedge-type stud with expansion plug anchor for use in hardened Portland cement concrete, with tension and shear capacities appropriate for application.
 - a. Stud: Threaded, zinc-coated carbon steel.
 - b. Expansion Plug: Zinc-coated steel.
 - c. Washer and Nut: Zinc-coated steel.
- 5. Chemical Fasteners: Insert-type stud, bonding-system anchor for use with hardened Portland cement concrete, with tension and shear capacities appropriate for application.
 - a. Bonding Material: ASTM C 881/C 881M, Type IV, Grade 3, two-component epoxy resin suitable for surface temperature of hardened concrete where fastener is to be installed.
 - b. Stud: ASTM A 307, zinc-coated carbon steel with continuous thread on stud, unless otherwise indicated.
 - c. Washer and Nut: Zinc-coated steel.

PART 3 EXECUTION

3.1 EXPANSION JOINT INSTALLATION

- A. Install expansion joints of sizes matching sizes of piping in which they are installed.
- B. Install packed-type expansion joints with packing suitable for fluid service.
- C. Install metal-bellows expansion joints according to EJMA's "Standards of the Expansion Joint Manufacturers Association, Inc."

3.2 PIPE LOOP AND SWING CONNECTION INSTALLATION

- A. Install pipe loops cold-sprung in tension or compression as required to partly absorb tension or compression produced during anticipated change in temperature.
- B. Connect risers and branch connections to mains with at least five pipe fittings, including tee in main.
- C. Connect risers and branch connections to terminal units with at least four pipe fittings, including tee in riser.
- D. Connect mains and branch connections to terminal units with at least four pipe fittings, including tee in main.

3.3 ALIGNMENT-GUIDE AND ANCHOR INSTALLATION

- A. Install alignment guides to guide expansion and to avoid end-loading and torsional stress.
- B. Install one guide(s) on each side of pipe expansion fittings and loops. Install guides nearest to expansion joint not more than four pipe diameters from expansion joint.
- C. Attach guides to pipe, and secure guides to building structure.
- D. Install anchors at locations to prevent stresses from exceeding those permitted by ASME B31.9 and to prevent transfer of loading and stresses to connected equipment.
- E. Anchor Attachments:
 - 1. Anchor Attachment to Steel Pipe: Attach by welding. Comply with ASME B31.9 and ASME Boiler and Pressure Vessel Code: Section IX, "Welding and Brazing Qualifications."
 - 2. Anchor Attachment to Copper Tubing: Attach with pipe hangers. Use MSS SP-69, Type 24; U bolts bolted to anchor.
- F. Fabricate and install steel anchors by welding steel shapes, plates, and bars. Comply with ASME B31.9 and AWS D1.1/D1.1M.
 - 1. Anchor Attachment to Steel Structural Members: Attach by welding.
 - 2. Anchor Attachment to Concrete Structural Members: Attach by fasteners. Follow fastener manufacturer's written instructions.
- G. Use grout to form flat bearing surfaces for guides and anchors attached to concrete.

END OF SECTION 230516

SECTION 323119 (ADDED ADDENDUM NO. 5) DECORATIVE METAL FENCES AND GATES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Decorative aluminum fences.
 - 2. Swing gates.
 - 3. Horizontal-slide gates.
- B. Related Requirements:
 - 1. Section 033000 "Cast-in-Place Concrete" for concrete bases for horizontal gate roller assembly and fence post footings.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

- A. Product Data:
 - 1. For each type of product.
- B. Shop Drawings: For fencing and gates.
 - 1. Include plans, elevations, sections, gate locations, post spacing, and mounting details.
- C. Samples: For each fence material and for each color specified.
 - 1. Provide Samples 12 inches in length for linear materials.

1.4 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.
- B. Product Test Reports: For decorative metallic-coated-steel tubular picket fences, including finish, indicating compliance with referenced standards[and other specified requirements].

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For gate operators to include in maintenance manuals.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Fabricator of products.
- B. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for fabrication and installation.

- 1. Include (2) sections of fence complying with requirements.
- 2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Wind Loading:
 - 1. Fence Height: 0 to 6 ft...
- B. Lightning-Protection System: Maximum grounding-resistance value of 25 ohms under normal dry conditions.

2.2 DECORATIVE ALUMINUM FENCES

- A. Decorative Aluminum Fence Assembly: Fences made from aluminum extrusions.
- B. Basis-of-Design Product: Subject to compliance with requirements, provide Ameristar Perimeter Security; ASSA ABLOY; model Echelon II, Style Majestic or comparable product by one of the following:
 - 1. Central Indiana Fence Company
 - 2. K and K Fence
 - 3. North Indy Fence & Rail
 - 4. Superior Fence and Rail, Inc.
- C. Posts: Square extruded tubes.
 - 1. Line Posts: 2 by 2 inches with 0.093-inch wall thickness.
 - 2. End and Corner Posts: 3 by 3 inches with 0.100-inch wall thickness.
 - 3. Swing Gate Posts: 3 by 3 inches with 0.125-inch wall thickness.
 - 4. Horizontal-Slide Gate Post, Openings up to 12 Ft. (3.7 m): 3 by 3 inches with 0.125-inch wall thickness.
 - 5. Horizontal-Slide Gate Post, Openings Wider than 12 Ft. (3.7 m): 4 by 4 inches with 0.250-inch wall thickness.
 - 6. Guide Posts for Class 1 Horizontal-Slide Gates: 3 by 3 inches with 0.125-inch wall thickness; installed adjacent to gate post to permit gate to slide in space between.
- D. Post Caps: Aluminum castings that cover entire top of posts.
- E. Rails: Extruded-aluminum channels, 1 by 1-1/2 inches, with 0.082-inch- thick sidewalls and 0.055-inch- thick top.
- F. Pickets: Extruded-aluminum tubes, 3/4 inch square, with 0.050-inch wall thickness.
 - 1. Picket Placement: Terminate tops of pickets at top rail for flush top appearance.
 - 2. Picket Spacing: 4 inches clear, maximum.
- G. Fasteners:
 - 1. Manufacturer's standard concealed fastening system.

- H. Color:
 - 1. Black.
- I. Fabrication: Assemble fences into sections by fastening pickets to rails.
 - 1. Fabricate sections with clips welded to rails for field fastening to posts.
 - 2. Drill clips for fasteners before finishing.
- J. Finish exposed welds to comply with NOMMA Guideline 1, Finish #2 completely sanded joint, some undercutting and pinholes okay.

2.3 SWING GATES

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Ameristar Perimeter Security; ASSA ABLOY; model Echelon II, Style Majestic or comparable products by one of the following:
 - 1. Central Indiana Fence Company
 - 2. K and K Fence
 - 3. North Indy Fence & Rail
 - 4. Superior Fence and Rail, Inc.
- B. Gate Configuration:
 - 1. Type:
 - a. For pedestrian access, as indicated on Drawings.
 - 2. Color:
 - a. Black
- C. Gate Frame Height: As indicated on Drawings.
- D. Gate Opening Width: As indicated on Drawings.
- E. Gate Type: As indicated on Drawings.
- F. Aluminum Frames and Bracing: Fabricate members from square extruded-aluminum tubes 1-1/2 by 1-1/2 inches with 0.125-inch wall thickness.
- G. Frame Corner Construction: Welded.
- H. Additional Rails: Provide as indicated, complying with requirements for fence rails.
- I. Gate Infill: As indicated on Drawings.
- J. Hardware: Latches permitting operation from both sides of gate, hinges, and keepers for each gate leaf more than 5 ft. wide. Provide center gate stops and cane bolts for pairs of gates. Fabricate latches with integral eye openings for padlocking; padlock accessible from both sides of gate.
- K. Hinges: BHMA A156.1, Grade 1, suitable for exterior use.
 - 1. Function: 39 Full surface, triple weight, antifriction bearing.

- 2. Material: Wrought steel, forged steel, cast steel, or malleable iron; galvanized.
- L. Rim Locks: BHMA A156.5, Grade 1, suitable for exterior use.
 - 1. Function: 626 Interlocking deadbolt operated by key from either side.
 - 2. Material: Cast, forged, or extruded brass or bronze.
 - 3. Mounting Plate: Configuration necessary for mounting locks. Fabricate from 1/8-inchthick aluminum plate.
- M. Cane Bolts: Provide for inactive leaf of pairs of gates. Fabricated from 3/4-inch- diameter round steel bars, hot-dip galvanized after fabrication. Finish to match gates. Provide galvanized-steel pipe strikes to receive cane bolts in closed position.
- N. Finish exposed welds to comply with NOMMA Guideline 1, Finish #4 good-quality, uniform undressed weld with minimal splatter.

2.4 HORIZONTAL-SLIDE GATES

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Ameristar Perimeter Security; ASSA ABLOY; model TransPort Traverse II, Style Majestic or comparable products by one of the following:
 - 1. Central Indiana Fence Company
 - 2. K and K Fence
 - 3. North Indy Fence & Rail
 - 4. Superior Fence and Rail, Inc.
- B. Gate Configuration: Single leaf for vehicle assembly.
 - 1. Type:
 - a. Cantilever slide, with external roller assemblies.
 - 2. Color:
 - a. Black
- C. Gate Frame Height: As indicated on Drawings.
- D. Gate Opening Width: As indicated on Drawings.
- E. Frame Corner Construction:
 - 1. Welded frame and 5/16-inch- diameter, adjustable truss rods for panels 5 ft. wide or wider
- F. Additional Rails: Provide as indicated, complying with requirements for fence rails.
- G. Gate Infill: As indicated on Drawings.
- H. Hardware: Latches permitting operation from both sides of gate, roller assemblies and stops fabricated from mill-finished, Grade 319 aluminum-alloy casting with stainless steel fasteners.
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide Securitron lock and mounting hardware; ASSA ABLOY; model GL1 or comparable products to be approved by submittal.

I. Finish exposed welds to comply with NOMMA Guideline 1, Finish #4 - good-quality, uniform undressed weld with minimal splatter.

2.5 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select in accordance with AWS specifications for metal alloy welded.
- B. Concrete: Normal-weight, air-entrained, ready-mix concrete complying with requirements in Section 033000 "Cast-in-Place Concrete" with a minimum 28-day compressive strength of 3000 psi, 3-inch slump, and 1-inch maximum aggregate size or dry, packaged, normal-weight concrete mix complying with ASTM C387/C387M mixed with potable water in accordance with manufacturer's written instructions.
- C. Nonshrink Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C1107/C1107M and specifically recommended in writing by manufacturer for exterior applications.

2.6 GROUNDING MATERIALS

- A. Comply with requirements of Section 260526 "Grounding and Bonding for Electrical Systems."
- B. Grounding Conductors: Size as indicated on Drawings. Bare, solid wire for No. 6 AWG and smaller; stranded wire for No. 4 AWG and larger.
 - 1. Material above Finished Grade: Aluminum.
 - 2. Material on or below Finished Grade: Copper.
 - 3. Bonding Jumpers: Braided copper tape, 1-5/8 inch wide and 1/16 inch thick, woven of No. 30 AWG bare copper wire, terminated with copper ferrules.
- C. Grounding Connectors and Grounding Rods: Comply with UL 467.
 - 1. Connectors for Below-Grade Use: Exothermic-welded type.
 - 2. Grounding Rods: Copper-clad steel.
 - a. Size: 5/8 by 96 inches.

2.7 ALUMINUM FINISH

- A. Finish: A thermal stratification coating process (high-temperature, in-line, multi-stage, and multi-layer) including, as a minimum, a six-stage pretreatment/wash, and an electrostatic spray application of a polyester finish. The topcoat shall be a "no-mar" TGIC Polyester Powder-Coat with a minimum dry film thickness of 2 mils. Comply with coating manufacturer's written instructions.
 - 1. Color: Black.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for site clearing, earthwork, pavement work, construction layout, and other conditions affecting

- performance of the Work.
- B. Do not begin installation before final grading is completed unless otherwise permitted by Architect.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 500 ft. or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.
 - 1. Construction layout and field engineering are specified in Section 017300 "Execution."

3.3 INSTALLATION OF DECORATIVE FENCES

- A. Install fences in accordance with manufacturer's written instructions.
- B. Post Excavation: Drill or hand-excavate holes for posts in firm, undisturbed soil. Excavate holes to a diameter of not less than 4 times post size and a depth of not less than 24 inches plus 3 inches for each foot or fraction of a foot that fence height exceeds 4 ft..
- C. Post Setting: Set posts in concrete at indicated spacing into firm, undisturbed soil.
 - 1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.
 - 2. Concrete Fill: Place concrete around posts and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.
 - a. Exposed Concrete: Extend 2 inches above grade. Finish and slope top surface to drain water away from post.
 - b. Concealed Concrete: Top 2 inches below grade as indicated on Drawings to allow covering with surface material. Slope top surface of concrete to drain water away from post.
 - 3. Posts Set in Concrete: Extend post to within 6 inches of specified excavation depth, but not closer than 3 inches to bottom of concrete.
 - 4. Posts Set into Concrete in Sleeves: Use galvanized-steel pipe sleeves with inside diameter at least 3/4 inch larger than outside diagonal dimension of post, preset and anchored into concrete for installing posts.
 - a. Extend posts at least 5 inches into sleeve.
 - b. After posts have been inserted in sleeves, fill annular space between post and sleeve with nonshrink grout, mixed and placed to comply with grout manufacturer's written instructions; shape and smooth to shed water. Finish and slope top surface of grout to drain water away from post.
 - 5. Posts Set into Voids in Concrete: Form or core drill holes not less than 3/4 inch larger than outside diagonal dimension of post.
 - a. Extend posts at least 5 inches into concrete.
 - b. Clean holes of loose material, insert posts, and fill annular space between post and concrete with nonshrink grout, mixed and placed to comply with grout manufacturer's written instructions. Finish and slope top surface of grout to drain

water away from post.

- 6. Mechanically Driven Posts: Drive into soil to depth of 36 inches. Protect post top to prevent distortion.
- 7. Space posts uniformly as indicated on Drawings.

3.4 INSTALLATION OF GATES

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

3.5 GROUNDING AND BONDING

- Comply with Section 260526 "Grounding and Bonding for Electrical Systems." A.
- В. Fence Grounding: Install at maximum intervals of 1500 ft. except as follows:
 - Fences within 100 Ft. (30 m) of Buildings, Structures, Walkways, and Roadways: 1. Ground at maximum intervals of 750 ft...
 - Gates and Other Fence Openings: Ground fence on each side of opening.
 - Bond metal gates to gate posts.
 - 2) Bond across openings, with and without gates, except at openings indicated as intentional fence discontinuities. Use No. 2 AWG wire and bury it at least 18 inches below finished grade.
- C. Protection at Crossings of Overhead Electrical Power Lines: Ground fence at location of crossing and at a maximum distance of 150 ft. on each side of crossing.
- D. Grounding Method: At each grounding location, drive a grounding rod vertically until the top is 6 inches below finished grade. Connect rod to fence with No. 6 AWG conductor. Connect conductor to each fence component at grounding location.
- E. Bonding Method for Gates: Connect bonding jumper between gate post and gate frame.
- F. Connections: Make connections so possibility of galvanic action or electrolysis is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact are galvanically compatible.
 - 1. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer in order of galvanic series.
 - 2. Make connections with clean, bare metal at points of contact.
 - Make aluminum-to-steel connections with stainless steel separators and mechanical 3. clamps.
 - 4. Make aluminum-to-galvanized-steel connections with tin-plated copper jumpers and mechanical clamps.
 - 5. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.
- G. Bonding to Lightning-Protection System: If fence terminates at lightning-protected building or structure, ground the fence and bond the fence grounding conductor to lightning-protection

down conductor or lightning-protection grounding conductor, complying with NFPA 780.

3.6 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
 - 1. Grounding-Resistance Tests: Subject completed grounding system to a megger test at each grounding location. Measure grounding resistance not less than two full days after last trace of precipitation, without soil having been moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural grounding resistance. Perform tests by two-point method in accordance with IEEE 81.
 - 2. Excessive Grounding Resistance: If resistance to grounding exceeds specified value, notify Architect promptly. Include recommendations for reducing grounding resistance and a proposal to accomplish recommended work.
 - 3. Report: Prepare test reports of grounding resistance at each test location certified by a testing agency. Include observations of weather and other phenomena that may affect test results.

3.7 ADJUSTING

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

3.8 DEMONSTRATION

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

END OF SECTION 323119

GL1 Gate Lock

Electromechanical gate solution offers one ton of holding power



The heavy duty GL1 Electromechanical Gate Lock provides weather-resistant access control for a wide range of gate applications.

The GL1 provides 2,000 lbs of holding force for electrical and manually operated indoor or outdoor gates where preload is a concern. Ideal for swinging or sliding vehicle, pedestrian or stock gate access control.

Features

Standard Features

- 2,000 lbs holding force
- Operates under preload up to 100 lbs
- Automatic dual-voltage no field adjustment required
- Accepts a standard mortise cylinder with Adams Rite MS cam for manual key override (not included, see spacer guide below)
- Self-aligning receiver (+/- 1/2" [12.7mm] horizontally) helps compensate for gate misalignment and sag
- Tamper resistant cast housing
- Optional latch status monitor
- Surface mount
- SecuriCare three-year, no-fault, no questions asked warranty

Optional Features

- FL Fail locked
- **FS** Fail safe
- **M** Monitoring option

Mortise Spacer Guide

CYLINDER LENGTH	SPACER REQUIRED
1" [25.4mm]	1/4" [6.35mm]
1-1/8" [28.5mm]	3/8" [9.5mm]
1-1/4" [31.75mm]	1/2" [12.7mm]





Specifications

Certifications

• UL 294 Listed

Electrical

- 12 Volts Initial (*Peak*): (~1.0 sec.) at 870 mA — Reduced: 290 mA
- 24 Volts Initial (*Peak*): (~1.0 sec.) at 720 mA — Reduced: 170 mA

Holding Force

• 2,000 lbs [907kg]

Operating Temperature

- -58° to 167°F [-50° to 75°C]
- Indoor or outdoor use

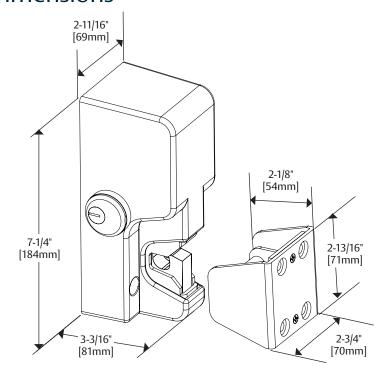
Shipping Weight

• 6 lbs [2.72 kg]

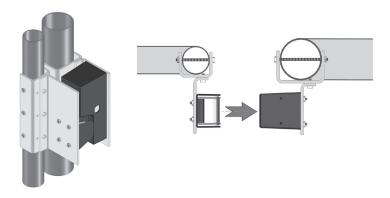
How to Order

MODEL SERIES	LOCK FAIL STATE	MONITORING OPTIONS
GL1	– FS	М
GL1	FL Fail Locked (Fail Secure)	(blank) No Monitoring
	FS Fail Safe	M Monitored

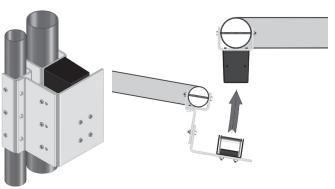
Dimensions



Sliding Gate GL1 with FMK-SL (sold separately) for sliding gates

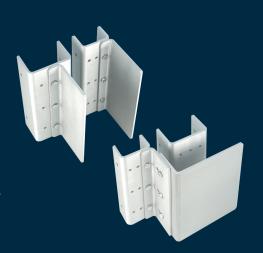


Swinging Gate GL1 with FMK-SW (sold separately) for swinging gates



FMK Flex-Mount Gate Lock Bracket Kits

Bracket kits extend access control to gates and fences



The FMK Flex-Mount
Bracket System is
an intuitive set of
mounting brackets
designed exclusively
for use with the
M62FG Magnalock®
and the GL1 Gate Lock.

Pre-formed post channels and plates of varying lengths make it easy for you to assemble a professional looking, high-security gate lock mounting platform in minutes, without special tools.

Features

Standard Features

- Permits electronics to be mounted on fence posts or gate posts
- Brackets are reversible
- Bracket kits include brackets, mounting hardware and post shims
- Post brackets are pre-drilled
- Zinc-plated steel provides durability and long life
- Bolt on or weld for installation
- Compatible with maximum 3" [76.2mm] round post with minimum pole separation of 1" [25.4mm]
- Use with post shim brackets for smaller post sizes
- MagnaCare[®] lifetime replacement, no-fault, no questions asked warranty



Specifications

Shipping Weight

• 13.4 lbs [6.08kg]

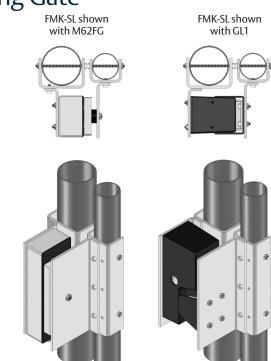
Notes

- M62FG and GL1 can be direct mounted on square posts
- To use FMK-SL with M62FG-SASM, post separation should be 1" to 2-1/4" [25.4mm – 57.15mm]
- To use FMK-SW with M62FG or GL1, post separation should be 1" to 2-3/4" [25.4mm – 69.85mm]
- To use FMK-SL with M62FG or GL1, post separation should be 1" to 3-3/4" [25.4mm – 95.25mm]

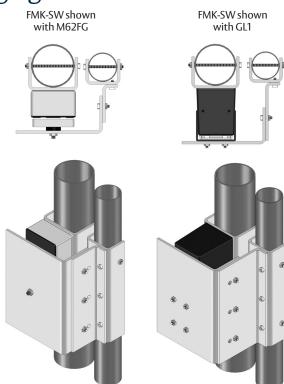
FMK Flex-Mount Kits

PART NUMBER	DESCRIPTION	
FMB9-4	Post shim kit for Flex-Mount Brackets - (Set of 4)	
FMK-SL	Flex-Mount Kit for Sliding Gate	
FMK-SW	Flex-Mount Kit for Swing Gate	

Sliding Gate



Swinging Gate



TS-12, TS-13 Vandal Resistant Request to Exit Station

The single gang TS-12 and narrow stile TS-13 request to exit stations, with vandal resistant push button, provide an effective means of locking an exit door while still providing egress during an emergency. Vandal resistant push buttons are designed for indoor, outdoor, commercial and industrial applications. Both models are available with timer relay for applications that require door to remain unlocked for a specified time.



TS-12



TS-13

Features

Standard Features

- TS-12 switch mounted on single gang wall plate with 430 stainless steel finish
- TS-13 switch mounted on narrow 1-3/4" wall plate with 302 stainless steel finish
- Vandal resistant 3/4" push button
- Plate is screened "PUSH TO EXIT" for easy to follow access instructions
- Momentary action switch

Options

- TS-12T, TS-13T with timer for timed access
- TS-12302 with weatherproof plate to meet IP65 standards
- TS-12T302 mounted on weather resistant plate with 302 stainless steel finish and timer for timed access
- Custom screening available

Specifications

Certifications & Listings

- UL 294 listed
- CSA certified components
- IP65 TS-12302 model only

Electrical

- DPDT contacts rated 10A at 35 VDC
- Switch depth behind plate: 1-1/2"
- Switch terminated with 12" leads

SECTION 323913.19 (REVISED ADDENDUM #5) DECORATIVE METAL BOLLARDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section Includes:
 - Security posts

1.3 RELATED SECTIONS

- A. Refer to the following specification sections for related Work.
 - 1. Section 312000 "Concrete" for footing and fill.

1.4 REFERENCES

- A. ASTM A312 Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes.
- B. ASTM A500 B Standard Specification for Structural Steel.
- C. ASTM A536 Standard Specification for Ductile Iron Castings.

1.5 SUBMITTALS

A. Product Data:

- 1. Provide for each type of bollard, component, finish, and accessory specified.
- 2. Color/Finish Sample: Provide for each type of material.
- 3. Setting Drawings:
 - a. Show embedded items and cutouts required for work specified.
- 4. Maintenance Data: Submit manufacturer's field touch -up, cleaning and maintenance instructions.
- 5. Warranty Documentation: Submit sample of manufacturer's warranty.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Comply with Section 01 43 00 Quality Assurance.
- 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Comply with Section 01 66 00 Product Storage and Handling Requirements.
- B. Protect bollards and accessories during delivery, storage, and handling.

PART 2 - PRODUCTS

2.1 SECURITY BOLLARDS AND COVERS

- A. Basis of Design Manufacturer:
 - 1. Reliance Foundry Co. Ltd., (604) 547-0460, https://www.reliance-foundry.com/bollard
- B. Products:
 - 1. Security Post: Model R-1007-06, 84-inch height by 6-5/8-inch diameter steel pipe bollard, color coating primer red
 - 2. Metal Bollard Cover: Model R-7305-EX, 42-inch height by 8-5/8-inch diameter stainless steel (grade TP 316) bollard cover, cylindrical cover with rounded top, color: brushed

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine paving or other substrates for compliance with manufacturer's requirements for placement and location of embedded items, condition of substrate, and other conditions affecting installation of bollards.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Comply with manufacturer's installation instructions and setting drawings.
- B. Do not install damaged, cracked, chipped, deformed or marred bollards. Field touch-up/polish minor imperfections in accordance with manufacturer's instructions. Replace bollards that cannot be field repaired.

3.3 CLEANING & PROTECTION

- A. Protect bollards against damage.
- B. Immediately prior to Substantial Completion, clean bollards in accordance with manufacturer's instructions to remove dust, dirt, adhesives and other foreign materials.
- C. Touch up damaged finishes according to manufacturer's instructions.

3.4 CLOSEOUT ACTIVITIES

A. Provide executed warranty.

END OF SECTION 323912.19

Sheet S100

Q: There is a MAT Foundation Schedule MAT 2.0 that is 2'-0" thick, however there is no callout on the drawings. The section cut for the elevator mat foundation shows a 1'-0" thick foundation. Please clarify.

A: Refer to sheet S100 FOUNDATION PLAN for MAT 2.0 foundation tag.

Sheet S100

Q: Please provide section cuts for the walls at the courtyard outside the Mechanical Rooms. What are these walls to be constructed of?

A: Refer to sheet S100 FOUNDATION PLAN for wall geometry, wall tags, keynotes, foundation tags, and wall sections.

Sheet S100

Interior demising wall between gymnasium and stage has been changed to an insulated 8" PC wall panel.

Sheet S100

Top footing elevations have been adjusted near southeast entry to accommodate storm/sewer piping existing the building.

Sheet S100

Added Foundation Plan Note 6 regarding precast plank insulation.

Sheet S500

Added note to detail 9 regarding precast insulation.

Sheet S501

Added note to details 8 and 9 regarding precast insulation.



March 10, 2025

Project Name: Joyce Kilmer IPS #69

Project Owner: Indianapolis Public Schools

Issued To: Meticulous

RE: Addendum 05

Drawing revisions narrative by sheet number as follows:

Sheet CS-101

- Keynotes #11 and #21 removed
- Revised keynotes to reflect new concrete sidewalk

Sheet CG-102

- Added additional spot elevations around playground

Sheet CU-101

- Revised rim elevations for STR-201, STR-212, and STR-214
- Revised invert elevations for STR-114 and STR-201
- Second drain line from building added that connects to STR-203
- Original drain line from building moved 6' south where it exits building

Sheet CU-504

- Storm sewer structure data tables added that include structure type and casting

Please let me know if you have additional questions.

Best regards,

DJ O'Toole



March 7, 2025

Project Name: Joyce Kilmer IPS #69

Project Owner: **Indianapolis Public Schools**

Issued To: Meticulous

RE: Addendum 05

Drawing revisions narrative by sheet number as follows:

Sheet L2.01

Added Optional exit button at the student sliding gate.

Sheet L2.02

Reference notes updated with Optional exit button for student gate.

Sheet L3.01

Basketball goals added to reference notes and called out.

Sheet L3.02

- Detail 3: Playground play mulch profile and ADA ramp updated.
- Detail 5: Basketball hoop.
- Detail 6: Tetherball.
- Detail 7: USA map colors.

Sheet L3.03

Detail 11: Update fence panel with 3 horizontal rails per basis of design.

Sheet L3.05

- Detail 1: Pedestrian gate detail updated.
- Detail 8: Steel Bollard detail updated.

Sheet L3.06

- Detail 1: Optional Emergency Exit button for student sliding gate.
- Detail 2: Reclaimed bollards.



Specification revisions narrative by specification section as follows:

Section 323913.19 DECORATIVE METAL BOLLARDS

- Bollard specification added to project.

Section 323119 DECORATIVE METAL FENCE AND GATES

- Fence and gate specification added to project.
- Cutsheet for sliding gate lock and mounting hardware.
- Cutsheet for Optional Emergency Exit button at student gate.

Questions answered below:

- 1. Asphalt Play Surface: The asphalt area in the play ground will match the asphalt profile of the basketball court per call out (18) on sheet CS-101. See details
- 2. Bollards:
 - a. Reclaimed bollards: See detail 2/L3.06.
 - b. Steel bollards: See detail 8/L5.05.

Please let me know if you have additional questions. Best regards, Andrew Livingston



Addendum #: 6

KBSO Project #: 23081
Project Name: IPS 69
Issue Date: 3/10/2025

This Addendum number 6 to the drawings and specifications shall supplement, amend, and become a part of the bidding documents, plans, and specifications. All bids and construction contracts shall be based on these modifications to the original contract documents.

Part 1. BIDDING AND CONTRACT DOCUMENTS

1.01 N/A

Part 2. SPECIFICATIONS

- 2.01 230516 EXPANSION FITTINGS AND LOOPS FOR HVAC
 - a. Added this spec section.
- 2.02 211000 WATER-BASED FIRE PROTECTION SYSTEM (WET PIPE)
 - a. Modified Part 2, paragraph 2.3, line C for pipe sizes.

Part 3. DRAWINGS

- 3.01 MH-111A 01 FLOOR MECHANICAL HVAC PLAN AREA A
 - a. Added keynote #3.
 - b. Added return to maintenance office and updated return branch ductwork.
 - c. Removed AH-6 return grille from Café.
- 3.02 MH-112A 02 FLOOR MECHANICAL HVAC PLAN AREA A
 - a. Updated keynotes #2, #3, and #5.
 - b. Added differential pressure sensor and keynote #8 to Gym.
 - c. Shifted combustion and flue for boilers.
- 3.03 MH-112B 02 FLOOR MECHANICAL HVAC PLAN AREA B
 - a. Added keynote #2.
- 3.04 MH-113A 03 FLOOR MECHANICAL HVAC PLAN AREA A
 - a. Added keynotes #1 and #2.
- 3.05 MH-113B 03 FLOOR MECHANICAL HVAC PLAN AREA B
 - a. Added keynote #1.
- 3.06 MP-111A 01 FLOOR MECHANICAL PIPING PLAN AREA A
 - a. Updated routing for chiller refrigerant lines.
 - b. Updated keynotes #3 and #4.
 - c. Updated boiler room layout.
- 3.07 MP-111B 01 FLOOR MECHANICAL PIPING PLAN AREA B
 - a. Added expansion loop.
 - b. Added keynote #5.
- 3.08 MP-112A 02 FLOOR MECHANICAL PIPING PLAN AREA A
 - a. Removed one thermostat from Media Center.
 - b. Updated keynote #2.
- 3.09 MP-112B 02 FLOOR MECHANICAL PIPING PLAN AREA B

- a. Added expansion loop.
- b. Added keynote #5.
- 3.10 M-401 MECHANICAL ENLARGED PLANS
 - a. Added reheat coil piping for AH-2.
 - b. Moved evaporator within boiler room, shifted other equipment accordingly.
 - c. Added louver L-2 over boiler room exterior door.
 - d. Added thermostats for mechanical and boiler room unit heaters.
- 3.11 M-501 MECHANICAL DETAILS
 - a. Added details #23 and #24.
- 3.12 M-601 MECHANICAL SCHEDULES
 - a. Added reheat coil for AH-2.
 - b. Added louver L-2.
- 3.13 M-901 TEMPERATURE CONTROL DIAGRAMS
 - a. Removed sound attenuators from diagram.
- 3.14 M-902 TEMPERATURE CONTROL DIAGRAMS
 - a. Removed sound attenuators from diagram.
- 3.15 M-903 TEMPERATURE CONTROL DIAGRAMS
 - a. Removed sound attenuators from diagram.
- 3.16 M-906 TEMPERATURE CONTROL DIAGRAMS
 - a. Removed references to radiant heating from Terminal Box Control Schematic.
 - b. Updated Hot Water Unit Heater Control Schematic per bidder questions.
- 3.17 EP-111A 01 FLOOR ELECTRICAL PLAN AREA A
 - a. Provided circuit for gym bleacher motor and control(s).
- 3.18 E-401 ENLARGED ELECTRICAL PLANS
 - a. Shifted pump electrical connections to match new locations within boiler room.
 - b. Added flow and tamper switch for new fire protection zone.
 - c. Added receptacle for nitrogen generator.
 - d. Added electrical connection for air compressor.
- 3.19 E-601 ELECTRICAL SCHEDULES
 - a. Updated Panel 1L1 to reflect breaker updates
- 3.20 E-901 ELECTRICAL ONE-LINE DIAGRAM
 - a. Revised schedule for 300A feeders.
- 3.21 P-110A FOUNDATION PLUMBING PLAN AREA A
 - a. Re-routed Storm piping to new exit location.
 - b. Modified Storm piping elevations.
 - c. Added Sanitary Waste piping routing and elevations.
 - d. Added additional floor drains in mechanical room.
 - e. Added pipe sleeves through wall.
 - f. Removed pipe sleeve through foundation footing and keynote #1.
- 3.22 P-110B FOUNDATION PLUMBING PLAN AREA B
 - a. Modified Storm piping routing and elevations.
 - b. Modified Sanitary Waste piping routing and elevations.
 - c. Added ECO to Storm and Sanitary Waste exits.
- 3.23 P-111A 01 FLOOR PLUMBING PLAN AREA A
 - a. Added isolation valves to CSW and HW branches
 - b. Added HWR to HW branch.
 - c. Shifted FCO to avoid conflict with door
 - d. Shifted check valve and balancing valve to avoid conflict with wall.
 - e. Shifted CSW to EWC-1 to avoid conflict with Vent piping.
 - f. Adjusted visibility of Storm piping to RD.

- g. Revised HWR sizing.
- h. Added pipe sizes for HWR branches.
- 3.24 P-111B 01 FLOOR PLUMBING PLAN AREA B
 - a. Added keynotes #8 and #9.
 - b. Added isolation valves to CW, CSW, and HW branches.
 - c. Added WCOs at base of Sanitary Waste and Storm risers.
 - d. Added pipe size tags.
 - e. Added ECO to Sanitary Waste and Storm exits.
 - f. Added TBV-1 and check valve.
- 3.25 P-401 PLUMBING ENLARGED PLANS
 - a. Changed floor drain callouts in Mechanical Room.
 - b. Added floor drain near mechanical pumps.
 - c. Relocated FD-2 to match boiler relocation.
 - d. Added isolation valves to CW branches.
 - e. Added isolation valves for gas piping.
 - f. Revised HWR pipe sizing and routing.
 - g. Removed designations for water heater system circulator pumps.
- 3.26 P-501 PLUMBING DETAILS
 - a. Revised Water Heater Piping Diagram.
 - b. Revised Water Softener Piping Diagram.
 - c. Revised Water Entrance Piping Detail.
- 3.27 P-602 PLUMBING SCHEDULES
 - a. Added fittings to the Plumbing Drainage Fitting Schedule.
 - b. Revised set temperature for TBV-1 to allow a delta T in the system.
 - c. Changed TET-1 specification.
 - d. Removed CP-2 and CP-3 from the schedule, as pumps are supplied with water heater.
 - e. Added RPBP-3 to Plumbing Equipment Schedule.
- 3.28 P-901 PLUMBING DIAGRAMS
 - a. Added Natural Gas Piping Diagram.
- 3.29 FP-111A 01 FLOOR FIRE SUPPRESSION AREA A
 - a. Removed pipe sleeves through foundation footing and keynote #1
 - b. Added pipe sleeves through wall.
 - c. Removed General Note F.
 - d. Added dry sprinkler system to cover Receiving 112 and Site Equip Storage 113.
 - e. Added note calling for dry-barrel sprinkler heads in Vestibule 123.
 - f. Added notation for pipe riser to Sprinkler Zone #2.
 - g. Removed General Note D pertaining to semi-recessed sprinklers.
 - h. Revised square footage of Sprinkler Sone #1.
- 3.30 FP-111B 01 FLOOR FIRE SUPPRESSION AREA B
 - a. Removed General Note F.
 - b. Removed General Note D pertaining to semi-recessed sprinklers.
- 3.31 FP-112A 02 FLOOR FIRE SUPPRESSION AREA A
 - a. Removed General Note F.
 - b. Removed General Note D pertaining to semi-recessed sprinklers.
- 3.32 FP-112B 02 FLOOR FIRE SUPPRESSION AREA B
 - a. Removed General Note F.
 - b. Removed General Note D pertaining to semi-recessed sprinklers.
- 3.33 FP-501 FIRE PROTECTION DETAILS
 - a. Removed CPVC from Fire Protection Pipe Material Schedule.
 - b. Added Zone #3 and drain lines to Fire Suppression Piping Diagram.

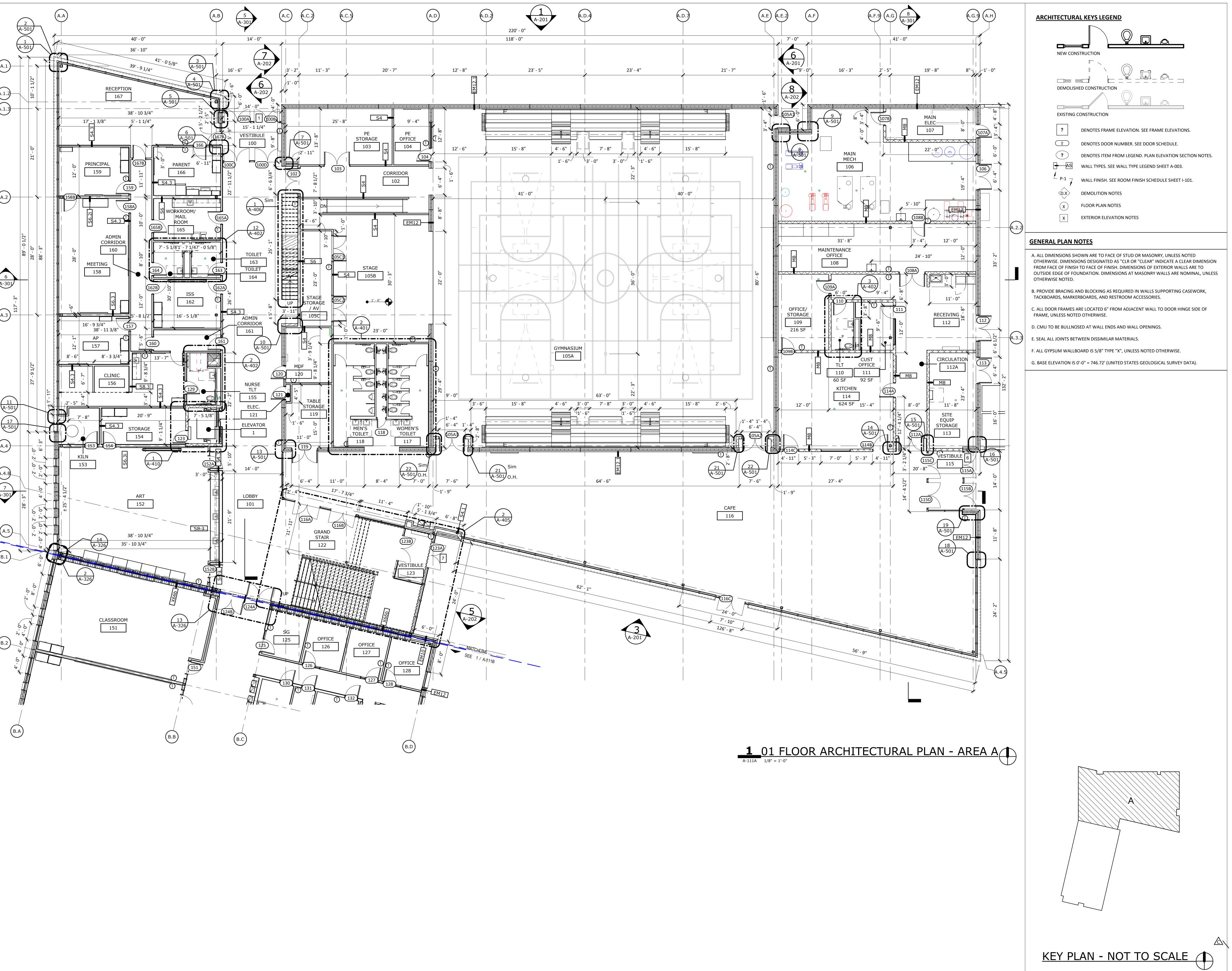
Part 4. BIDDER QUESTIONS & ANSWERS

- 1.01 Question: Sheet M-906 Radiation panels are shown on the Terminal Box Control Schematic, but there are none shown in the mechanical schedules or on the piping plans. Please advise.
 - a. Answer: This portion of the schematic has been removed in Addendum #6.
- 1.02 Question: Sheet M-906 Hot Water Unit Heater Control Schematic note 3 references a line voltage thermostat, but there is a DDC points list shown. Please advise.
 - a. Answer: this schematic is updated in Addendum #6.
- 1.03 Question: Please confirm that the chilled water system bypass valve is to be PICV.
 - a. Answer: This is correct.
- 1.04 Question: Are extended coverage sprinklers acceptable?
 - a. Extended coverage sprinklers are acceptable where necessary.
- 1.05 Question: Are roll grooves acceptable for pipe sized 2.5" and less or will square cut grooves be required?
 - a. KBSO has no preference on groove style; this is left to the contractor's discretion.

ATTACHMENTS:

MH-111A, MH-112A, MH-112B, MH-113A, MH-113B, MP-111A, MP-111B, MP-112A, MP-112B, M-401, M-501, M-601, M-901, M-902, M-903, M-906, EP-111A, E-601, E-901 P-110A, P-110B, P-111A. P-111B, P-401, P-501, P-602, P-901, FP-111A, FP-111B, FP-112A, FP-112B; Spec Section – 211000, 230516, Updated TOC,

END OF ADDENDUM



LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820

> ARCHITECTURAL PARTNER **PERKINS & WILL** 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611

v. (312) 755-0770 CIVIL & STRUCTURAL ENGINEER:

8840 ALLISON BLVD INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300

CARMEL. IN 46032 v. (317) 344-8044

INTERIOR DESIGNER: RELO DESIGN 7222 N Shadeland Ave. Suite 170

Indianapolis, IN 46250 P: (317) 202.0000



01 FLOOR PLAN -AREA A

ARCHITECTURAL KEYS LEGEND

NEW CONSTRUCTION DEMOLISHED CONSTRUCTION

EXISTING CONSTRUCTION

DENOTES FRAME ELEVATION. SEE FRAME ELEVATIONS.

DENOTES DOOR NUMBER. SEE DOOR SCHEDULE.

DENOTES ITEM FROM LEGEND. PLAN ELEVATION SECTION NOTES. WALL TYPES. SEE WALL TYPE LEGEND SHEET A-003.

WALL FINISH. SEE ROOM FINISH SCHEDULE SHEET I-101.

 $\langle D.X \rangle$ **DEMOLITION NOTES**

FLOOR PLAN NOTES

EXTERIOR ELEVATION NOTES

GENERAL PLAN NOTES

A. ALL DIMENSIONS SHOWN ARE TO FACE OF STUD OR MASONRY, UNLESS NOTED OTHERWISE. DIMENSIONS DESIGNATED AS "CLR OR "CLEAR" INDICATE A CLEAR DIMENSION FROM FACE OF FINISH TO FACE OF FINISH. DIMENSIONS OF EXTERIOR WALLS ARE TO OUTSIDE EDGE OF FOUNDATION. DIMENSIONS AT MASONRY WALLS ARE NOMINAL, UNLESS OTHERWISE NOTED.

B. PROVIDE BRACING AND BLOCKING AS REQUIRED IN WALLS SUPPORTING CASEWORK, TACKBOARDS, MARKERBOARDS, AND RESTROOM ACCESSORIES.

C. ALL DOOR FRAMES ARE LOCATED 6" FROM ADJACENT WALL TO DOOR HINGE SIDE OF FRAME, UNLESS NOTED OTHERWISE.

D. CMU TO BE BULLNOSED AT WALL ENDS AND WALL OPENINGS.

E. SEAL ALL JOINTS BETWEEN DISSIMILAR MATERIALS. F. ALL GYPSUM WALLBOARD IS 5/8" TYPE "X", UNLESS NOTED OTHERWISE.

G. BASE ELEVATION IS 0'-0" = 746.72' (UNITED STATES GEOLOGICAL SURVEY DATA).

LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820

ARCHITECTURAL PARTNER **PERKINS & WILL** 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611

v. (312) 755-0770

8840 ALLISON BLVD

CIVIL & STRUCTURAL ENGINEER:

INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. /

FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300

CARMEL. IN 46032 v. (317) 344-8044 **INTERIOR DESIGNER:**

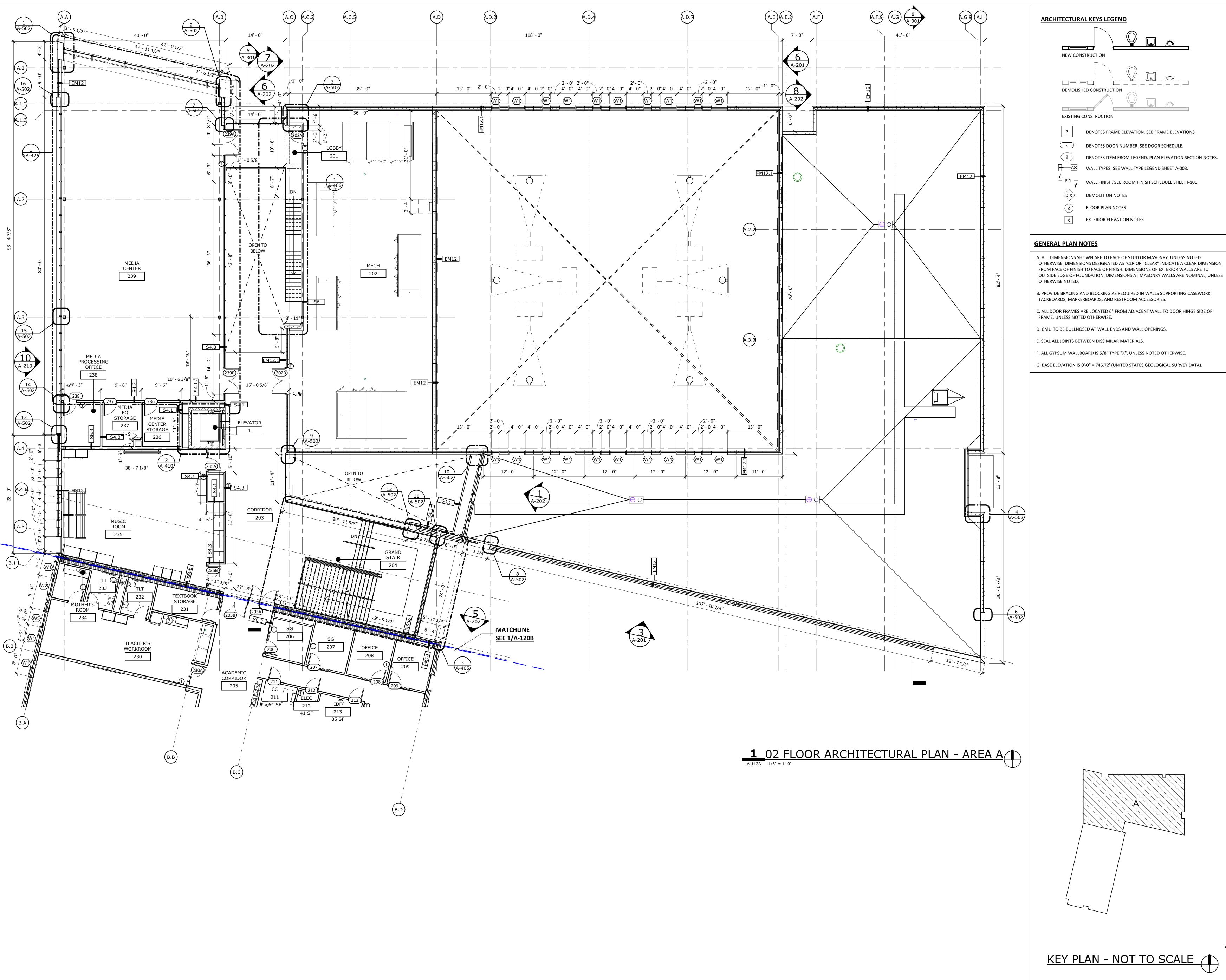
RELO DESIGN 7222 N Shadeland Ave.

Suite 170 Indianapolis, IN 46250 P: (317) 202.0000

01 FLOOR PLAN -AREA B

<u>A-111B</u>

KEY PLAN - NOT TO SCALE





NEW CONSTRUCTION

DEMOLISHED CONSTRUCTION

EXISTING CONSTRUCTION

DENOTES DOOR NUMBER. SEE DOOR SCHEDULE.

DENOTES ITEM FROM LEGEND. PLAN ELEVATION SECTION NOTES. WALL TYPES. SEE WALL TYPE LEGEND SHEET A-003.

WALL FINISH. SEE ROOM FINISH SCHEDULE SHEET I-101.

DEMOLITION NOTES

FLOOR PLAN NOTES

EXTERIOR ELEVATION NOTES

A. ALL DIMENSIONS SHOWN ARE TO FACE OF STUD OR MASONRY, UNLESS NOTED OTHERWISE. DIMENSIONS DESIGNATED AS "CLR OR "CLEAR" INDICATE A CLEAR DIMENSION FROM FACE OF FINISH TO FACE OF FINISH. DIMENSIONS OF EXTERIOR WALLS ARE TO OUTSIDE EDGE OF FOUNDATION. DIMENSIONS AT MASONRY WALLS ARE NOMINAL, UNLESS

B. PROVIDE BRACING AND BLOCKING AS REQUIRED IN WALLS SUPPORTING CASEWORK, TACKBOARDS, MARKERBOARDS, AND RESTROOM ACCESSORIES.

C. ALL DOOR FRAMES ARE LOCATED 6" FROM ADJACENT WALL TO DOOR HINGE SIDE OF FRAME, UNLESS NOTED OTHERWISE.

D. CMU TO BE BULLNOSED AT WALL ENDS AND WALL OPENINGS.

ARCHITECTURAL PARTNER DENOTES FRAME ELEVATION. SEE FRAME ELEVATIONS.

PERKINS & WILL 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611 v. (312) 755-0770

317.926.1820

LANDSCAPE, INTERIOR

DESIGN, URBAN PLANNING

INDIANAPOLIS, IN 45202

WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM

25 NORTH PINE STREET, SUITE B

8840 ALLISON BLVD INDIANAPOLIS, IN 46250 v. (317) 661-1964

CIVIL & STRUCTURAL ENGINEER:

MECH. / ELECT. / PLUMB. /

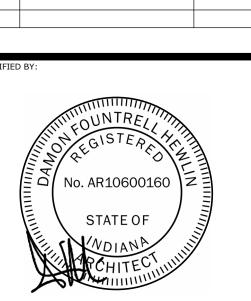
FIRE PROT. ENGINEER: **KBSO CONSULTING** 275 VETERANS WAY

SUITE 300 CARMEL. IN 46032 v. (317) 344-8044

INTERIOR DESIGNER:

RELO DESIGN 7222 N Shadeland Ave. Suite 170

Indianapolis, IN 46250 P: (317) 202.0000



02 FLOOR PLAN -

AREA A

ARCHITECTURAL KEYS LEGEND

NEW CONSTRUCTION DEMOLISHED CONSTRUCTION

EXISTING CONSTRUCTION

DENOTES FRAME ELEVATION. SEE FRAME ELEVATIONS.

DENOTES DOOR NUMBER. SEE DOOR SCHEDULE.

DENOTES ITEM FROM LEGEND. PLAN ELEVATION SECTION NOTES. WALL TYPES. SEE WALL TYPE LEGEND SHEET A-003.

WALL FINISH. SEE ROOM FINISH SCHEDULE SHEET I-101.

 $\langle D.X \rangle$ **DEMOLITION NOTES**

FLOOR PLAN NOTES

EXTERIOR ELEVATION NOTES

GENERAL PLAN NOTES

A. ALL DIMENSIONS SHOWN ARE TO FACE OF STUD OR MASONRY, UNLESS NOTED OTHERWISE. DIMENSIONS DESIGNATED AS "CLR OR "CLEAR" INDICATE A CLEAR DIMENSION FROM FACE OF FINISH TO FACE OF FINISH. DIMENSIONS OF EXTERIOR WALLS ARE TO OUTSIDE EDGE OF FOUNDATION. DIMENSIONS AT MASONRY WALLS ARE NOMINAL, UNLESS OTHERWISE NOTED.

B. PROVIDE BRACING AND BLOCKING AS REQUIRED IN WALLS SUPPORTING CASEWORK, TACKBOARDS, MARKERBOARDS, AND RESTROOM ACCESSORIES.

C. ALL DOOR FRAMES ARE LOCATED 6" FROM ADJACENT WALL TO DOOR HINGE SIDE OF FRAME, UNLESS NOTED OTHERWISE.

D. CMU TO BE BULLNOSED AT WALL ENDS AND WALL OPENINGS.

E. SEAL ALL JOINTS BETWEEN DISSIMILAR MATERIALS. F. ALL GYPSUM WALLBOARD IS 5/8" TYPE "X", UNLESS NOTED OTHERWISE.

G. BASE ELEVATION IS 0'-0" = 746.72' (UNITED STATES GEOLOGICAL SURVEY DATA).

25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820 ARCHITECTURAL PARTNER

PERKINS & WILL 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611

v. (312) 755-0770

8840 ALLISON BLVD

CIVIL & STRUCTURAL ENGINEER:

INDIANAPOLIS, IN 46250 v. (317) 661-1964

LANDSCAPE, INTERIOR

DESIGN, URBAN PLANNING

MECH. / ELECT. / PLUMB. /

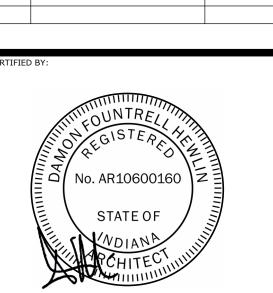
FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300

CARMEL. IN 46032 v. (317) 344-8044

INTERIOR DESIGNER: RELO DESIGN

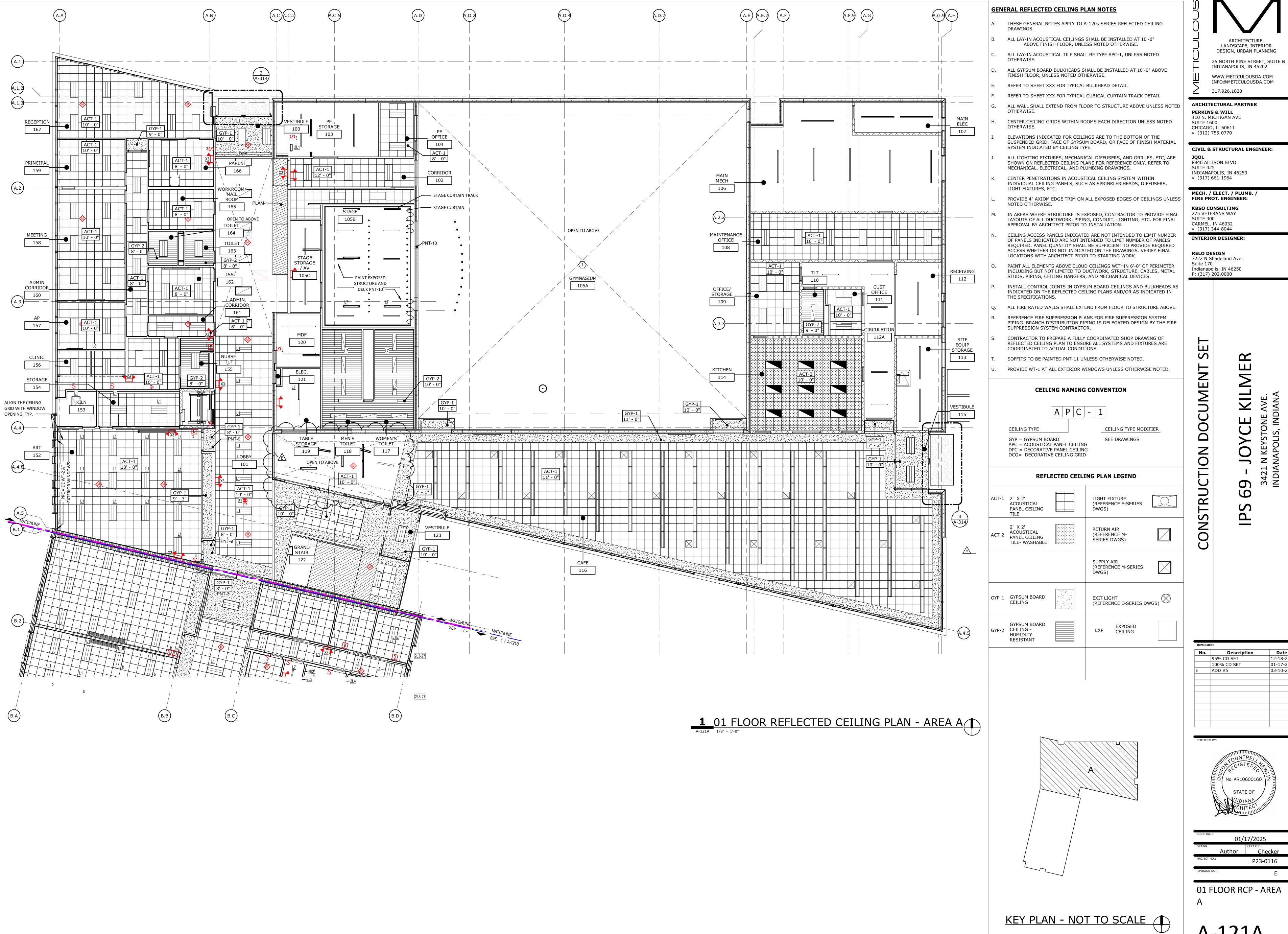
7222 N Shadeland Ave. Suite 170 Indianapolis, IN 46250 P: (317) 202.0000



02 FLOOR PLAN -AREA B

<u>A-112B</u>

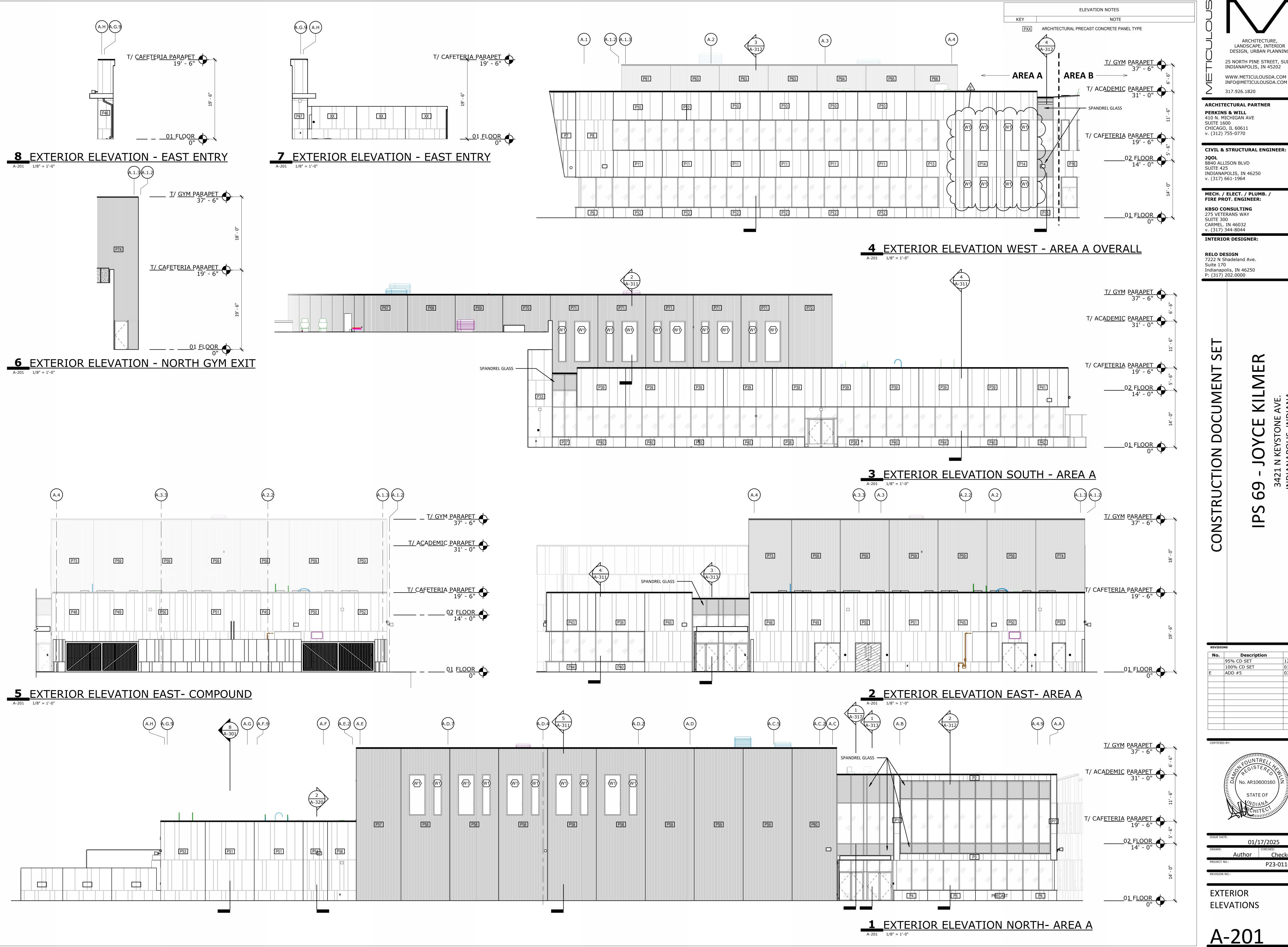
KEY PLAN - NOT TO SCALE



100% CD SET

LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING

01 FLOOR RCP - AREA

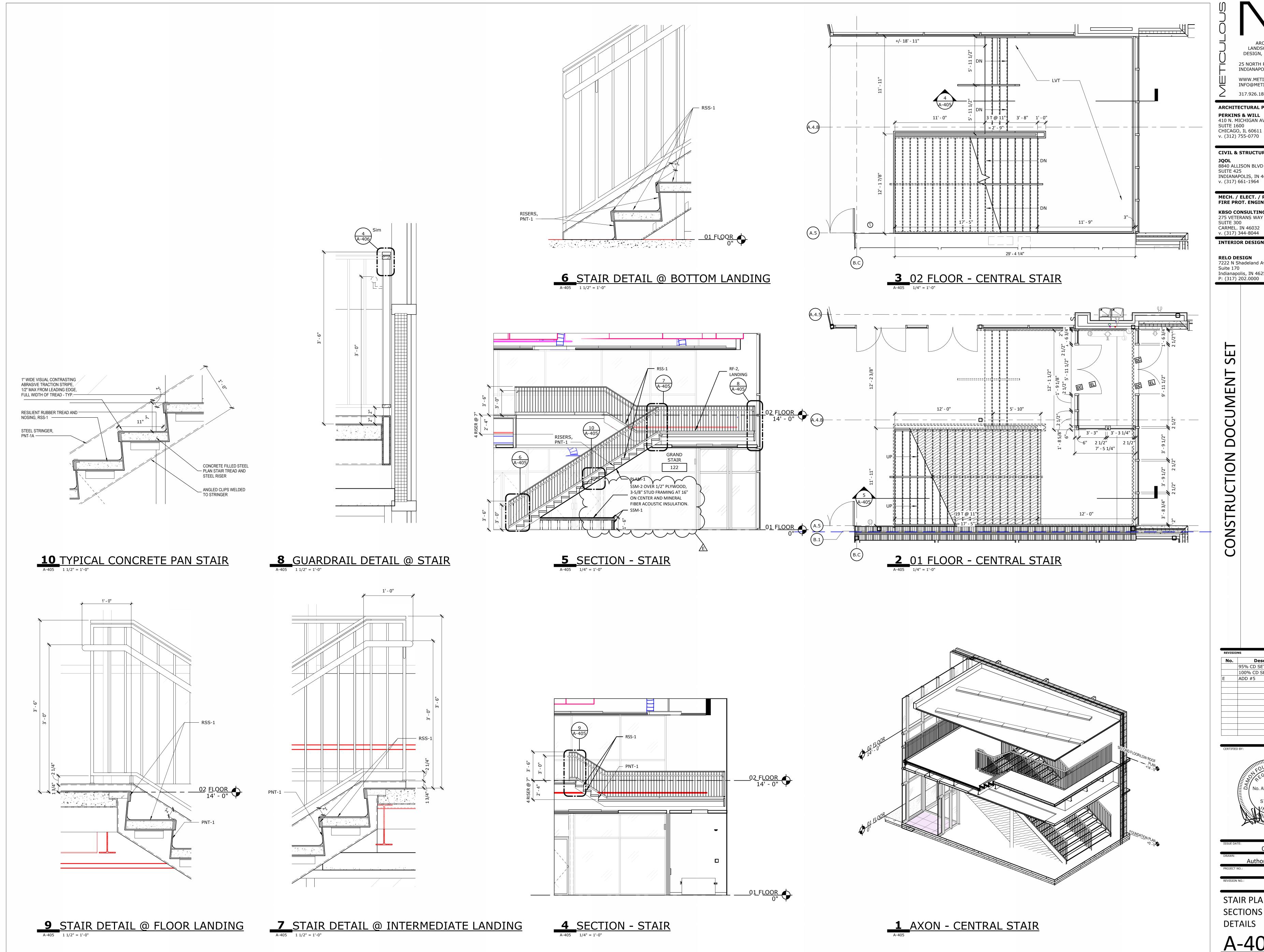


ARCHITECTURE, LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM

Date 12-18-24 01-17-25 03-10-25



P23-0116



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317.926.1820 ARCHITECTURAL PARTNER PERKINS & WILL 410 N. MICHIGAN AVE

v. (312) 755-0770 CIVIL & STRUCTURAL ENGINEER:

JQOL 8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

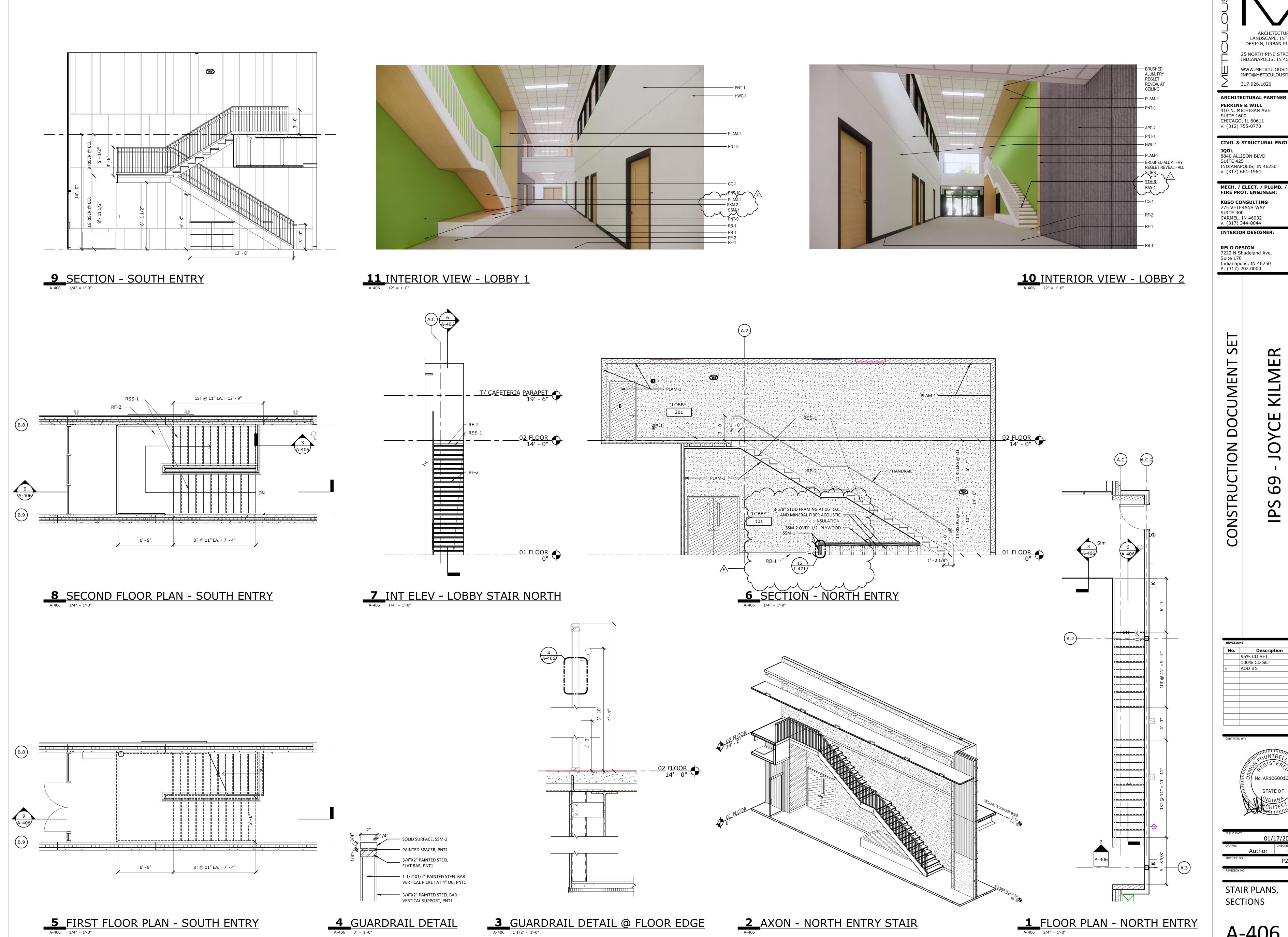
KBSO CONSULTING 275 VETERANS WAY CARMEL. IN 46032

v. (317) 344-8044 **INTERIOR DESIGNER:**

RELO DESIGN 7222 N Shadeland Ave. Indianapolis, IN 46250 P: (317) 202.0000

STAIR PLANS, SECTIONS AND

<u>A-405</u>



ARCHITECTURE, LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820

ARCHITECTURAL PARTNER PERKINS & WILL 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611

CIVIL & STRUCTURAL ENGINEER: JQOL 8840 ALLISON BLVD SUITE 425

INDIANAPOLIS, IN 46250 v. (317) 661-1964

FIRE PROT. ENGINEER: KBSO CONSULTING 275 VETERANS WAY SUITE 300

CARMEL. IN 46032 v. (317) 344-8044

RELO DESIGN 7222 N Shadeland Ave.

Suite 170 Indianapolis, IN 46250 P: (317) 202.0000

STAIR PLANS, SECTIONS

											GENERAL DOOR & FRAME SCHEDULE NOTES DOOR & FRAME SCHEDULE NOTES
			DOOR PANI			DOOR AND FRAME SC	HEDULE FRAME		DETAILS		A. THIS DOOR SCHEDULE(S) IS FURNISHED FOR WHATEVER ASSISTANCE IT MAY AFFORD THE CONTRACTOR. DO NOT CONSIDER IT AS ENTIRELY INCLUSIVE. CAREFULLY EXAMINE THE DRAWINGS (ESPECIALLY THE FLOOR PLANS) A. SET DOOR IN FRAME TO ALLOW FOR 180° DOOR SWING. A. SET DOOR IN FRAME TO ALLOW FOR 180° DOOR SWING.
NUMBER	R ROOM NAME	DOOR PANEL DOOR TYPE MATERIAL	NO. OF PANELS	W	SIZE H	TH GLAZING		RAME TERIAL RATING	HW SET HEAD JAMB	SILL NOTES	AND THE SPECIFICATIONS TO DETERMINE THE EXTENT OF DOOR AND FRAME QUANTITIES REQUIRED (INCLUDING INTERIOR BORROWED LITE OR SIDELITE OPENINGS). SHOULD ANY PARTICULAR DOOR, FRAME, OR B. HM FRAMES IN MASONRY SHALL BE WELDED.
100A 100B 100C	VESTIBULE VESTIBULE VESTIBULE	ST AL ST AL	2 6	5' - 0"	7' - 0"	1 3/4" 1" INSUL. 1 3/4" 1" INSUL. 1 3/4" 1/4" TEMP.	-	AL - 1	31 18		INTERIOR BORROWED LITE OR SIDELITE SHOWN ON THE DRAWINGS BE INADVERTENTLY OMITTED FROM THIS SCHEDULE, SUPPLY SAME AS REQUIRED FOR SIMILAR OPENINGS. C. HM FRAMES IN GYP. BD FRAMED WALLS SHALL BE KNOCK-DOWN. C. HM FRAMES IN GYP. BD FRAMED WALLS SHALL BE KNOCK-DOWN.
100D 102	VESTIBULE CORRIDOR	ST AL N WD	2 E 6	5' - 0" 5' - 0"	7' - 0" 7' - 0"	1 3/4" 1/4" TEMP. 1 3/4" 1/4" TEMP.	1	AL - 4 MTL - 4	9/A-601 8/A-601	·	B. THE "DOOR WIDTH" COLUMN DESIGNATES THE TOTAL WIDTH OF ALL LEAVES. IN MULTIPLE LEAF CONDITIONS, THE LEAVES SHALL EQUALLY DIVIDE THE "DOOR WIDTH" UNLESS NOTED OTHERWISE; HOWEVER, THE ACTIVE LEAF SHALL NOT BE LESS THAN 3'-0" WIDE.
103 104 105A1	PE STORAGE PE OFFICE GYMNASIUM	F WD F HM	3	o' - 0" o' - 0" o' - 0"	7' - 0"	1 3/4" - 1 3/4" - 1 3/4" -	6	MTL - 2 MTL - 3 MTL - 4	9/A-601 8/A-601 28 6/A-601 5/A-601 42	7/A-601 4/A-601	C. DOOR TYPE "X" DENOTES A FRAME WITH NO DOOR SUCH AS A BORROWED LITE, REFERENCE FRAME ELEVATIONS.
105A2 105A3 105C1	GYMNASIUM	N WD N WD F WD	2 6	5' - 0"	7' - 0"	1 3/4" 1/4" TEMP. 1 3/4" 1/4" TEMP. 1 3/4" -	3		23 6/A-601 5/A-601 23 6/A-601 5/A-601 45 9/A-601 8/A-601	4/A-601	D. AN ASTERISK (*) IN A DIMENSION DENOTES A WIDTH THAT VARIES, REFERENCE PLANS, ELEVATIONS, DETAILS AND SCHEDULES.
105C2 106 107A		F WD F HM	2 6	5' - 0"	7' - 0"	1 3/4" - 1 3/4" - 1 3/4" -	3	MTL - 0	9/A-601 8/A-601 02	7/A-601	E. VERIFY LOCKSETS WITH THE OWNER DURING SUBMITTALS.
107B 108A	MAIN ELEC MAINTENANCE OFFICE MAINTENANCE OFFICE	F HM N WD	1 3 1 6	s' - 0" 5' - 0"	7' - 0" 7' - 0"	1 3/4" - 1 3/4" 1/4" TEMP.	2 2	MTL - 2 MTL - 3	29 6/A-601 5/A-601 30 6/A-601 5/A-601	4/A-601	F. EXTERIOR GLAZED WINDOWS, PATIO DOORS, ETC.
108B 109A 109B	OFFICE/STORAGE OFFICE / STORAGE	F WD N WD N WD	1 3 1 3	0' - 0" 0' - 0"	7' - 0" 7' - 0"	1 3/4" - 1 3/4" 1/4" TEMP. 1 3/4" 1/4" TEMP.	2 2	MTL - 3 MTL - 0 MTL - 0	03 6/A-601 5/A-601 04 6/A-601 5/A-601	4/A-601 4/A-601 4/A-601	
110 111 112	TLT CUST OFFICE RECEIVING	F WD F WD N HM	1 3 2 6	5' - 0" 5' - 0"	7' - 0" 7' - 0"	1 3/4" - 1 3/4" - 1 3/4" 1" INSUL.	6 3		04 6/A-601 5/A-601		DOOR PANEL TYPE LEGEND
112A 113 114A	SITE EQUIP STORAGE KITCHEN	N WD F HM N WD	2 6	5' - 0" 5' - 4"	7' - 0" 7' - 0"	1 3/4" 1/4" TEMP. 1 3/4" - 1 3/4" 1/4" TEMP.	3 2	I'IIL - J	02 5/A 601 5/A 601 84 6/A 601 5/A 601	4/A-601	SEE SCHEDULE SEE SCHEDULE 3"_6" L 2 1/4"
114B 114C 115A	KITCHEN KITCHEN VESTIBULE	N WD N WD ST AL	1 3	6' - 6" 6' - 6" 6' - 0"	7' - 0"	1 3/4" 1/4" TEMP. 1 3/4" 1/4" TEMP. 1 3/4" 1" INSUL.	2	MTL - 3 MTL - 3 AL - 3	9/A-601 8/A-601 9/A-601 8/A-601	7/A-601 7/A-601	
115B 115C 115D	VESTIBULE VESTIBULE VESTIBULE	ST AL ST AL ST AL	2 6			1 3/4" 1" INSUL. 1 3/4" 1/4" TEMP. 1 3/4" 1/4" TEMP.	-	AL - 1	1.8 1.7 1.0		
116A 116B 116C	CAFE CAFE CAFE	ST AL ST AL ST AL	2 6	5' - 0"	7' - 0"	1 3/4" 1" INSUL. 1 3/4" 1" INSUL. 1 3/4" 1" INSUL.	-	AL - 4	13 13		S C C C C C C C C C C C C C C C C C C C
118 119 120	RESTROOM TABLE STORAGE MDF	F WD F WD	1 2 2 6	.' - 0" 5' - 0"	7' - 0" 7' - 0"	1 3/4" - 1 3/4" - 1 3/4" -	1	MTL - 1 MTL - 4 MTL - 1		. 1/A-601 . 1/A-601	
121 123	ELEC ELEVATOR CONTROLLER	F WD	1 3 1 3	s' - 0" s' - 0"	7' - 0" 7' - 0"	1 3/4" - 1 3/4" -	1 1	MTL - 00	08 3/A-601 2/A-601 09	1/A-601	TYPE F TYPE N TYPE ST
123A 123B 124A	VESTIBULE VESTIBULE ACADEMIC CORRIDOR	ST AL ST AL WD	2 5' -	11 1/2" 6	' - 11 3/4"	1 3/4" 1" INSUL. 1 3/4" 1/4" TEMP. 1 3/4" 1/4" TEMP.	-	AL - 1 AL - 0 MTL B-Label 90 2 Min.	19 01 27 9/A-601 8/A-601	. 7/A-601	DOOR PANEL ELEVATION LEGEND 1/4" = 1'-0"
124B 125	ACADEMIC CORRIDOR SG	N WD				1 3/4" 1/4" TEMP. 1 3/4" -		MTL B-Label 90 Min. MTL - 3	9/A-601 8/A-601 32 9/A-601 8/A-601	7/A-601	DOOR FRAME TYPE LEGEND SEE SCHEDULE 1' - 0" =
126 127 128	OFFICE OFFICE OFFICE	F WD F WD	1 3	'' - 0" '' - 0"	7' - 0"	1 3/4" - 1 3/4" - 1 3/4" -	4	MTL - 3 MTL - 3 MTL - 3	32 9/A-601 8/A-601	7/A-601 7/A-601 7/A-601	SEE SCHEDULE SEE SCHEDULE SEE SCHEDULE SEE SCHEDULE 1' - 0" SEE SCHEDULE SEE SCHEDULE 6' - 0"
129 130 131	NURSE TLT CC ELEC	F WD F WD	1 3 1 3	s' - 0" s' - 0"	7' - 0" 7' - 0"	1 3/4" - 1 3/4" - 1 3/4" -	1 1	MTL - 2 MTL - 3 MTL - 3	9/A-601 8/A-601 6 9/A-601 8/A-601	7/A-601 7/A-601 7/A-601	
132 133 134	IDF OT/PT RESTROOM	F WD N WD F WD	1 3 1 3	s' - 0" s' - 0"	7' - 0" 7' - 0"	1 3/4" - 1 3/4" 1/4" TEMP. 1 3/4" -	1 4	MTL - 1		7/A-601	
136A 136B	FLEX FLEX	F WD F WD	1 3 1 3	s' - 0" s' - 0"	7' - 0" 7' - 0"	1 3/4" - 1 3/4" -	5 5	MTL - 1 MTL - 1	9/A-601 8/A-601	7/A-601 7/A-601	
137A 137B 138	FLEX FLEX CLASSROOM	F WD F WD	1 3 1 3	'' - 0" '' - 0" '' - 0"	7' - 0" 7' - 0"	1 3/4" - 1 3/4" - 1 3/4" -	5 5	MTL - 1 MTL - 1 MTL - 1	9/A-601 8/A-601	7/A-601 7/A-601	
139 140 141	CLASSROOM CLASSROOM ACADEMIC CORRIDOR	F WD F WD ST AL	1 3 2 5'-	5' - 0" 11 1/2" 6'	7' - 0" ' - 11 3/4"	1 3/4" - 1 3/4" - 1 3/4" 1" INSUL.	5	MTL - 1 MTL - 1 AL - 1	9/A-601 8/A-601	7/A-601 7/A-601	TYPE 1 TYPE 2 TYPE 3 TYPE 4 TYPE 5 TYPE 6
142 143 144	CLASSROOM CLASSROOM CLASSROOM	F WD F WD	1 3		7' - 0"	1 3/4" - 1 3/4" - 1 3/4" -	5	MTL - 1 MTL - 1 MTL - 1	9/A-601 8/A-601	7/A-601 7/A-601 7/A-601	DOOR FRAME ELEVATION LEGEND 1/4" = 1'-0"
145 146A 147	CLASSROOM SENSORY CORRIDOR TOILET	F WD F WD F WD	1 3	s' - 0" s' - 0"	7' - 0"	1 3/4" - 1 3/4" - 1 3/4" -	5	MTL - 1 MTL - 1 MTL - 0	9/A-601 8/A-601	7/A-601 7/A-601 7/A-601	
148 149 150	RESOURCE ROOM SENSORY CLASSROOM	F WD F WD	1 3	3' - 0"	7' - 0" 7' - 0"	1 3/4" - 1 3/4" - 1 3/4" -	4 4	MTL - 1 MTL - 0 MTL - 1	9/A-601 8/A-601 9 9/A-601 8/A-601	7/A-601 7/A-601 7/A-601	PLANS 5/8" GYPSUM WALLBOARD
151 152A 152B	CLASSROOM ART ART	F WD F WD	1 3	3' - 0"	7' - 0"	1 3/4" - 1 3/4" - 1 3/4" -	5	MTL - 1 MTL - 1 MTL - 1	9/A-601 8/A-601	7/A-601 7/A-601 7/A-601	DOOR FRAME
153 154 156	KILN STORAGE NURSE	N WD F WD N WD	1 3	'' - 0" '' - 0"	7' - 0"	1 3/4" 1/4" TEMP. 1 3/4" - 1 3/4" 1/4" TEMP.	1	MTL - 1 MTL - 2 MTL - 0	9/A-601 8/A-601	7/A-601 7/A-601 7/A-601	3 5/8" METAL RUNNER 3 5/8" METAL RUNNER 3 5/8" METAL RUNNER 5 5/8" METAL RUNNER 5 5/8" METAL RUNNER
157 158A 158B	AP MEETING MEETING	N WD N WD N WD	1 3 1 3	s' - 0" s' - 0"	7' - 0" 7' - 0"	1 3/4" 1/4" TEMP. 1 3/4" 1/4" TEMP. 1 3/4" 1/4" TEMP.	1 1	MTL - 0 MTL - 3 MTL - 0	9/A-601 8/A-601 88 9/A-601 8/A-601	7/A-601 7/A-601 7/A-601	1/2" SEALANT 5/8" GYPSUM WALLBOARD
159 160 161	PRINCIPAL ADMIN CORRIDOR ADMIN CORRIDOR	N WD N WD N WD	1 3 1 3	3' - 0"	7' - 0" 7' - 0"	1 3/4" 1/4" TEMP. 1 3/4" 1/4" TEMP. 1 3/4" 1/4" TEMP.	1 1	MTL - 0 MTL - 0 MTL - 4	9/A-601 8/A-601 9/A-601 8/A-601	7/A-601 7/A-601 7/A-601	SEE WALLBOARD
162A 162B	CONFERENCE CONFERENCE	N WD N WD	1 3 1 3	3' - 0"	7' - 0"	1 3/4" 1/4" TEMP. 1 3/4" 1/4" TEMP.	1 1	MTL - 0 MTL - 0	9/A-601 8/A-601 9/A-601 8/A-601	7/A-601 7/A-601	PLANS
163 164 165A	TOILET TOILET WORKROOM / MAIL ROOM	F WD F WD N WD	1 3 1 3	s' - 0" s' - 0"	7' - 0" 7' - 0"	1 3/4" - 1 3/4" 1/4" TEMP.	1 1	MTL - 0 MTL - 3	9/A-601 8/A-601 9/A-601 8/A-601	7/A-601 7/A-601 7/A-601	9 STUD - INT. DOOR HEAD 8 STUD - INT. DOOR JAMB 7 STUD - INT. DOOR - SILL A-601 1 1/2" = 1'-0" A-601 1 1/2" = 1'-0"
165B 166 167A	WORKROOM / MAIL ROOM PARENT RECEPTION	N WD N WD ST AL	1 3 1 3	s' - 0" s' - 0"	7' - 0" 7' - 0"	1 3/4" 1/4" TEMP. 1 3/4" 1/4" TEMP. 1/4" TEMP.	1	MTL - 0 MTL - 2 AL 1	9/A-601 8/A-601		EQ 6" EQ
167B 202A 202B	RECEPTION MECH MECH	N WD F WD F WD	1 3	3' - 0"	7' - 0"	1 3/4" 1/4" TEMP. 1 3/4" - 1 3/4" -	1	MTL - 4 MTL - 2 MTL - 1		7/A-601 7/A-601 1/A-601	SEE PLANS OPENING FRAME
205A 205B	ACADEMIC CORRIDOR ACADEMIC CORRIDOR	N WD				1 3/4" 1/4" TEMP. 1 3/4" 1/4" TEMP.		MTL B-Label 90 Min. 2 Min. MTL B-Label 90 2 2 Min.	9/A-601 8/A-601 27 9/A-601 8/A-601	7/A-601 7/A-601	CONCRETE MASONRY UNITS SEALANT SEALANT OOR FRAME
206	SG SG	F WD	1 3	3' - 0"	7' - 0"	1 3/4" - 1 3/4" -	4	MTL - 3		7/A-601	SILL SILL
208 209 211	OFFICE OFFICE CC	F WD F WD	1 3 1 3	3' - 0"	7' - 0" 7' - 0"	1 3/4" - 1 3/4" - 1 3/4" -	4	MTL - 3 MTL - 3 MTL - 2	9/A-601 8/A-601 21 9/A-601 8/A-601	7/A-601 7/A-601 7/A-601	CONCRETE MASONRY UNITS CONCRETE MASONRY UNITS FINISH FLOORING. SEE INTERIOR SUITETTE
212 213 214	ELEC IDF OFFICE	F WD F WD	1 3	'' - 0" '' - 0" '' - 0"	7' - 0"	1 3/4" - 1 3/4" - 1 3/4" -	1	MTL - 2 MTL - 1 MTL - 3	9/A-601 8/A-601	7/A-601 7/A-601 7/A-601	SEALANT MASONRY ANCHOR SHEETS
215 216 218A	OFFICE RESTROOM CLASSROOM	F WD F WD	1 2	.' - 0"	7' - 0"	1 3/4" - 1 3/4" - 1 3/4" -	1 1	MTL - 4 MTL - 1 MTL - 1	9/A-601 8/A-601 14 9/A-601 8/A-601	7/A-601 7/A-601	
218B 219A 219B	CLASSROOM CLASSROOM CLASSROOM	F WD F WD	1 3	s' - 0" s' - 0"	7' - 0" 7' - 0"	1 3/4" - 1 3/4" - 1 3/4" -	5	MTL - 1 MTL - 1 MTL - 1	9/A-601 8/A-601 1 9/A-601 8/A-601	7/A-601 7/A-601 7/A-601	SEE PLANS
220 221 222	CLASSROOM CLASSROOM CLASSROOM	F WD F WD	1 3	'' - 0" '' - 0"	7' - 0" 7' - 0"	1 3/4" - 1 3/4" - 1 3/4" -	5 5	MTL - 1 MTL - 1 MTL - 1	9/A-601 8/A-601	7/A-601 7/A-601	EQ EQ
224 225 226	CLASSROOM CLASSROOM CLASSROOM	F WD F WD	1 3 1 3	s' - 0" s' - 0"	7' - 0" 7' - 0"	1 3/4" - 1 3/4" - 1 3/4" -	5 5	MTL - 1 MTL - 1 MTL - 1	9/A-601 8/A-601 11 9/A-601 8/A-601	7/A-601 . 7/A-601 . 7/A-601	6 CMU INT. DOOR HEAD A-601 1 1/2" = 1'-0" 5 CMU - INT. DOOR JAMB A-601 1 1/2" = 1'-0" 4 CMU - INT. DOOR SILL A-601 1 1/2" = 1'-0"
227 228 229	CLASSROOM CLASSROOM CLASSROOM CLASSROOM	F WD F WD	1 3 1 3	3' - 0"	7' - 0" 7' - 0"	1 3/4" - 1 3/4" - 1 3/4" -	5 5	MTL - 1 MTL - 1 MTL - 1 MTL - 1	9/A-601 8/A-601 11 9/A-601 8/A-601	7/A-601 7/A-601 7/A-601	A-601 1 1/2" = 1'-0" A-601 1 1/2" = 1'-0" SEE PLANS
230A 231	TEACHER'S WORKROOM TEXTBOOK STORAGE	F WD F WD F WD	1 3 1 3	3' - 0"	7' - 0" 7' - 0"	1 3/4" - 1 3/4" - 1 3/4" -	5	MTL - 0 MTL - 0 MTL - 0	9/A-601 8/A-601 9 9/A-601 8/A-601	7/A-601 7/A-601 7/A-601 7/A-601	INTERIOR EXTERIOR
232 233 234 235A	TLT MOTHER'S ROOM MUSIC ROOM	F WD N WD F WD	1 3 1 3	s' - 0" s' - 0"	7' - 0" 7' - 0"	1 3/4" - 1 3/4" - 1 3/4" 1/4" TEMP. 1 3/4" -	1 1	MTL - 0 MTL - 0 MTL - 1	9/A-601 8/A-601	7/A-601 7/A-601	4" EXTRUDED POLYSTYRENE BOARD 6" 4" EXTRUDED POLYSTYRENE BOARD CASED OPENING FRAME
235B 236 237	MUSIC ROOM MUSIC ROOM TEXTBOOK STORAGE MEDIA EQ STORAGE	F WD F WD F WD	1 3 1 3	s' - 0" s' - 0"	7' - 0" 7' - 0"	1 3/4" - 1 3/4" - 1 3/4" -	5	MTL - 1 MTL - 0 MTL - 0	9/A-601 8/A-601 9 9/A-601 8/A-601	7/A-601 7/A-601	INSULATION PRECAST CONCRETE PRECAST CONCRETE PRECAST CONCRETE PRECAST CONCRETE
238 239A	MEDIA EQ STORAGE MEDIA PROCESSING OFFICE MEDIA CENTER	F WD N WD	1 3	3' - 0"	7' - 0"	1 3/4" - 1 3/4" - 1 3/4" 1/4" TEMP.	1	MTL - 0	9/A-601 8/A-601	7/A-601	DRIP EDGE WOOD BLOCKING DRIP EDGE WOOD BLOCKING WOOD BLOCKING FINISH FLOORING. CONCRETE STOOP-
239B		N WD				1 3/4" 1/4" TEMP.		MTL - 2	20 9/A-601 8/A-601		TREATED 2X4 TREATED 2X4 TREATED 2X4 BACKER ROD & BACKER ROD & TREATED 2X4 SEE INTERIOR DWGS DWGS
											EXTERIOR INTERIOR EXTERIOR INTERIOR
											EQ 6" EQ COMPRESSIBLE FILLER

GENERAL DOOR & FRAME NOTES

- THESE GENERAL NOTES APPLY TO THE A-601 SERIES DRAWINGS FOR DOOR SCHEDULE/LEGEND DRAWINGS.
- UNDERCUT DOORS AS REQUIRED BY FINAL FLOOR FINISH.
- PROVIDE SEALANT BETWEEN HOLLOW METAL FRAME PERIMETER AND
- SURROUNDING WALL CONSTRUCTION UNLESS NOTED OTHERWISE.
- PROVIDE SEALANT BETWEEN INTERIOR AND EXTERIOR STOREFRONT FRAME PERIMETERS AND SURROUNDING WALL CONSTRUCTION UNLESS NOTED OTHERWISE.
- GROUT FULL NEW HOLLOW METAL DOOR FRAMES IN MASONRY WALL CONSTRUCTION.
- SPOT GROUT NEW HOLLOW METAL DOOR FRAMES IN GYPSUM BOARD WALL CONSTRUCTION.
- WHERE A FIRE RATING IS INDICATED ON THE DOOR SCHEDULE, HARDWARE AND DOOR ASSEMBLY COMPONENTS SHALL MEET THE REQUIREMENTS OF THAT LABEL.
- WHERE ACOUSTICAL RATING IS INDICATED ON THE DOOR SCHEDULE, HARDWARE AND DOOR ASSEMBLY COMPONENTS SHALL MEET THE REQUIREMENTS OF THAT RATING.
- INSTALL DOOR GLASS USING WET-GLAZING METHOD.
- REFER TO PROJECT MANUAL FOR GLAZING.
- REFER TO PROJECT MANUAL FOR HARDWARE INFORMATION.
- DIMENSIONS DO NOT REFLECT SIZE OF PACKAGED DOORS, REFER TO OPENING ELEVATIONS.
- SLIDING DOORS ARE SIZED INSIDE TO INSIDE.

ARCHITECT OF ANY DISCREPANCIES.

3 EXTERIOR DOOR - HEAD
A-601 1 1/2" = 1'-0" **2** EXTERIOR DOOR - JAMB
A-601 1 1/2" = 1'-0"

A-601 1 1/2" = 1'-0" **1** EXTERIOR DOOR - SILL
A-601 1 1/2" = 1'-0"

- REFER TO ELECTRICAL WIRING DIAGRAMS OF POWERED OPENINGS FOR ADDITIONAL INFORMATION. PROVIDE LEAD THICKNESS OR EQUIVALENCY IN DOORS, FRAMES, AND/OR
- WINDOWS AS IN ADJACENT PARTITION. VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS IN THE FIELD PRIOR TO FABRICATION OF DOORS AND FRAMES. THE CONTRACTOR SHALL NOTIFY THE

SUITE 1600 CHICAGO, IL 60611 v. (312) 755-0770

317.926.1820

ARCHITECTURAL PARTNER

PERKINS & WILL

410 N. MICHIGAN AVE

LANDSCAPE, INTERIOR

DESIGN, URBAN PLANNING

INDIANAPOLIS, IN 45202

WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM

25 NORTH PINE STREET, SUITE B

CIVIL & STRUCTURAL ENGINEER:

8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250

v. (317) 661-1964

MECH. / ELECT. / PLUMB. /

FIRE PROT. ENGINEER: **KBSO CONSULTING** 275 VETERANS WAY

SUITE 300 CARMEL. IN 46032 v. (317) 344-8044

INTERIOR DESIGNER:

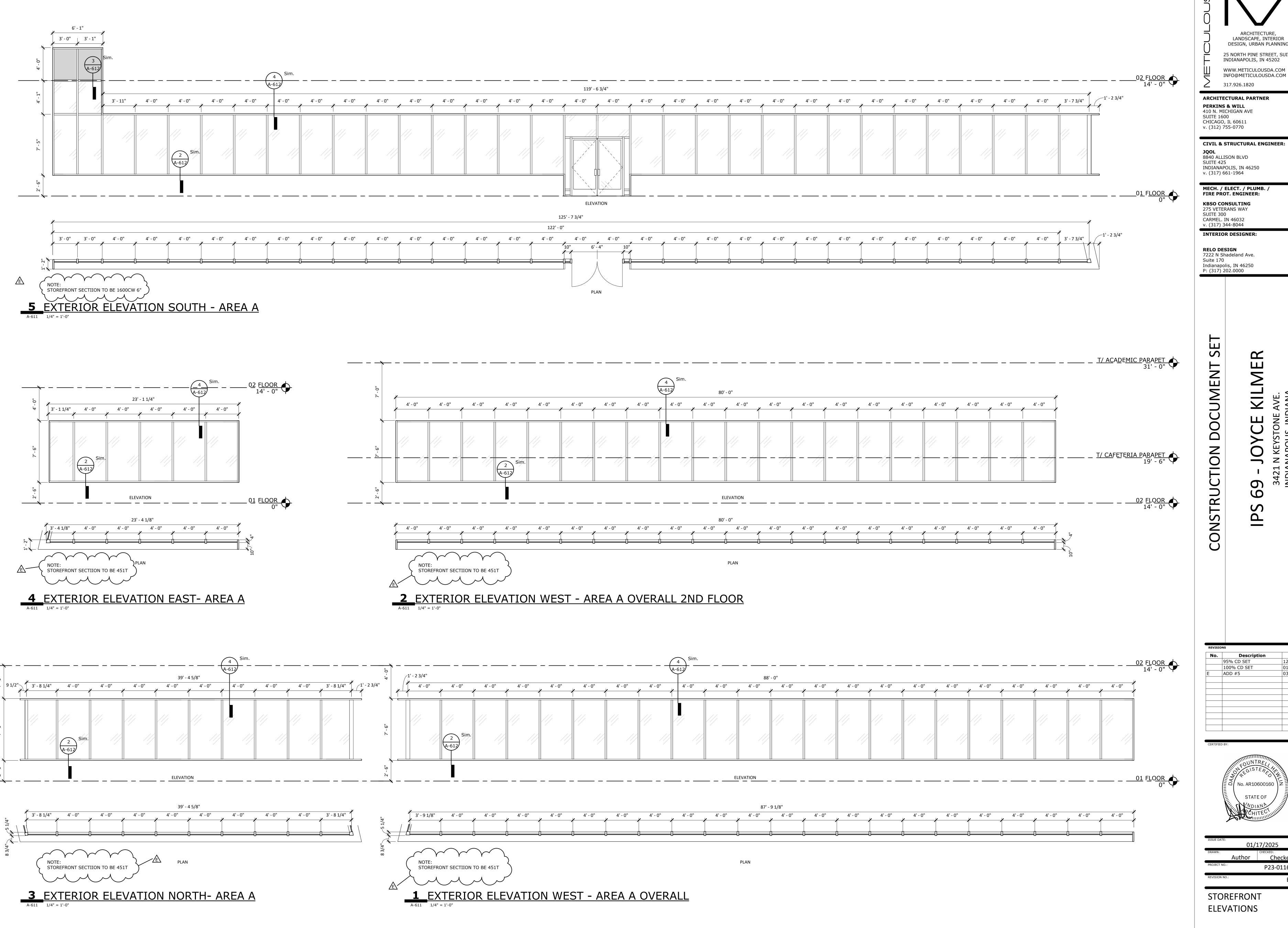
P: (317) 202.0000

RELO DESIGN 7222 N Shadeland Ave. Suite 170 Indianapolis, IN 46250

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CONSTRUCTION DOCUM

DOOR AND FRAME SCHEDULE



LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 INFO@METICULOUSDA.COM 317.926.1820

ARCHITECTURAL PARTNER **PERKINS & WILL** 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611

8840 ALLISON BLVD INDIANAPOLIS, IN 46250

MECH. / ELECT. / PLUMB. /

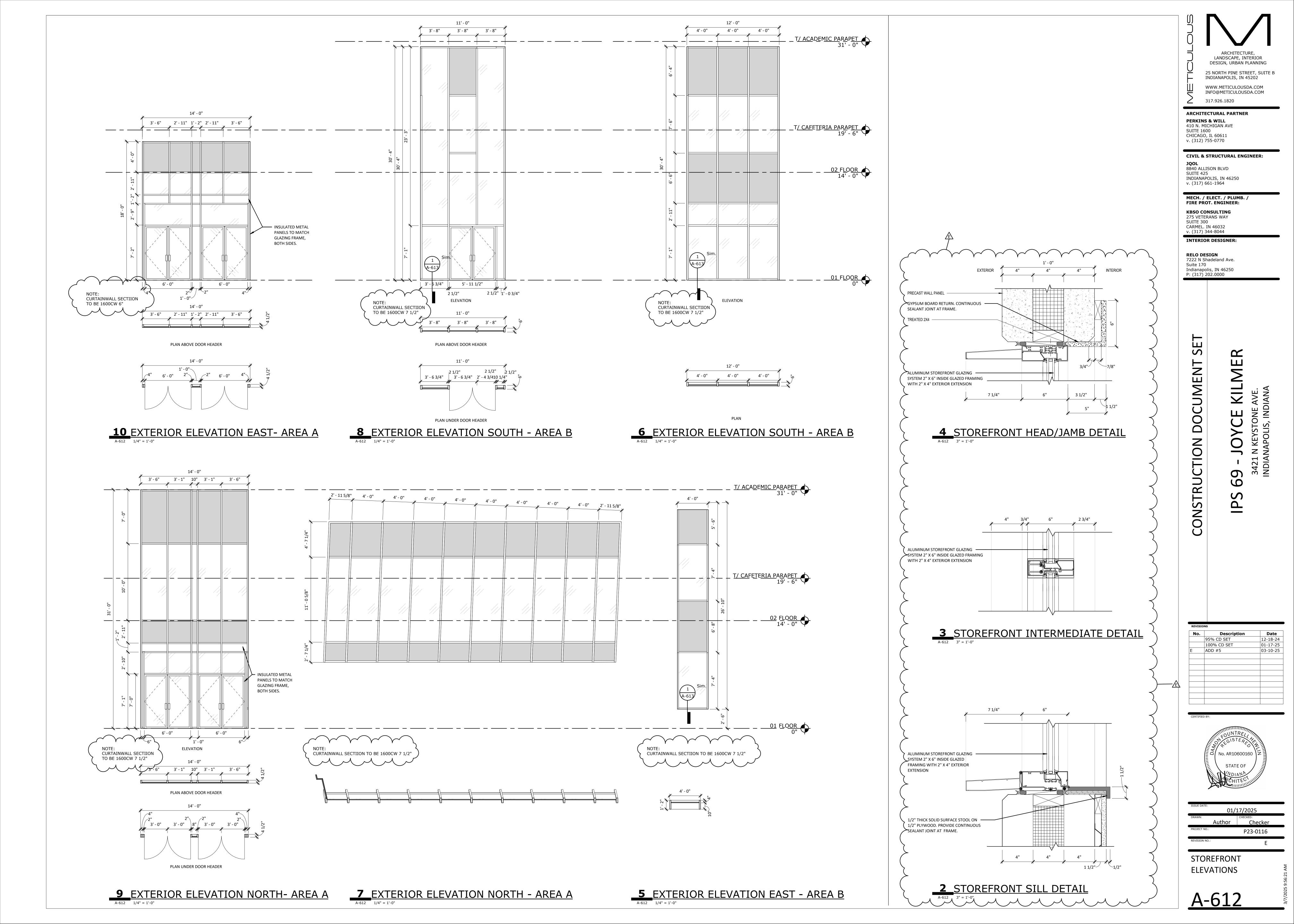
KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032

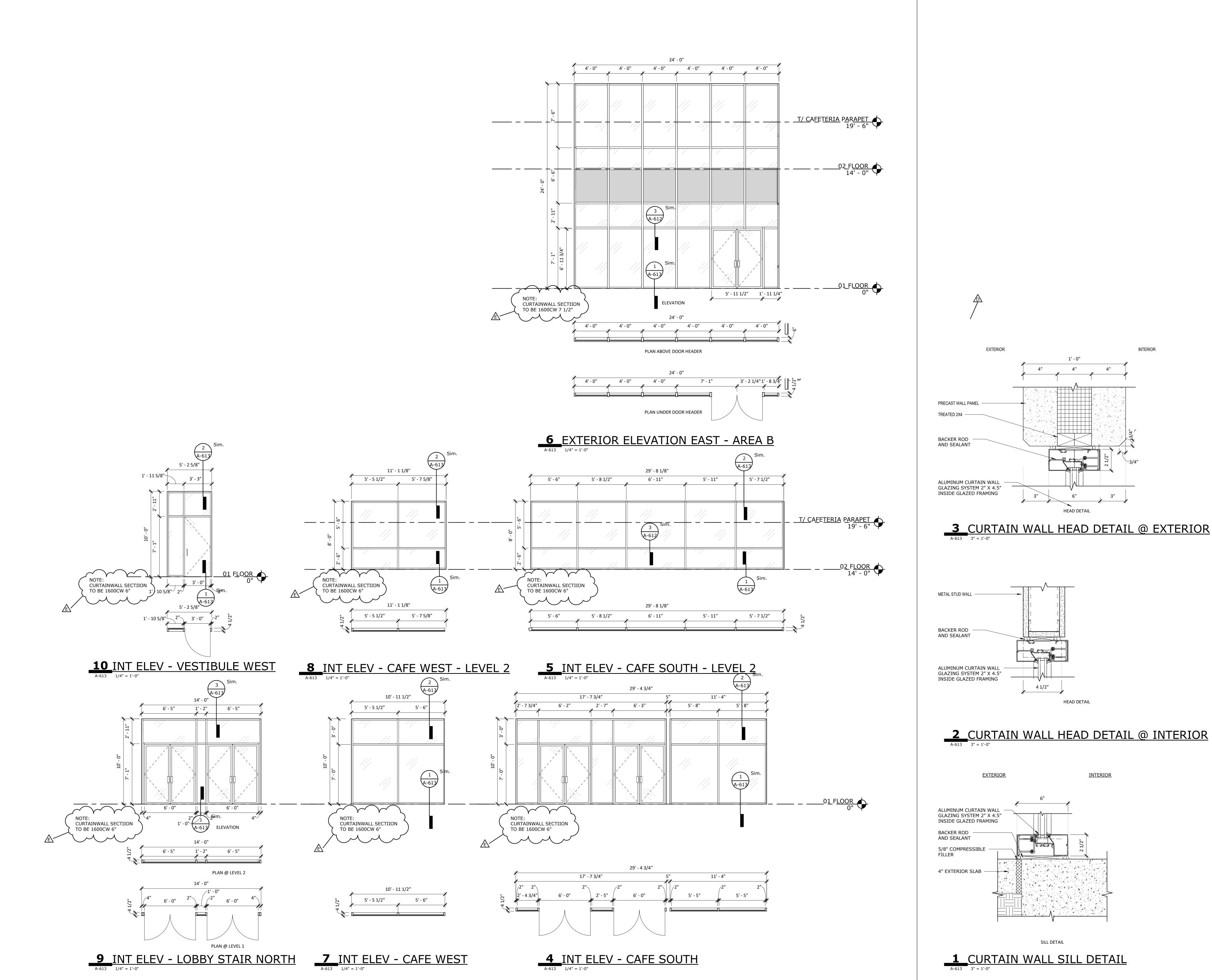
INTERIOR DESIGNER:

RELO DESIGN 7222 N Shadeland Ave. Suite 170 Indianapolis, IN 46250 P: (317) 202.0000

STATE OF

STOREFRONT **ELEVATIONS**







8840 ALLISON BLVD INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032 v. (317) 344-8044

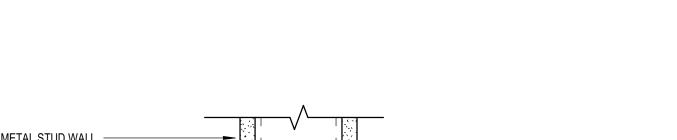
INTERIOR DESIGNER:

SE

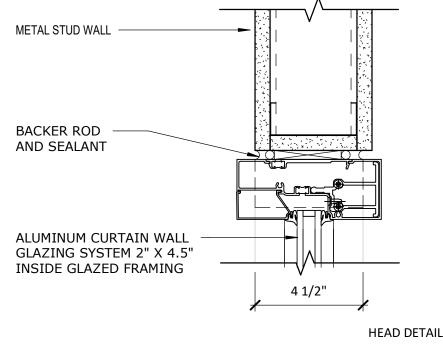
CONSTRUCTION DOCUM

RELO DESIGN 7222 N Shadeland Ave. Suite 170

Indianapolis, IN 46250 P: (317) 202.0000

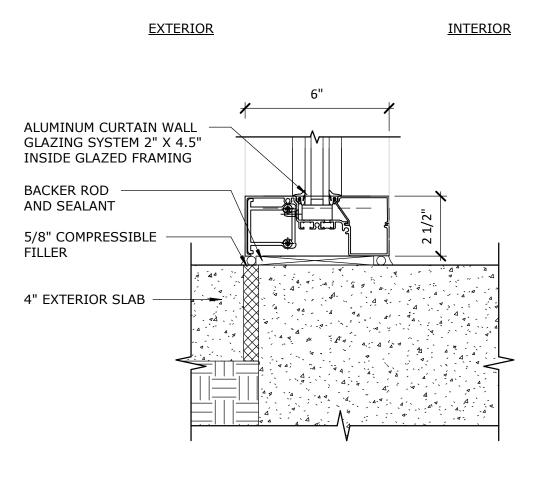


INTERIOR



EXTERIOR

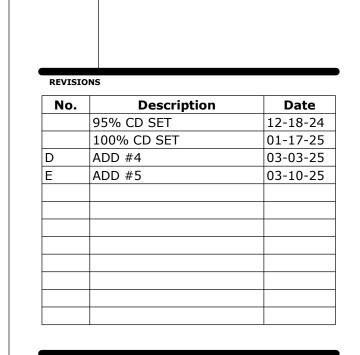
2 CURTAIN WALL HEAD DETAIL @ INTERIOR

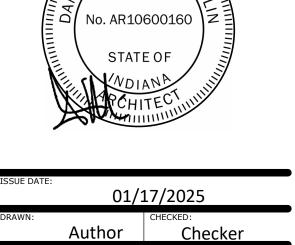


1 CURTAIN WALL SILL DETAIL

A-613 3" = 1'-0"

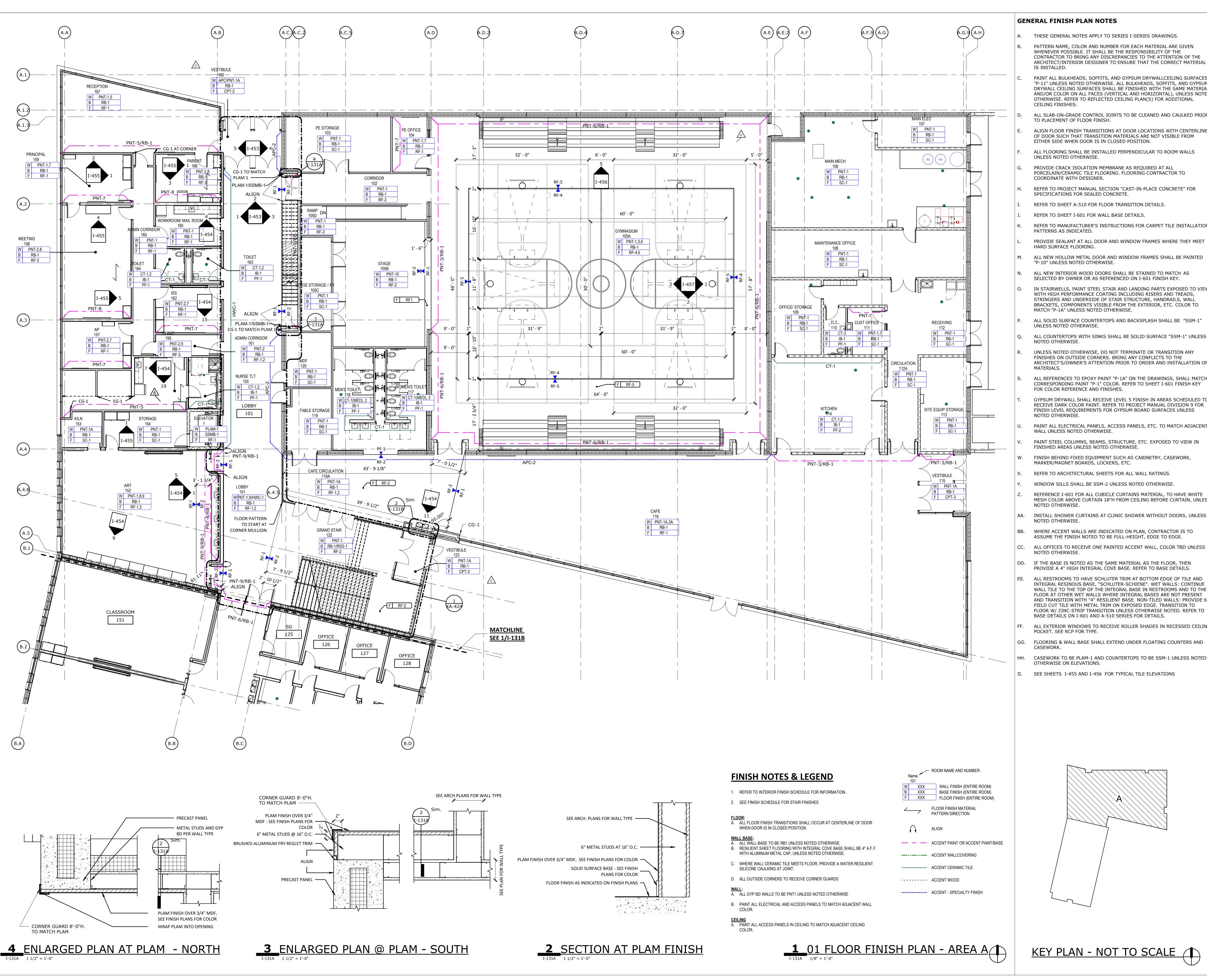
SILL DETAIL





STOREFRONT **ELEVATIONS**

<u>A-613</u>



- THESE GENERAL NOTES APPLY TO SERIES I-SERIES DRAWINGS.
- PATTERN NAME, COLOR AND NUMBER FOR EACH MATERIAL ARE GIVEN WHENEVER POSSIBLE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/INTERIOR DESIGNER TO ENSURE THAT THE CORRECT MATERIAL IS INSTALLED.
- PAINT ALL BULKHEADS, SOFFITS, AND GYPSUM DRYWALLCEILING SURFACES "P-11" UNLESS NOTED OTHERWISE. ALL BULKHEADS, SOFFITS, AND GYPSUM DRYWALL CEILING SURFACES SHALL BE FINISHED WITH THE SAME MATERIAL AND/OR COLOR ON ALL FACES (VERTICAL AND HORIZONTAL), UNLESS NOTED OTHERWISE. REFER TO REFLECTED CEILING PLAN(S) FOR ADDITIONAL

LANDSCAPE, INTERIOR

DESIGN, URBAN PLANNING

INDIANAPOLIS, IN 45202

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ARCHITECTURAL PARTNER

CIVIL & STRUCTURAL ENGINEER:

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CHICAGO, IL 60611 v. (312) 755-0770

8840 ALLISON BLVD

v. (317) 661-1964

KBSO CONSULTING

275 VETERANS WAY

CARMEL. IN 46032

v. (317) 344-8044

RELO DESIGN

Suite 170

INTERIOR DESIGNER:

7222 N Shadeland Ave.

Indianapolis, IN 46250

P: (317) 202.0000

SUITE 300

INDIANAPOLIS, IN 46250

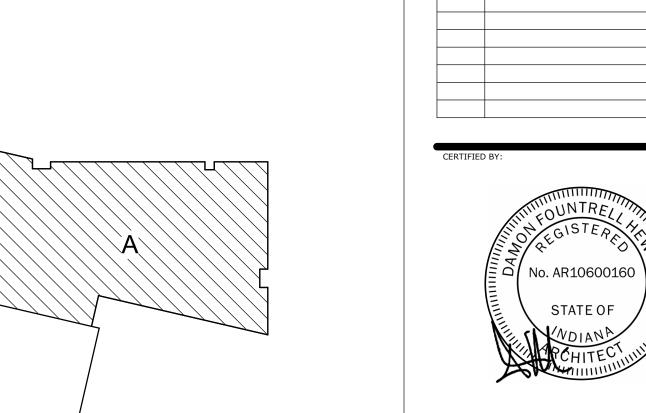
MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

SUITE 1600

410 N. MICHIGAN AVE

25 NORTH PINE STREET, SUITE B

- ALL SLAB-ON-GRADE CONTROL JOINTS TO BE CLEANED AND CAULKED PRIOR TO PLACEMENT OF FLOOR FINISH.
- ALIGN FLOOR FINISH TRANSITIONS AT DOOR LOCATIONS WITH CENTERLINE OF DOOR SUCH THAT TRANSITION MATERIALS ARE NOT VISIBLE FROM EITHER SIDE WHEN DOOR IS IN CLOSED POSITION.
- ALL FLOORING SHALL BE INSTALLED PERPENDICULAR TO ROOM WALLS
- PROVIDE CRACK ISOLATION MEMBRANE AS REQUIRED AT ALL PORCELAIN/CERAMIC TILE FLOORING. FLOORING CONTRACTOR TO COORDINATE WITH DESIGNER.
- REFER TO PROJECT MANUAL SECTION "CAST-IN-PLACE CONCRETE" FOR SPECIFICATIONS FOR SEALED CONCRETE.
- REFER TO SHEET A-510 FOR FLOOR TRANSITION DETAILS.
- REFER TO SHEET I-601 FOR WALL BASE DETAILS.
- REFER TO MANUFACTURER'S INSTRUCTIONS FOR CARPET TILE INSTALLATION PATTERNS AS INDICATED.
- PROVIDE SEALANT AT ALL DOOR AND WINDOW FRAMES WHERE THEY MEET HARD SURFACE FLOORING.
- ALL NEW HOLLOW METAL DOOR AND WINDOW FRAMES SHALL BE PAINTED
- ALL NEW INTERIOR WOOD DOORS SHALL BE STAINED TO MATCH AS
- SELECTED BY OWNER OR AS REFERENCED ON I-601 FINISH KEY.
- IN STAIRWELLS, PAINT STEEL STAIR AND LANDING PARTS EXPOSED TO VIEW WITH HIGH PERFORMANCE COATING INCLUDING RISERS AND TREADS, STRINGERS AND UNDERSIDE OF STAIR STRUCTURE, HANDRAILS, WALL BRACKETS, COMPONENTS VISIBLE FROM THE EXTERIOR, ETC. COLOR TO MATCH "P-1A" UNLESS NOTED OTHERWISE.
- ALL SOLID SURFACE COUNTERTOPS AND BACKSPLASH SHALL BE "SSM-1" UNLESS NOTED OTHERWISE.
- ALL COUNTERTOPS WITH SINKS SHALL BE SOLID SURFACE "SSM-1" UNLESS NOTED OTHERWISE.
- UNLESS NOTED OTHERWISE, DO NOT TERMINATE OR TRANSITION ANY FINISHES ON OUTSIDE CORNERS. BRING ANY CONFLICTS TO THE ARCHITECT'S/OWNER'S ATTENTION PRIOR TO ORDER AND INSTALLATION OF
- ALL REFERENCES TO EPOXY PAINT "P-1A" ON THE DRAWINGS, SHALL MATCH CORRESPONDING PAINT "P-1" COLOR. REFER TO SHEET I-601 FINISH KEY FOR COLOR REFERENCE AND FINISHES.
- GYPSUM DRYWALL SHALL RECEIVE LEVEL 5 FINISH IN AREAS SCHEDULED TO RECEIVE DARK COLOR PAINT. REFER TO PROJECT MANUAL DIVISION 9 FOR FINISH LEVEL REQUIREMENTS FOR GYPSUM BOARD SURFACES UNLESS NOTED OTHERWISE.
- PAINT ALL ELECTRICAL PANELS, ACCESS PANELS, ETC. TO MATCH ADJACENT WALL UNLESS NOTED OTHERWISE.
- PAINT STEEL COLUMNS, BEAMS, STRUCTURE, ETC. EXPOSED TO VIEW IN FINISHED AREAS UNLESS NOTED OTHERWISE.
- FINISH BEHIND FIXED EQUIPMENT SUCH AS CABINETRY, CASEWORK, MARKER/MAGNET BOARDS, LOCKERS, ETC.
- REFER TO ARCHITECTURAL SHEETS FOR ALL WALL RATINGS.
- WINDOW SILLS SHALL BE SSM-2 UNLESS NOTED OTHERWISE.
- REFERENCE I-601 FOR ALL CUBICLE CURTAINS MATERIAL, TO HAVE WHITE MESH COLOR ABOVE CURTAIN 18"H FROM CEILING BEFORE CURTAIN, UNLESS
- INSTALL SHOWER CURTAINS AT CLINIC SHOWER WITHOUT DOORS, UNLESS NOTED OTHERWISE.
- WHERE ACCENT WALLS ARE INDICATED ON PLAN, CONTRACTOR IS TO ASSUME THE FINISH NOTED TO BE FULL-HEIGHT, EDGE TO EDGE.
- ALL OFFICES TO RECEIVE ONE PAINTED ACCENT WALL, COLOR TBD UNLESS NOTED OTHERWISE.
- IF THE BASE IS NOTED AS THE SAME MATERIAL AS THE FLOOR, THEN PROVIDE A 4" HIGH INTEGRAL COVE BASE. REFER TO BASE DETAILS.
- ALL RESTROOMS TO HAVE SCHLUTER TRIM AT BOTTOM EDGE OF TILE AND INTEGRAL RESINOUS BASE, "SCHLUTER-SCHIENE". WET WALLS: CONTINUE WALL TILE TO THE TOP OF THE INTEGRAL BASE IN RESTROOMS AND TO THE FLOOR AT OTHER WET WALLS WHERE INTEGRAL BASES ARE NOT PRESENT AND TRANSITION WITH "4" RESILIENT BASE. NON-TILED WALLS: PROVIDE 6" FIELD CUT TILE WITH METAL TRIM ON EXPOSED EDGE. TRANSITION TO FLOOR W/ ZINC-STRIP TRANSITION UNLESS OTHERWISE NOTED. REFER TO
- ALL EXTERIOR WINDOWS TO RECEIVE ROLLER SHADES IN RECESSED CEILING POCKET. SEE RCP FOR TYPE.
- FLOORING & WALL BASE SHALL EXTEND UNDER FLOATING COUNTERS AND
- CASEWORK TO BE PLAM-1 AND COUNTERTOPS TO BE SSM-1 UNLESS NOTED OTHERWISE ON ELEVATIONS.
- SEE SHEETS I-455 AND I-456 FOR TYPICAL TILE ELEVATIONS



ISSUE DATE:	01/:	17/2025
DRAWN:	JAM	CHECKED: RS/JW
PROJECT NO.:		P23-0116
REVISION NO.:		С

01 INTERIOR FINISH PLAN - AREA A

95% CD SET 100% CD SET

02-24-25

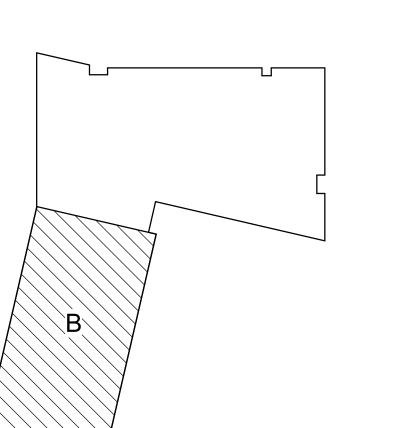
ADD #1 ADD #3

<u>I-131A</u>

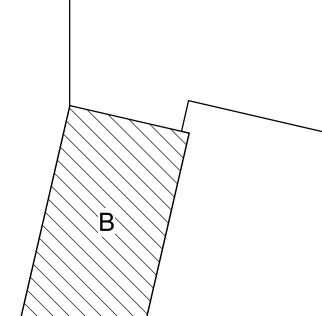
- THESE GENERAL NOTES APPLY TO SERIES I-SERIES DRAWINGS.
- PATTERN NAME, COLOR AND NUMBER FOR EACH MATERIAL ARE GIVEN WHENEVER POSSIBLE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/INTERIOR DESIGNER TO ENSURE THAT THE CORRECT MATERIAL IS INSTALLED.
- PAINT ALL BULKHEADS, SOFFITS, AND GYPSUM DRYWALLCEILING SURFACES "P-11" UNLESS NOTED OTHERWISE. ALL BULKHEADS, SOFFITS, AND GYPSUM DRYWALL CEILING SURFACES SHALL BE FINISHED WITH THE SAME MATERIAL AND/OR COLOR ON ALL FACES (VERTICAL AND HORIZONTAL), UNLESS NOTED OTHERWISE. REFER TO REFLECTED CEILING PLAN(S) FOR ADDITIONAL CEILING FINISHES.
- ALL SLAB-ON-GRADE CONTROL JOINTS TO BE CLEANED AND CAULKED PRIOR TO PLACEMENT OF FLOOR FINISH.
- ALIGN FLOOR FINISH TRANSITIONS AT DOOR LOCATIONS WITH CENTERLINE OF DOOR SUCH THAT TRANSITION MATERIALS ARE NOT VISIBLE FROM EITHER SIDE WHEN DOOR IS IN CLOSED POSITION.
 - ALL FLOORING SHALL BE INSTALLED PERPENDICULAR TO ROOM WALLS UNLESS NOTED OTHERWISE.
- PROVIDE CRACK ISOLATION MEMBRANE AS REQUIRED AT ALL PORCELAIN/CERAMIC TILE FLOORING. FLOORING CONTRACTOR TO COORDINATE WITH DESIGNER.
- REFER TO PROJECT MANUAL SECTION "CAST-IN-PLACE CONCRETE" FOR SPECIFICATIONS FOR SEALED CONCRETE.
- REFER TO SHEET A-510 FOR FLOOR TRANSITION DETAILS.
- REFER TO SHEET I-601 FOR WALL BASE DETAILS.

MATCH "P-1A" UNLESS NOTED OTHERWISE.

- REFER TO MANUFACTURER'S INSTRUCTIONS FOR CARPET TILE INSTALLATION PATTERNS AS INDICATED.
- PROVIDE SEALANT AT ALL DOOR AND WINDOW FRAMES WHERE THEY MEET HARD SURFACE FLOORING.
- ALL NEW HOLLOW METAL DOOR AND WINDOW FRAMES SHALL BE PAINTED "P-10" UNLESS NOTED OTHERWISE.
- ALL NEW INTERIOR WOOD DOORS SHALL BE STAINED TO MATCH AS
- SELECTED BY OWNER OR AS REFERENCED ON I-601 FINISH KEY.
- IN STAIRWELLS, PAINT STEEL STAIR AND LANDING PARTS EXPOSED TO VIEW WITH HIGH PERFORMANCE COATING INCLUDING RISERS AND TREADS, STRINGERS AND UNDERSIDE OF STAIR STRUCTURE, HANDRAILS, WALL BRACKETS, COMPONENTS VISIBLE FROM THE EXTERIOR, ETC. COLOR TO
- ALL SOLID SURFACE COUNTERTOPS AND BACKSPLASH SHALL BE "SSM-1" UNLESS NOTED OTHERWISE.
- ALL COUNTERTOPS WITH SINKS SHALL BE SOLID SURFACE "SSM-1" UNLESS NOTED OTHERWISE.
- UNLESS NOTED OTHERWISE, DO NOT TERMINATE OR TRANSITION ANY FINISHES ON OUTSIDE CORNERS. BRING ANY CONFLICTS TO THE ARCHITECT'S/OWNER'S ATTENTION PRIOR TO ORDER AND INSTALLATION OF
- ALL REFERENCES TO EPOXY PAINT "P-1A" ON THE DRAWINGS, SHALL MATCH CORRESPONDING PAINT "P-1" COLOR. REFER TO SHEET I-601 FINISH KEY FOR COLOR REFERENCE AND FINISHES.
- GYPSUM DRYWALL SHALL RECEIVE LEVEL 5 FINISH IN AREAS SCHEDULED TO RECEIVE DARK COLOR PAINT. REFER TO PROJECT MANUAL DIVISION 9 FOR FINISH LEVEL REQUIREMENTS FOR GYPSUM BOARD SURFACES UNLESS NOTED OTHERWISE.
- PAINT ALL ELECTRICAL PANELS, ACCESS PANELS, ETC. TO MATCH ADJACENT WALL UNLESS NOTED OTHERWISE.
- PAINT STEEL COLUMNS, BEAMS, STRUCTURE, ETC. EXPOSED TO VIEW IN FINISHED AREAS UNLESS NOTED OTHERWISE.
- FINISH BEHIND FIXED EQUIPMENT SUCH AS CABINETRY, CASEWORK, MARKER/MAGNET BOARDS, LOCKERS, ETC.
- REFER TO ARCHITECTURAL SHEETS FOR ALL WALL RATINGS.
- WINDOW SILLS SHALL BE SSM-2 UNLESS NOTED OTHERWISE.
- REFERENCE I-601 FOR ALL CUBICLE CURTAINS MATERIAL, TO HAVE WHITE MESH COLOR ABOVE CURTAIN 18"H FROM CEILING BEFORE CURTAIN, UNLESS
- INSTALL SHOWER CURTAINS AT CLINIC SHOWER WITHOUT DOORS, UNLESS NOTED OTHERWISE.
- WHERE ACCENT WALLS ARE INDICATED ON PLAN, CONTRACTOR IS TO ASSUME THE FINISH NOTED TO BE FULL-HEIGHT, EDGE TO EDGE.
- ALL OFFICES TO RECEIVE ONE PAINTED ACCENT WALL, COLOR TBD UNLESS NOTED OTHERWISE.
- IF THE BASE IS NOTED AS THE SAME MATERIAL AS THE FLOOR, THEN PROVIDE A 4" HIGH INTEGRAL COVE BASE. REFER TO BASE DETAILS.
- ALL RESTROOMS TO HAVE SCHLUTER TRIM AT BOTTOM EDGE OF TILE AND INTEGRAL RESINOUS BASE, "SCHLUTER-SCHIENE". WET WALLS: CONTINUE WALL TILE TO THE TOP OF THE INTEGRAL BASE IN RESTROOMS AND TO THE FLOOR AT OTHER WET WALLS WHERE INTEGRAL BASES ARE NOT PRESENT AND TRANSITION WITH "4" RESILIENT BASE. NON-TILED WALLS: PROVIDE 6" FIELD CUT TILE WITH METAL TRIM ON EXPOSED EDGE. TRANSITION TO FLOOR W/ ZINC-STRIP TRANSITION UNLESS OTHERWISE NOTED. REFER TO BASE DETAILS ON I-601 AND A-510 SERIES FOR DETAILS.
- ALL EXTERIOR WINDOWS TO RECEIVE ROLLER SHADES IN RECESSED CEILING POCKET. SEE RCP FOR TYPE.
- GG. FLOORING & WALL BASE SHALL EXTEND UNDER FLOATING COUNTERS AND
- HH. CASEWORK TO BE PLAM-1 AND COUNTERTOPS TO BE SSM-1 UNLESS NOTED OTHERWISE ON ELEVATIONS.
- SEE SHEETS I-455 AND I-456 FOR TYPICAL TILE ELEVATIONS



1 01 FLOOR FINISH PLAN - AREA B



KEY PLAN - NOT TO SCALE

LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202

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317.926.1820 ARCHITECTURAL PARTNER **PERKINS & WILL** 410 N. MICHIGAN AVE

SUITE 1600 CHICAGO, IL 60611

v. (312) 755-0770

CIVIL & STRUCTURAL ENGINEER:

8840 ALLISON BLVD

v. (317) 661-1964

MECH. / ELECT. / PLUMB. /

FIRE PROT. ENGINEER:

INDIANAPOLIS, IN 46250

KBSO CONSULTING 275 VETERANS WAY SUITE 300

CARMEL. IN 46032

v. (317) 344-8044 INTERIOR DESIGNER:

RELO DESIGN

7222 N Shadeland Ave. Suite 170 Indianapolis, IN 46250

P: (317) 202.0000

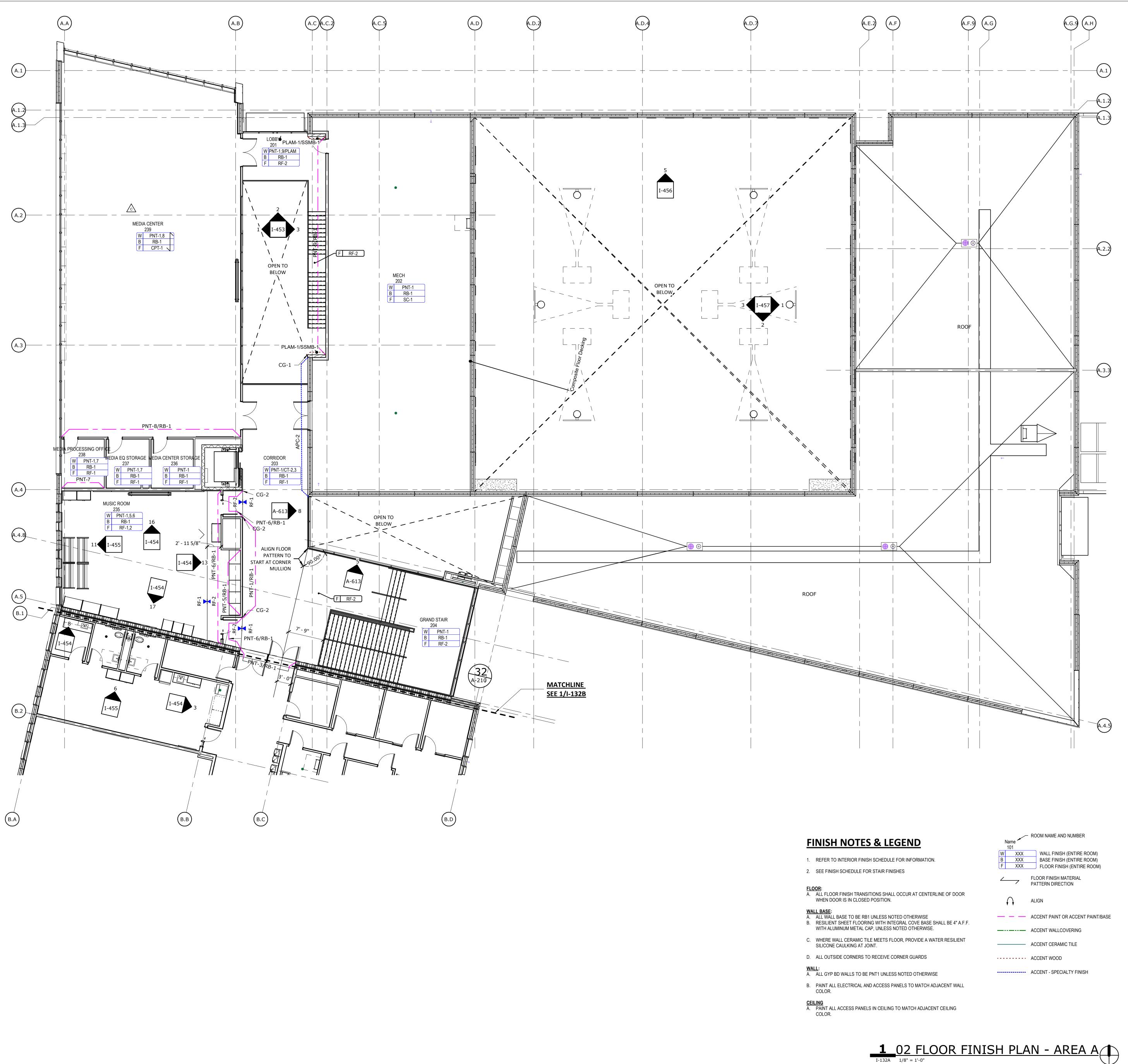
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No. AR10600160 STATEOF

P23-0116

01 INTERIOR FINISH PLAN - AREA B

I-131B



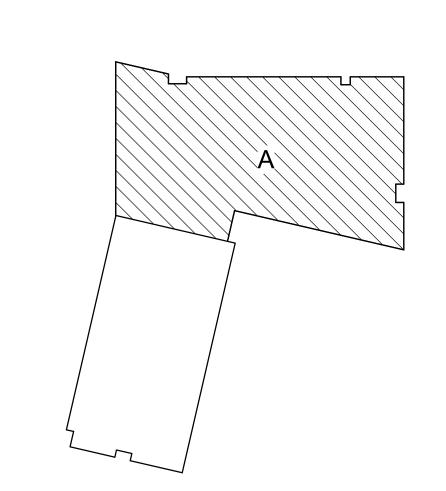
IS INSTALLED.

- THESE GENERAL NOTES APPLY TO SERIES I-SERIES DRAWINGS.
- PATTERN NAME, COLOR AND NUMBER FOR EACH MATERIAL ARE GIVEN WHENEVER POSSIBLE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/INTERIOR DESIGNER TO ENSURE THAT THE CORRECT MATERIAL
 - PAINT ALL BULKHEADS, SOFFITS, AND GYPSUM DRYWALLCEILING SURFACES "P-11" UNLESS NOTED OTHERWISE. ALL BULKHEADS, SOFFITS, AND GYPSUM DRYWALL CEILING SURFACES SHALL BE FINISHED WITH THE SAME MATERIAL AND/OR COLOR ON ALL FACES (VERTICAL AND HORIZONTAL), UNLESS NOTED OTHERWISE. REFER TO REFLECTED CEILING PLAN(S) FOR ADDITIONAL CEILING FINISHES.
 - ALL SLAB-ON-GRADE CONTROL JOINTS TO BE CLEANED AND CAULKED PRIOR TO PLACEMENT OF FLOOR FINISH.
 - ALIGN FLOOR FINISH TRANSITIONS AT DOOR LOCATIONS WITH CENTERLINE OF DOOR SUCH THAT TRANSITION MATERIALS ARE NOT VISIBLE FROM EITHER SIDE WHEN DOOR IS IN CLOSED POSITION.
 - ALL FLOORING SHALL BE INSTALLED PERPENDICULAR TO ROOM WALLS UNLESS NOTED OTHERWISE.
 - PROVIDE CRACK ISOLATION MEMBRANE AS REQUIRED AT ALL PORCELAIN/CERAMIC TILE FLOORING. FLOORING CONTRACTOR TO COORDINATE WITH DESIGNER.
- REFER TO PROJECT MANUAL SECTION "CAST-IN-PLACE CONCRETE" FOR SPECIFICATIONS FOR SEALED CONCRETE.
- REFER TO SHEET A-510 FOR FLOOR TRANSITION DETAILS.
- REFER TO SHEET I-601 FOR WALL BASE DETAILS.

"P-10" UNLESS NOTED OTHERWISE.

MATCH "P-1A" UNLESS NOTED OTHERWISE.

- REFER TO MANUFACTURER'S INSTRUCTIONS FOR CARPET TILE INSTALLATION PATTERNS AS INDICATED.
- PROVIDE SEALANT AT ALL DOOR AND WINDOW FRAMES WHERE THEY MEET HARD SURFACE FLOORING.
- ALL NEW HOLLOW METAL DOOR AND WINDOW FRAMES SHALL BE PAINTED
- ALL NEW INTERIOR WOOD DOORS SHALL BE STAINED TO MATCH AS SELECTED BY OWNER OR AS REFERENCED ON I-601 FINISH KEY.
- IN STAIRWELLS, PAINT STEEL STAIR AND LANDING PARTS EXPOSED TO VIEW WITH HIGH PERFORMANCE COATING INCLUDING RISERS AND TREADS, STRINGERS AND UNDERSIDE OF STAIR STRUCTURE, HANDRAILS, WALL BRACKETS, COMPONENTS VISIBLE FROM THE EXTERIOR, ETC. COLOR TO
- ALL SOLID SURFACE COUNTERTOPS AND BACKSPLASH SHALL BE "SSM-1" UNLESS NOTED OTHERWISE.
- ALL COUNTERTOPS WITH SINKS SHALL BE SOLID SURFACE "SSM-1" UNLESS NOTED OTHERWISE.
- UNLESS NOTED OTHERWISE, DO NOT TERMINATE OR TRANSITION ANY FINISHES ON OUTSIDE CORNERS. BRING ANY CONFLICTS TO THE ARCHITECT'S/OWNER'S ATTENTION PRIOR TO ORDER AND INSTALLATION OF
- ALL REFERENCES TO EPOXY PAINT "P-1A" ON THE DRAWINGS, SHALL MATCH CORRESPONDING PAINT "P-1" COLOR. REFER TO SHEET I-601 FINISH KEY FOR COLOR REFERENCE AND FINISHES.
- GYPSUM DRYWALL SHALL RECEIVE LEVEL 5 FINISH IN AREAS SCHEDULED TO RECEIVE DARK COLOR PAINT. REFER TO PROJECT MANUAL DIVISION 9 FOR FINISH LEVEL REQUIREMENTS FOR GYPSUM BOARD SURFACES UNLESS NOTED OTHERWISE.
- PAINT ALL ELECTRICAL PANELS, ACCESS PANELS, ETC. TO MATCH ADJACENT WALL UNLESS NOTED OTHERWISE.
- PAINT STEEL COLUMNS, BEAMS, STRUCTURE, ETC. EXPOSED TO VIEW IN FINISHED AREAS UNLESS NOTED OTHERWISE.
- FINISH BEHIND FIXED EQUIPMENT SUCH AS CABINETRY, CASEWORK,
- MARKER/MAGNET BOARDS, LOCKERS, ETC.
- REFER TO ARCHITECTURAL SHEETS FOR ALL WALL RATINGS. WINDOW SILLS SHALL BE SSM-2 UNLESS NOTED OTHERWISE.
- REFERENCE I-601 FOR ALL CUBICLE CURTAINS MATERIAL, TO HAVE WHITE MESH COLOR ABOVE CURTAIN 18"H FROM CEILING BEFORE CURTAIN, UNLESS
- INSTALL SHOWER CURTAINS AT CLINIC SHOWER WITHOUT DOORS, UNLESS NOTED OTHERWISE.
- WHERE ACCENT WALLS ARE INDICATED ON PLAN, CONTRACTOR IS TO ASSUME THE FINISH NOTED TO BE FULL-HEIGHT, EDGE TO EDGE.
- ALL OFFICES TO RECEIVE ONE PAINTED ACCENT WALL, COLOR TBD UNLESS NOTED OTHERWISE.
- IF THE BASE IS NOTED AS THE SAME MATERIAL AS THE FLOOR, THEN PROVIDE A 4" HIGH INTEGRAL COVE BASE. REFER TO BASE DETAILS.
- ALL RESTROOMS TO HAVE SCHLUTER TRIM AT BOTTOM EDGE OF TILE AND INTEGRAL RESINOUS BASE, "SCHLUTER-SCHIENE". WET WALLS: CONTINUE WALL TILE TO THE TOP OF THE INTEGRAL BASE IN RESTROOMS AND TO THE FLOOR AT OTHER WET WALLS WHERE INTEGRAL BASES ARE NOT PRESENT AND TRANSITION WITH "4" RESILIENT BASE. NON-TILED WALLS: PROVIDE 6" FIELD CUT TILE WITH METAL TRIM ON EXPOSED EDGE. TRANSITION TO FLOOR W/ ZINC-STRIP TRANSITION UNLESS OTHERWISE NOTED. REFER TO BASE DETAILS ON I-601 AND A-510 SERIES FOR DETAILS.
- ALL EXTERIOR WINDOWS TO RECEIVE ROLLER SHADES IN RECESSED CEILING POCKET. SEE RCP FOR TYPE.
- FLOORING & WALL BASE SHALL EXTEND UNDER FLOATING COUNTERS AND
- CASEWORK TO BE PLAM-1 AND COUNTERTOPS TO BE SSM-1 UNLESS NOTED OTHERWISE ON ELEVATIONS.
- SEE SHEETS I-455 AND I-456 FOR TYPICAL TILE ELEVATIONS



KEY PLAN - NOT TO SCALE

GENERAL FINISH PLAN NOTES

LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM

ARCHITECTURAL PARTNER **PERKINS & WILL** 410 N. MICHIGAN AVE SUITE 1600

CHICAGO, IL 60611 v. (312) 755-0770

317.926.1820

CIVIL & STRUCTURAL ENGINEER:

8840 ALLISON BLVD INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. /

FIRE PROT. ENGINEER: **KBSO CONSULTING** 275 VETERANS WAY SUITE 300

v. (317) 344-8044

CARMEL. IN 46032 INTERIOR DESIGNER:

RELO DESIGN 7222 N Shadeland Ave. Suite 170 Indianapolis, IN 46250

P: (317) 202.0000

95% CD SET 100% CD SET ADD #3

No. AR10600160 STATEOF

P23-0116

02 INTERIOR FINISH PLAN - AREA A

- THESE GENERAL NOTES APPLY TO SERIES I-SERIES DRAWINGS.
- PATTERN NAME, COLOR AND NUMBER FOR EACH MATERIAL ARE GIVEN WHENEVER POSSIBLE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/INTERIOR DESIGNER TO ENSURE THAT THE CORRECT MATERIAL IS INSTALLED.
- PAINT ALL BULKHEADS, SOFFITS, AND GYPSUM DRYWALLCEILING SURFACES "P-11" UNLESS NOTED OTHERWISE. ALL BULKHEADS, SOFFITS, AND GYPSUM DRYWALL CEILING SURFACES SHALL BE FINISHED WITH THE SAME MATERIAL AND/OR COLOR ON ALL FACES (VERTICAL AND HORIZONTAL), UNLESS NOTED OTHERWISE. REFER TO REFLECTED CEILING PLAN(S) FOR ADDITIONAL CEILING FINISHES.
- ALL SLAB-ON-GRADE CONTROL JOINTS TO BE CLEANED AND CAULKED PRIOR TO PLACEMENT OF FLOOR FINISH.
- ALIGN FLOOR FINISH TRANSITIONS AT DOOR LOCATIONS WITH CENTERLINE OF DOOR SUCH THAT TRANSITION MATERIALS ARE NOT VISIBLE FROM EITHER SIDE WHEN DOOR IS IN CLOSED POSITION.
 - ALL FLOORING SHALL BE INSTALLED PERPENDICULAR TO ROOM WALLS UNLESS NOTED OTHERWISE.
- PROVIDE CRACK ISOLATION MEMBRANE AS REQUIRED AT ALL PORCELAIN/CERAMIC TILE FLOORING. FLOORING CONTRACTOR TO COORDINATE WITH DESIGNER.
- REFER TO PROJECT MANUAL SECTION "CAST-IN-PLACE CONCRETE" FOR SPECIFICATIONS FOR SEALED CONCRETE.
- REFER TO SHEET A-510 FOR FLOOR TRANSITION DETAILS.
- REFER TO SHEET I-601 FOR WALL BASE DETAILS.

"P-10" UNLESS NOTED OTHERWISE.

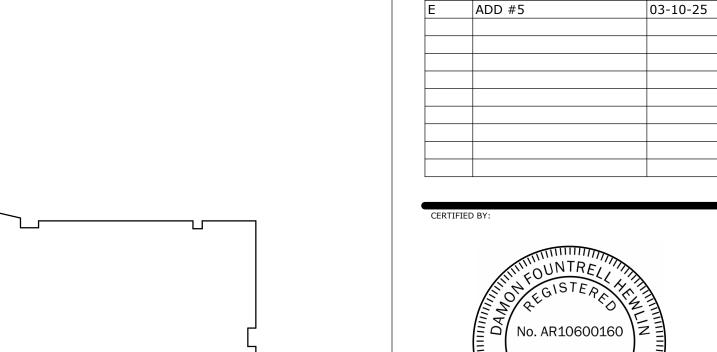
MATCH "P-1A" UNLESS NOTED OTHERWISE.

- REFER TO MANUFACTURER'S INSTRUCTIONS FOR CARPET TILE INSTALLATION PATTERNS AS INDICATED.
- PROVIDE SEALANT AT ALL DOOR AND WINDOW FRAMES WHERE THEY MEET HARD SURFACE FLOORING.
- ALL NEW HOLLOW METAL DOOR AND WINDOW FRAMES SHALL BE PAINTED
- ALL NEW INTERIOR WOOD DOORS SHALL BE STAINED TO MATCH AS SELECTED BY OWNER OR AS REFERENCED ON I-601 FINISH KEY.
- IN STAIRWELLS, PAINT STEEL STAIR AND LANDING PARTS EXPOSED TO VIEW WITH HIGH PERFORMANCE COATING INCLUDING RISERS AND TREADS, STRINGERS AND UNDERSIDE OF STAIR STRUCTURE, HANDRAILS, WALL
- ALL SOLID SURFACE COUNTERTOPS AND BACKSPLASH SHALL BE "SSM-1" UNLESS NOTED OTHERWISE.
- ALL COUNTERTOPS WITH SINKS SHALL BE SOLID SURFACE "SSM-1" UNLESS NOTED OTHERWISE.

BRACKETS, COMPONENTS VISIBLE FROM THE EXTERIOR, ETC. COLOR TO

- UNLESS NOTED OTHERWISE, DO NOT TERMINATE OR TRANSITION ANY FINISHES ON OUTSIDE CORNERS. BRING ANY CONFLICTS TO THE ARCHITECT'S/OWNER'S ATTENTION PRIOR TO ORDER AND INSTALLATION OF
- ALL REFERENCES TO EPOXY PAINT "P-1A" ON THE DRAWINGS, SHALL MATCH CORRESPONDING PAINT "P-1" COLOR. REFER TO SHEET I-601 FINISH KEY FOR COLOR REFERENCE AND FINISHES.
- GYPSUM DRYWALL SHALL RECEIVE LEVEL 5 FINISH IN AREAS SCHEDULED TO RECEIVE DARK COLOR PAINT. REFER TO PROJECT MANUAL DIVISION 9 FOR FINISH LEVEL REQUIREMENTS FOR GYPSUM BOARD SURFACES UNLESS NOTED OTHERWISE.
- PAINT ALL ELECTRICAL PANELS, ACCESS PANELS, ETC. TO MATCH ADJACENT WALL UNLESS NOTED OTHERWISE.
- PAINT STEEL COLUMNS, BEAMS, STRUCTURE, ETC. EXPOSED TO VIEW IN FINISHED AREAS UNLESS NOTED OTHERWISE.
- FINISH BEHIND FIXED EQUIPMENT SUCH AS CABINETRY, CASEWORK,
- MARKER/MAGNET BOARDS, LOCKERS, ETC.
- REFER TO ARCHITECTURAL SHEETS FOR ALL WALL RATINGS. WINDOW SILLS SHALL BE SSM-2 UNLESS NOTED OTHERWISE.
- REFERENCE I-601 FOR ALL CUBICLE CURTAINS MATERIAL, TO HAVE WHITE
- MESH COLOR ABOVE CURTAIN 18"H FROM CEILING BEFORE CURTAIN, UNLESS
- INSTALL SHOWER CURTAINS AT CLINIC SHOWER WITHOUT DOORS, UNLESS NOTED OTHERWISE.
- WHERE ACCENT WALLS ARE INDICATED ON PLAN, CONTRACTOR IS TO ASSUME THE FINISH NOTED TO BE FULL-HEIGHT, EDGE TO EDGE.
- ALL OFFICES TO RECEIVE ONE PAINTED ACCENT WALL, COLOR TBD UNLESS NOTED OTHERWISE.
- IF THE BASE IS NOTED AS THE SAME MATERIAL AS THE FLOOR, THEN PROVIDE A 4" HIGH INTEGRAL COVE BASE. REFER TO BASE DETAILS.
- ALL RESTROOMS TO HAVE SCHLUTER TRIM AT BOTTOM EDGE OF TILE AND INTEGRAL RESINOUS BASE, "SCHLUTER-SCHIENE". WET WALLS: CONTINUE WALL TILE TO THE TOP OF THE INTEGRAL BASE IN RESTROOMS AND TO THE FLOOR AT OTHER WET WALLS WHERE INTEGRAL BASES ARE NOT PRESENT AND TRANSITION WITH "4" RESILIENT BASE. NON-TILED WALLS: PROVIDE 6" FIELD CUT TILE WITH METAL TRIM ON EXPOSED EDGE. TRANSITION TO FLOOR W/ ZINC-STRIP TRANSITION UNLESS OTHERWISE NOTED. REFER TO BASE DETAILS ON I-601 AND A-510 SERIES FOR DETAILS.
- ALL EXTERIOR WINDOWS TO RECEIVE ROLLER SHADES IN RECESSED CEILING POCKET. SEE RCP FOR TYPE.
- GG. FLOORING & WALL BASE SHALL EXTEND UNDER FLOATING COUNTERS AND
- HH. CASEWORK TO BE PLAM-1 AND COUNTERTOPS TO BE SSM-1 UNLESS NOTED
- OTHERWISE ON ELEVATIONS.

SEE SHEETS I-455 AND I-456 FOR TYPICAL TILE ELEVATIONS



ISSUE DATE:	01/	17/2025
DRAWN:	JAM	CHECKED: RS/JW
PROJECT NO.:		P23-0116
REVISION NO.:		E

02 INTERIOR FINISH PLAN - AREA B

KEY PLAN - NOT TO SCALE

317.926.1820 ARCHITECTURAL PARTNER **PERKINS & WILL** 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611 v. (312) 755-0770 CIVIL & STRUCTURAL ENGINEER: 8840 ALLISON BLVD INDIANAPOLIS, IN 46250 v. (317) 661-1964 MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER: **KBSO CONSULTING** 275 VETERANS WAY SUITE 300 CARMEL. IN 46032 v. (317) 344-8044 **INTERIOR DESIGNER:**

RELO DESIGN

P: (317) 202.0000

Suite 170

7222 N Shadeland Ave.

Indianapolis, IN 46250

LANDSCAPE, INTERIOR

DESIGN, URBAN PLANNING

INDIANAPOLIS, IN 45202

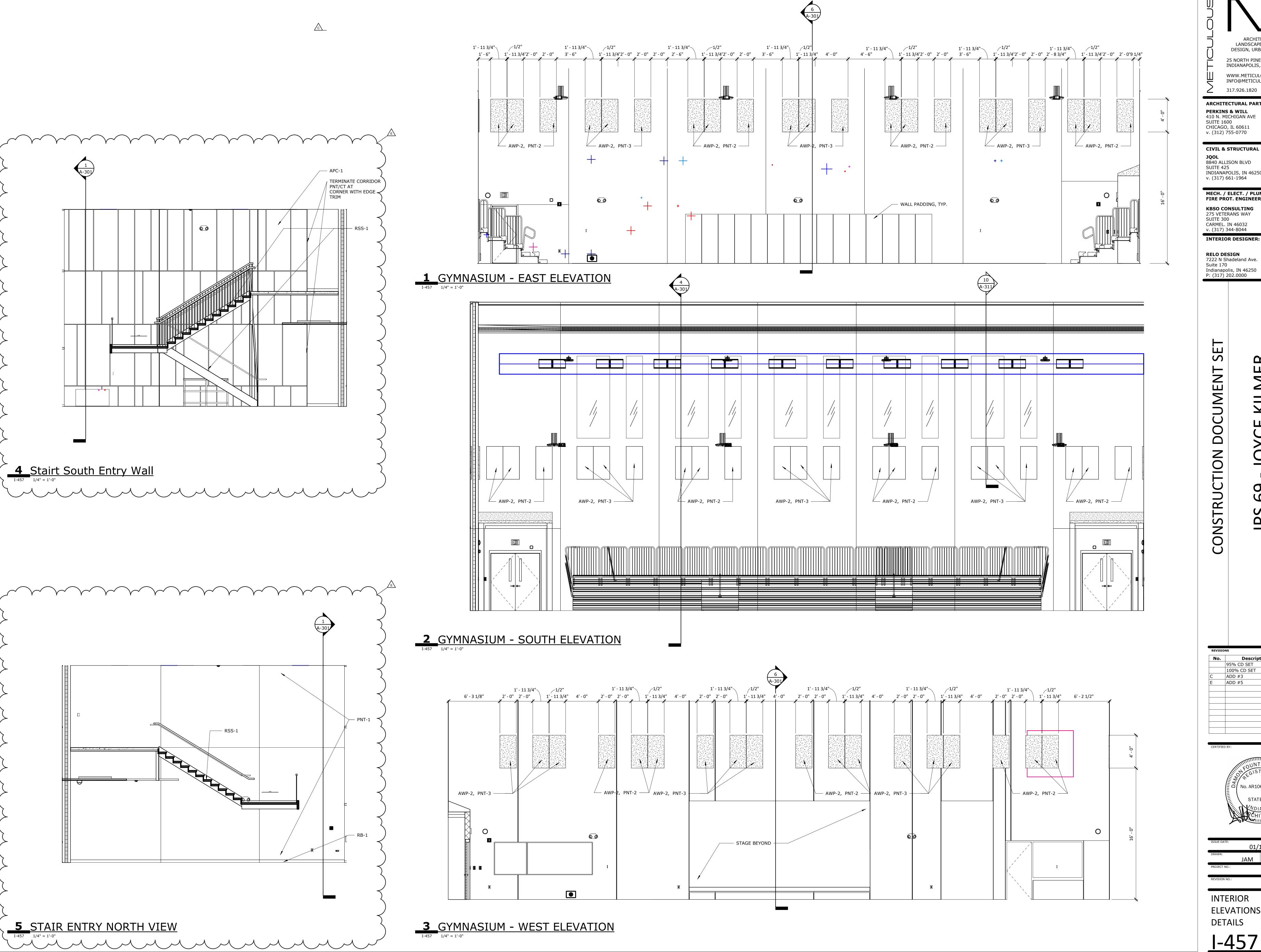
WWW.METICULOUSDA.COM

INFO@METICULOUSDA.COM

25 NORTH PINE STREET, SUITE B

95% CD SET 100% CD SET

STATEOF



LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820

> ARCHITECTURAL PARTNER **PERKINS & WILL** 410 N. MICHIGAN AVE CHICAGO, IL 60611

CIVIL & STRUCTURAL ENGINEER: 8840 ALLISON BLVD INDIANAPOLIS, IN 46250

MECH. / ELECT. / PLUMB. /

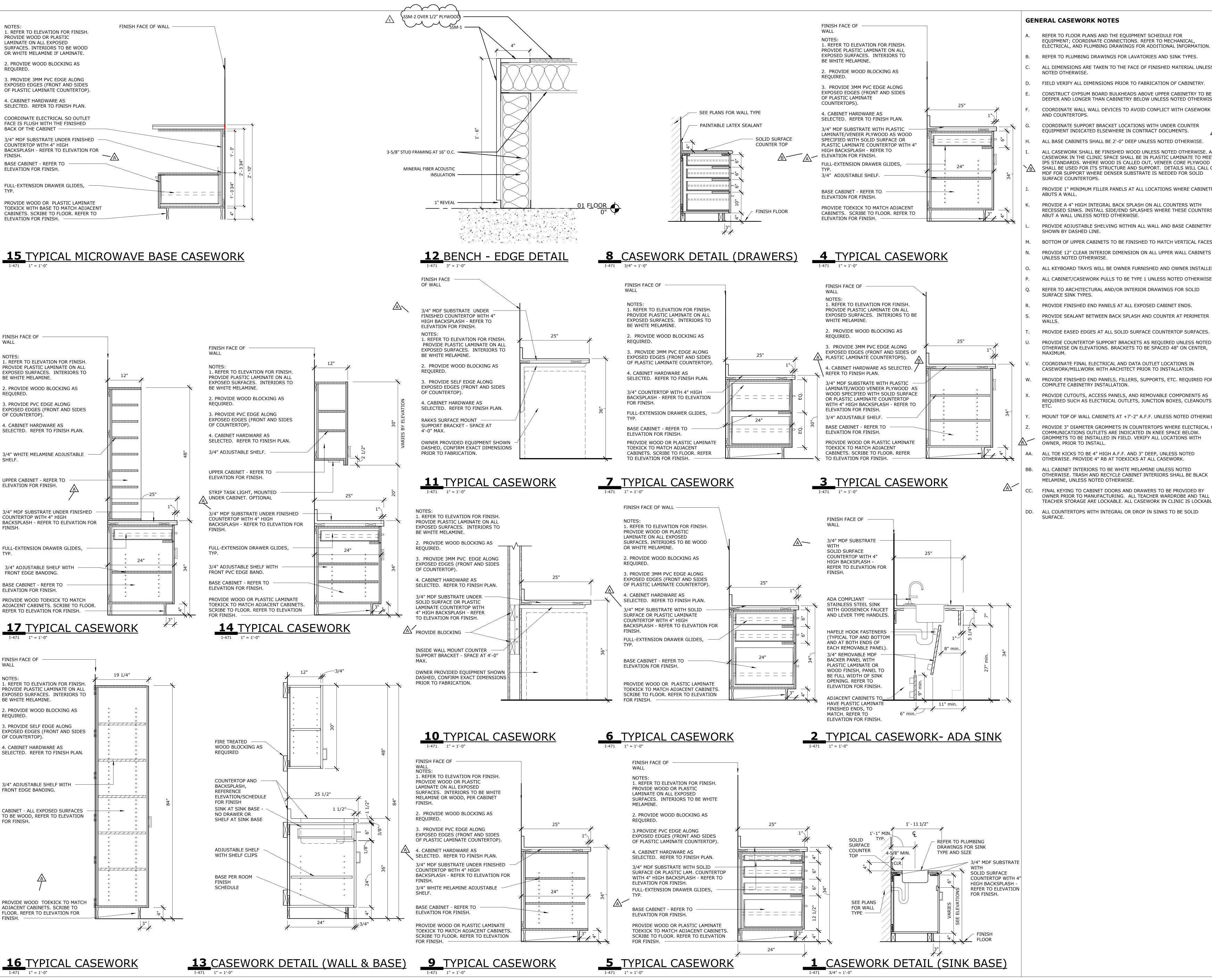
FIRE PROT. ENGINEER: **KBSO CONSULTING** 275 VETERANS WAY SUITE 300

CARMEL. IN 46032 v. (317) 344-8044

RELO DESIGN 7222 N Shadeland Ave. Suite 170 Indianapolis, IN 46250 P: (317) 202.0000

INTERIOR **ELEVATIONS & DETAILS**

<u> 1-457</u>



WALL

REFER TO FLOOR PLANS AND THE EQUIPMENT SCHEDULE FOR EQUIPMENT; COORDINATE CONNECTIONS. REFER TO MECHANICAL,

ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.

REFER TO PLUMBING DRAWINGS FOR LAVATORIES AND SINK TYPES.

ALL DIMENSIONS ARE TAKEN TO THE FACE OF FINISHED MATERIAL UNLESS

FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION OF CABINETRY.

CONSTRUCT GYPSUM BOARD BULKHEADS ABOVE UPPER CABINETRY TO BE 1 DEEPER AND LONGER THAN CABINETRY BELOW UNLESS NOTED OTHERWISE.

COORDINATE SUPPORT BRACKET LOCATIONS WITH UNDER COUNTER EQUIPMENT INDICATED ELSEWHERE IN CONTRACT DOCUMENTS.

ALL CASEWORK SHALL BE FINISHED WOOD UNLESS NOTED OTHERWISE. ALL CASEWORK IN THE CLINIC SPACE SHALL BE IN PLASTIC LAMINATE TO MEET IPS STANDARDS. WHERE WOOD IS CALLED OUT, VENEER CORE PLYWOOD SHALL BE USED FOR ITS STRUCTURE AND SUPPORT. DETAILS WILL CALL OUT

PROVIDE 1" MINIMUM FILLER PANELS AT ALL LOCATIONS WHERE CABINETRY

PROVIDE A 4" HIGH INTEGRAL BACK SPLASH ON ALL COUNTERS WITH RECESSED SINKS. INSTALL SIDE/END SPLASHES WHERE THESE COUNTERS ABUT A WALL UNLESS NOTED OTHERWISE.

PROVIDE ADJUSTABLE SHELVING WITHIN ALL WALL AND BASE CABINETRY AS

BOTTOM OF UPPER CABINETS TO BE FINISHED TO MATCH VERTICAL FACES. PROVIDE 12" CLEAR INTERIOR DIMENSION ON ALL UPPER WALL CABINETS

ALL KEYBOARD TRAYS WILL BE OWNER FURNISHED AND OWNER INSTALLED. ALL CABINET/CASEWORK PULLS TO BE TYPE 1 UNLESS NOTED OTHERWISE REFER TO ARCHITECTURAL AND/OR INTERIOR DRAWINGS FOR SOLID

PROVIDE FINISHED END PANELS AT ALL EXPOSED CABINET ENDS.

PROVIDE EASED EDGES AT ALL SOLID SURFACE COUNTERTOP SURFACES. PROVIDE COUNTERTOP SUPPORT BRACKETS AS REQUIRED UNLESS NOTED OTHERWISE ON ELEVATIONS. BRACKETS TO BE SPACED 48" ON CENTER,

COORDINATE FINAL ELECTRICAL AND DATA OUTLET LOCATIONS IN CASEWORK/MILLWORK WITH ARCHITECT PRIOR TO INSTALLATION. PROVIDE FINISHED END PANELS, FILLERS, SUPPORTS, ETC. REQUIRED FOR A

PROVIDE CUTOUTS, ACCESS PANELS, AND REMOVABLE COMPONENTS AS REQUIRED SUCH AS ELECTRICAL OUTLETS, JUNCTION BOXES, CLEANOUTS,

MOUNT TOP OF WALL CABINETS AT +7'-2" A.F.F. UNLESS NOTED OTHERWISE PROVIDE 3" DIAMETER GROMMETS IN COUNTERTOPS WHERE ELECTRICAL OR COMMUNICATIONS OUTLETS ARE INDICATED IN KNEE SPACE BELOW.

ALL TOE KICKS TO BE 4" HIGH A.F.F. AND 3" DEEP, UNLESS NOTED OTHERWISE. PROVIDE 4" RB AT TOEKICKS AT ALL CASEWORK.

ALL CABINET INTERIORS TO BE WHITE MELAMINE UNLESS NOTED OTHERWISE. TRASH AND RECYCLE CABINET INTERIORS SHALL BE BLACK

FINAL KEYING TO CABINET DOORS AND DRAWERS TO BE PROVIDED BY OWNER PRIOR TO MANUFACTURING. ALL TEACHER WARDROBE AND TALL TEACHER STORAGE ARE LOCKABLE. ALL CASEWORK IN CLINIC IS LOCKABLE.

DD. ALL COUNTERTOPS WITH INTEGRAL OR DROP IN SINKS TO BE SOLID

LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820

ARCHITECTURAL PARTNER **PERKINS & WILL** 410 N. MICHIGAN AVE **SUITE 1600** CHICAGO, IL 60611

v. (312) 755-0770 **CIVIL & STRUCTURAL ENGINEER:**

8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / **FIRE PROT. ENGINEER:**

KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032

v. (317) 344-8044 **INTERIOR DESIGNER:**

RELO DESIGN

7222 N Shadeland Ave. Suite 170 Indianapolis, IN 46250 P: (317) 202.0000

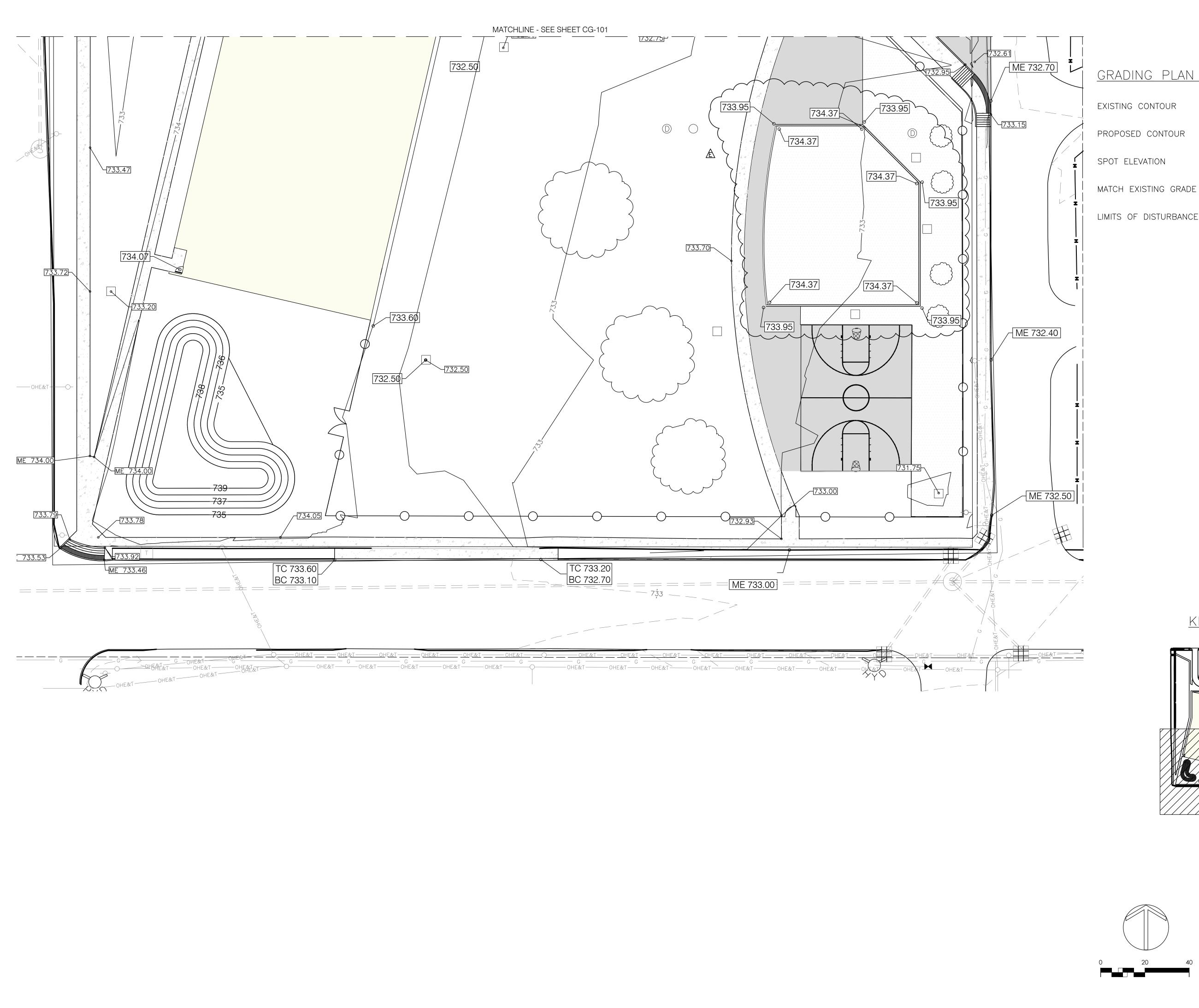
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No.	Description	Date
	95% CD SET	12-18-24
	100% CD SET	01-17-25
A	ADD #1	02-10-25
В	ADD #2	02-17-25
Е	ADD #5	03-10-25



01/17/2025 JAM/PW P23-0116

CASEWORK DETAILS

I-471

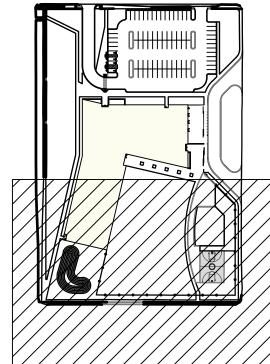


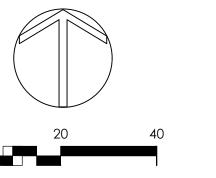


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ME 851.75

<u>KEYPLAN</u>





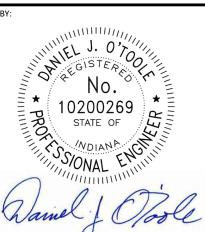


ARCHITECTURE INTERIORS **PROJECT** MANAGEMENT PLANNING www.meticulousda.com info@meticulousda.com v. 317.926.1820 f. 317.926.1815 QUALITY OF LIFE Indianapolis, IN 46250 P: (317) 661-1964

Renovation 100%

REVISIONS # Date Revision 12-18-24 95% CD SET 01-17-25 100% CD SET 03-10-25

ADDENDUM 05

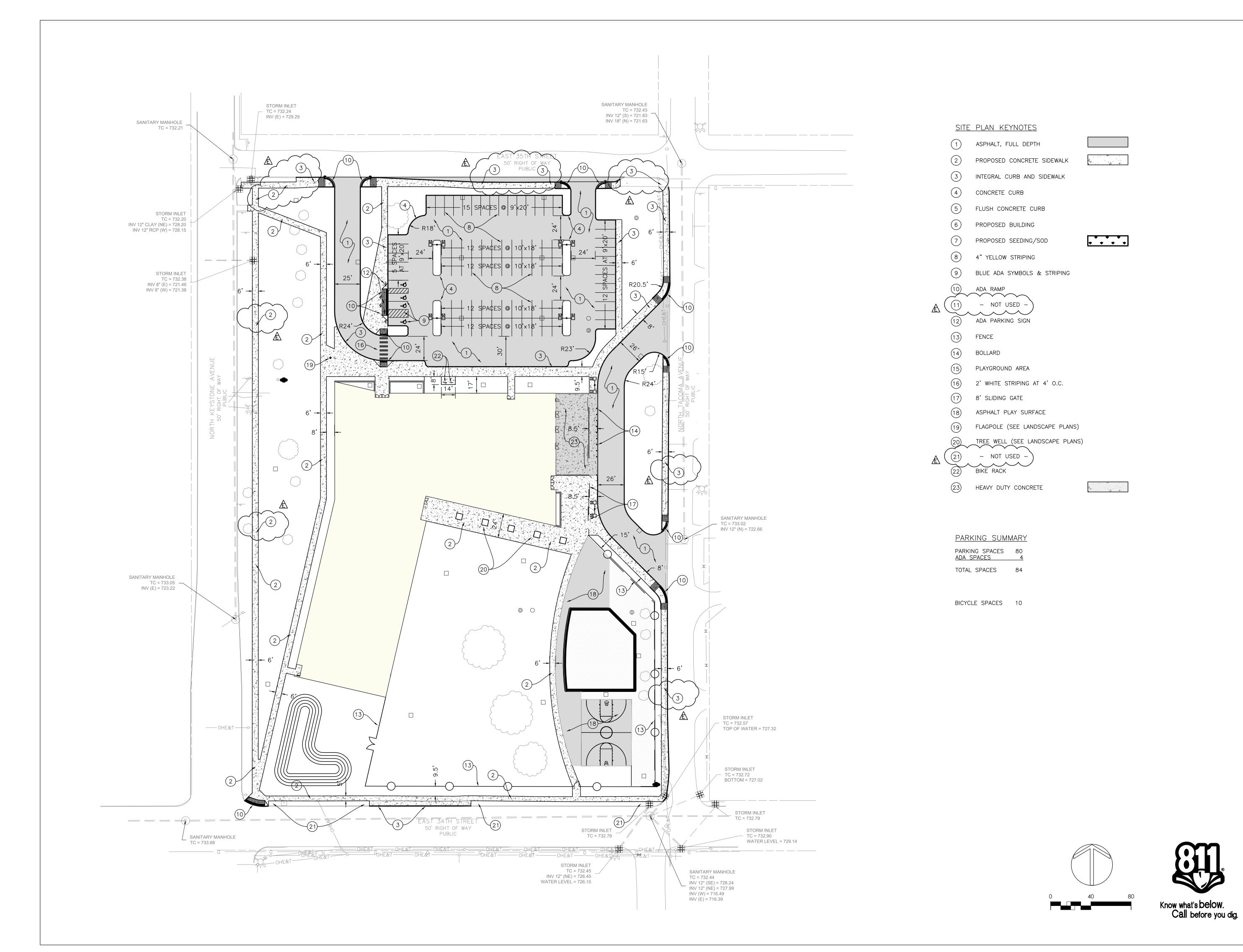


JANUARY 17, 2025

REVISION NO.:

GRADING PLAN

CG-102



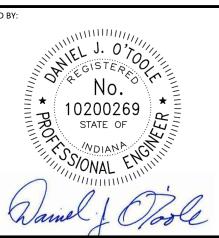
ARCHITECTURE **PROJECT** Indianapolis, IN 46202 www.meticulousda.com info@meticulousda.com v. 317.926.1820 f. 317.926.1815 CIVIL/STRUCTURAL ENGINEER:

> Blvd Suite 425, Indianapolis, IN 46250 QUALITY OF LIFE P: (317) 661-1964

Joyce

100%

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	#	Revision	Date
		95% CD SET	12-18-24
		100% CD SET	01-17-25
1	<u> </u>	ADDENDUM 05	03-10-25

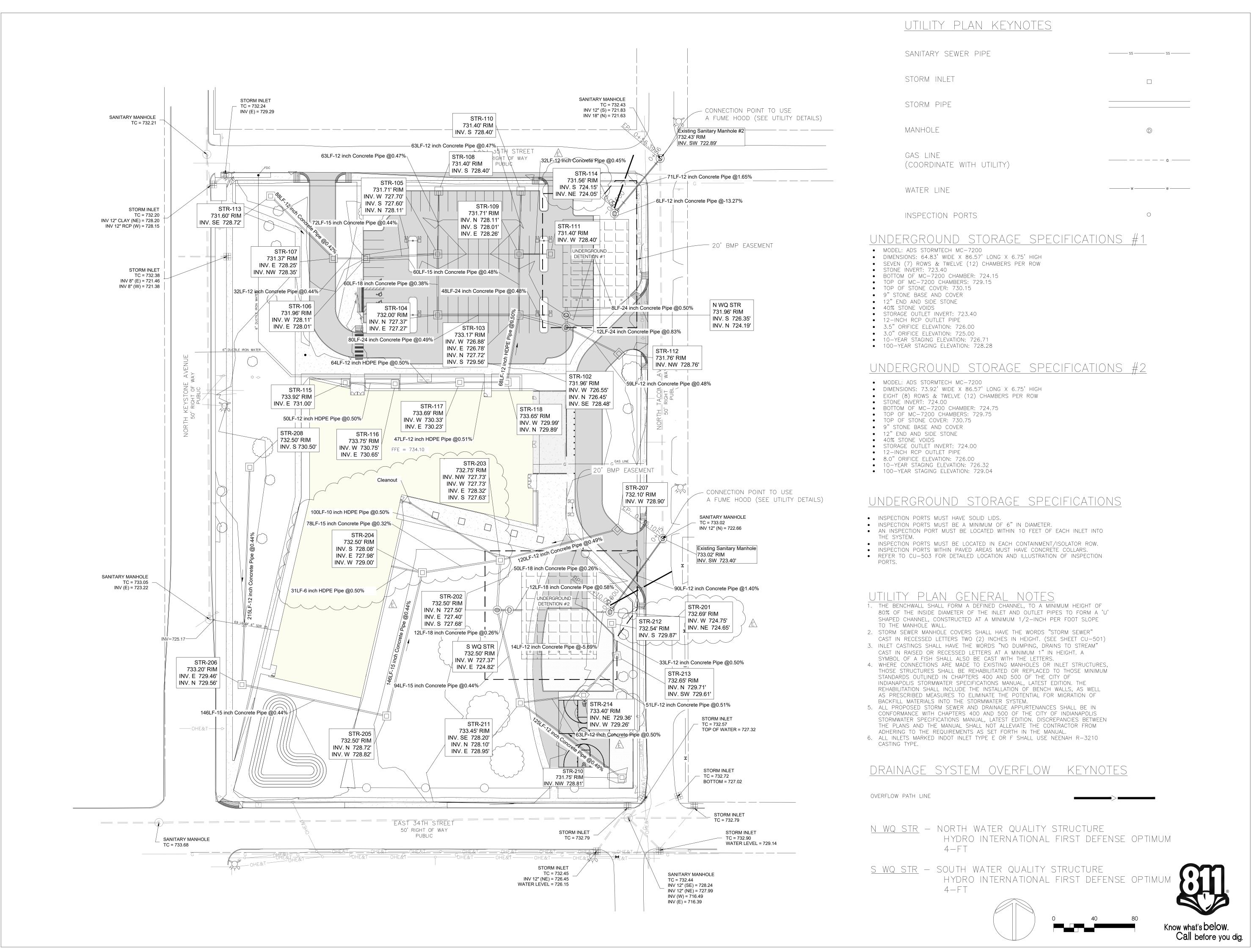


JANUARY 17, 2025 AKD PROJECT NO.:

REVISION NO.:

SITE PLAN

CS-101



ARCHITECTURE INTERIORS PROJECT MANAGEMEN¹ **PLANNING** 1828 North Illinois Street Indianapolis, IN 46202 www.meticulousda.com info@meticulousda.com v. 317.926.1820 f. 317.926.1815

> CIVIL/STRUCTURAL ENGINEER 8840 Allison Pointe Blvd Suite 425, Indianapolis, IN 46250 P: (317) 661-1964

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REVISIONS Revision Date 12-18-24 95% CD SET 100% CD SET 01-17-25 **ADDENDUM 05** 03-10-25

CERTIFIED BY: 10200269 STATE OF

ISSUE DATE: JANUARY 17, 2025 DRAWN: DJO

PROJECT NO.:

REVISION NO.:

UTILITY PLAN

STRUCTURE	TYPE	RIM	INVERT	CASTING	NOTE
STR-114	MANHOLE	731.56	S INV - 724.15 NE INV - 724.05	R-1772	SEE SHEET CU-502 FOR DETAIL
N WQ STR	SWIRL CHAMBER	731.96	S INV - 726.35 N INV - 724.19	AS SUPPLIED	-
STR-102	MANHOLE	731.96	W INV - 726.55 N INV - 726.45 SE INV - 728.48	R-1772	-
STR-103	MANHOLE	733.17	W INV - 726.88 E INV - 726.78 N INV - 727.72 S INV - 729.56	R-2501	-
STR-104	MANHOLE	732.00	N INV - 727.37 E INV - 727.27	R-2501	-
STR-105	MANHOLE	731.71	W INV - 727.70 S INV - 727.60 N INV - 728.11	R-2501	-
STR-106	CATCH BASIN	731.96	W INV - 728.11 E INV - 728.01	R-3220-L	-
STR-107	CATCH BASIN	731.37	E INV - 728.25 NW INV - 728.35	R-3220-L	-
STR-108	CATCH BASIN	731.40	S INV - 728.40	R-3220-L	-
STR-109	CATCH BASIN	731.71	N INV - 728.11 S INV - 728.01 E INV - 728.26	R-2501	-
STR-110	CATCH BASIN	731.40	S INV - 728.40	R-3220-L	-
STR-111	CATCH BASIN	731.40	W INV - 728.40	R-3220-L	-
STR-112	CATCH BASIN	731.76	NW INV - 728.76	R-3220-L	-
STR-113	CATCH BASIN	731.60	SE INV - 728.72	R-4215-C	-

12" DOME

GRATE

12" DOME

12" DOME

GRATE

12" DOME

GRATE

GRATE

STR-115

STR-116

STR-117

12" NYLOPLAST

12" NYLOPLAST

12" NYLOPLAST

12" NYLOPLAST

DRAIN BASIN

DRAIN BASIN

DRAIN BASIN

DRAIN BASIN

733.92

733.75

733.69

733.65

E INV - 731.00

W INV - 730.75

E INV - 730.65

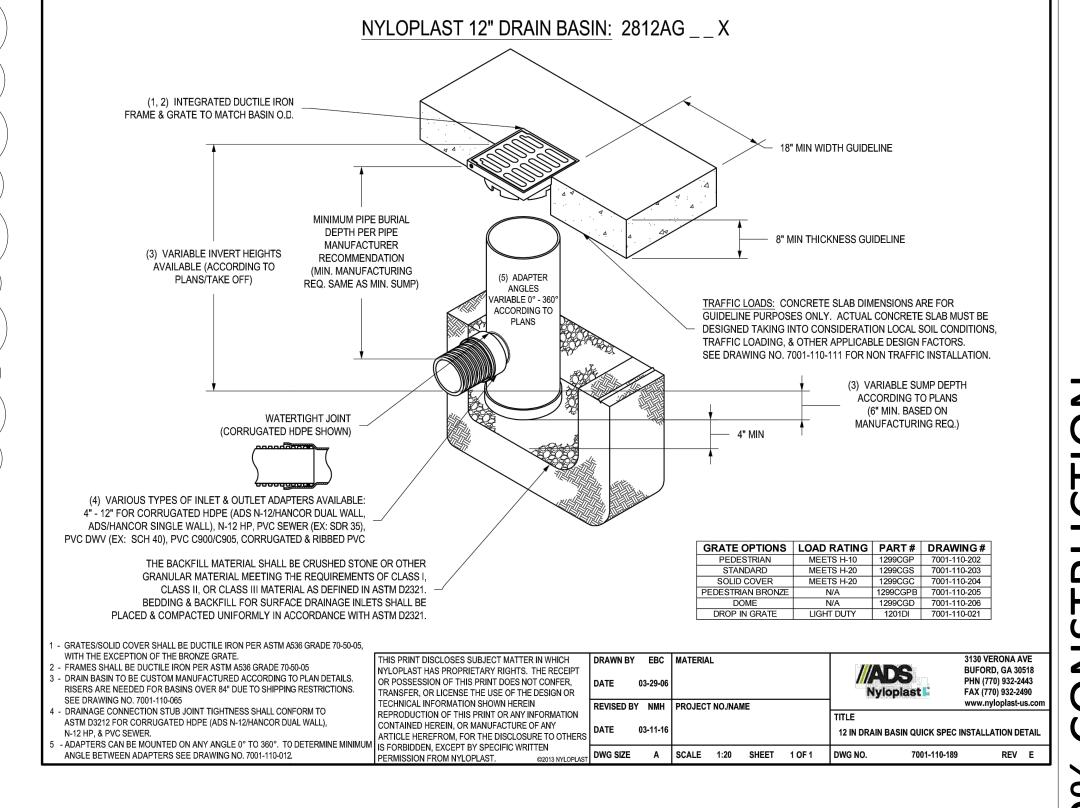
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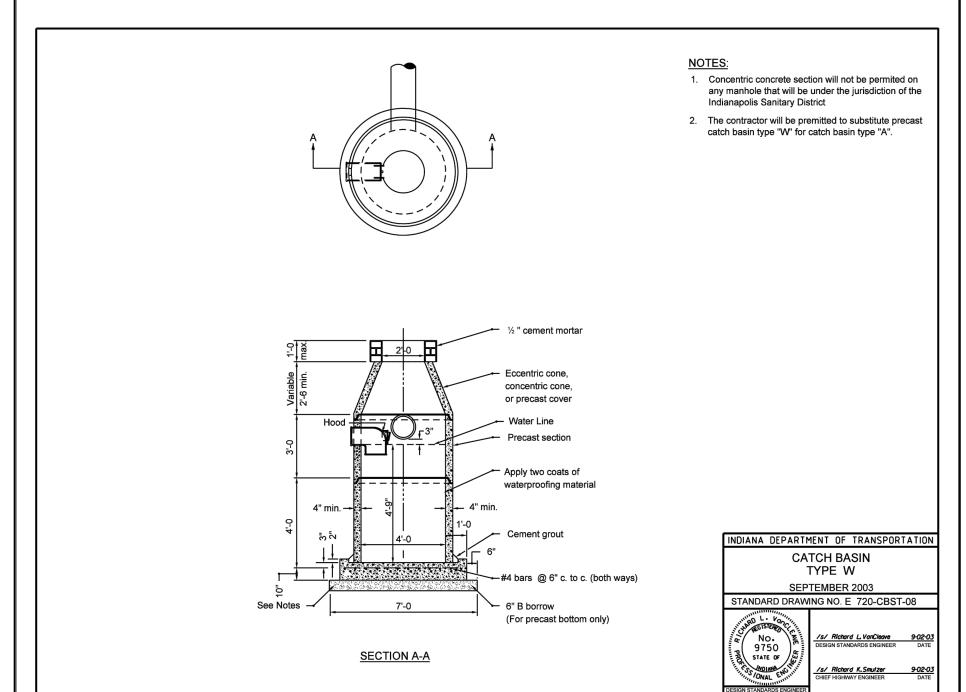
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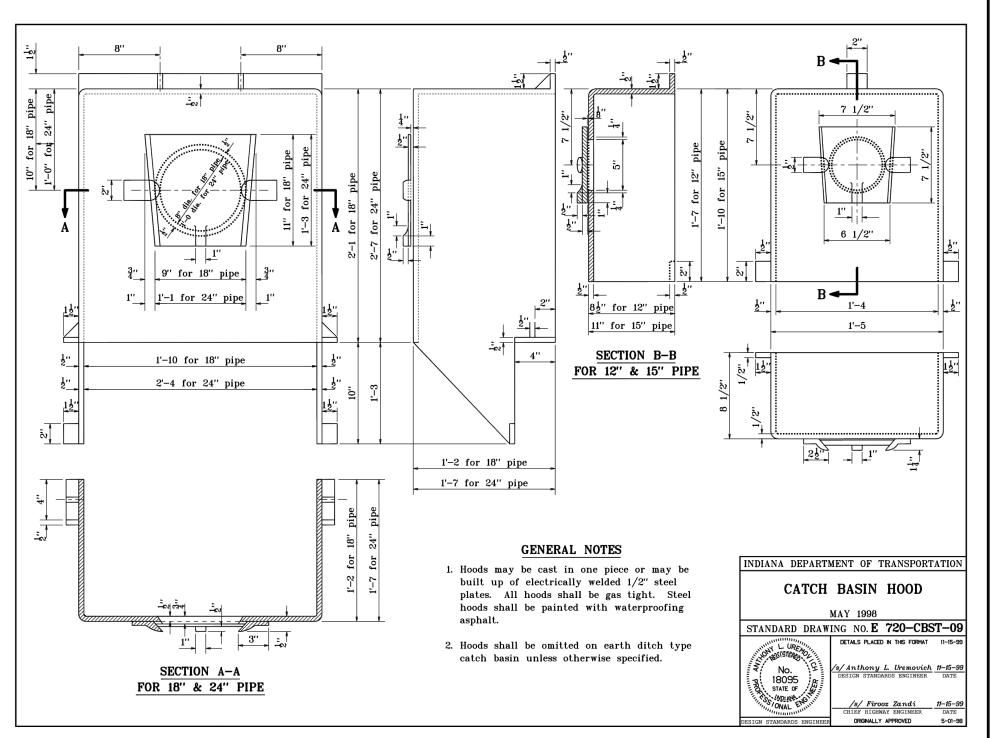
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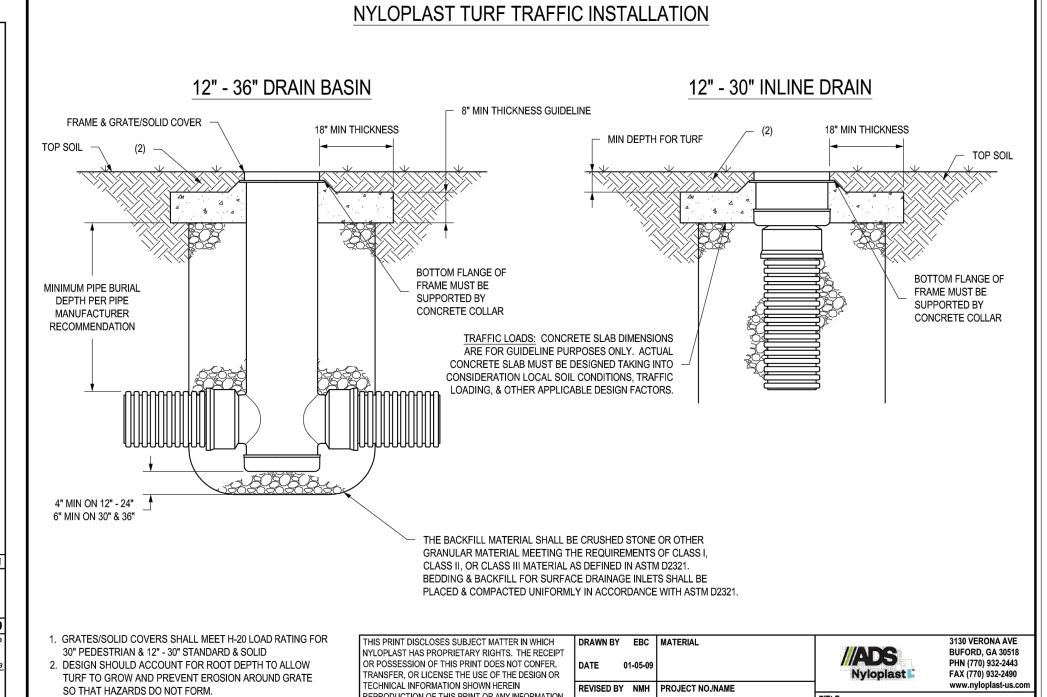
N INV - 729.89

STRUCTURE	TYPE	RIM	INVERT	CASTING	NOTE
STR-201	MANHOLE	732.69	W INV - 724.75 NE INV - 724.65	R-1772	SEE SHEET CU-502 FOR DETAIL
S WQ STR	SWIRL CHAMBER	732.50	W INV - 727.37 E INV - 724.82	AS SUPPLIED	-
STR-202	MANHOLE	732.50	W INV - 727.50 E INV - 727.40 S INV - 727.68	R-1772	-
STR-203	MANHOLE	732.75	NW INV - 727.73 W INV - 727.73 E INV - 728.32 S INV - 727.63	R-4215-C	-
STR-204	MANHOLE	732.50	W INV - 729.00 S INV - 728.08 E INV - 727.98	R-4215-C	-
STR-205	CATCH BASIN	732.50	N INV - 728.72 W INV - 728.82	R-4215-C	-
STR-206	CATCH BASIN	733.20	N INV - 729.56 E INV - 729.46	R-4215-C	-
STR-207	CATCH BASIN	732.10	W INV - 728.90	R-3220-L	-
STR-208	CATCH BASIN	732.50	S INV - 730.50	R-4215-C	-
STR-209 - ELIM	IINATED				
STR-210	CATCH BASIN	731.75	NW INV - 728.81	R-4215-C	-
STR-211	CATCH BASIN	733.45	SE INV - 728.20 E INV - 728.95 N INV - 728.10	R-4215-C	-
STR-212	CATCH BASIN	732.54	S INV - 729.87	R-4215-C	-
STR-213	CATCH BASIN	732.65	W INV - 729.71 SW INV - 729.61	R-4215-C	-
STR-214	CATCH BASIN	733.40	NE INV - 729.36 W INV - 729.26	R-4215-C	-









CONTAINED HEREIN, OR MANUFACTURE OF ANY

ARTICLE HEREFROM, FOR THE DISCLOSURE TO OTHERS IS FORBIDDEN, EXCEPT BY SPECIFIC WRITTEN

CONE REQUIRES 2.25FT MINIMUM FROM GRADE TO TOP OF PIPE.



REVISIONS

CERTIFIED BY:

ISSUE DATE:

DRAWN:

PROJECT NO.:

REVISION NO.:

DRAIN BASIN & INLINE DRAIN

DWG SIZE A SCALE 1:25 SHEET 1 OF 1 DWG NO.

 σ 0 0

Revision

STATE OF

JANUARY 17, 2025

DJO

95% CD SET

100% CD SET

ADDENDUM 05

Date 12-18-24

01-17-25

03-10-25

ARCHITECTURE

INTERIORS

PROJECT MANAGEMEN

PLANNING

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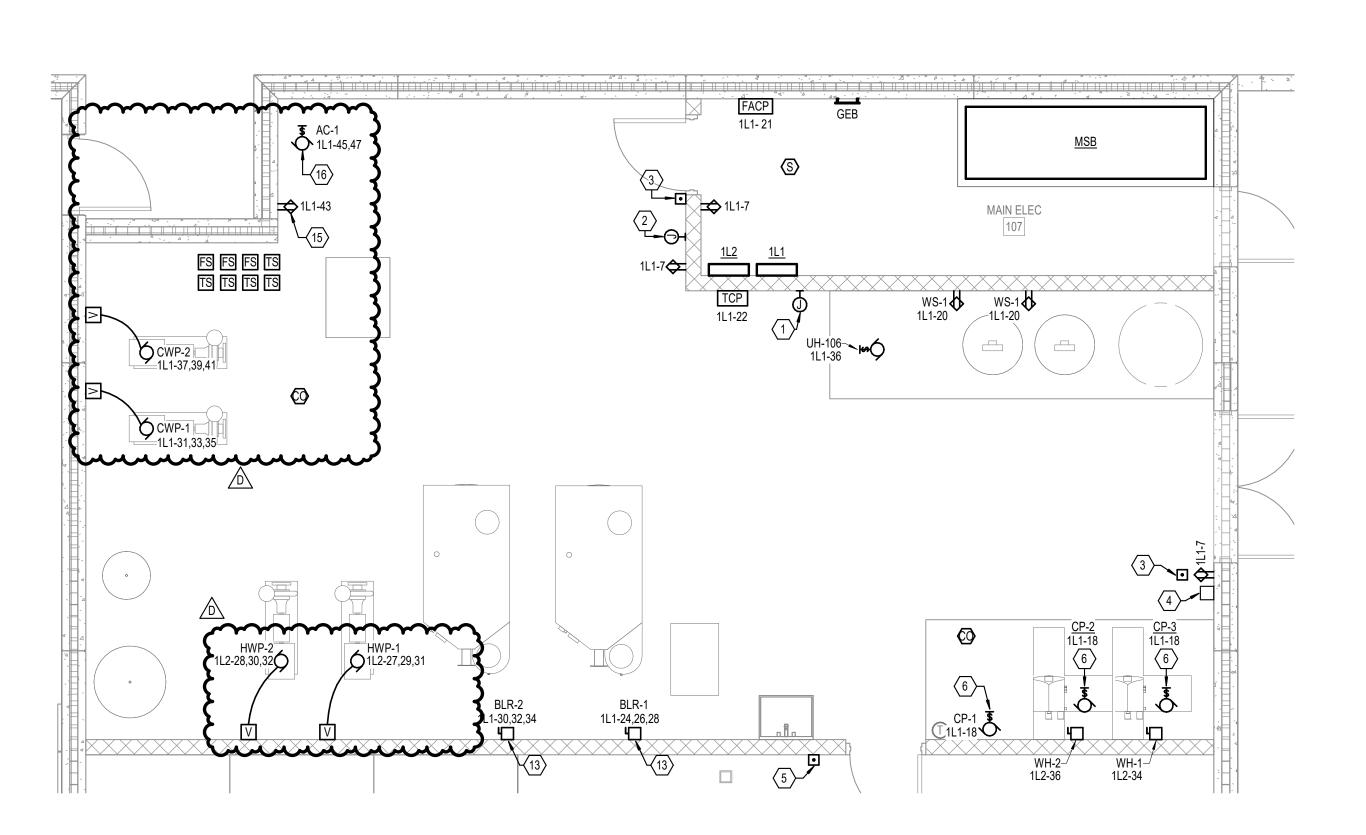
v. 317.926.1820 f. 317.926.1815

CIVIL/STRUCTURAL ENGINEER:

UTILITY DETAILS CU-504

KITCHEN

2 ENLARGED KITCHEN 120 ELECTRICAL PLAN



ENLARGED MAIN MECH 128 ELECTRICAL PLAN

GENERAL NOTES

- A REFER TO SHEET E-000 FOR GENERAL ELECTRICAL NOTES, SYMBOLS AND
- ABBREVIATIONS. B REFER TO E-600 SERIES SHEETS FOR LOAD PANEL SCHEDULES.
- C VERIFY HEIGHT OF ALL COUNTERTOP RECEPTACLES WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.
- D CIRCUIT TAG UNDER ROOM NAME INDICATES ALL DEVICES IN ROOM ARE ON
- INDICATED CIRCUIT UNLESS OTHERWISE NOTED. E LABEL ALL RECEPTACLE COVER PLATES WITH PANEL AND CIRCUIT NUMBER
- F ALL DUPLEXES WITHIN PUBLIC SPACES (CLASSROOMS, CORRIDORS, VESTIBULES, GROUP RESTROOMS, CAFÈTERIA, AND GYMNASIUM ARE TO BE

TAMPER RESISTANT.

SHEET KEYNOTES

1 PROVIDE ELECTRICAL CONNECTION TO CARBON MONOXIDE DETECTION

- SYSTEM. 2 PROVIDE ELECTRICAL CONNECTION TO REFRIGERANT DETECTION SYSTEM. 3 PROVIDE PILLA ELECTRICAL WPSRP1SL PUSH BUTTON CONTROL STATION, OR APPROVED EQUAL, TO DE-ENERGIZE CONTACTOR TO BE LOCATED IN MECHANICAL ROOM. MOUNT 44-INCHES ABOVE FINISH FLOOR. PROVIDE IDENTIFICATION LABEL JUST ABOVE SWITCH TO IDENTIFY AS EMERGENCY BOILER SHUT-OFF.
- 4 PROVIDE MULTI-POLE CONTACTOR OPERATED BY TWO DIFFERENT EMERGENCY PUSH-BUTTONS AT THIS LOCATION. INTERCEPT CIRCUITS FEEDING WATER HEATERS AND BOILERS. PUSHBUTTONS INSIDE AND OUTSIDE OF MECHANICAL ROOM TO DE-ENERGIZE BOILERS UPON ACTIVATION AT EITHER PUSH-BUTTON. PROVIDE IDENTIFICATION LABEL ON CONTACTOR TO SAY "EMERGENCY WATER HEATER / BOILER SHUT-OFF"
- 5 PROVIDE DAYTON 32W275 PUSH BUTTON CONTROL STATION, OR APPROVED EQUAL, TO DE-ENERGIZE CONTACTOR TO BE LOCATED IN MECHANICAL ROOM. MOUNT 44-INCHES ABOVE FINISH FLOOR. PROVIDE IDENTIFICATION LABEL JUST ABOVE SWITCH TO IDENTIFY AS EMERGENCY BOILER SHUT-OFF.
- 6 PROVIDE TOGGLE DISCONNECT FOR CIRCULATOR PUMP AND 120V CIRCUIT AS INDICATED. PROVIDE (2) #12 AND (1) #12G IN A 3/4" CONDUIT. COORDINATE EXACT LOCATION WITH EQUIPMENT PROVIDER PRIOR TO INSTALLATION. 7 PROVIDE FLOOR PEDESTAL RECEPTACLE FOR CASHIER COUNTER. PROVIDE LEGRAND WIREMOLD 525 SERIES SERVICE FITTINGS OR APPROVED EQUAL AND NEMA 5-20R, (2) #12 AND (1) #12G IN A 3/4" CONDUIT. COORDINATE EXACT LOCATION AND ADDITIONAL POWER REQUIREMENTS WITH EQUIPMENT
- PROVIDER PRIOR TO PERFORMING WORK. 8 PROVIDE FLOOR PEDESTAL RECEPTACLE FOR POS SYSTEM. PROVIDE LEGRAND WIREMOLD 525 SERIES SERVICE FITTINGS OR APPROVED EQUAL AND NEMA 5-20R, (2) #12 AND (1) #12G IN A 3/4" CONDUIT. COORDINATE EXACT LOCATION AND ADDITIONAL POWER REQUIREMENTS WITH EQUIPMENT
- PROVIDER PRIOR TO PERFORMING WORK. 9 PROVIDE NEMA 5-15R FOR MILK COOLER. PROVIDE (2) #12 AND (1) #12G IN A 3/4" CONDUIT. COORDINATE EXACT LOCATION AND ADDITIONAL POWER REQUIREMENTS WITH EQUIPMENT PROVIDER PRIOR TO PERFORMING WORK.
- 10 PROVIDE ROUGH-IN FOR RETHERM OVEN AND (3) #3 AND (1) #8G IN A 1-1/2" CONDUIT, COORDINATE EXACT LOCATION AND ADDITIONAL INSTALLATION REQUIREMENTS WITH EQUIPMENT PROVIDER PRIOR TO PERFORMING WORK. 11 PROVIDE ROUGH-IN FOR HOT HOLDING CABINET AND (2) #10 AND (1) #10G IN A
- 3/4" CONDUIT. COORDINATE EXACT LOCATION AND ADDITIONAL INSTALLATION REQUIREMENTS WITH EQUIPMENT PROVIDER PRIOR TO PERFORMING WORK. 12 PROVIDE NEMA 5-15R FOR SINGLE DOOR ROLL-IN REFRIGERATOR AND (2) #12 AND (1) #12G IN A 3/4" CONDUIT. COORDINATE EXACT LOCATION AND ADDITIONAL INSTALLATION REQUIREMENTS WITH EQUIPMENT PROVIDER PRIOR TO PERFORMING WORK.
- 13 PROVIDE ELECTRICAL CONNECTION TO BOILER DISCONNECT. PROVIDE (3) #10 AND (1) #10G IN A 3/4" CONDUIT FROM SOURCE PANEL TO EQUIPMENT DISCONNECT. PROVIDE INFRASTURE TO BOILER STEP UP TRANSFORMER PER MANUFACTURERS INSTALLATION INSTRUCTIONS. PROVIDE INFRASTRUCTURE FROM BOILER STEP UP TRANSFORMER TO BOILER. COORDINATE EXACT LOCATION AND ADDITIONAL INSTALLATION INSTRUCTIONS WITH EQUIPMENT PROVIDER PRIOR TO PERFORMING WORK.
- 14 PROVIDE TOGGLE DISCONNECT FOR VAV BOX. COORDINATE EXACT LOCATION AND ADDITIONAL INSTALLATION INSTRUCTIONS WITH EQUIPMENT ABOHADEW BEHEB TEN BELEOUNTHEMISKS
- PROVIDE ELECTRICAL CONNECTION TO NITROGEN GENERATOR. COORDINAT EXACT LOCATION AND ADDITIONAL INSTALLATION INSTRUCTIONS WITH EQUIPMENT PROVIDER PRIOR TO PERFORMING WORK. PROVIDE ELECTRICAL CONNECTION TO AIR COMPRESSOR. COORDINATE EXACT LOCATION AND ADDITIONAL INSTALLATION INSTRUCTIONS WITH EQUIPMENT PROVIDER PRIOR TO PERFORMING WORK.

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MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER: **KBSO CONSULTING**

275 VETERANS WAY SUITE 300 CARMEL. IN 46032 v. (317) 344-8044

100%

REVISIO	ONS	
No.	Description	Date
	95% CD SET	12-18-24
	100% CD SET	01-17-25
D	ADDENDUM #6	03-10-25

ISSUE DATE:	01.	17.2025
DRAWN:	DIT	CHECKED:
	BLT	PLR
PROJECT NO.:		P23-0116
REVISION NO.:		D

ENLARGED ELECTRICAL PLANS

E-401

		LIG	HT	FIXTU	JRE S	CHED	ULE					
UNIT		DRIVER	VOLTS		LIGHT		LO			MOUNTING	MANUFACTURER	EQUAL MANUFACTURERS
ID L1	DESCRIPTION 2' BY 4' DIRECT-LIT LED FLAT PANEL, FULLY SWITCHABLE CONFIGURAL, DLC LISTED, METAL FRAME WITH SATIN WHITE LENS	0-10V DIMMING	(V)	4000 (K)	QTY (LM) 5000	UNITS /FIXTURE	QTY (W) 35.6	UNITS /FIXTURE	MOUNTING RECESSED	HEIGHT (AFF)	LITHONIA CPX SERIES	OR APPROVED EQUALS
LI	2 BT 4 DIRECT-LIT LED FLAT FAINEL, FOLLT SWITCHABLE CONFIGURAL, DLC LISTED, INICIAL FRAINE WITH SATIN WHITE LENS	TO 10%	120	4000	3000	FIXTURE	33.0	/FIXTURE	RECESSED	IN/A	LITHONIA GFA SERIES	ON APPROVED EQUALS
L1E	2' BY 4' DIRECT-LIT LED FLAT PANEL, FULLY SWITCHABLE CONFIGURAL, DLC LISTED, METAL FRAME WITH SATIN WHITE LENS, WITH INTEGRAL EMERGENCY BATTERY PACK	0-10V DIMMING TO 10%	120	4000	5000	/FIXTURE	35.6	/FIXTURE	RECESSED	N/A	LITHONIA CPX SERIES	OR APPROVED EQUALS
L2	2' BY 4' DIRECT-LIT LED FLAT PANEL, FULLY SWITCHABLE CONFIGURAL, DLC LISTED, METAL FRAME WITH SATIN WHITE LENS	0-10V DIMMING TO 10%	120	4000	6000	/FIXTURE	48.5	/FIXTURE	RECESSED	N/A	LITHONIA CPX SERIES	OR APPROVED EQUALS
	2' BY 4' DIRECT-LIT LED FLAT PANEL, FULLY SWITCHABLE CONFIGURAL, DLC LISTED, METAL FRAME WITH SATIN WHITE LENS, WITH INTEGRAL EMERGENCY BATTERY PACK	0-10V DIMMING TO 10%	120	4000	6000	/FIXTURE	48.5	/FIXTURE	RECESSED	N/A	LITHONIA CPX SERIES	OR APPROVED EQUALS
L3E	2' BY 4' VANDAL RESISTANT LED TROFFER, DAMP LOCATION, DLC LISTED, FINISH TO BE DETERMINED BY ARCHITECT FROM MANUFACTURERS STANDARD CATALOG, WITH INTEGRAL EMERGENCY BATTERY PACK	0-10V DIMMING TO 10%	120	4000	5000	/FIXTURE	41	/FIXTURE	RECESSED	N/A	LITHONIA VRTL SERIES	OR APPROVED EQUALS
L4	NOMINALLY 4-FOOT VAPOR-TIGHT FIXTURE, FULLY-GASKETED POLYCARBONATE HOUSIG, WET LOCATION RATED, INTEGRAL EMERGENCY BATTERY PACK.	ELECTRONIC	120	4000	4946	/FIXTURE	42	/FIXTURE	SURFACE/WALL	N/A	LITHONIA CSVT SERIES	OR APPROVED EQUALS
L5	1' BY 4' VANDAL RESISTANT LED TROFFER, DAMP LOCATION, DLC LISTED, FINISH TO BE DETERMINED BY ARCHITECT FROM MANUFACTURERS STANDARD CATALOG.	0-10V DIMMING TO 10%	120	4000	5000	/FIXTURE	46	/FIXTURE	RECESSED	N/A	LITHONIA VRTL SERIES	OR APPROVED EQUALS
L6	LED HIGH BAY, CHAIN HUNG, SAFETY CHAIN KIT, TRI-RADIAL POLYCARBONATE LENS, IKO RATED, FINISH TO BE DETERMINED BY ARCHITECT	ELECTRONIC	120	4000	24000	/FIXTURE	175	/FIXTURE	SUSPENDED	+25'-0"	LITHONIA CPRB SERIES	OR APPROVED EQUALS
L7	4' LENSED STRIP, COMPACT-DESIGN CHANNEL, HIGH-GLOSS, BAKED WHITE ENAMEL FINISH	ELECTRONIC	120	4000	4298	/FIXTURE	35.3	/FIXTURE	SUSPENDED	+108"	LITHONIA CSS SERIES	OR APPROVED EQUALS
L8	4' LINEAR, POLYESTER POWDER COATED FINISH, COLD-ROLLED STEEL HOUSING WITH EXTRUDED ALUMINUM CEILING TRIM, FLUSH MOUNTING, FINISH TO BE DETERMINED BY ARCHITECT.	0-10V DIMMING TO 10%	120	4000	600	/FT	24	/FIXTURE	RECESSED	N/A	MARK SLOT 4 LED RECESSED	OR APPROVED EQUALS
L9	4' LINEAR, POLYESTER POWDER COATED FINISH, ALUMINUM HOUSING, PENDANT MOUNTING, FINISH TO BE DETERMINED BY ARCHITECT.	0-10V DIMMING TO 10%	120	4000	600	/FT	19	/FIXTURE	SUSPENDED	N/A	MARK SLOT 4 LED PENDANT	OR APPROVED EQUALS
L10	4' LINEAR, POLYESTER POWDER COATED FINISH, ALUMINUM HOUSING, PENDANT MOUNTING, FINISH TO BE DETERMINED BY ARCHITECT. VERIFY FIXTURE HEIGHTS WITH ARCHITECT.	0-10V DIMMING TO 10%	120	4000	300	/FT	10	/FIXTURE	SUSPENDED	N/A	MARK SLOT 4 LED PENDANT	OR APPROVED EQUALS
S1	FULL-CUT OFF ARCHITECTURAL WALL SCONCE, WET LOCATION RATED, WITH INTEGRAL EMERGENCY BATTERY PACK, WITH NLITE AIR CAPABILITIES.	0-10V DIMMING TO 10%	120	4000	3000	/FIXTURE	25	/FIXTURE	SURFACE	+9-0'	LITHONIA WST SERIES	OR APPROVED EQUALS
S2	ARM MOUNT AREA LIGHT, TYPE II MEIUM DISTRIBUTION, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S CATLOG OF STANDARD COLORS, WITH INTEGRAL BATTERY PACK, WITH NLITE AIR CAPABILITIES.	0-10V DIMMING TO 10%	120	4000	7507	/FIXTURE	51	/FIXTURE	SURFACE	+15-0'	LITHONIA DSX1 SERIES	OR APPROVED EQUALS
S3	ARM MOUNT AREA LIGHT, TYPE IV MEDIUM DISTRIBTUION, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S CATLOG OF STANDARD COLORS, WITH NLITE AIR CAPABILITIES.	ELECTRONIC	120	4000	13403	/FIXTURE	102	/FIXTURE	CONCRETE BASE	+30'-0"	LITHONIA DSX1 SERIES	OR APPROVED EQUALS
S4	ARM MOUNT AREA LIGHT, TYPE II MEIUM DISTRIBUTION, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S CATLOG OF STANDARD COLORS, WITH NLITE AIR CAPABILITIES.	ELECTRONIC	120	4000	9260	/FIXTURE	69	/FIXTURE	CONCRETE BASE	+30'-0"	LITHONIA DSX1 SERIES	OR APPROVED EQUALS
S5	ARM MOUNT AREA LIGHT, TYPE LCCO DISTRIBUTION, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S CATLOG OF STANDARD COLORS, WITH NLITE AIR CAPABILITIES.	ELECTRONIC	120	4000	9692	/FIXTURE	102	/FIXTURE	CONCRETE BASE	+30'-0"	LITHONIA DSX1 SERIES	OR APPROVED EQUALS
S6	ARM MOUNT AREA LIGHT, TYPE FORWARD THROW MEDIUM DISTRIBTUION, FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S CATLOG OF STANDARD COLORS, WITH NLITE AIR CAPABILITIES.	ELECTRONIC	120	4000	7760	/FIXTURE	51	/FIXTURE	CONCRETE BASE	+30'-0"	LITHONIA DSX1 SERIES	OR APPROVED EQUALS
X1	COMPACT ARCHITECTURAL LED EXIT SIGN, FACES AND CHEVRONS AS INDICATED, RED LETTERING, FLAME-RATED UV STABLE THERMOPLASTIC HOUSING,	ELECTRONIC	120				1.4	/FIXTURE	CEILING	N/A	DUAL-LITE EVE SERIES	OR APPROVED EQUALS
X2	COMPACT ARCHITECTURAL LED EXIT SIGN, FACES AND CHEVRONS AS INDICATED, RED LETTERING, FLAME-RATED UV STABLE THERMOPLASTIC HOUSING,	ELECTRONIC	120				1.4	/FIXTURE	SURFACE	N/A	DUAL-LITE EVE SERIES	OR APPROVED EQUALS
Х3	HIGH IMPACT ARCHITECTURAL LED EMERGENCY LIGHT, FLAME RATED, UV STABLE WHITE THERMOPLASTIC HOUSING, SELF-DIAGNOSTIC	ELECTRONIC	120		250	/FIXTURE	2	/FIXTURE	SURFACE	+7'-6"	DUAL-LITE EV SERIES	OR APPROVED EQUALS

7 RECE 9 LIGHT 11 LIGHT 13 LIGHT 15 LIGHT 17 RECE 19 EWC: 21 FIRE A 23 BASKI 25 BASKI 27 BASKI 29 BASKI 31 CWP- 35 37 39 CWP- 43 NITRO	ARE CEPT - ROOF CEPT: MAIN ELEC 107 HTING: GYMNASIUM HTING: SITE HTING: CAFE HTING: OFFICE, REC. STOR. TLT, CIRC CEPT: CAFE C: CAFE E ALARM CONTROL PANEL SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP	Trip 20 A	Poles 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	540	1400	0 1575	0	360	C	Poles 1 1		Circuit De	escription	CKT 2
1 SPARI 3 SPARI 5 RECE 7 RECE 9 LIGHT 11 LIGHT 13 LIGHT 15 LIGHT 17 RECE 19 EWC: 21 FIRE A 23 BASKI 25 BASKI 27 BASKI 29 BASKI 29 BASKI 31 33 CWP- 35 37 39 CWP- 41 AIR CO 45 AIR CO 47 SPARI 51 SPARI 55 SPARI	ARE CEPT - ROOF CEPT: MAIN ELEC 107 HTING: GYMNASIUM HTING: SITE HTING: CAFE HTING: OFFICE, REC. STOR. TLT, CIRC CEPT: CAFE C: CAFE E ALARM CONTROL PANEL SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP	20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A	1 1 1 1 1 1 1 1 1 1 1	540	1400					1	20 A	SPARE		
5 RECE 7 RECE 9 LIGHT 11 LIGHT 13 LIGHT 15 LIGHT 17 RECE 19 EWC: 21 FIRE A 23 BASKI 25 BASKI 27 BASKI 29 BASKI 31 GWP- 35 GWP- 43 NITRO 45 AIR CO 49 SPARI 51 SPARI 55 SPARI	CEPT - ROOF CEPT: MAIN ELEC 107 HTING: GYMNASIUM HTING: SITE HTING: CAFE HTING: OFFICE, REC. STOR. TLT, CIRC CEPT: CAFE C: CAFE E ALARM CONTROL PANEL SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP	20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A	1 1 1 1 1 1 1 1 1	1372				360		1	20 A			
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9 LIGHT 11 LIGHT 13 LIGHT 15 LIGHT 17 RECE 19 EWC: 21 FIRE A 23 BASKI 25 BASKI 27 BASKI 29 BASKI 31 33 CWP- 35 37 39 CWP- 41 AIR CO 49 SPARI 51 SPARI 55 SPARI	HTING: GYMNASIUM HTING: SITE HTING: CAFE HTING: OFFICE, REC. STOR. TLT, CIRC CEPT: CAFE C: CAFE E ALARM CONTROL PANEL SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP	20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A	1 1 1 1 1 1 1	1372		1575			0	1	20 A	SPARE		6
11 LIGHT 13 LIGHT 13 LIGHT 15 LIGHT 17 RECE 19 EWC: 21 FIRE A 23 BASKI 25 BASKI 27 BASKI 29 BASKI 31 GWP- 35 GWP- 43 NITRO 44 AIR CO 49 SPARI 51 SPARI 53 SPARI 55 SPARI	HTING: SITE HTING: CAFE HTING: OFFICE, REC. STOR. TLT, CIRC CEPT: CAFE C: CAFE E ALARM CONTROL PANEL SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP	20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A	1 1 1 1 1 1		1291	1575				1	20 A	LIGHTING: GYMNASIU	JM	8
13 LIGHT 15 LIGHT 17 RECE 19 EWC: 21 FIRE A 23 BASKI 25 BASKI 27 BASKI 29 BASKI 31 GWP- 35 GWP- 41 AIR CO 49 SPARI 51 SPARI 55 SPARI	HTING: CAFE HTING: OFFICE, REC. STOR. TLT, CIRC CEPT: CAFE C: CAFE E ALARM CONTROL PANEL SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP	20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A	1 1 1 1 1		1291		394			1	20 A	LIGHTING: MAIN MECI	H / MAIN ELEC	10
15 LIGHT 17 RECE 19 EWC: 21 FIRE A 23 BASKI 25 BASKI 27 BASKI 29 BASKI 31 33 CWP- 35 37 39 CWP- 41 43 NITRO 45 AIR CO 49 SPARI 51 SPARI 55 SPARI	HTING: OFFICE, REC. STOR. TLT, CIRC CEPT: CAFE C: CAFE E ALARM CONTROL PANEL SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP	20 A 20 A 20 A 20 A 20 A 20 A 20 A	1 1 1 1 1		1291			1191	398	1	20 A	LIGHTING: EXTERIOR		12
17 RECE 19 EWC: 21 FIRE A 23 BASKI 25 BASKI 27 BASKI 29 BASKI 31 GWP- 35 GWP- 43 NITRO 45 AIR CO 49 SPARI 51 SPARI 55 SPARI	CEPT: CAFE C: CAFE E ALARM CONTROL PANEL SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP	20 A 20 A 20 A 20 A 20 A 20 A	1 1 1							1	20 A	LIGHTING: CAFE / VES	STIBULE	14
17 RECE 19 EWC: 21 FIRE A 23 BASKI 25 BASKI 27 BASKI 29 BASKI 31 GWP- 35 GWP- 43 NITRO 45 AIR CO 49 SPARI 51 SPARI 55 SPARI	CEPT: CAFE C: CAFE E ALARM CONTROL PANEL SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP	20 A 20 A 20 A 20 A 20 A 20 A	1 1 1			867	1440			1	20 A	RECEPT: CAFE / LOBE	BY / STOR.	16
21 FIRE A 23 BASKI 25 BASKI 27 BASKI 29 BASKI 31 33 CWP- 35 37 39 CWP- 41 43 NITRO 45 AIR CO 49 SPARI 51 SPARI 53 SPARI 55 SPARI	E ALARM CONTROL PANEL SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP	20 A 20 A 20 A 20 A	1					180	1373	1	20 A	CP-1, 2, 3		18
23 BASKI 25 BASKI 27 BASKI 29 BASKI 31 33 CWP- 35 37 39 CWP- 41 43 NITRO 45 AIR CO 49 SPARI 51 SPARI 53 SPARI 55 SPARI	SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP	20 A 20 A 20 A	1	1080	360					1	20 A	WATER SOFTENERS		20
25 BASKI 27 BASKI 29 BASKI 31 33 CWP- 35 37 39 CWP- 41 43 NITRO 45 AIR CO 49 SPARI 51 SPARI 53 SPARI 55 SPARI	SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP	20 A 20 A	-			1500	1000			1	20 A	TEMPERATURE CONT	TROL PANEL	22
25 BASKI 27 BASKI 29 BASKI 31 33 CWP- 35 37 39 CWP- 41 43 NITRO 45 AIR CO 49 SPARI 51 SPARI 53 SPARI 55 SPARI	SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP SKETBALL GOAL BACKSTOP	20 A 20 A	4					1000	500					24
29 BASKI 31 33 CWP- 35 37 39 CWP- 41 43 NITRO 45 47 AIR CO 49 SPARI 51 SPARI 53 SPARI 55 57 SPARI	SKETBALL GOAL BACKSTOP		1	1000	500					3	20 A	BLR-1		26
31 33 35 37 39 CWP-2 41 43 AIR CO 45 47 AIR CO 49 SPARI 51 SPARI 53 SPARI 55 SPARI		20 A	1			0	500							28
33 CWP-35 37 39 CWP-241 43 NITRO 45 47 49 SPARI 51 SPARI 55 57 SPARI	P-1	2071	1					2000	500					30
35 37 39 CWP-2 41 43 NITRO 45 47 AIR CO 49 SPARI 51 SPARI 53 SPARI 55 57 SPARI	P-1			5800	500					3	20 A	BLR-2		32
37 39 CWP-2 43 NITRO 45 AIR CO 49 SPARI 51 SPARI 53 SPARI 55 SPARI	1	90 A	3			5800	500							34
39 CWP-2 41 43 NITRO 45 AIR CO 47 SPARI 51 SPARI 53 SPARI 55 SPARI								5800	120	~1~	15 A	WH406~~~	~~~~	~~~~
43 NITRO 45 AIR CO 47 SPARI 51 SPARI 53 SPARI 55 SPARI				5800	2099									38
43 NITRO 45 AIR CO 47 SPARI 51 SPARI 53 SPARI 55 SPARI	P-2	90 A	3			5800	2099		*	3	30 A	BLEACHER MOTOR C	ONTROLS	40
45 47 49 SPARI 51 SPARI 53 SPARI 55 57 SPARI								5800	2099					42
45 47 49 SPARI 51 SPARI 53 SPARI 55 57 SPARI	ROGEN GENERATOR - MECH	20 A	1	180	2099				1					44
47 49 SPARI 51 SPARI 53 SPARI 55 SPARI				7		1440	2099		•	3	30 A	BLEACHER MOTOR C	ONTROLS	46
 49 SPARI 51 SPARI 53 SPARI 55 57 SPARI 	COMPRESSOR	30 A	2			1111		1440	2099	7				48
51 SPAR53 SPAR5557 SPAR	ARE	20 A	1	30	0					1	20 A	SPARE		50
53 SPARI 55 SPARI		20 A	1	1		0	0		}	1		SPARE		52
55 57 SPAR		20 A	1	7				0	0	1		SPARE		54
57 SPAR) 0	0				•	1		SPARE		56
	ARE	60 A	3	3		0	0		(1		SPARE		58
سسّ	- · <u>-</u>			1				0	0	1		SPARE		60
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			Amps:		0 A		0 A		8 A					
egend:														
oad Classifi	sification	Con	nected	Load	Der	nand Fa	ctor	Estim	ated De	mand		Panel ¹	Totals	
IVAC			3000 V			100.00%			3000 VA					
IGHTING			8488 V			125.00%			0610 V			Total Conn. Load:	73897 VA	
Other			1500 V			100.00%			1500 VA			Total Est. Demand:		
RECEPT			4140 V			100.00%			4140 VA			Total Conn.:		
	Miscellaneous Power		1000 V			100.00%			1000 VA			Total Est. Demand:		
			5493 V			100.00%			5493 VA					
NTEGRAL HE			50276 V			100.00%			50276 V					
lotes:	AL HP MOTOR		55210 V			100.007			.5210 VI	•				

	Location: MAIN ELECTOR Supply From: MSB Mounting: SURFACE Enclosure: TYPE 1				F	Volts: Phases: Wires:			A.I.C. Rating: 65kAIC Mains Type: MLO Mains Rating: 300 A					
СКТ	Circuit Description	Trip	Poles		A 1		3	С		Poles	Trip	Circuit Description		CK
1	SPARE	20 A	1	0	0					1		SPARE		2
3	SPARE	20 A	1			0	0			1		SPARE		4
5	SPARE	20 A	1					0	0	1		SPARE		6
7	RECEPT: GYMNASIUM	20 A	1	360	720					1		RECEPT: OFFICE 109		8
9	RECEPT: GYMNASIUM	20 A	1			540	1080			1	20 A	RECEPT: CIRC. / CUS	T. OFFICE / REC.	10
11	WASHER: RECEIVING	20 A	1					500	2500	2	30 A	DRYER: RECEIVING		12
13	RECEPT: MAINTENANCE OFFICE	20 A	1	180	2500									14
15	RECEPT: MAINTENANCE OFFICE	20 A	1			180	360			1		RECEPT: EXTERIOR		16
17	RECEPT: MAINTENANCE OFFICE	20 A	1					180	360	1		RECEPT: EXTERIOR		18
19	RECEPT: MAINTENANCE OFFICE	20 A	1	720	180	.=	1000			1		RECEPT: TOILET		20
21	EF-5 / EF-6	20 A	1			1704	1000	1000	4500	1		ACCESS CONTROLS:		22
23	RECEPT	20 A	1	0.10				1000	1500	1		ACCESS CONTROLS:	VESTIBULE / CAFE.	24 26
25	CUH-112	15 A	1	240	500	7.450	7.450			1	20 A	VAV XFMR		
27	- LINAKE A	100 A				7458	7458	7.450	7.450		400.4	LINAID		28
29	1		3	7450	7450			7458	7458	3	100 A	HWP-2		30
31			4	7458	7458	528	1920			4	20.4			32
33 35	HCP-6	15 A	1			526	1920	1681	1920	1	20 A	WH-2		34 36
	ALULA CITE FOLUD STOD	20.4		1681	0			1001	1920	'	20 A	VV II-Z		
37	AHU-6 - SITE EQUIP STOR	20 A	3	1001	0	4004	0			3	00.4	SPD		38
39	1111.440	15 A	4			1681	0	400			60 A			40
41	UH-113	15 A	1	0400	0.144	22000 \ / /		120 0						42
			I Load:		96 VA 23908 VA			24676 VA						
Total Amps: 183 A 202 A 208 A Legend:														
	Classification		nected l			nand Fa			ated De			Panel	Totals	
RECE			8200 V			77.47%			4100 V					
	TIONAL HP MOTOR		888 VA			100.00%			888 VA			Total Conn. Load:		
INTEC	GRAL HP MOTOR	5	1493 V	4		100.00%)	5	1493 V	A		Total Est. Demand:		
												Total Conn.:		
												Total Est. Demand:	185 A	
	:													

	Branch Panel: 1L3 Location: KITCHEN Supply From: MSB Mounting: RECESSE Enclosure: TYPE 4X					Volts: Phases: Wires:		8 Wye				A.I.C. Rating: 65kAIC Mains Type: MCB Mains Rating: 200 A MCB Rating: 200 A		
СКТ	Circuit Description	Trip	Poles		^		В		•	Poles	Trip	Circuit De	scription	CK.
	SPARE	20 A	1	0	A			,		1		SPARE	scription	2
	SPARE	20 A	1			0	0			1		SPARE		4
	SPARE	20 A	1					0	0	1		SPARE		6
	LIGHTING: KITCHEN	20 A	1	437	6965					•				8
9			_			1758	6965	3 80 A RETHI	RETHERM OVEN	THERM OVEN				
11	HOT HOLDING CABINET	25 A	2					1758	6965					12
13 .	LIGT LIGI BING CARINET	05.4		1758	1272					1	15 A	SINGLE DOOR ROLL-I	N REFRIGERATOR	14
15	HOT HOLDING CABINET	25 A	2			1758	1272			1	15 A	SINGLE DOOR ROLL-I	N REFRIGERATOR	16
17 I	DOUBLE-SIDED MILK COOLER(S)	20 A	1					1620	1272	1	15 A	SINGLE DOOR ROLL-I	N REFRIGERATOR	18
19 (CASHIER COUNTER	20 A	1	1920	1920					1	20 A	POINT OF SALE SYST	EM	20
21 I	RECEPT: KITCHEN	20 A	1			720	0			1	20 A	SPARE		22
23	SPARE	20 A	1					0	0	1	20 A	SPARE		24
25	SPARE	20 A	1	0	0					1	20 A	SPARE		26
27	SPARE	20 A	1			0	0			1	20 A	SPARE		28
29	SPARE	20 A	1					0	0	1		SPARE		30
	SPARE	20 A	1	0	0					1		SPARE		32
	SPARE	20 A	1			0	0			1				34
	SPARE	20 A	1					0	0	1	20 A	SPARE		36
	SPARE	20 A	1	0	0									38
	SPARE	20 A	1			0	0			3	60 A	SPD		40
41	SPARE	20 A	1					0	0					42
			I Load:		'2 VA		'3 VA	1161						
		Total	Amps:	12	0 A	10	5 A	97	A					
-egend		Con	noctod	Load	Dom	and Fa	octor	Estim	ated De	mand		Panel '	Totals	
Load Classification LIGHTING			Connected Load 437 VA			Demand Factor 125.00%		Estimated Demand 546 VA				r and	· Julij	
												Total Conn. Load:	38359 VA	
					1									
								<u> </u>				Total Conn.:		
												Total Est. Demand:		
RECEPT Kitchen			4560 VA 33362 VA		1	100.00% 65.00%			4560 VA 21686 VA				2	26792 VA 106 A

ARCHITECTURE,
LANDSCAPE, INTERIOR
DESIGN, URBAN PLANNING

25 NORTH PINE STREET, SUITE B
INDIANAPOLIS, IN 45202

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INFO@METICULOUSDA.COM
317.926.1820

ARCHITECTURAL PARTNER

PERKINS & WILL

410 N. MICHIGAN AVE

SUITE 1600

CHICAGO, IL 60611

v. (312) 755-0770

CIVIL & STRUCTURAL ENGINEER:
JQOL

JQOL 8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING
275 VETERANS WAY
SUITE 300
CARMEL. IN 46032
v. (317) 344-8044

JOYCE KILMER

SET

100%

 No.
 Description
 Date

 95% CD SET
 12-18-24

 100% CD SET
 01-17-25

 B ADDENDUM #2
 02-18-25

 C ADDENDUM #3
 02-25-25

 D ADDENDUM #6
 03-10-25

No. 11300632
STATE OF

No. 11300632

STATE OF

No. 11300632

O1.17.2025

DRAWN:

BLT

PROJECT NO.:

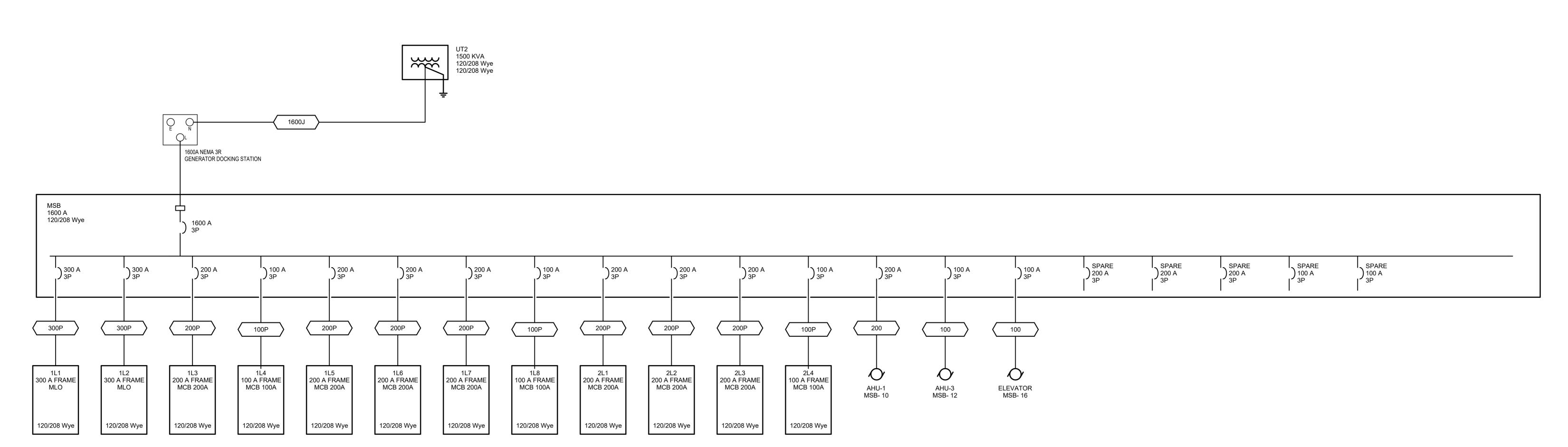
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REVISION NO.:

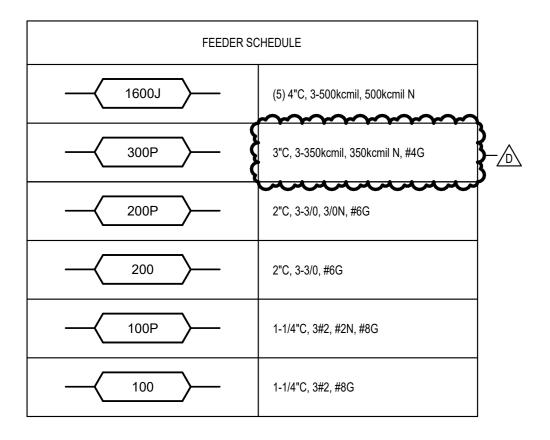
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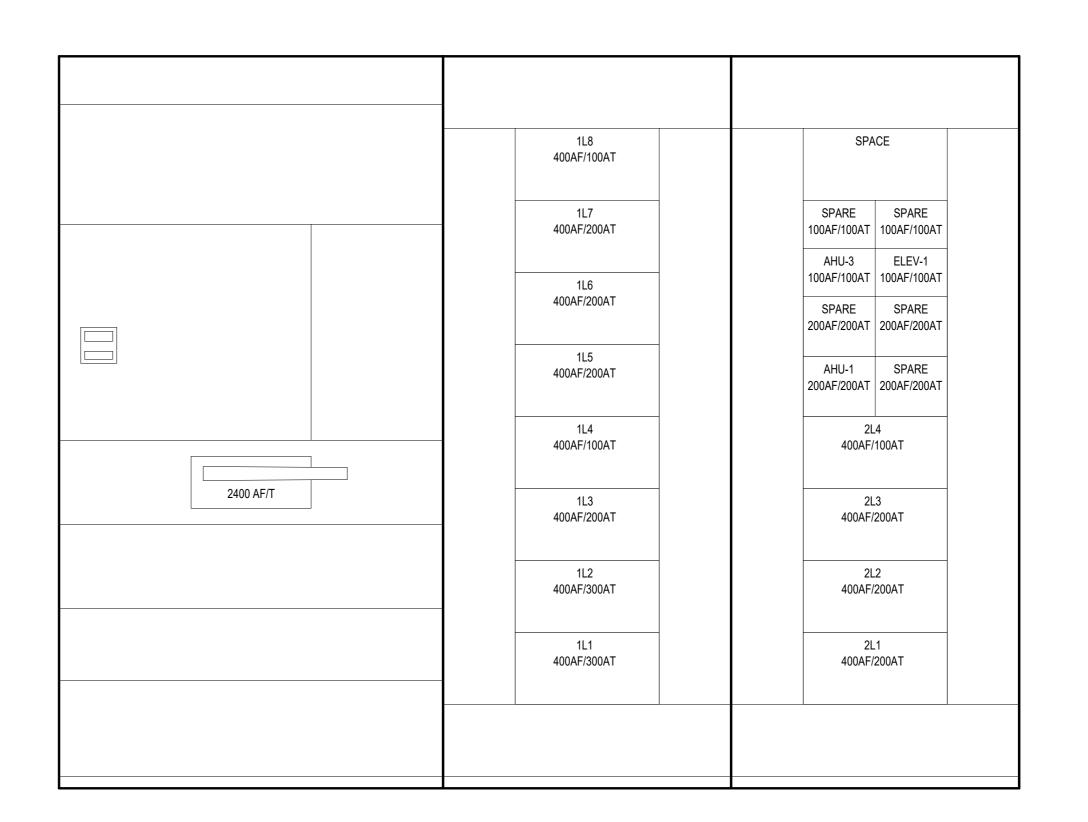
ELECTRICAL SCHEDULES

E-601



1 ELECTRICAL ONE-LINE DIAGRAM NOT TO SCALE





MSB ELEVATION
NOT TO SCALE

LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820

> ARCHITECTURAL PARTNER **PERKINS & WILL** 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611

v. (312) 755-0770 **CIVIL & STRUCTURAL ENGINEER:**

JQOL 8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032

v. (317) 344-8044

S 100%

JOY

95% CD SET 12-18-24 100% CD SET 01-17-25 03-10-25 ADDENDUM #6

ELECTRICAL ONE-LINE DIAGRAM

E-901

GENERAL NOTES

ABBREVIATIONS.

- A REFER TO SHEET E-000 FOR GENERAL ELECTRICAL NOTES, SYMBOLS AND
- B REFER TO E-600 SERIES SHEETS FOR LOAD PANEL SCHEDULES. C VERIFY HEIGHT OF ALL COUNTERTOP RECEPTACLES WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.
- D CIRCUIT TAG UNDER ROOM NAME INDICATES ALL DEVICES IN ROOM ARE ON INDICATED CIRCUIT UNLESS OTHERWISE NOTED. E LABEL ALL RECEPTACLE COVER PLATES WITH PANEL AND CIRCUIT NUMBER
- F ALL DUPLEXES WITHIN PUBLIC SPACES (CLASSROOMS, CORRIDORS, TAMPER RESISTANT.

FED FROM. VESTIBULES, GROUP RESTROOMS, CAFETERIA, AND GYMNASIUM ARE TO BE

SHEET KEYNOTES

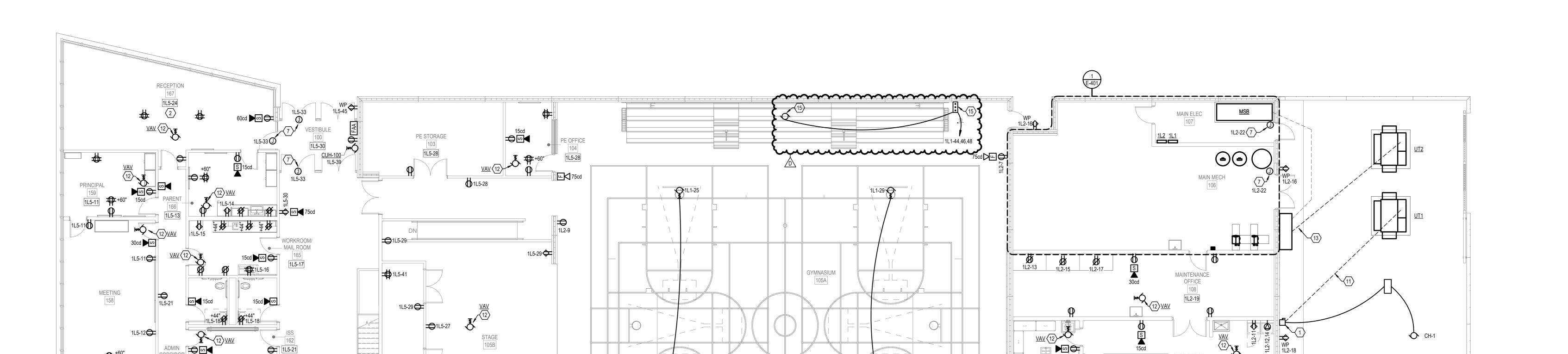
- COORDINATE EXACT LOCATION WITH EQUIPMENT PROVIDER PRIOR TO PERFORMING WORK. PROVIDE 500A OVERCURRENT PROTECTIVE DEVICE AND 2 SETS OF (3) 250KCMIL AND (1) #2G IN A 3" SCH 40 PVC FROM DISCONNECT TO AIR COOLED CHILLER.
- 2 PROVIDE 208V, 1-PH CIRCUIT AND ELECTRICAL INFRASTRUCTURE AS REQUIRED FOR DIGITAL SIGNAGE. COORDINATE EXACT LOCATION WITH

1 PROVIDE 480V, 600A, NEMA 3R SERVICE RATED DISCONNECT FOR CHILLER.

- EQUIPMENT PROVIDER PRIOR TO PERFORMING WORK. 3 PROVIDE ELECTRICAL CONNECTION AND DISCONNECT TO SERVE ELEVATOR CAB LIGHTS AND RECEPTACLE. COORDINATE EXACT LOCATION WITH ELEVATOR INSTALLER PRIOR TO PERFORMING WORK.
- 4 PROVIDE ELECTRICAL CONNECTION AND DISCONNECT TO SERVE ELEVATOR. VERIFY EXACT LOCATION WITH ELEVATOR INSTALLER PRIOR TO PERFORMING WORK. SEE ELECTRICAL ONE-LINE DIAGRAM FOR MORE INFORMATION.
- 5 PROVIDE TURN KEY SWITCHES FOR BASKETBALL GOAL CONTROL. COORDINATE EXACT LOCATION AND ADDITIONAL INSTALLATION REQUIREMENTS WITH EQUIPMENT PROVIDER PRIOR TO PERFORMING WORK.
- 6 PROVIDE NEMA 5-15R FOR MILK COOLER. PROVIDE (2) #12 AND (1) #12G IN A 3/4" CONDUIT. COORDINATE EXACT LOCATION AND ADDITIONAL POWER REQUIREMENTS WITH EQUIPMENT PROVIDER PRIOR TO PERFORMING WORK.

SHEET KEYNOTES

- 7 PROVIDE ROUGH-IN FOR LOW VOLTAGE ACCESS CONTROLS. COORDINATE EXACT LOCATION AND ADDITIONAL REQUIREMENTS WITH LOW VOLTAGE CONSULTANT PRIOR TO PERFORMING WORK.
- 8 PROVIDE ELECTRICAL CONNECTION TO CHANGING STATION. VERIFY EXACT LOCATION WITH EQUIPMENT INSTALLER PRIOR TO PERFORMING WORK. 9 REFER TO DETAIL 3/T-504 FOR ADDITIONAL DETAILS ON RECEPTACLE ELEVATIONS AT TEACHERS STATION.
- 10 PROVIDE ELECTRICAL CONNECTION TO VAV LOW VOLTAGE TRANSFORMER PROVIDED BY TEMPERATURE CONTROL CONTRACTOR. PROVIDE (2) #12 AND (1) #12G IN A 3/4" FROM SOURCE PANEL TO LOW VOLTAGE VAV XFMR. COORDINATE EXACT LOCATION AND ADDITONAL INSTALLATION REQUIREMENTS WITH EQUIPMENT PROVIDER PRIOR TO INSTALLATION.
- 11 PROVIDE 2 SETS OF (4) 250KCMIL IN A 3" SCHEDULE 40 PVC FROM UTILITY TRANSFORMER TO SERVICE RATED DISCONNECT.
- 12 PROVIDE TOGGLE DISCONNECT FOR VAV BOX. COORDINATE EXACT LOCATION AND ADDITIONAL INSTALLATION INSTRUCTIONS WITH EQUIPMENT PROVIDER PRIOR TO PERFORMING WORK.
- 13 PROVIDE GENERATOR DOCKING STATION ACCORDING TO ONE-LINE DIAGRAM. 14 PROVIDE CONDUIT AND WIRING TO INTERIOR DUCTLESS SPLIT AIR CONDITIONER FROM ASSOCIATED HEAT PUMP PER MECHANICAL SCHEDULE. COORDINATE EXACT LOCATION WITH EQUIPMENT PROVIDER PRIOR TO COORDINATE EXACT LOCATION WITH BLEACHER EQUIPMENT PROVIDE PRIOR TO PERFORMING WORK. PROVIDE (3) #10 AND (1) #10G IN A 3/4"



+60" **1**L1-19

1 01 FLOOR ELECTRICAL PLAN - AREA A



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> ARCHITECTURAL PARTNER **PERKINS & WILL**

410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611 v. (312) 755-0770

317.926.1820

CIVIL & STRUCTURAL ENGINEER: 8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

v. (317) 661-1964

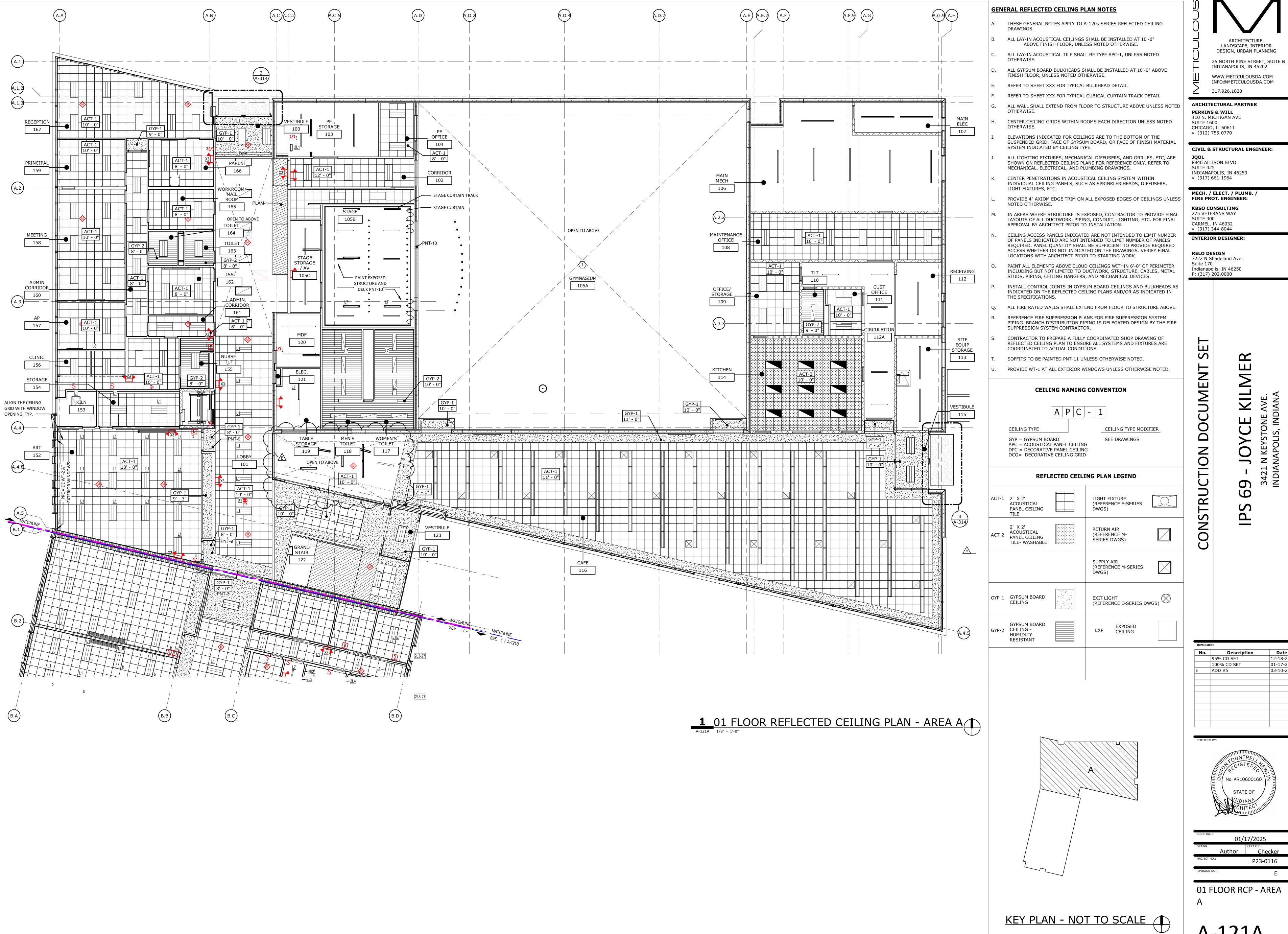
KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032

v. (317) 344-8044

95% CD SET 100% CD SET ADDENDUM #3 ADDENDUM #6

01 FLOOR ELECTRICAL PLAN - AREA A

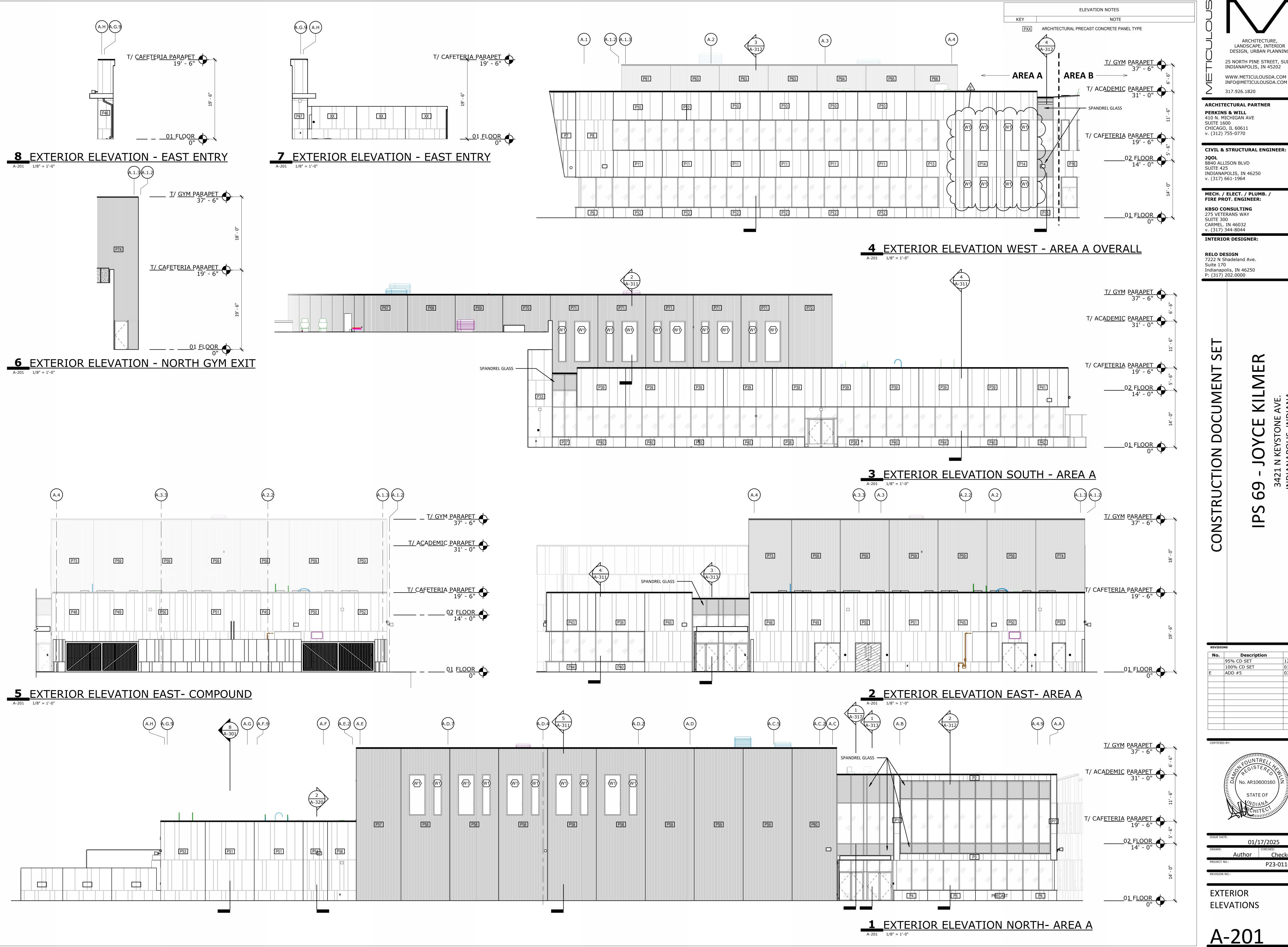
EP-111A



100% CD SET

LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING

01 FLOOR RCP - AREA

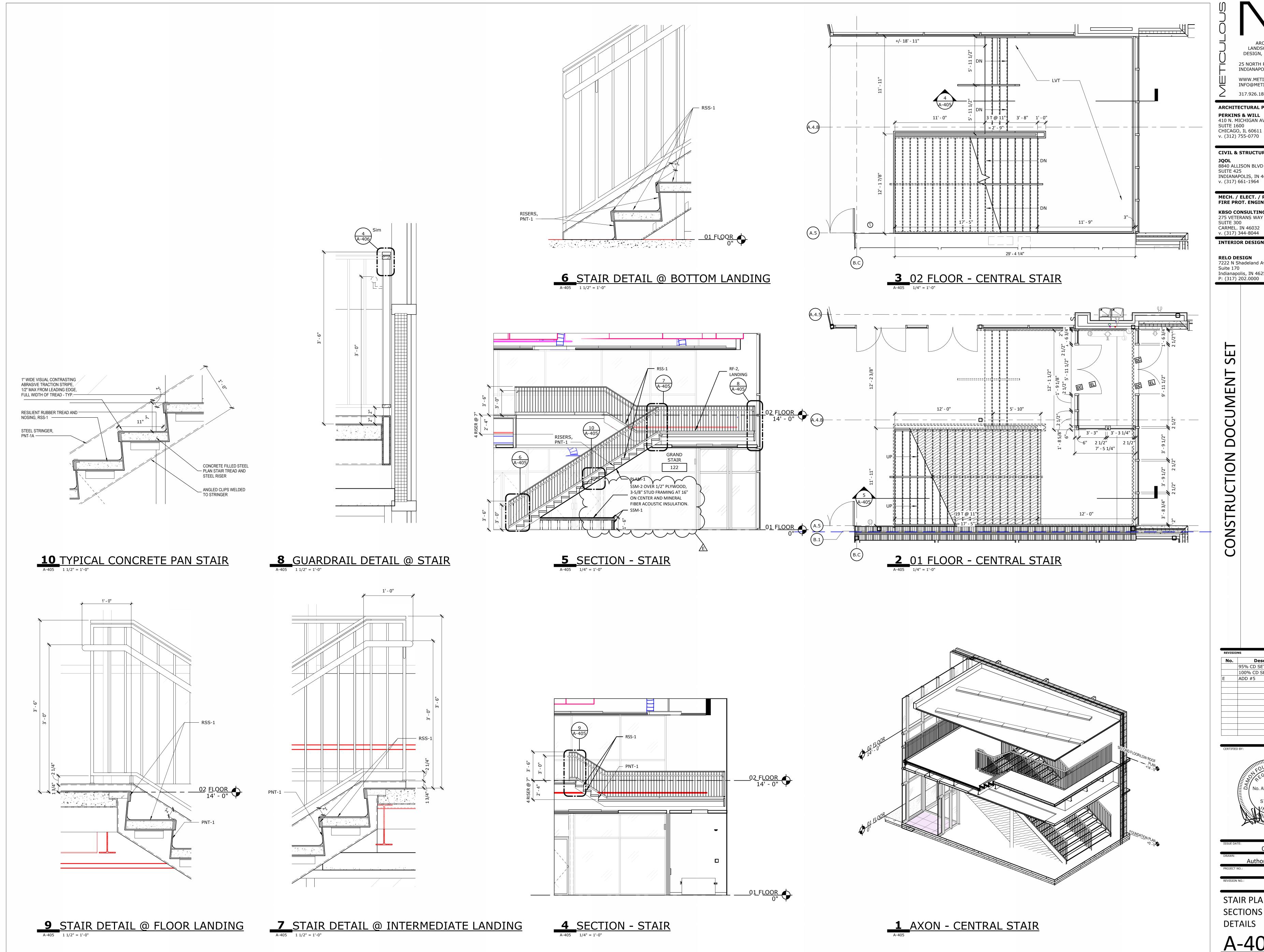


ARCHITECTURE, LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM

Date 12-18-24 01-17-25 03-10-25



P23-0116



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317.926.1820 ARCHITECTURAL PARTNER PERKINS & WILL 410 N. MICHIGAN AVE

v. (312) 755-0770 CIVIL & STRUCTURAL ENGINEER:

JQOL 8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

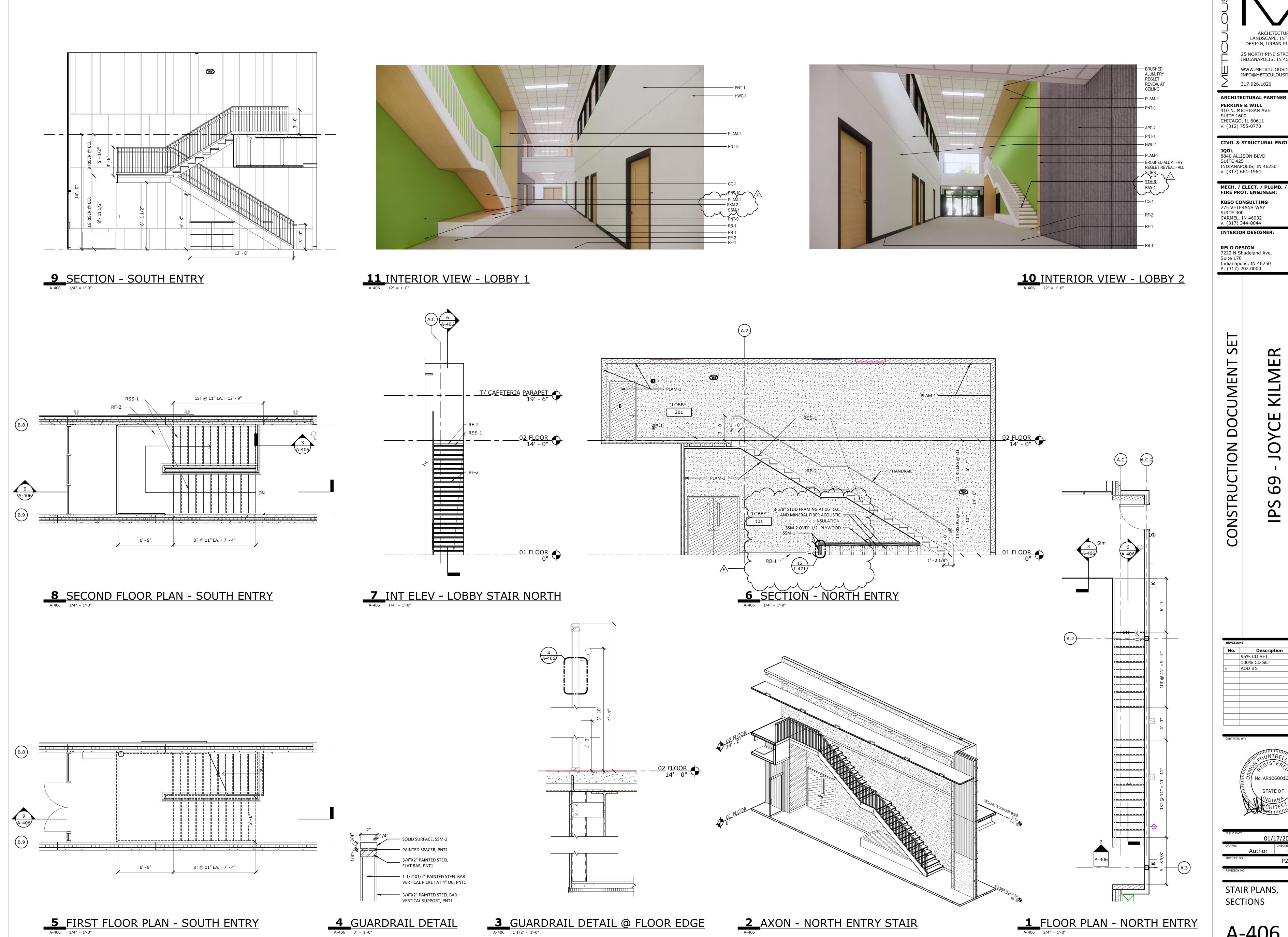
KBSO CONSULTING 275 VETERANS WAY CARMEL. IN 46032

v. (317) 344-8044 **INTERIOR DESIGNER:**

RELO DESIGN 7222 N Shadeland Ave. Indianapolis, IN 46250 P: (317) 202.0000

STAIR PLANS, SECTIONS AND

<u>A-405</u>



ARCHITECTURE, LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820

ARCHITECTURAL PARTNER PERKINS & WILL 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611

CIVIL & STRUCTURAL ENGINEER: JQOL 8840 ALLISON BLVD SUITE 425

INDIANAPOLIS, IN 46250 v. (317) 661-1964

FIRE PROT. ENGINEER: KBSO CONSULTING 275 VETERANS WAY SUITE 300

CARMEL. IN 46032 v. (317) 344-8044

RELO DESIGN 7222 N Shadeland Ave.

Suite 170 Indianapolis, IN 46250 P: (317) 202.0000

STAIR PLANS, SECTIONS

												GENERAL DOOR & FRAME SCHEDULE NOTES DOOR & FRAME SCHEDULE NOTES
			DOOR PANEL			OOR AND FRAME SC	HEDULE FRAME		DET	AILS		A. THIS DOOR SCHEDULE(S) IS FURNISHED FOR WHATEVER ASSISTANCE IT MAY AFFORD THE CONTRACTOR. DO NOT CONSIDER IT AS ENTIRELY INCLUSIVE. CAREFULLY EXAMINE THE DRAWINGS (ESPECIALLY THE FLOOR PLANS) A. SET DOOR IN FRAME TO ALLOW FOR 180° DOOR SWING. A. SET DOOR IN FRAME TO ALLOW FOR 180° DOOR SWING. A. SET DOOR IN FRAME TO ALLOW FOR 180° DOOR SWING.
NUMBER	ROOM NAME	DOOR PANEL DOOR TYPE MATERIAL	NO. OF PANELS	W Si	SIZE H	TH GLAZING		RAME RATING	HW SET HEAD JA	AMB	SILL NOTES	AND THE SPECIFICATIONS TO DETERMINE THE EXTENT OF DOOR AND FRAME QUANTITIES REQUIRED (INCLUDING INTERIOR BORROWED LITE OR SIDELITE OPENINGS). SHOULD ANY PARTICULAR DOOR, FRAME, OR B. HM FRAMES IN MASONRY SHALL BE WELDED. B. HM FRAMES IN MASONRY SHALL BE WELDED.
100A 100B 100C	VESTIBULE VESTIBULE VESTIBULE	ST AL ST AL	2 6'	- 0" 7	7' - 0" 1	3/4" 1" INSUL. 3/4" 1" INSUL. 3/4" 1/4" TEMP.	-	712	31 18			INTERIOR BORROWED LITE OR SIDELITE SHOWN ON THE DRAWINGS BE INADVERTENTLY OMITTED FROM THIS SCHEDULE, SUPPLY SAME AS REQUIRED FOR SIMILAR OPENINGS. C. HM FRAMES IN GYP. BD FRAMED WALLS SHALL BE KNOCK-DOWN. C. HM FRAMES IN GYP. BD FRAMED WALLS SHALL BE KNOCK-DOWN.
100D 102	VESTIBULE CORRIDOR	ST AL N WD	2 6' 2 E 6'	- 0" 7 - 0" 7	7' - 0" 1 7' - 0" 1	3/4" 1/4" TEMP. 3/4" 1/4" TEMP.	- 1	AL - MTL -	47 41 9/A-601 8/A		•	B. THE "DOOR WIDTH" COLUMN DESIGNATES THE TOTAL WIDTH OF ALL LEAVES. IN MULTIPLE LEAF CONDITIONS, THE LEAVES SHALL EQUALLY DIVIDE THE "DOOR WIDTH" UNLESS NOTED OTHERWISE; HOWEVER, THE ACTIVE LEAF SHALL NOT BE LESS THAN 3'-0" WIDE.
103 104 105A1	PE STORAGE PE OFFICE GYMNASIUM	F WD F HM	3'	- 0" 7	7' - 0" 1	3/4" - 3/4" - 3/4" -	6	MTL - MTL - MTL -	28 9/A-601 8/A 32 6/A-601 5/A 42		7/A-601 4/A-601	C. DOOR TYPE "X" DENOTES A FRAME WITH NO DOOR SUCH AS A BORROWED LITE, REFERENCE FRAME ELEVATIONS.
105A2 105A3 105C1	GYMNASIUM GYMNASIUM STAGE STORAGE/AV	N WD N WD F WD	2 6'	- 0" 7	7' - 0" 1	3/4" 1/4" TEMP. 3/4" 1/4" TEMP. 3/4" -	3	MTL -	23 6/A-601 5/A 23 6/A-601 5/A 45 9/A-601 8/A	-601	4/A-601	D. AN ASTERISK (*) IN A DIMENSION DENOTES A WIDTH THAT VARIES, REFERENCE PLANS, ELEVATIONS, DETAILS AND SCHEDULES.
105C2 106 107A	STAGE STORAGE/AV MAIN MECH MAIN ELEC	F WD F HM	2 6'	- 0" 7	7' - 0" 1	3/4" - 3/4" - 3/4" -	3	MTL -	45 9/A-601 8/A 02 42	x-601	7/A-601	E. VERIFY LOCKSETS WITH THE OWNER DURING SUBMITTALS.
107B 108A	MAIN ELEC MAINTENANCE OFFICE MAINTENANCE OFFICE	F HM N WD	1 3' 1 6'	- 0" 7 - 0" 7	7' - 0" <u>1</u> 7' - 0" <u>1</u>	3/4" - 3/4" 1/4" TEMP.	2 2	MTL - MTL -	29 6/A-601 5/A 30 6/A-601 5/A	-601	4/A-601	F. EXTERIOR GLAZED WINDOWS, PATIO DOORS, ETC.
108B 109A 109B	OFFICE/STORAGE OFFICE / STORAGE	F WD N WD N WD	1 3' 1 3'	- 0" 7 - 0" 7	7' - 0" 1 7' - 0" 1	3/4" - 3/4" 1/4" TEMP. 3/4" 1/4" TEMP.	2 2	MTL - MTL - MTL -	03 6/A-601 5/A 04 6/A-601 5/A	x-601 ·	4/A-601 4/A-601	
110 111 112	TLT CUST OFFICE RECEIVING	F WD F WD N HM	1 3' 2 6'	- 0" 7 - 0" 7	7' - 0" 1 7' - 0" 1	3/4" - 3/4" - 3/4" 1" INSUL.	6 3	MTL - MTL -	04 6/A-601 5/A 13	x-601		DOOR PANEL TYPE LEGEND
112A 113 114A	CIRCULATION SITE EQUIP STORAGE KITCHEN	N WD F HM N WD	2 6' 1 3'	- 0" 7 - 4" 7	7' - 0" <u>1</u> 7' - 0" <u>1</u>	3/4" 1/4" TEMP. 3/4" - 3/4" 1/4" TEMP.	3 2	MTL - MTL -	26 6/A-601 5/A 02 34 6/A-601 5/A	v-601	4/A-601	SEE SCHEDULE SEE SCHEDULE 3"_6" L 2 1/4"
114B 114C 115A	KITCHEN KITCHEN VESTIBULE	N WD N WD ST AL	1 3'	- 6" 7	7' - 0" 1	3/4" 1/4" TEMP. 3/4" 1/4" TEMP. 3/4" 1" INSUL.	2	MTL	35 9/A-601 8/A 35 9/A-601 8/A 31		7/A-601 7/A-601	
115B 115C 115D	VESTIBULE VESTIBULE VESTIBULE	ST AL ST AL ST AL	2 6'	- 0" 7	7' - 0" 1	3/4" 1" INSUL. 3/4" 1/4" TEMP. 3/4" 1/4" TEMP.		712	18 17 40			
116A 116B 116C	CAFE CAFE CAFE	ST AL ST AL ST AL	2 6'	- 0" 7	7' - 0" 1	3/4" 1" INSUL. 3/4" 1" INSUL. 3/4" 1" INSUL.			43 43 19			P C C C C C C C C C C C C C C C C C C C
118 119 120	RESTROOM TABLE STORAGE MDF	F WD F WD	1 2' 2 6'	- 0" 7 - 0" 7	7' - 0" 1	3/4" - 3/4" - 3/4" -	1	MTL - MTL - MTL -			1/A-601 1/A-601	
121 123	ELEC ELEVATOR CONTROLLER	F WD F WD	1 3' 1 3'	- 0" 7 - 0" 7	7' - 0" 1 7' - 0" 1	3/4" - 3/4" -	1 1	MTL - MTL -	08 3/A-601 2/A 09		1/A-601	TYPE F TYPE N TYPE ST
123A 123B 124A	VESTIBULE VESTIBULE ACADEMIC CORRIDOR	ST AL ST AL WD	2 5' - 1	.1 1/2" 6' -	11 3/4" 1	3/4" 1" INSUL. 3/4" 1/4" TEMP. 3/4" 1/4" TEMP.	-		19 01 27 9/A-601 8/A	x-601	7/A-601	DOOR PANEL ELEVATION LEGEND 1/4" = 1'-0"
124B 125	ACADEMIC CORRIDOR	N WD				3/4" 1/4" TEMP.		MTL B-Label 90 Min. MTL -	27 9/A-601 8/A 32 9/A-601 8/A		7/A-601 7/A-601	DOOR FRAME TYPE LEGEND SEE SCHEDULE \(\sigma^{1'} - 0'' \)
126 127 128	OFFICE OFFICE OFFICE	F WD F WD	1 3'	- 0" 7	7' - 0" 1	3/4" - 3/4" - 3/4" -	4	MTL - MTL - MTL -	32 9/A-601 8/A	-601	7/A-601 7/A-601 7/A-601	SEE SCHEDULE SEE SCHEDULE SEE SCHEDULE SEE SCHEDULE 1' - 0" SEE SCHEDULE SEE SCHEDULE 6' - 0"
129 130 131	NURSE TLT CC ELEC	F WD F WD	1 3' 1 3'	- 0" 7 - 0" 7	7' - 0" 1 7' - 0" 1	3/4" - 3/4" - 3/4" -	1 1	MTL - MTL - MTL -	25 9/A-601 8/A 36 9/A-601 8/A	x-601	7/A-601 7/A-601 7/A-601	
132 133 134	IDF OT/PT RESTROOM	F WD N WD F WD	1 3' 1 3'	- 0" 7 - 0" 7	7' - 0" 1 7' - 0" 1	3/4" - 3/4" 1/4" TEMP. 3/4" -	1 4	MTL	12 9/A-601 8/A	-601	7/A-601 7/A-601	BOULE EDULE EDULE
136A 136B	FLEX FLEX	F WD F WD	1 3' 1 3'	- 0" 7 - 0" 7	7' - 0" 1 7' - 0" 1	3/4" - 3/4" -	5 5	MTL - MTL -	11 9/A-601 8/A	-601	7/A-601 7/A-601	
137A 137B 138	FLEX FLEX CLASSROOM	F WD F WD	1 3' 1 3'	- 0" 7	7' - 0" <u>1</u> 7' - 0" <u>1</u>	3/4" - 3/4" - 3/4" -	5 5	MTL - MTL - MTL -	11 9/A-601 8/A 11 9/A-601 8/A	x-601 x-601		
139 140 141	CLASSROOM CLASSROOM ACADEMIC CORRIDOR	F WD F WD ST AL	1 3' 2 5' - 1	- 0" 7 .1 1/2" 6' -	7' - 0" 1 11 3/4" 1	3/4" - 3/4" - 3/4" 1" INSUL.		MTL	11 9/A-601 8/A 19	x-601	7/A-601 7/A-601	TYPE 1 TYPE 2 TYPE 3 TYPE 4 TYPE 5 TYPE 6
142 143 144	CLASSROOM CLASSROOM CLASSROOM	F WD F WD	1 3'	- 0" 7	7' - 0" 1	3/4" - 3/4" - 3/4" -	5 5	MTL - MTL - MTL -	11 9/A-601 8/A	-601	7/A-601 7/A-601 7/A-601	DOOR FRAME ELEVATION LEGEND 1/4" = 1'-0"
145 146A 147	CLASSROOM SENSORY CORRIDOR TOILET	F WD F WD F WD	1 3'	- 0" 7	7' - 0" 1	3/4" - 3/4" - 3/4" -	5	MTL - MTL - MTL -	11 9/A-601 8/A	-601	7/A-601 7/A-601 7/A-601	SEE
148 149 150	RESOURCE ROOM SENSORY CLASSROOM	F WD F WD	1 3'	- 0" 7	7' - 0" 1 7' - 0" 1	3/4" - 3/4" - 3/4" -	4 4	MTL - MTL - MTL -	11 9/A-601 8/A 09 9/A-601 8/A	x-601	7/A-601 7/A-601 7/A-601	PLANS 5/8" GYPSUM WALLBOARD
151 152A 152B	CLASSROOM ART ART	F WD F WD	1 3'	- 0" 7	7' - 0" 1	3/4" - 3/4" - 3/4" -	5	MTL - MTL - MTL -	15 9/A-601 8/A	-601	7/A-601 7/A-601 7/A-601	DOOR FRAME
153 154 156	KILN STORAGE NURSE	N WD F WD N WD	1 3'	- 0" 7	7' - 0" 1	3/4" 1/4" TEMP. 3/4" - 3/4" 1/4" TEMP.	1	MTL - MTL - MTL -	22 9/A-601 8/A	-601	7/A-601 7/A-601 7/A-601	3 5/8" METAL RUNNER 3 5/8" METAL RUNNER 3 5/8" METAL RUNNER 5 5/8" METAL RUNNER 5 5/8" METAL RUNNER
157 158A 158B	AP MEETING MEETING	N WD N WD N WD	1 3' 1 3'	- 0" 7 - 0" 7	7' - 0" 1 7' - 0" 1	3/4" 1/4" TEMP. 3/4" 1/4" TEMP. 3/4" 1/4" TEMP.	1 1	MTL - MTL - MTL -	04 9/A-601 8/A 38 9/A-601 8/A	x-601 x-601	7/A-601 7/A-601 7/A-601	1/2"
159 160 161	PRINCIPAL ADMIN CORRIDOR ADMIN CORRIDOR	N WD N WD N WD	1 3' 1 3'	- 0" 7 - 0" 7	7' - 0" 1 7' - 0" 1	3/4" 1/4" TEMP. 3/4" 1/4" TEMP. 3/4" 1/4" TEMP.	1 1	MTL - MTL - MTL -	04 9/A-601 8/A 04 9/A-601 8/A	x-601 x-601	7/A-601 7/A-601 7/A-601	SEE WALLBOARD
162A 162B	CONFERENCE CONFERENCE	N WD N WD	1 3' 1 3'	- 0" 7 - 0" 7	7' - 0" 1 7' - 0" 1	3/4" 1/4" TEMP. 3/4" 1/4" TEMP.	1 1	MTL - MTL - MTL -	32 9/A-601 8/A 04 9/A-601 8/A	x-601	7/A-601 7/A-601	PLANS
	TOILET TOILET WORKROOM / MAIL ROOM	F WD F WD N WD	1 3' 1 3'	- 0" 7 - 0" 7	7' - 0" 1 7' - 0" 1	3/4" - 3/4" 1/4" TEMP.	1 1	MTL - MTL -	07 9/A-601 8/A 39 9/A-601 8/A	x-601	7/A-601 7/A-601 7/A-601	9 STUD - INT. DOOR HEAD A-601 1 1/2" = 1'-0" 8 STUD - INT. DOOR JAMB A-601 1 1/2" = 1'-0" 8 STUD - INT. DOOR JAMB A-601 1 1/2" = 1'-0" 8 STUD - INT. DOOR - SILL A-601 1 1/2" = 1'-0"
166 167A	WORKROOM / MAIL ROOM PARENT RECEPTION	N WD N WD ST AL	1 3' 1 3'	- 0" 7 - 0" 7	7' - 0" 1	3/4" 1/4" TEMP. 3/4" 1/4" TEMP. 1/4" TEMP.	1	MTL -	24 9/A-601 8/A 10	-601		EQ 6" EQ
167B 202A 202B	RECEPTION MECH MECH	N WD F WD F WD	1 3'	- 0" 7	7' - 0" 1	3/4" 1/4" TEMP. 3/4" - 3/4" -	1	MTL - MTL - MTL -		-601	7/A-601 7/A-601 1/A-601	SEE PLANS OPENING FRAME
205A 205B	ACADEMIC CORRIDOR ACADEMIC CORRIDOR	N WD				3/4" 1/4" TEMP. 3/4" 1/4" TEMP.		MTL B-Label 90 Min. MTL B-Label 90	27 9/A-601 8/A 27 9/A-601 8/A		7/A-601 7/A-601	CONCRETE MASONRY UNITS SEALANT SEALANT OF THE DOOR FRAME
206 207	SG SG	F WD	1 3'	- 0" 7	7' - 0" 1	3/4" - 3/4" -	4	MTL -			7/A-601	SILL SILL
208 209 211	OFFICE OFFICE CC	F WD F WD	1 3' 1 3'	- 0" 7 - 0" 7	7' - 0" 1 7' - 0" 1	3/4" - 3/4" - 3/4" -	4	MTL - MTL - MTL -	32 9/A-601 8/A 21 9/A-601 8/A	x-601	7/A-601 7/A-601 7/A-601	CONCRETE MASONRY UNITS CONCRETE MASONRY UNITS FINISH FLOORING. SEE INTERIOR SUITETTE
212 213 214	ELEC IDF OFFICE	F WD F WD	1 3'	- 0" 7	7' - 0" 1	3/4" - 3/4" - 3/4" -	1	MTL - MTL - MTL -	12 9/A-601 8/A	-601	7/A-601 7/A-601 7/A-601	SEALANT MASONRY ANCHOR SHEETS
215 216 218A	OFFICE RESTROOM CLASSROOM	F WD F WD	1 2'	- 0" 7	7' - 0" 1	3/4" - 3/4" - 3/4" -	1 1	MTL - MTL	9/A-601 8/A 14 9/A-601 8/A	x-601	7/A-601 7/A-601	
218B 219A 219B	CLASSROOM CLASSROOM CLASSROOM	F WD F WD	1 3'	- 0" 7	7' - 0" 1	3/4" - 3/4" - 3/4" -	5 5	MTL - MTL - MTL -	11 9/A-601 8/A 11 9/A-601 8/A	x-601	7/A-601 7/A-601 7/A-601	SEE PLANS
220 221 222	CLASSROOM CLASSROOM CLASSROOM	F WD F WD	1 3' 1 3'	- 0" 7 - 0" 7	7' - 0" 1 7' - 0" 1	3/4" - 3/4" - 3/4" -	5 5	MTL - MTL - MTL -	11 9/A-601 8/A 11 9/A-601 8/A	x-601	7/A-601 7/A-601 7/A-601	
224 225 226	CLASSROOM CLASSROOM CLASSROOM	F WD F WD	1 3' 1 3'	- 0" 7 - 0" 7	7' - 0" 1 7' - 0" 1	3/4" - 3/4" - 3/4" -	5 5	MTL - MTL - MTL	11 9/A-601 8/A 11 9/A-601 8/A	x-601 x-601	7/A-601 7/A-601 7/A-601	6 CMU INT. DOOR HEAD 5 CMU - INT. DOOR JAMB 4 CMU - INT. DOOR SILL
227 228	CLASSROOM CLASSROOM	F WD F WD	1 3' 1 3'	- 0" 7 - 0" 7	7' - 0" 1 7' - 0" 1	3/4" - 3/4" -	5 5	MTL - MTL -	11 9/A-601 8/A 11 9/A-601 8/A	x-601	7/A-601 7/A-601	A-601 1 1/2" = 1'-0" A-601 1 1/2" = 1'-0" SEE PLANS
229 230A 231	CLASSROOM TEACHER'S WORKROOM TEXTBOOK STORAGE	F WD F WD	1 3' 1 3'	- 0" 7 - 0" 7	7' - 0" 1 7' - 0" 1	3/4" - 3/4" - 3/4" -	5 1	MTL - MTL - MTL -	06 9/A-601 8/A 09 9/A-601 8/A	x-601 x-601	7/A-601 7/A-601 7/A-601	INTERIOR EXTERIOR
232 233 234	TLT TLT MOTHER'S ROOM	F WD F WD N WD	1 3' 1 3'	- 0" 7 - 0" 7	7' - 0" 1 7' - 0" 1	3/4" - 3/4" - 3/4" 1/4" TEMP.	1 1	MTL - MTL - MTL -	07 9/A-601 8/A 07 9/A-601 8/A	x-601 x-601	7/A-601 7/A-601 7/A-601	4" EXTRUDED POLYSTYRENE BOARD 6" 4" EXTRUDED POLYSTYRENE BOARD A" EXTRUDED POLYSTYRENE BOARD
235A 235B 236	MUSIC ROOM MUSIC ROOM TEXTBOOK STORAGE	F WD F WD	1 3' 1 3'	- 0" 7 - 0" 7	7' - 0" 1 7' - 0" 1	3/4" - 3/4" - 3/4" -	5 1	MTL - MTL - MTL -		x-601 x-601	7/A-601 7/A-601	INSULATION PRECAST CONCRETE PRECAST CONCRETE PRECAST CONCRETE PRECAST CONCRETE
237 238	MEDIA EQ STORAGE MEDIA PROCESSING OFFICE MEDIA CENTER	F WD WD	1 3'	- 0" 7	7' - 0" 1	3/4" - 3/4" - 3/4" 1/4" TEMP.	1	MTL -	09 9/A-601 8/A 04 9/A-601 8/A 20 9/A-601 8/A	-601	7/A-601	DRIP EDGE WOOD BLOCKING WOOD BLOCKING DOOR THRESHOLD WOOD BLOCKING WOOD BLOCKING FINISH FLOORING.
239A 239B	MEDIA CENTER MEDIA CENTER	N WD N WD				3/4" 1/4" TEMP. 3/4" 1/4" TEMP.		MTL -	20 9/A-601 8/A			TREATED 2X4 BACKER ROD & BACKER ROD & SEE INTERIOR DWGS DWGS BACKER ROD &
												SEALANT SEALANT SEALANT INTERIOR EXTERIOR INTERIOR
												EQ 6" EQ COMPRESSIBLE FILLER

GENERAL DOOR & FRAME NOTES

- THESE GENERAL NOTES APPLY TO THE A-601 SERIES DRAWINGS FOR DOOR SCHEDULE/LEGEND DRAWINGS.
- UNDERCUT DOORS AS REQUIRED BY FINAL FLOOR FINISH.
- PROVIDE SEALANT BETWEEN HOLLOW METAL FRAME PERIMETER AND
- SURROUNDING WALL CONSTRUCTION UNLESS NOTED OTHERWISE.
- PROVIDE SEALANT BETWEEN INTERIOR AND EXTERIOR STOREFRONT FRAME PERIMETERS AND SURROUNDING WALL CONSTRUCTION UNLESS NOTED OTHERWISE.
- GROUT FULL NEW HOLLOW METAL DOOR FRAMES IN MASONRY WALL CONSTRUCTION.
- SPOT GROUT NEW HOLLOW METAL DOOR FRAMES IN GYPSUM BOARD WALL CONSTRUCTION.
- WHERE A FIRE RATING IS INDICATED ON THE DOOR SCHEDULE, HARDWARE AND DOOR ASSEMBLY COMPONENTS SHALL MEET THE REQUIREMENTS OF THAT LABEL.
- WHERE ACOUSTICAL RATING IS INDICATED ON THE DOOR SCHEDULE, HARDWARE AND DOOR ASSEMBLY COMPONENTS SHALL MEET THE REQUIREMENTS OF THAT RATING.
- INSTALL DOOR GLASS USING WET-GLAZING METHOD.
- REFER TO PROJECT MANUAL FOR GLAZING.
- REFER TO PROJECT MANUAL FOR HARDWARE INFORMATION.
- DIMENSIONS DO NOT REFLECT SIZE OF PACKAGED DOORS, REFER TO OPENING ELEVATIONS.
- SLIDING DOORS ARE SIZED INSIDE TO INSIDE.

ARCHITECT OF ANY DISCREPANCIES.

3 EXTERIOR DOOR - HEAD
A-601 1 1/2" = 1'-0" **2** EXTERIOR DOOR - JAMB
A-601 1 1/2" = 1'-0"

A-601 1 1/2" = 1'-0" **1** EXTERIOR DOOR - SILL
A-601 1 1/2" = 1'-0"

- REFER TO ELECTRICAL WIRING DIAGRAMS OF POWERED OPENINGS FOR ADDITIONAL INFORMATION. PROVIDE LEAD THICKNESS OR EQUIVALENCY IN DOORS, FRAMES, AND/OR
- WINDOWS AS IN ADJACENT PARTITION. VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS IN THE FIELD PRIOR TO FABRICATION OF DOORS AND FRAMES. THE CONTRACTOR SHALL NOTIFY THE

410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611 v. (312) 755-0770

317.926.1820

ARCHITECTURAL PARTNER

PERKINS & WILL

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DESIGN, URBAN PLANNING

INDIANAPOLIS, IN 45202

WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM

25 NORTH PINE STREET, SUITE B

CIVIL & STRUCTURAL ENGINEER:

8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250

v. (317) 661-1964

MECH. / ELECT. / PLUMB. /

FIRE PROT. ENGINEER: **KBSO CONSULTING** 275 VETERANS WAY SUITE 300

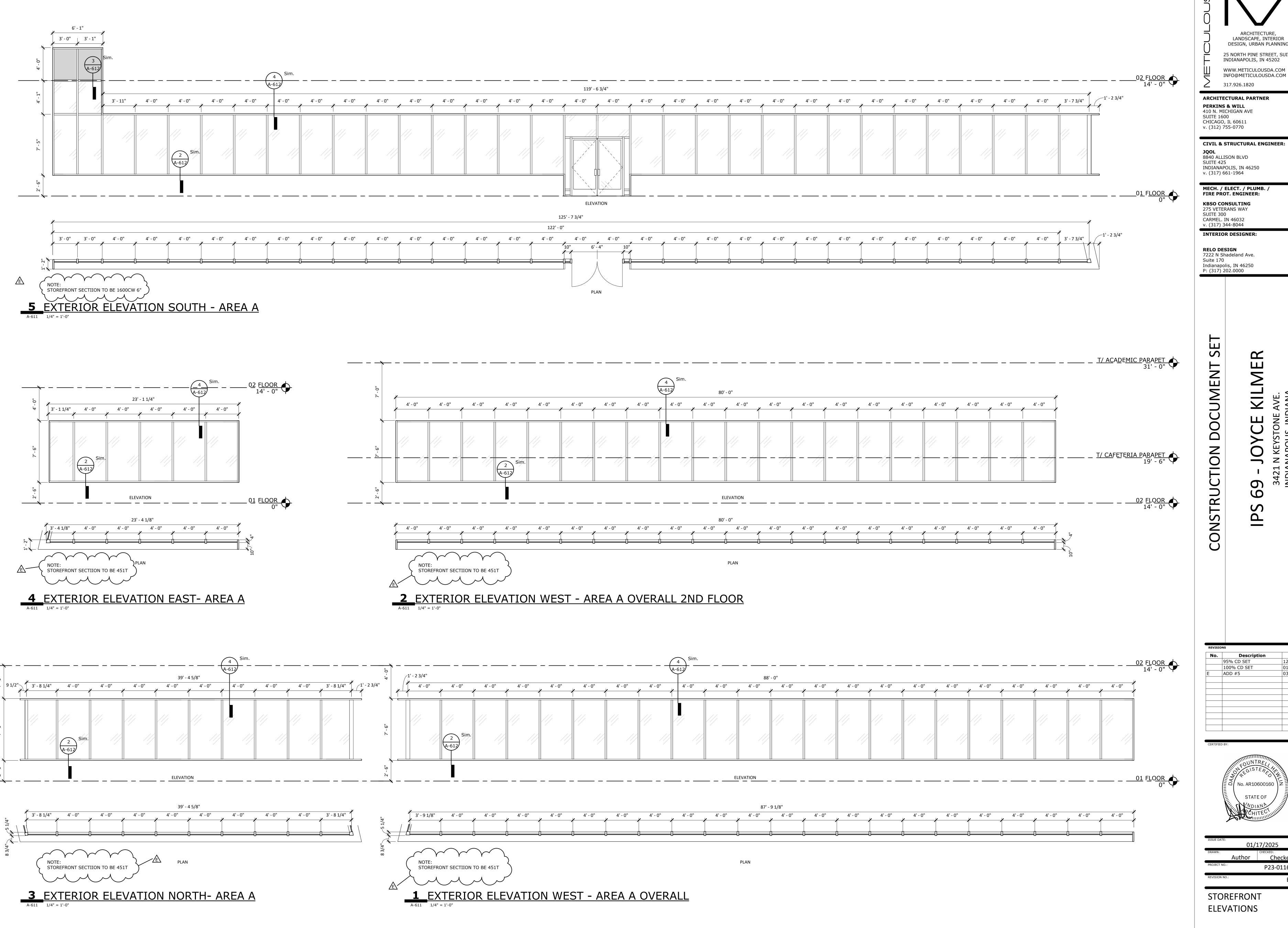
v. (317) 344-8044 INTERIOR DESIGNER:

CARMEL. IN 46032

RELO DESIGN 7222 N Shadeland Ave. Suite 170 Indianapolis, IN 46250 P: (317) 202.0000

SE CONSTRUCTION DOCUM

DOOR AND FRAME SCHEDULE



LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 INFO@METICULOUSDA.COM 317.926.1820

ARCHITECTURAL PARTNER **PERKINS & WILL** 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611

8840 ALLISON BLVD INDIANAPOLIS, IN 46250

MECH. / ELECT. / PLUMB. /

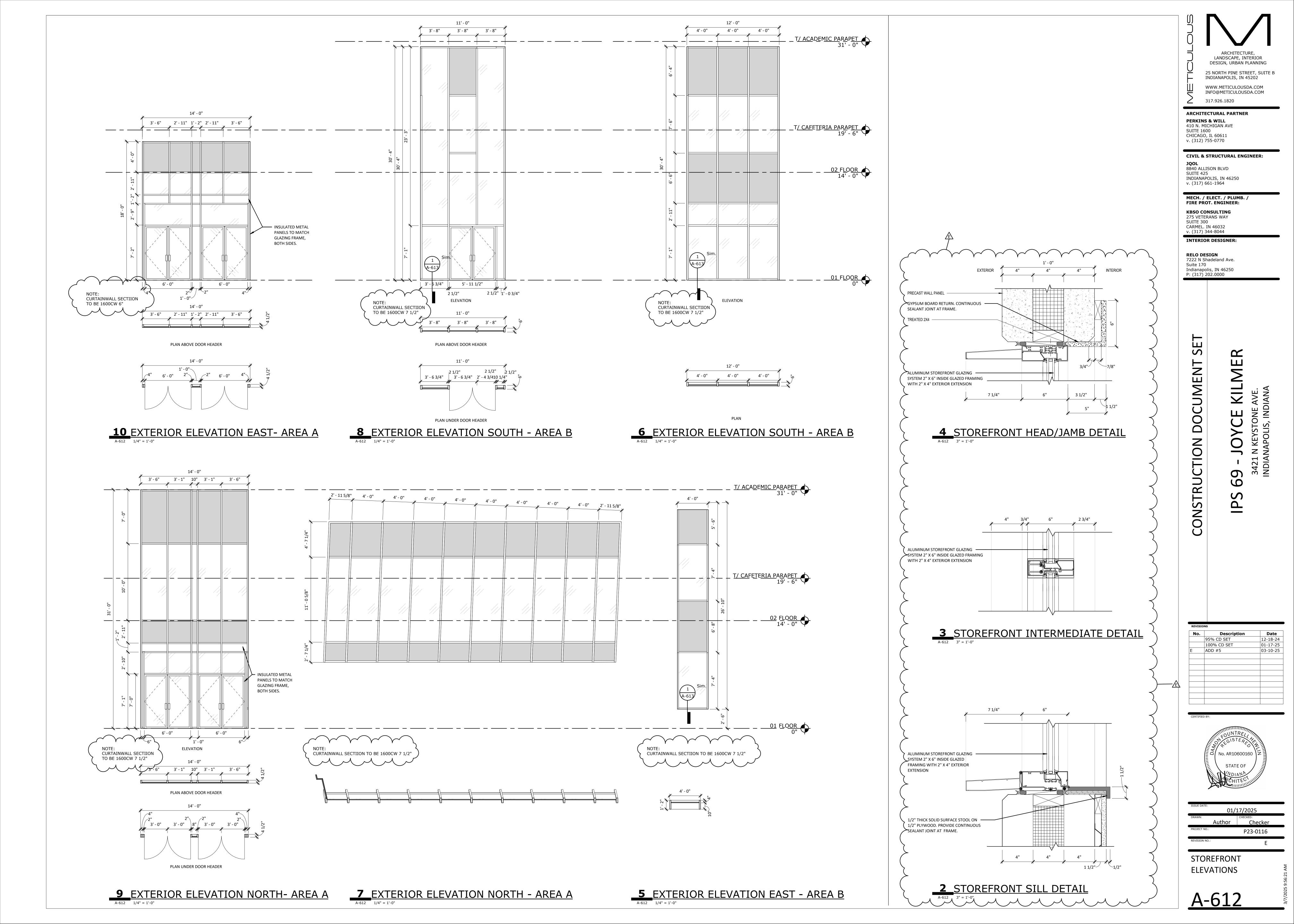
KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032

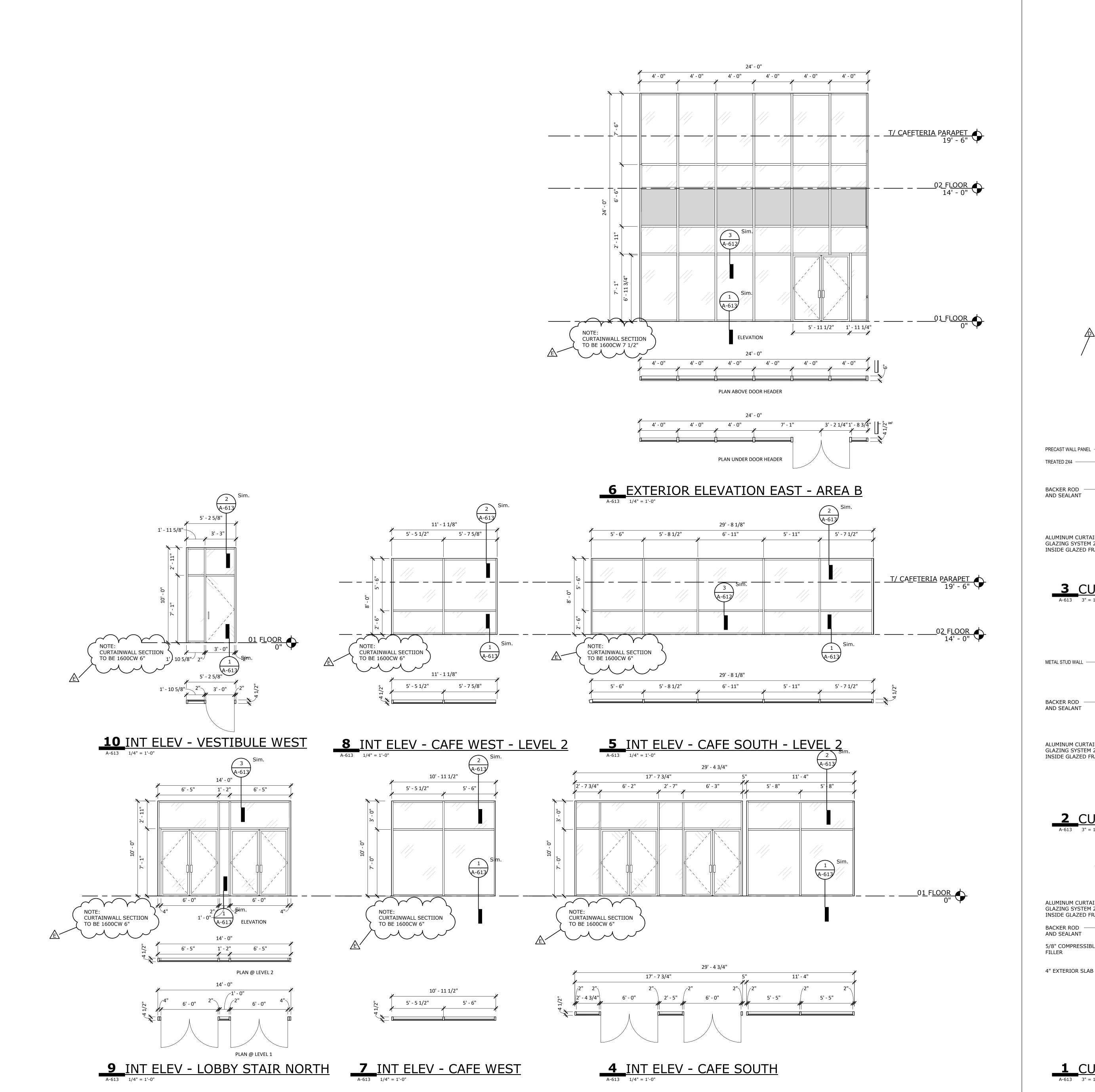
INTERIOR DESIGNER:

RELO DESIGN 7222 N Shadeland Ave. Suite 170 Indianapolis, IN 46250 P: (317) 202.0000

STATE OF

STOREFRONT **ELEVATIONS**







8840 ALLISON BLVD INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

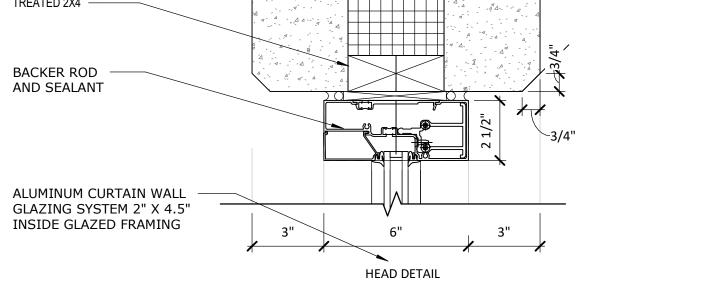
KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032 v. (317) 344-8044

INTERIOR DESIGNER:

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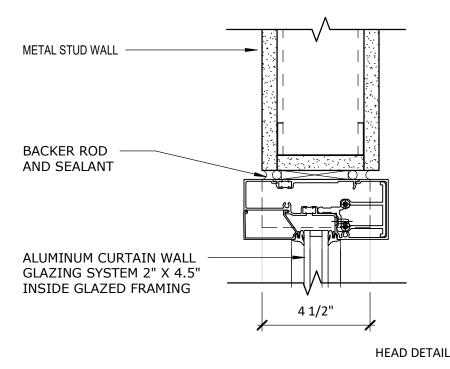
CONSTRUCTION DOCUM

RELO DESIGN 7222 N Shadeland Ave. Suite 170 Indianapolis, IN 46250 P: (317) 202.0000



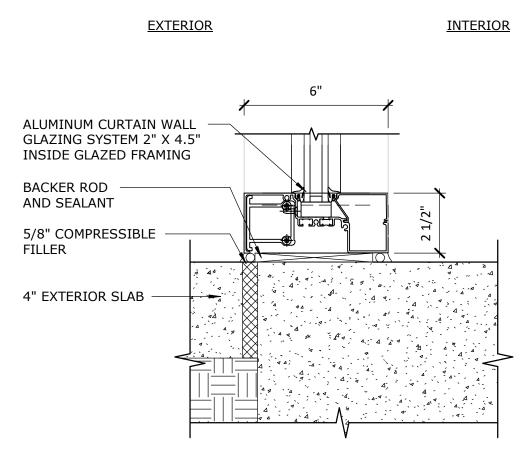
INTERIOR

3 CURTAIN WALL HEAD DETAIL @ EXTERIOR



EXTERIOR

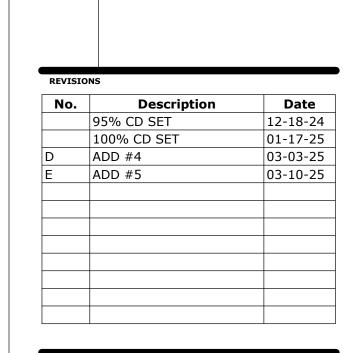
2 CURTAIN WALL HEAD DETAIL @ INTERIOR

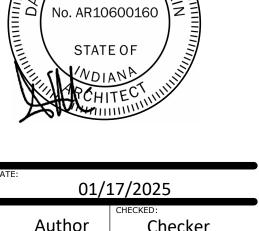


1 CURTAIN WALL SILL DETAIL

A-613 3" = 1'-0"

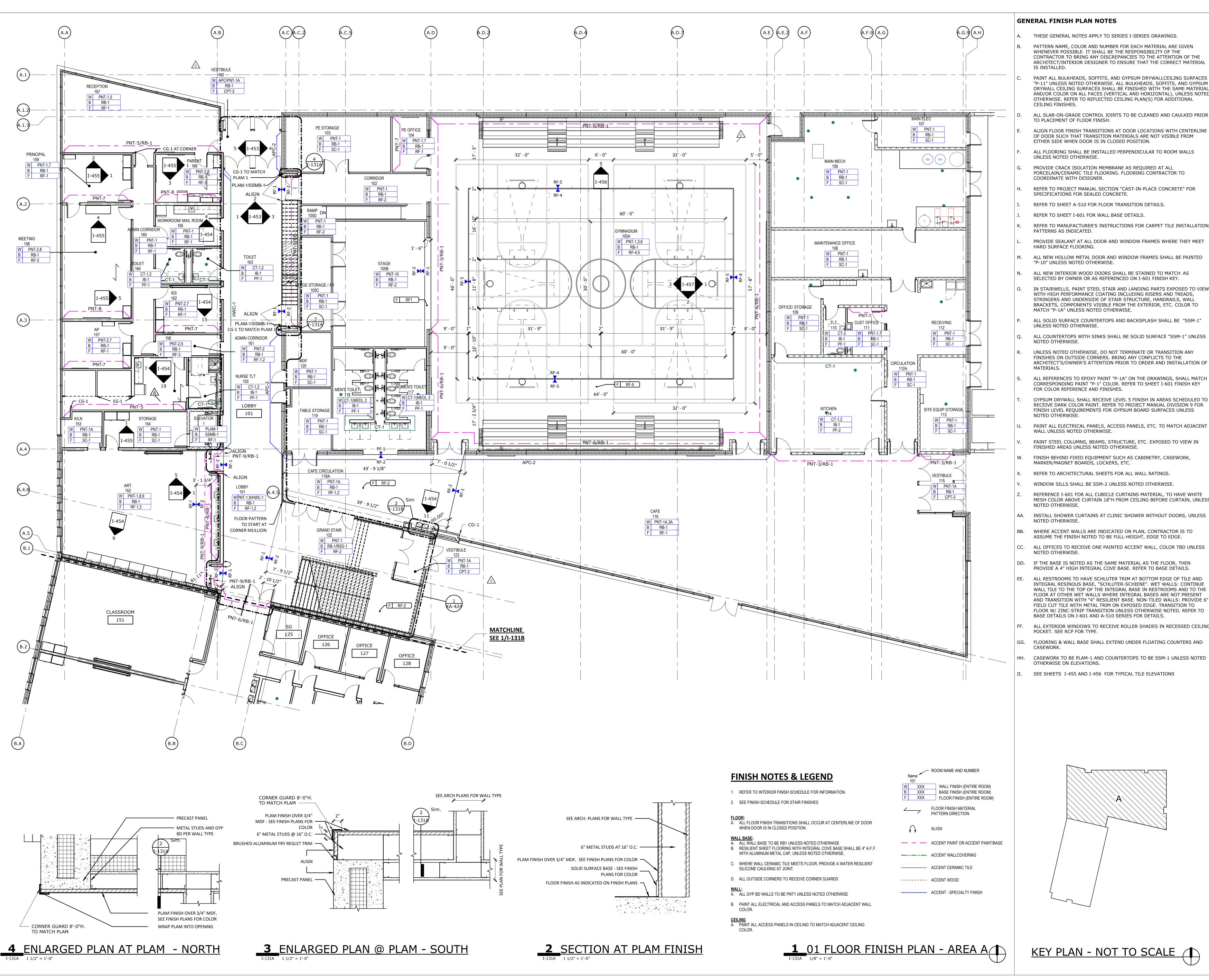
SILL DETAIL





STOREFRONT **ELEVATIONS**

<u>A-613</u>



- THESE GENERAL NOTES APPLY TO SERIES I-SERIES DRAWINGS.
- PATTERN NAME, COLOR AND NUMBER FOR EACH MATERIAL ARE GIVEN WHENEVER POSSIBLE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/INTERIOR DESIGNER TO ENSURE THAT THE CORRECT MATERIAL IS INSTALLED.
- PAINT ALL BULKHEADS, SOFFITS, AND GYPSUM DRYWALLCEILING SURFACES "P-11" UNLESS NOTED OTHERWISE. ALL BULKHEADS, SOFFITS, AND GYPSUM DRYWALL CEILING SURFACES SHALL BE FINISHED WITH THE SAME MATERIAL AND/OR COLOR ON ALL FACES (VERTICAL AND HORIZONTAL), UNLESS NOTED OTHERWISE. REFER TO REFLECTED CEILING PLAN(S) FOR ADDITIONAL

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8840 ALLISON BLVD

v. (317) 661-1964

KBSO CONSULTING

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v. (317) 344-8044

RELO DESIGN

Suite 170

INTERIOR DESIGNER:

7222 N Shadeland Ave.

Indianapolis, IN 46250

P: (317) 202.0000

SUITE 300

INDIANAPOLIS, IN 46250

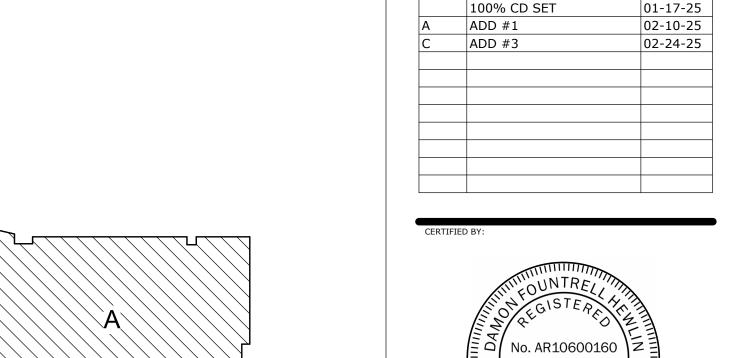
MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

SUITE 1600

410 N. MICHIGAN AVE

25 NORTH PINE STREET, SUITE B

- ALL SLAB-ON-GRADE CONTROL JOINTS TO BE CLEANED AND CAULKED PRIOR TO PLACEMENT OF FLOOR FINISH.
- ALIGN FLOOR FINISH TRANSITIONS AT DOOR LOCATIONS WITH CENTERLINE OF DOOR SUCH THAT TRANSITION MATERIALS ARE NOT VISIBLE FROM EITHER SIDE WHEN DOOR IS IN CLOSED POSITION.
- ALL FLOORING SHALL BE INSTALLED PERPENDICULAR TO ROOM WALLS
- PROVIDE CRACK ISOLATION MEMBRANE AS REQUIRED AT ALL PORCELAIN/CERAMIC TILE FLOORING. FLOORING CONTRACTOR TO COORDINATE WITH DESIGNER.
- REFER TO PROJECT MANUAL SECTION "CAST-IN-PLACE CONCRETE" FOR SPECIFICATIONS FOR SEALED CONCRETE.
- REFER TO SHEET A-510 FOR FLOOR TRANSITION DETAILS.
- REFER TO SHEET I-601 FOR WALL BASE DETAILS.
- REFER TO MANUFACTURER'S INSTRUCTIONS FOR CARPET TILE INSTALLATION PATTERNS AS INDICATED.
- PROVIDE SEALANT AT ALL DOOR AND WINDOW FRAMES WHERE THEY MEET HARD SURFACE FLOORING.
- ALL NEW HOLLOW METAL DOOR AND WINDOW FRAMES SHALL BE PAINTED
- ALL NEW INTERIOR WOOD DOORS SHALL BE STAINED TO MATCH AS SELECTED BY OWNER OR AS REFERENCED ON I-601 FINISH KEY.
- IN STAIRWELLS, PAINT STEEL STAIR AND LANDING PARTS EXPOSED TO VIEW WITH HIGH PERFORMANCE COATING INCLUDING RISERS AND TREADS, STRINGERS AND UNDERSIDE OF STAIR STRUCTURE, HANDRAILS, WALL BRACKETS, COMPONENTS VISIBLE FROM THE EXTERIOR, ETC. COLOR TO
- ALL SOLID SURFACE COUNTERTOPS AND BACKSPLASH SHALL BE "SSM-1" UNLESS NOTED OTHERWISE.
- ALL COUNTERTOPS WITH SINKS SHALL BE SOLID SURFACE "SSM-1" UNLESS NOTED OTHERWISE.
- UNLESS NOTED OTHERWISE, DO NOT TERMINATE OR TRANSITION ANY FINISHES ON OUTSIDE CORNERS. BRING ANY CONFLICTS TO THE ARCHITECT'S/OWNER'S ATTENTION PRIOR TO ORDER AND INSTALLATION OF
- ALL REFERENCES TO EPOXY PAINT "P-1A" ON THE DRAWINGS, SHALL MATCH CORRESPONDING PAINT "P-1" COLOR. REFER TO SHEET I-601 FINISH KEY FOR COLOR REFERENCE AND FINISHES.
- GYPSUM DRYWALL SHALL RECEIVE LEVEL 5 FINISH IN AREAS SCHEDULED TO RECEIVE DARK COLOR PAINT. REFER TO PROJECT MANUAL DIVISION 9 FOR FINISH LEVEL REQUIREMENTS FOR GYPSUM BOARD SURFACES UNLESS NOTED OTHERWISE.
- WALL UNLESS NOTED OTHERWISE.
- PAINT STEEL COLUMNS, BEAMS, STRUCTURE, ETC. EXPOSED TO VIEW IN FINISHED AREAS UNLESS NOTED OTHERWISE.
- FINISH BEHIND FIXED EQUIPMENT SUCH AS CABINETRY, CASEWORK, MARKER/MAGNET BOARDS, LOCKERS, ETC.
- REFER TO ARCHITECTURAL SHEETS FOR ALL WALL RATINGS.
- WINDOW SILLS SHALL BE SSM-2 UNLESS NOTED OTHERWISE.
- REFERENCE I-601 FOR ALL CUBICLE CURTAINS MATERIAL, TO HAVE WHITE MESH COLOR ABOVE CURTAIN 18"H FROM CEILING BEFORE CURTAIN, UNLESS
- INSTALL SHOWER CURTAINS AT CLINIC SHOWER WITHOUT DOORS, UNLESS NOTED OTHERWISE.
- WHERE ACCENT WALLS ARE INDICATED ON PLAN, CONTRACTOR IS TO ASSUME THE FINISH NOTED TO BE FULL-HEIGHT, EDGE TO EDGE.
- ALL OFFICES TO RECEIVE ONE PAINTED ACCENT WALL, COLOR TBD UNLESS NOTED OTHERWISE.
- IF THE BASE IS NOTED AS THE SAME MATERIAL AS THE FLOOR, THEN PROVIDE A 4" HIGH INTEGRAL COVE BASE. REFER TO BASE DETAILS.
- ALL RESTROOMS TO HAVE SCHLUTER TRIM AT BOTTOM EDGE OF TILE AND INTEGRAL RESINOUS BASE, "SCHLUTER-SCHIENE". WET WALLS: CONTINUE WALL TILE TO THE TOP OF THE INTEGRAL BASE IN RESTROOMS AND TO THE FLOOR AT OTHER WET WALLS WHERE INTEGRAL BASES ARE NOT PRESENT AND TRANSITION WITH "4" RESILIENT BASE. NON-TILED WALLS: PROVIDE 6" FIELD CUT TILE WITH METAL TRIM ON EXPOSED EDGE. TRANSITION TO FLOOR W/ ZINC-STRIP TRANSITION UNLESS OTHERWISE NOTED. REFER TO BASE DETAILS ON I-601 AND A-510 SERIES FOR DETAILS.
- ALL EXTERIOR WINDOWS TO RECEIVE ROLLER SHADES IN RECESSED CEILING POCKET. SEE RCP FOR TYPE.
- FLOORING & WALL BASE SHALL EXTEND UNDER FLOATING COUNTERS AND
- CASEWORK TO BE PLAM-1 AND COUNTERTOPS TO BE SSM-1 UNLESS NOTED OTHERWISE ON ELEVATIONS.
- SEE SHEETS I-455 AND I-456 FOR TYPICAL TILE ELEVATIONS



ISSUE DATE:	01/:	17/2025
DRAWN:	JAM	CHECKED: RS/JW
PROJECT NO.:		P23-0116
REVISION NO.:		С

STATEOF

01 INTERIOR FINISH PLAN - AREA A

95% CD SET

<u>I-131A</u>

KEY PLAN - NOT TO SCALE

- A. THESE GENERAL NOTES APPLY TO SERIES I-SERIES DRAWINGS.
- B. PATTERN NAME, COLOR AND NUMBER FOR EACH MATERIAL ARE GIVEN WHENEVER POSSIBLE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/INTERIOR DESIGNER TO ENSURE THAT THE CORRECT MATERIAL IS INSTALLED.
- PAINT ALL BULKHEADS, SOFFITS, AND GYPSUM DRYWALLCEILING SURFACES "P-11" UNLESS NOTED OTHERWISE. ALL BULKHEADS, SOFFITS, AND GYPSUM DRYWALL CEILING SURFACES SHALL BE FINISHED WITH THE SAME MATERIAL AND/OR COLOR ON ALL FACES (VERTICAL AND HORIZONTAL), UNLESS NOTED OTHERWISE. REFER TO REFLECTED CEILING PLAN(S) FOR ADDITIONAL CEILING FINISHES.

LANDSCAPE, INTERIOR

DESIGN, URBAN PLANNING

INDIANAPOLIS, IN 45202

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317.926.1820

ARCHITECTURAL PARTNER

CIVIL & STRUCTURAL ENGINEER:

PERKINS & WILL

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8840 ALLISON BLVD

v. (317) 661-1964

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FIRE PROT. ENGINEER:

KBSO CONSULTING

275 VETERANS WAY

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RELO DESIGN

Suite 170

INTERIOR DESIGNER:

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P: (317) 202.0000

SUITE 300 CARMEL. IN 46032

MECH. / ELECT. / PLUMB. /

SUITE 1600

410 N. MICHIGAN AVE

25 NORTH PINE STREET, SUITE B

- ALL SLAB-ON-GRADE CONTROL JOINTS TO BE CLEANED AND CAULKED PRIOR TO PLACEMENT OF FLOOR FINISH.
- ALIGN FLOOR FINISH TRANSITIONS AT DOOR LOCATIONS WITH CENTERLINE OF DOOR SUCH THAT TRANSITION MATERIALS ARE NOT VISIBLE FROM EITHER SIDE WHEN DOOR IS IN CLOSED POSITION.
- ALL FLOORING SHALL BE INSTALLED PERPENDICULAR TO ROOM WALLS UNLESS NOTED OTHERWISE.
- PROVIDE CRACK ISOLATION MEMBRANE AS REQUIRED AT ALL PORCELAIN/CERAMIC TILE FLOORING. FLOORING CONTRACTOR TO COORDINATE WITH DESIGNER.
- REFER TO PROJECT MANUAL SECTION "CAST-IN-PLACE CONCRETE" FOR SPECIFICATIONS FOR SEALED CONCRETE.
- REFER TO SHEET A-510 FOR FLOOR TRANSITION DETAILS.
- REFER TO SHEET I-601 FOR WALL BASE DETAILS.

"P-10" UNLESS NOTED OTHERWISE.

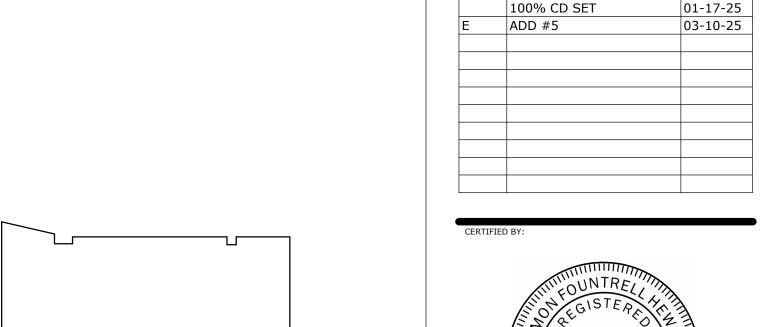
- REFER TO MANUFACTURER'S INSTRUCTIONS FOR CARPET TILE INSTALLATION PATTERNS AS INDICATED.
- L. PROVIDE SEALANT AT ALL DOOR AND WINDOW FRAMES WHERE THEY MEET
- HARD SURFACE FLOORING.

 M. ALL NEW HOLLOW METAL DOOR AND WINDOW FRAMES SHALL BE PAINTED
- N. ALL NEW INTERIOR WOOD DOORS SHALL BE STAINED TO MATCH AS
- SELECTED BY OWNER OR AS REFERENCED ON I-601 FINISH KEY.

 O. IN STAIRWELLS, PAINT STEEL STAIR AND LANDING PARTS EXPOSED TO VIEW
- WITH HIGH PERFORMANCE COATING INCLUDING RISERS AND TREADS, STRINGERS AND UNDERSIDE OF STAIR STRUCTURE, HANDRAILS, WALL BRACKETS, COMPONENTS VISIBLE FROM THE EXTERIOR, ETC. COLOR TO MATCH "P-1A" UNLESS NOTED OTHERWISE.
- P. ALL SOLID SURFACE COUNTERTOPS AND BACKSPLASH SHALL BE "SSM-1" UNLESS NOTED OTHERWISE.
- Q. ALL COUNTERTOPS WITH SINKS SHALL BE SOLID SURFACE "SSM-1" UNLESS NOTED OTHERWISE.
- R. UNLESS NOTED OTHERWISE, DO NOT TERMINATE OR TRANSITION ANY FINISHES ON OUTSIDE CORNERS. BRING ANY CONFLICTS TO THE ARCHITECT'S/OWNER'S ATTENTION PRIOR TO ORDER AND INSTALLATION OF MATERIALS.
- S. ALL REFERENCES TO EPOXY PAINT "P-1A" ON THE DRAWINGS, SHALL MATCH CORRESPONDING PAINT "P-1" COLOR. REFER TO SHEET I-601 FINISH KEY FOR COLOR REFERENCE AND FINISHES.
- GYPSUM DRYWALL SHALL RECEIVE LEVEL 5 FINISH IN AREAS SCHEDULED TO RECEIVE DARK COLOR PAINT. REFER TO PROJECT MANUAL DIVISION 9 FOR FINISH LEVEL REQUIREMENTS FOR GYPSUM BOARD SURFACES UNLESS NOTED OTHERWISE.
- PAINT ALL ELECTRICAL PANELS, ACCESS PANELS, ETC. TO MATCH ADJACENT WALL UNLESS NOTED OTHERWISE.
- PAINT STEEL COLUMNS, BEAMS, STRUCTURE, ETC. EXPOSED TO VIEW IN FINISHED AREAS UNLESS NOTED OTHERWISE.
- FINISH BEHIND FIXED EQUIPMENT SUCH AS CABINETRY, CASEWORK,
- MARKER/MAGNET BOARDS, LOCKERS, ETC.

 REFER TO ARCHITECTURAL SHEETS FOR ALL WALL RATINGS.
- WINDOW SILLS SHALL BE SSM-2 UNLESS NOTED OTHERWISE.
- REFERENCE I-601 FOR ALL CUBICLE CURTAINS MATERIAL, TO HAVE WHITE
- MESH COLOR ABOVE CURTAIN 18"H FROM CEILING BEFORE CURTAIN, UNLESS NOTED OTHERWISE.
- A. INSTALL SHOWER CURTAINS AT CLINIC SHOWER WITHOUT DOORS, UNLESS NOTED OTHERWISE.
- WHERE ACCENT WALLS ARE INDICATED ON PLAN, CONTRACTOR IS TO ASSUME THE FINISH NOTED TO BE FULL-HEIGHT, EDGE TO EDGE.
- C. ALL OFFICES TO RECEIVE ONE PAINTED ACCENT WALL, COLOR TBD UNLESS NOTED OTHERWISE.
- DD. IF THE BASE IS NOTED AS THE SAME MATERIAL AS THE FLOOR, THEN PROVIDE A 4" HIGH INTEGRAL COVE BASE. REFER TO BASE DETAILS.
- ALL RESTROOMS TO HAVE SCHLUTER TRIM AT BOTTOM EDGE OF TILE AND INTEGRAL RESINOUS BASE, "SCHLUTER-SCHIENE". WET WALLS: CONTINUE WALL TILE TO THE TOP OF THE INTEGRAL BASE IN RESTROOMS AND TO THE FLOOR AT OTHER WET WALLS WHERE INTEGRAL BASES ARE NOT PRESENT AND TRANSITION WITH "4" RESILIENT BASE. NON-TILED WALLS: PROVIDE 6" FIELD CUT TILE WITH METAL TRIM ON EXPOSED EDGE. TRANSITION TO FLOOR W/ ZINC-STRIP TRANSITION UNLESS OTHERWISE NOTED. REFER TO BASE DETAILS ON I-601 AND A-510 SERIES FOR DETAILS.
- ALL EXTERIOR WINDOWS TO RECEIVE ROLLER SHADES IN RECESSED CEILING POCKET. SEE RCP FOR TYPE.
- GG. FLOORING & WALL BASE SHALL EXTEND UNDER FLOATING COUNTERS AND CASEWORK.
- HH. CASEWORK TO BE PLAM-1 AND COUNTERTOPS TO BE SSM-1 UNLESS NOTED
- OTHERWISE ON ELEVATIONS.

SEE SHEETS I-455 AND I-456 FOR TYPICAL TILE ELEVATIONS



<u> </u>	SHOTCH CH	ITEC MINIS
ISSUE DATE:	01/	17/2025
DRAWN:	JAM	CHECKED: RS/JW
PROJECT NO.:		P23-0116

No. AR10600160

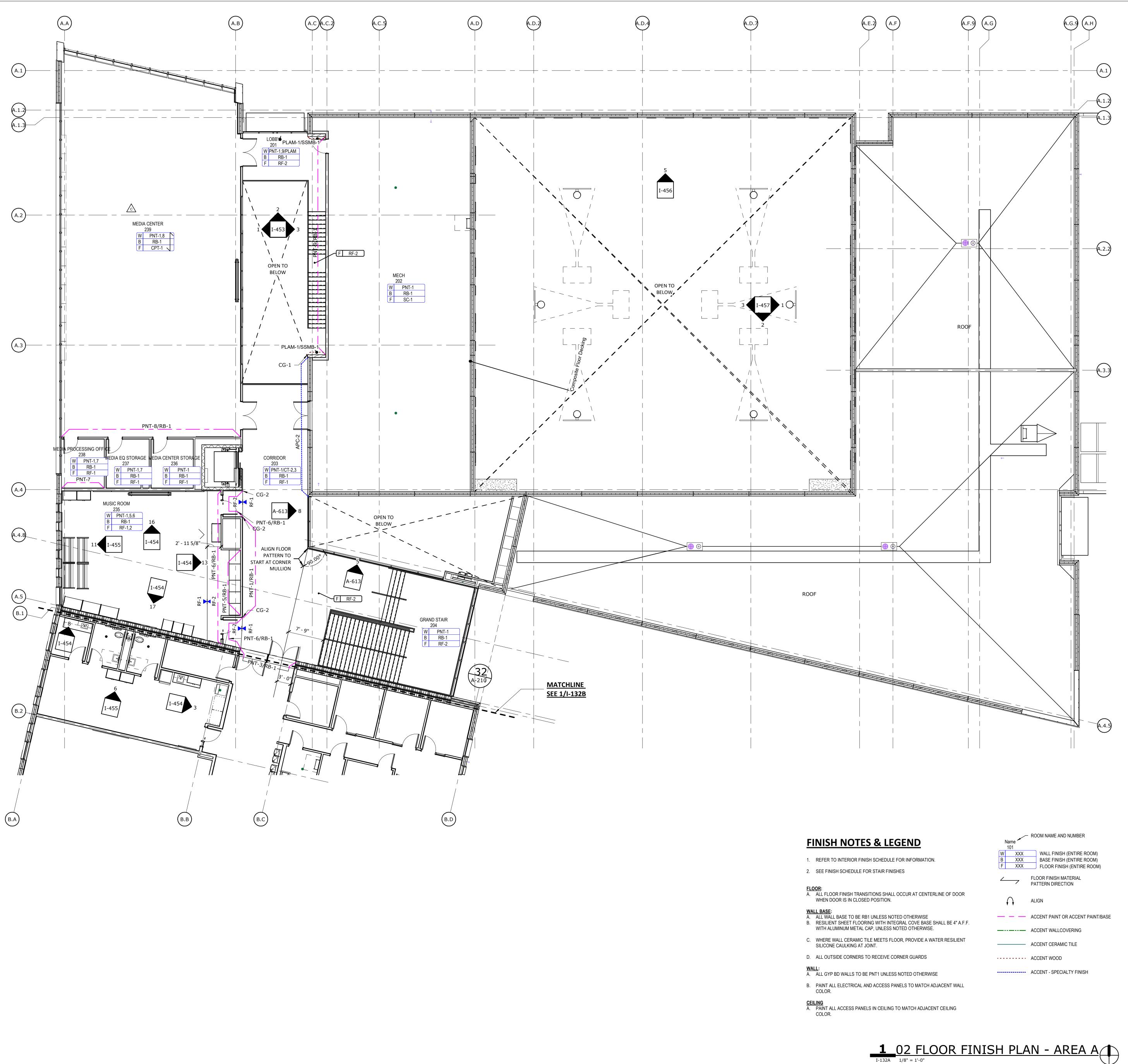
STATEOF

01 INTERIOR FINISH PLAN - AREA B

95% CD SET

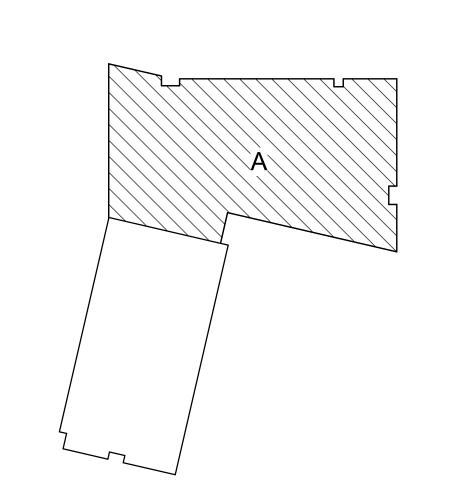
KEY PLAN - NOT TO SCALE

I-131B



- PATTERN NAME, COLOR AND NUMBER FOR EACH MATERIAL ARE GIVEN WHENEVER POSSIBLE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BRING ANY DISCREPANCIES TO THE ATTENTION OF THE
 - PAINT ALL BULKHEADS, SOFFITS, AND GYPSUM DRYWALLCEILING SURFACES "P-11" UNLESS NOTED OTHERWISE. ALL BULKHEADS, SOFFITS, AND GYPSUM DRYWALL CEILING SURFACES SHALL BE FINISHED WITH THE SAME MATERIAL AND/OR COLOR ON ALL FACES (VERTICAL AND HORIZONTAL), UNLESS NOTED OTHERWISE. REFER TO REFLECTED CEILING PLAN(S) FOR ADDITIONAL
- REFER TO PROJECT MANUAL SECTION "CAST-IN-PLACE CONCRETE" FOR SPECIFICATIONS FOR SEALED CONCRETE.
- REFER TO SHEET A-510 FOR FLOOR TRANSITION DETAILS.
- REFER TO MANUFACTURER'S INSTRUCTIONS FOR CARPET TILE INSTALLATION PATTERNS AS INDICATED.
- PROVIDE SEALANT AT ALL DOOR AND WINDOW FRAMES WHERE THEY MEET HARD SURFACE FLOORING.
- ALL NEW INTERIOR WOOD DOORS SHALL BE STAINED TO MATCH AS
- IN STAIRWELLS, PAINT STEEL STAIR AND LANDING PARTS EXPOSED TO VIEW WITH HIGH PERFORMANCE COATING INCLUDING RISERS AND TREADS, STRINGERS AND UNDERSIDE OF STAIR STRUCTURE, HANDRAILS, WALL
- ALL SOLID SURFACE COUNTERTOPS AND BACKSPLASH SHALL BE "SSM-1" UNLESS NOTED OTHERWISE.
- ALL COUNTERTOPS WITH SINKS SHALL BE SOLID SURFACE "SSM-1" UNLESS
- UNLESS NOTED OTHERWISE, DO NOT TERMINATE OR TRANSITION ANY FINISHES ON OUTSIDE CORNERS. BRING ANY CONFLICTS TO THE ARCHITECT'S/OWNER'S ATTENTION PRIOR TO ORDER AND INSTALLATION OF
- ALL REFERENCES TO EPOXY PAINT "P-1A" ON THE DRAWINGS, SHALL MATCH CORRESPONDING PAINT "P-1" COLOR. REFER TO SHEET I-601 FINISH KEY
- GYPSUM DRYWALL SHALL RECEIVE LEVEL 5 FINISH IN AREAS SCHEDULED TO RECEIVE DARK COLOR PAINT. REFER TO PROJECT MANUAL DIVISION 9 FOR FINISH LEVEL REQUIREMENTS FOR GYPSUM BOARD SURFACES UNLESS NOTED OTHERWISE.
- WALL UNLESS NOTED OTHERWISE.
- FINISHED AREAS UNLESS NOTED OTHERWISE.

- INSTALL SHOWER CURTAINS AT CLINIC SHOWER WITHOUT DOORS, UNLESS NOTED OTHERWISE.
- WHERE ACCENT WALLS ARE INDICATED ON PLAN, CONTRACTOR IS TO ASSUME THE FINISH NOTED TO BE FULL-HEIGHT, EDGE TO EDGE.
- ALL OFFICES TO RECEIVE ONE PAINTED ACCENT WALL, COLOR TBD UNLESS
- ALL RESTROOMS TO HAVE SCHLUTER TRIM AT BOTTOM EDGE OF TILE AND INTEGRAL RESINOUS BASE, "SCHLUTER-SCHIENE". WET WALLS: CONTINUE WALL TILE TO THE TOP OF THE INTEGRAL BASE IN RESTROOMS AND TO THE FLOOR AT OTHER WET WALLS WHERE INTEGRAL BASES ARE NOT PRESENT AND TRANSITION WITH "4" RESILIENT BASE. NON-TILED WALLS: PROVIDE 6" FIELD CUT TILE WITH METAL TRIM ON EXPOSED EDGE. TRANSITION TO FLOOR W/ ZINC-STRIP TRANSITION UNLESS OTHERWISE NOTED. REFER TO
- ALL EXTERIOR WINDOWS TO RECEIVE ROLLER SHADES IN RECESSED CEILING
- CASEWORK TO BE PLAM-1 AND COUNTERTOPS TO BE SSM-1 UNLESS NOTED
- SEE SHEETS I-455 AND I-456 FOR TYPICAL TILE ELEVATIONS



KEY PLAN - NOT TO SCALE

- THESE GENERAL NOTES APPLY TO SERIES I-SERIES DRAWINGS.
- ARCHITECT/INTERIOR DESIGNER TO ENSURE THAT THE CORRECT MATERIAL IS INSTALLED.
 - CEILING FINISHES.
 - ALL SLAB-ON-GRADE CONTROL JOINTS TO BE CLEANED AND CAULKED PRIOR TO PLACEMENT OF FLOOR FINISH.
 - ALIGN FLOOR FINISH TRANSITIONS AT DOOR LOCATIONS WITH CENTERLINE OF DOOR SUCH THAT TRANSITION MATERIALS ARE NOT VISIBLE FROM EITHER SIDE WHEN DOOR IS IN CLOSED POSITION.
 - ALL FLOORING SHALL BE INSTALLED PERPENDICULAR TO ROOM WALLS UNLESS NOTED OTHERWISE.
 - PROVIDE CRACK ISOLATION MEMBRANE AS REQUIRED AT ALL PORCELAIN/CERAMIC TILE FLOORING. FLOORING CONTRACTOR TO COORDINATE WITH DESIGNER.

- REFER TO SHEET I-601 FOR WALL BASE DETAILS.

- ALL NEW HOLLOW METAL DOOR AND WINDOW FRAMES SHALL BE PAINTED "P-10" UNLESS NOTED OTHERWISE.
- SELECTED BY OWNER OR AS REFERENCED ON I-601 FINISH KEY.
- BRACKETS, COMPONENTS VISIBLE FROM THE EXTERIOR, ETC. COLOR TO MATCH "P-1A" UNLESS NOTED OTHERWISE.
- NOTED OTHERWISE.
- FOR COLOR REFERENCE AND FINISHES.
- PAINT ALL ELECTRICAL PANELS, ACCESS PANELS, ETC. TO MATCH ADJACENT
- PAINT STEEL COLUMNS, BEAMS, STRUCTURE, ETC. EXPOSED TO VIEW IN
- FINISH BEHIND FIXED EQUIPMENT SUCH AS CABINETRY, CASEWORK,
- MARKER/MAGNET BOARDS, LOCKERS, ETC.
- REFER TO ARCHITECTURAL SHEETS FOR ALL WALL RATINGS.
- WINDOW SILLS SHALL BE SSM-2 UNLESS NOTED OTHERWISE.
- REFERENCE I-601 FOR ALL CUBICLE CURTAINS MATERIAL, TO HAVE WHITE MESH COLOR ABOVE CURTAIN 18"H FROM CEILING BEFORE CURTAIN, UNLESS
- NOTED OTHERWISE.
- IF THE BASE IS NOTED AS THE SAME MATERIAL AS THE FLOOR, THEN PROVIDE A 4" HIGH INTEGRAL COVE BASE. REFER TO BASE DETAILS.
- BASE DETAILS ON I-601 AND A-510 SERIES FOR DETAILS.
- POCKET. SEE RCP FOR TYPE.
- FLOORING & WALL BASE SHALL EXTEND UNDER FLOATING COUNTERS AND
- OTHERWISE ON ELEVATIONS.

95% CD SET 100% CD SET ADD #3

LANDSCAPE, INTERIOR

25 NORTH PINE STREET, SUITE B

DESIGN, URBAN PLANNING

INDIANAPOLIS, IN 45202

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ARCHITECTURAL PARTNER

CIVIL & STRUCTURAL ENGINEER:

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INDIANAPOLIS, IN 46250

FIRE PROT. ENGINEER:

KBSO CONSULTING

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v. (317) 344-8044

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SUITE 300

MECH. / ELECT. / PLUMB. /

SUITE 1600

410 N. MICHIGAN AVE



ISSUE DATE:	01/	17/2025
DRAWN:		CHECKED:
	JAM	RS/JW
PROJECT NO.:		P23-0116

02 INTERIOR FINISH PLAN - AREA A

- THESE GENERAL NOTES APPLY TO SERIES I-SERIES DRAWINGS.
- PATTERN NAME, COLOR AND NUMBER FOR EACH MATERIAL ARE GIVEN WHENEVER POSSIBLE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/INTERIOR DESIGNER TO ENSURE THAT THE CORRECT MATERIAL IS INSTALLED.
- PAINT ALL BULKHEADS, SOFFITS, AND GYPSUM DRYWALLCEILING SURFACES "P-11" UNLESS NOTED OTHERWISE. ALL BULKHEADS, SOFFITS, AND GYPSUM DRYWALL CEILING SURFACES SHALL BE FINISHED WITH THE SAME MATERIAL AND/OR COLOR ON ALL FACES (VERTICAL AND HORIZONTAL), UNLESS NOTED OTHERWISE. REFER TO REFLECTED CEILING PLAN(S) FOR ADDITIONAL

LANDSCAPE, INTERIOR

DESIGN, URBAN PLANNING

INDIANAPOLIS, IN 45202

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KBSO CONSULTING

275 VETERANS WAY

v. (317) 344-8044

RELO DESIGN

P: (317) 202.0000

Suite 170

INTERIOR DESIGNER:

7222 N Shadeland Ave.

Indianapolis, IN 46250

SUITE 300 CARMEL. IN 46032

MECH. / ELECT. / PLUMB. /

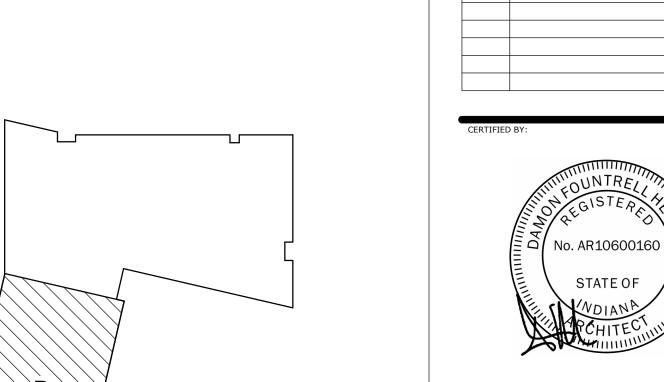
SUITE 1600

SUITE 425

410 N. MICHIGAN AVE

25 NORTH PINE STREET, SUITE B

- ALL SLAB-ON-GRADE CONTROL JOINTS TO BE CLEANED AND CAULKED PRIOR
- ALIGN FLOOR FINISH TRANSITIONS AT DOOR LOCATIONS WITH CENTERLINE OF DOOR SUCH THAT TRANSITION MATERIALS ARE NOT VISIBLE FROM EITHER SIDE WHEN DOOR IS IN CLOSED POSITION.
- ALL FLOORING SHALL BE INSTALLED PERPENDICULAR TO ROOM WALLS
- PROVIDE CRACK ISOLATION MEMBRANE AS REQUIRED AT ALL PORCELAIN/CERAMIC TILE FLOORING. FLOORING CONTRACTOR TO COORDINATE WITH DESIGNER.
- REFER TO PROJECT MANUAL SECTION "CAST-IN-PLACE CONCRETE" FOR
- REFER TO SHEET A-510 FOR FLOOR TRANSITION DETAILS.
- REFER TO SHEET I-601 FOR WALL BASE DETAILS.
- REFER TO MANUFACTURER'S INSTRUCTIONS FOR CARPET TILE INSTALLATION PATTERNS AS INDICATED.
- PROVIDE SEALANT AT ALL DOOR AND WINDOW FRAMES WHERE THEY MEET HARD SURFACE FLOORING.
- ALL NEW HOLLOW METAL DOOR AND WINDOW FRAMES SHALL BE PAINTED
- ALL NEW INTERIOR WOOD DOORS SHALL BE STAINED TO MATCH AS SELECTED BY OWNER OR AS REFERENCED ON I-601 FINISH KEY.
- IN STAIRWELLS, PAINT STEEL STAIR AND LANDING PARTS EXPOSED TO VIEW WITH HIGH PERFORMANCE COATING INCLUDING RISERS AND TREADS, STRINGERS AND UNDERSIDE OF STAIR STRUCTURE, HANDRAILS, WALL
- ALL SOLID SURFACE COUNTERTOPS AND BACKSPLASH SHALL BE "SSM-1" UNLESS NOTED OTHERWISE.
- ALL COUNTERTOPS WITH SINKS SHALL BE SOLID SURFACE "SSM-1" UNLESS
- UNLESS NOTED OTHERWISE, DO NOT TERMINATE OR TRANSITION ANY FINISHES ON OUTSIDE CORNERS. BRING ANY CONFLICTS TO THE ARCHITECT'S/OWNER'S ATTENTION PRIOR TO ORDER AND INSTALLATION OF
- ALL REFERENCES TO EPOXY PAINT "P-1A" ON THE DRAWINGS, SHALL MATCH CORRESPONDING PAINT "P-1" COLOR. REFER TO SHEET I-601 FINISH KEY FOR COLOR REFERENCE AND FINISHES.
- GYPSUM DRYWALL SHALL RECEIVE LEVEL 5 FINISH IN AREAS SCHEDULED TO RECEIVE DARK COLOR PAINT. REFER TO PROJECT MANUAL DIVISION 9 FOR FINISH LEVEL REQUIREMENTS FOR GYPSUM BOARD SURFACES UNLESS
- PAINT ALL ELECTRICAL PANELS, ACCESS PANELS, ETC. TO MATCH ADJACENT WALL UNLESS NOTED OTHERWISE.
- PAINT STEEL COLUMNS, BEAMS, STRUCTURE, ETC. EXPOSED TO VIEW IN FINISHED AREAS UNLESS NOTED OTHERWISE.
- FINISH BEHIND FIXED EQUIPMENT SUCH AS CABINETRY, CASEWORK,
- MARKER/MAGNET BOARDS, LOCKERS, ETC.
- WINDOW SILLS SHALL BE SSM-2 UNLESS NOTED OTHERWISE.
- REFERENCE I-601 FOR ALL CUBICLE CURTAINS MATERIAL, TO HAVE WHITE MESH COLOR ABOVE CURTAIN 18"H FROM CEILING BEFORE CURTAIN, UNLESS
- INSTALL SHOWER CURTAINS AT CLINIC SHOWER WITHOUT DOORS, UNLESS
- WHERE ACCENT WALLS ARE INDICATED ON PLAN, CONTRACTOR IS TO ASSUME THE FINISH NOTED TO BE FULL-HEIGHT, EDGE TO EDGE.
- ALL OFFICES TO RECEIVE ONE PAINTED ACCENT WALL, COLOR TBD UNLESS
- IF THE BASE IS NOTED AS THE SAME MATERIAL AS THE FLOOR, THEN PROVIDE A 4" HIGH INTEGRAL COVE BASE. REFER TO BASE DETAILS.
- ALL RESTROOMS TO HAVE SCHLUTER TRIM AT BOTTOM EDGE OF TILE AND INTEGRAL RESINOUS BASE, "SCHLUTER-SCHIENE". WET WALLS: CONTINUE WALL TILE TO THE TOP OF THE INTEGRAL BASE IN RESTROOMS AND TO THE FLOOR AT OTHER WET WALLS WHERE INTEGRAL BASES ARE NOT PRESENT AND TRANSITION WITH "4" RESILIENT BASE. NON-TILED WALLS: PROVIDE 6" FIELD CUT TILE WITH METAL TRIM ON EXPOSED EDGE. TRANSITION TO
- ALL EXTERIOR WINDOWS TO RECEIVE ROLLER SHADES IN RECESSED CEILING
- GG. FLOORING & WALL BASE SHALL EXTEND UNDER FLOATING COUNTERS AND
- HH. CASEWORK TO BE PLAM-1 AND COUNTERTOPS TO BE SSM-1 UNLESS NOTED
- OTHERWISE ON ELEVATIONS.



ISSUE DATE:		
	01/	17/2025
DRAWN:	JAM	CHECKED: RS/JW
PROJECT NO.:		P23-0116
REVISION NO.:		E

02 INTERIOR FINISH PLAN - AREA B

95% CD SET 100% CD SET

ADD #5

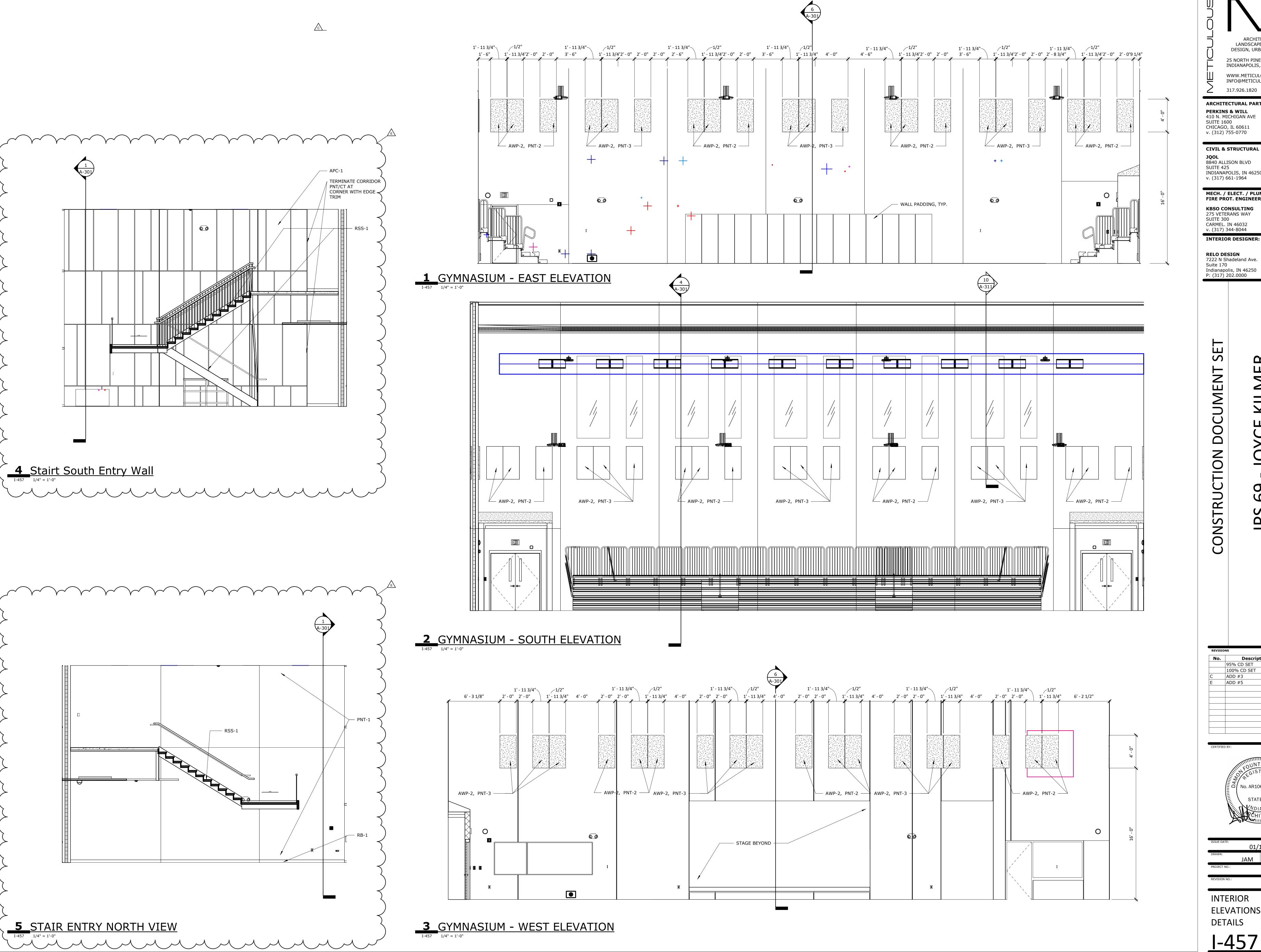
KEY PLAN - NOT TO SCALE

CEILING FINISHES. TO PLACEMENT OF FLOOR FINISH. UNLESS NOTED OTHERWISE. SPECIFICATIONS FOR SEALED CONCRETE. "P-10" UNLESS NOTED OTHERWISE. BRACKETS, COMPONENTS VISIBLE FROM THE EXTERIOR, ETC. COLOR TO MATCH "P-1A" UNLESS NOTED OTHERWISE. NOTED OTHERWISE. NOTED OTHERWISE. REFER TO ARCHITECTURAL SHEETS FOR ALL WALL RATINGS. NOTED OTHERWISE. NOTED OTHERWISE.

FLOOR W/ ZINC-STRIP TRANSITION UNLESS OTHERWISE NOTED. REFER TO BASE DETAILS ON I-601 AND A-510 SERIES FOR DETAILS.

POCKET. SEE RCP FOR TYPE.

SEE SHEETS I-455 AND I-456 FOR TYPICAL TILE ELEVATIONS



LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820

> ARCHITECTURAL PARTNER **PERKINS & WILL** 410 N. MICHIGAN AVE CHICAGO, IL 60611

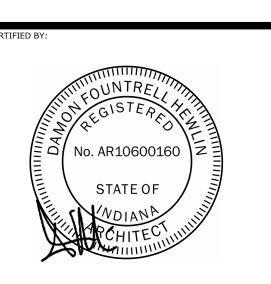
CIVIL & STRUCTURAL ENGINEER: 8840 ALLISON BLVD INDIANAPOLIS, IN 46250

MECH. / ELECT. / PLUMB. /

FIRE PROT. ENGINEER: **KBSO CONSULTING** 275 VETERANS WAY SUITE 300

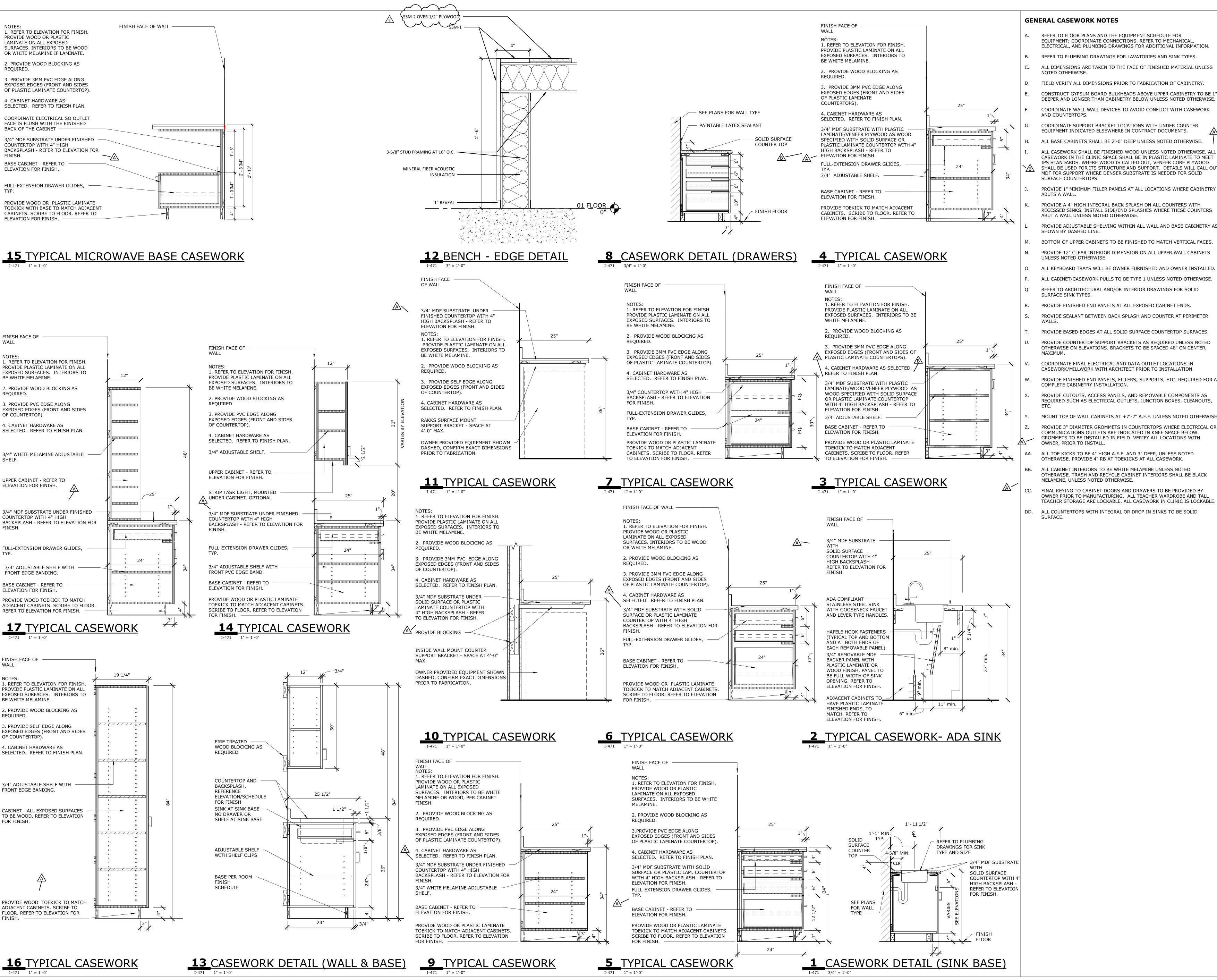
CARMEL. IN 46032 v. (317) 344-8044

RELO DESIGN 7222 N Shadeland Ave. Suite 170 Indianapolis, IN 46250 P: (317) 202.0000



INTERIOR **ELEVATIONS & DETAILS**

<u> 1-457</u>



WALL

- REFER TO FLOOR PLANS AND THE EQUIPMENT SCHEDULE FOR EQUIPMENT; COORDINATE CONNECTIONS. REFER TO MECHANICAL,
- ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
- ALL DIMENSIONS ARE TAKEN TO THE FACE OF FINISHED MATERIAL UNLESS
- CONSTRUCT GYPSUM BOARD BULKHEADS ABOVE UPPER CABINETRY TO BE 1
- DEEPER AND LONGER THAN CABINETRY BELOW UNLESS NOTED OTHERWISE.
- COORDINATE WALL WALL DEVICES TO AVOID CONFLICT WITH CASEWORK
- COORDINATE SUPPORT BRACKET LOCATIONS WITH UNDER COUNTER EQUIPMENT INDICATED ELSEWHERE IN CONTRACT DOCUMENTS.
- ALL BASE CABINETS SHALL BE 2'-0" DEEP UNLESS NOTED OTHERWISE.
- ALL CASEWORK SHALL BE FINISHED WOOD UNLESS NOTED OTHERWISE. ALL
- CASEWORK IN THE CLINIC SPACE SHALL BE IN PLASTIC LAMINATE TO MEET IPS STANDARDS. WHERE WOOD IS CALLED OUT, VENEER CORE PLYWOOD SHALL BE USED FOR ITS STRUCTURE AND SUPPORT. DETAILS WILL CALL OUT MDF FOR SUPPORT WHERE DENSER SUBSTRATE IS NEEDED FOR SOLID
- PROVIDE 1" MINIMUM FILLER PANELS AT ALL LOCATIONS WHERE CABINETRY
- PROVIDE A 4" HIGH INTEGRAL BACK SPLASH ON ALL COUNTERS WITH RECESSED SINKS. INSTALL SIDE/END SPLASHES WHERE THESE COUNTERS ABUT A WALL UNLESS NOTED OTHERWISE.
- BOTTOM OF UPPER CABINETS TO BE FINISHED TO MATCH VERTICAL FACES.
- ALL KEYBOARD TRAYS WILL BE OWNER FURNISHED AND OWNER INSTALLED.
- ALL CABINET/CASEWORK PULLS TO BE TYPE 1 UNLESS NOTED OTHERWISE REFER TO ARCHITECTURAL AND/OR INTERIOR DRAWINGS FOR SOLID
- PROVIDE FINISHED END PANELS AT ALL EXPOSED CABINET ENDS.
- PROVIDE EASED EDGES AT ALL SOLID SURFACE COUNTERTOP SURFACES.
- PROVIDE COUNTERTOP SUPPORT BRACKETS AS REQUIRED UNLESS NOTED OTHERWISE ON ELEVATIONS. BRACKETS TO BE SPACED 48" ON CENTER,
- CASEWORK/MILLWORK WITH ARCHITECT PRIOR TO INSTALLATION. PROVIDE FINISHED END PANELS, FILLERS, SUPPORTS, ETC. REQUIRED FOR A
- REQUIRED SUCH AS ELECTRICAL OUTLETS, JUNCTION BOXES, CLEANOUTS,
- PROVIDE 3" DIAMETER GROMMETS IN COUNTERTOPS WHERE ELECTRICAL OR COMMUNICATIONS OUTLETS ARE INDICATED IN KNEE SPACE BELOW. GROMMETS TO BE INSTALLED IN FIELD. VERIFY ALL LOCATIONS WITH
- ALL TOE KICKS TO BE 4" HIGH A.F.F. AND 3" DEEP, UNLESS NOTED OTHERWISE. PROVIDE 4" RB AT TOEKICKS AT ALL CASEWORK.
- ALL CABINET INTERIORS TO BE WHITE MELAMINE UNLESS NOTED OTHERWISE. TRASH AND RECYCLE CABINET INTERIORS SHALL BE BLACK MELAMINE, UNLESS NOTED OTHERWISE.
- FINAL KEYING TO CABINET DOORS AND DRAWERS TO BE PROVIDED BY OWNER PRIOR TO MANUFACTURING. ALL TEACHER WARDROBE AND TALL TEACHER STORAGE ARE LOCKABLE. ALL CASEWORK IN CLINIC IS LOCKABLE.
- DD. ALL COUNTERTOPS WITH INTEGRAL OR DROP IN SINKS TO BE SOLID

LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM

ARCHITECTURAL PARTNER **PERKINS & WILL** 410 N. MICHIGAN AVE **SUITE 1600** CHICAGO, IL 60611

317.926.1820

v. (312) 755-0770

CIVIL & STRUCTURAL ENGINEER: 8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250

MECH. / ELECT. / PLUMB. / **FIRE PROT. ENGINEER:**

KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032

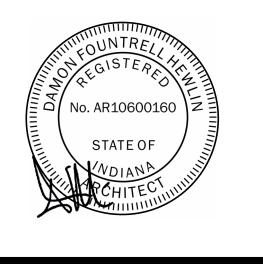
v. (317) 661-1964

v. (317) 344-8044 **INTERIOR DESIGNER:**

RELO DESIGN 7222 N Shadeland Ave. Suite 170 Indianapolis, IN 46250

P: (317) 202.0000

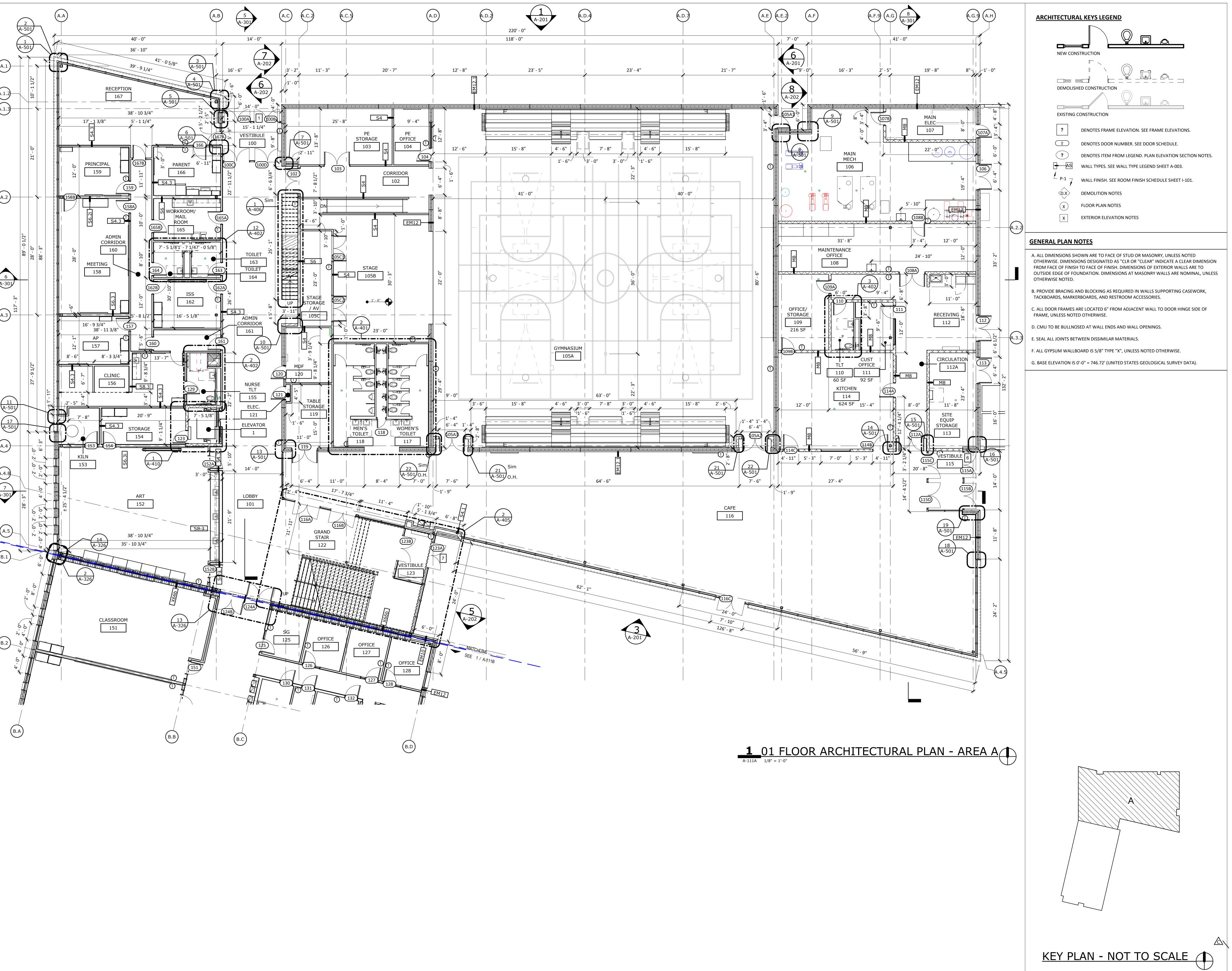
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Description	Date				
95% CD SET	12-18-24				
100% CD SET	01-17-25				
ADD #1	02-10-25				
ADD #2	02-17-25				
ADD #5	03-10-25				
	Description 95% CD SET 100% CD SET ADD #1 ADD #2				



SSUE DATE	SUE DATE: 01/17/2025					
DRAWN:		CHECKED:				
	JAM/PW	RS/JW				
PROJECT NO).:	P23-0116				
REVISION N	0.:	E				

CASEWORK DETAILS

I-471



LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820

> ARCHITECTURAL PARTNER **PERKINS & WILL** 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611

v. (312) 755-0770 CIVIL & STRUCTURAL ENGINEER:

8840 ALLISON BLVD INDIANAPOLIS, IN 46250 v. (317) 661-1964

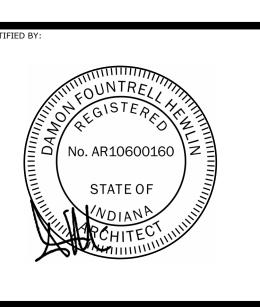
MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300

CARMEL. IN 46032 v. (317) 344-8044

INTERIOR DESIGNER: RELO DESIGN 7222 N Shadeland Ave. Suite 170

Indianapolis, IN 46250 P: (317) 202.0000



01 FLOOR PLAN -AREA A

ARCHITECTURAL KEYS LEGEND

NEW CONSTRUCTION DEMOLISHED CONSTRUCTION

EXISTING CONSTRUCTION

DENOTES FRAME ELEVATION. SEE FRAME ELEVATIONS.

DENOTES DOOR NUMBER. SEE DOOR SCHEDULE. DENOTES ITEM FROM LEGEND. PLAN ELEVATION SECTION NOTES.

WALL TYPES. SEE WALL TYPE LEGEND SHEET A-003.

WALL FINISH. SEE ROOM FINISH SCHEDULE SHEET I-101. $\langle D.X \rangle$ **DEMOLITION NOTES**

FLOOR PLAN NOTES

EXTERIOR ELEVATION NOTES

GENERAL PLAN NOTES

A. ALL DIMENSIONS SHOWN ARE TO FACE OF STUD OR MASONRY, UNLESS NOTED OTHERWISE. DIMENSIONS DESIGNATED AS "CLR OR "CLEAR" INDICATE A CLEAR DIMENSION FROM FACE OF FINISH TO FACE OF FINISH. DIMENSIONS OF EXTERIOR WALLS ARE TO OUTSIDE EDGE OF FOUNDATION. DIMENSIONS AT MASONRY WALLS ARE NOMINAL, UNLESS OTHERWISE NOTED.

B. PROVIDE BRACING AND BLOCKING AS REQUIRED IN WALLS SUPPORTING CASEWORK, TACKBOARDS, MARKERBOARDS, AND RESTROOM ACCESSORIES.

C. ALL DOOR FRAMES ARE LOCATED 6" FROM ADJACENT WALL TO DOOR HINGE SIDE OF FRAME, UNLESS NOTED OTHERWISE.

D. CMU TO BE BULLNOSED AT WALL ENDS AND WALL OPENINGS.

E. SEAL ALL JOINTS BETWEEN DISSIMILAR MATERIALS.

G. BASE ELEVATION IS 0'-0" = 746.72' (UNITED STATES GEOLOGICAL SURVEY DATA).

F. ALL GYPSUM WALLBOARD IS 5/8" TYPE "X", UNLESS NOTED OTHERWISE.

LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820 ARCHITECTURAL PARTNER **PERKINS & WILL** 410 N. MICHIGAN AVE

SUITE 1600 CHICAGO, IL 60611

v. (312) 755-0770

CIVIL & STRUCTURAL ENGINEER: 8840 ALLISON BLVD

INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

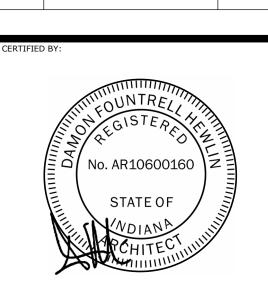
KBSO CONSULTING 275 VETERANS WAY

SUITE 300 CARMEL. IN 46032

v. (317) 344-8044 **INTERIOR DESIGNER:**

RELO DESIGN

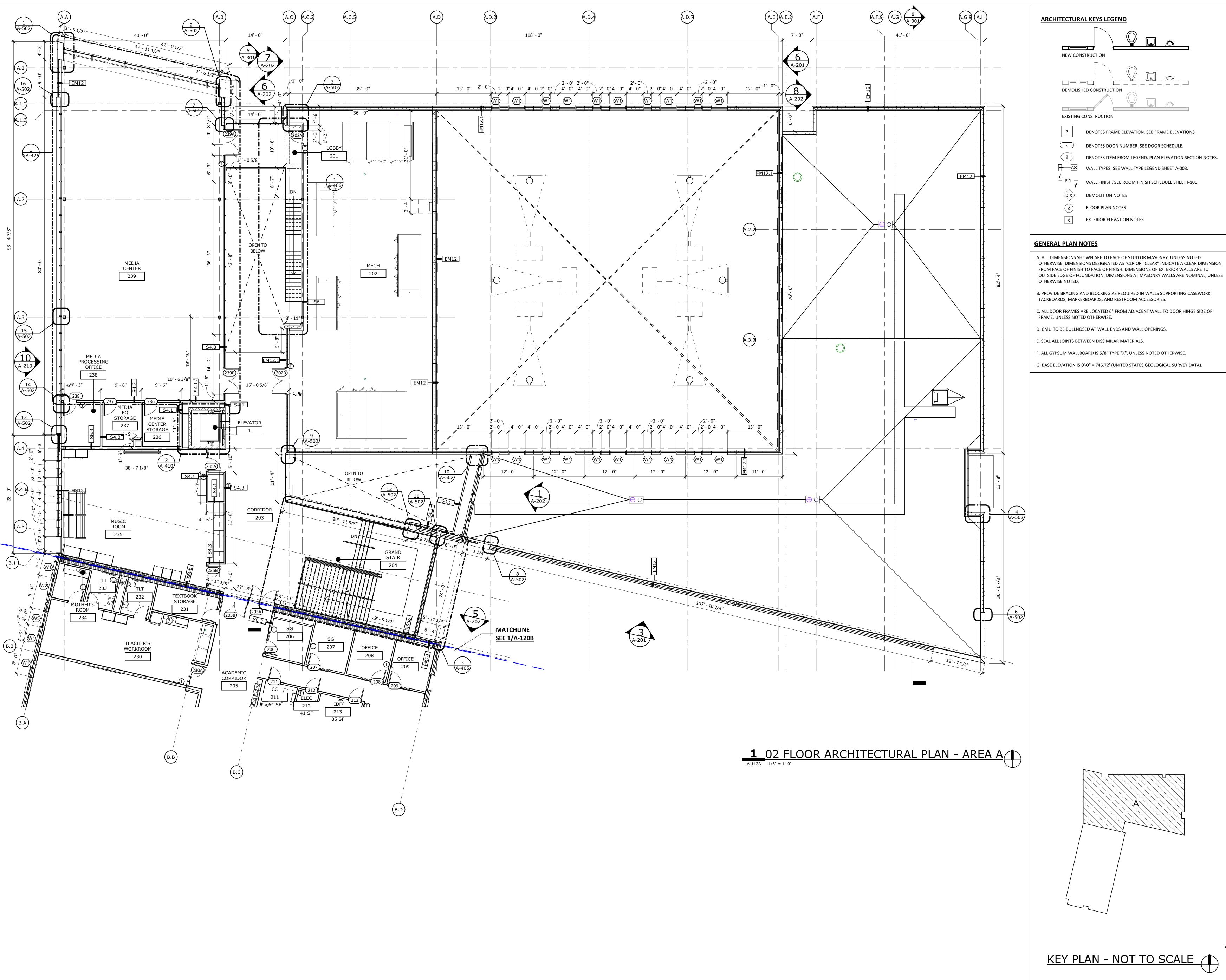
7222 N Shadeland Ave. Suite 170 Indianapolis, IN 46250 P: (317) 202.0000



01 FLOOR PLAN -AREA B

<u>A-111B</u>

KEY PLAN - NOT TO SCALE



ARCHITECTURAL KEYS LEGEND

NEW CONSTRUCTION

DEMOLISHED CONSTRUCTION

EXISTING CONSTRUCTION

DENOTES FRAME ELEVATION. SEE FRAME ELEVATIONS.

DENOTES DOOR NUMBER. SEE DOOR SCHEDULE.

DENOTES ITEM FROM LEGEND. PLAN ELEVATION SECTION NOTES. WALL TYPES. SEE WALL TYPE LEGEND SHEET A-003.

WALL FINISH. SEE ROOM FINISH SCHEDULE SHEET I-101.

DEMOLITION NOTES

FLOOR PLAN NOTES

EXTERIOR ELEVATION NOTES

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B. PROVIDE BRACING AND BLOCKING AS REQUIRED IN WALLS SUPPORTING CASEWORK,

FRAME, UNLESS NOTED OTHERWISE.

D. CMU TO BE BULLNOSED AT WALL ENDS AND WALL OPENINGS.

TACKBOARDS, MARKERBOARDS, AND RESTROOM ACCESSORIES.

E. SEAL ALL JOINTS BETWEEN DISSIMILAR MATERIALS.

F. ALL GYPSUM WALLBOARD IS 5/8" TYPE "X", UNLESS NOTED OTHERWISE.

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER: **KBSO CONSULTING** 275 VETERANS WAY SUITE 300 CARMEL. IN 46032

v. (317) 344-8044

INTERIOR DESIGNER:

LANDSCAPE, INTERIOR

DESIGN, URBAN PLANNING

INDIANAPOLIS, IN 45202

WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM

317.926.1820

ARCHITECTURAL PARTNER

CIVIL & STRUCTURAL ENGINEER:

PERKINS & WILL 410 N. MICHIGAN AVE

CHICAGO, IL 60611 v. (312) 755-0770

8840 ALLISON BLVD

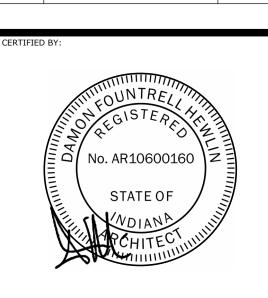
v. (317) 661-1964

INDIANAPOLIS, IN 46250

SUITE 1600

25 NORTH PINE STREET, SUITE B

RELO DESIGN 7222 N Shadeland Ave. Suite 170 Indianapolis, IN 46250 P: (317) 202.0000



02 FLOOR PLAN -AREA A

ARCHITECTURAL KEYS LEGEND

NEW CONSTRUCTION DEMOLISHED CONSTRUCTION

EXISTING CONSTRUCTION

DENOTES FRAME ELEVATION. SEE FRAME ELEVATIONS.

DENOTES DOOR NUMBER. SEE DOOR SCHEDULE.

DENOTES ITEM FROM LEGEND. PLAN ELEVATION SECTION NOTES. WALL TYPES. SEE WALL TYPE LEGEND SHEET A-003.

WALL FINISH. SEE ROOM FINISH SCHEDULE SHEET I-101.

 $\langle D.X \rangle$ **DEMOLITION NOTES**

FLOOR PLAN NOTES

EXTERIOR ELEVATION NOTES

GENERAL PLAN NOTES

A. ALL DIMENSIONS SHOWN ARE TO FACE OF STUD OR MASONRY, UNLESS NOTED OTHERWISE. DIMENSIONS DESIGNATED AS "CLR OR "CLEAR" INDICATE A CLEAR DIMENSION FROM FACE OF FINISH TO FACE OF FINISH. DIMENSIONS OF EXTERIOR WALLS ARE TO OUTSIDE EDGE OF FOUNDATION. DIMENSIONS AT MASONRY WALLS ARE NOMINAL, UNLESS OTHERWISE NOTED.

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E. SEAL ALL JOINTS BETWEEN DISSIMILAR MATERIALS. F. ALL GYPSUM WALLBOARD IS 5/8" TYPE "X", UNLESS NOTED OTHERWISE.

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25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820 ARCHITECTURAL PARTNER

PERKINS & WILL 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611

v. (312) 755-0770

8840 ALLISON BLVD

CIVIL & STRUCTURAL ENGINEER:

INDIANAPOLIS, IN 46250 v. (317) 661-1964

LANDSCAPE, INTERIOR

DESIGN, URBAN PLANNING

MECH. / ELECT. / PLUMB. /

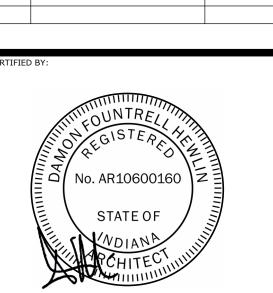
FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300

CARMEL. IN 46032 v. (317) 344-8044

INTERIOR DESIGNER: RELO DESIGN

7222 N Shadeland Ave. Suite 170 Indianapolis, IN 46250 P: (317) 202.0000



02 FLOOR PLAN -AREA B

<u>A-112B</u>

KEY PLAN - NOT TO SCALE

- A AVOID ALL CONFLICTS BETWEEN FIRE PROTECTION SYSTEMS, AND CONDUIT, DUCT, EQUIPMENT, PIPING, STRUCTURAL MEMBERS, AND ANY OTHER OBSTRUCTIONS ENCOUNTERED. PIPING LAYOUTS ARE DIAGRAMMATIC AND SHOW SYSTEM INTENT. PIPING MAY REQUIRE ADDITIONAL OFFSETS, DROPS, RISERS, AND FITTINGS, ETC.
- B PROVIDE UPRIGHT HEADS IN AREAS WITH NO CEILINGS (EXPOSED TO STRUCTURE).
- C PROVIDE SIDEWALL HEADS IN AREAS WHERE IT IS IMPRACTICAL TO PROVIDE CEILING MOUNTED HEADS.
- D PROVIDE CONCEALED HEADS IN AREAS WITH FINISHED CEILINGS (GYPSUM BOARD OR ACOUSTICAL CEILING TILE).

ARCHITECTURE,
LANDSCAPE, INTERIOR
DESIGN, URBAN PLANNING

25 NORTH PINE STREET, SUITE B
INDIANAPOLIS, IN 45202

WWW.METICULOUSDA.COM
INFO@METICULOUSDA.COM
317.926.1820

ARCHITECTURAL PARTNER

PERKINS & WILL

410 N. MICHIGAN AVE

SUITE 1600

CHICAGO, IL 60611

v. (312) 755-0770

CIVIL & STRUCTURAL ENGINEER:

8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250 v. (317) 661-1964

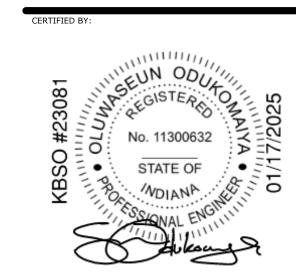
MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032 v. (317) 344-8044

VCF KII MFR

PS 69 - JOYCE KILM

| No. | Description | Date | 95% CD SET | 12-18-24 | 100% CD SET | 01-17-25 | O | ADDENDUM #6 | 03-10-25 |



O1.17.2025

DRAWN:

JSM

PROJECT NO.:

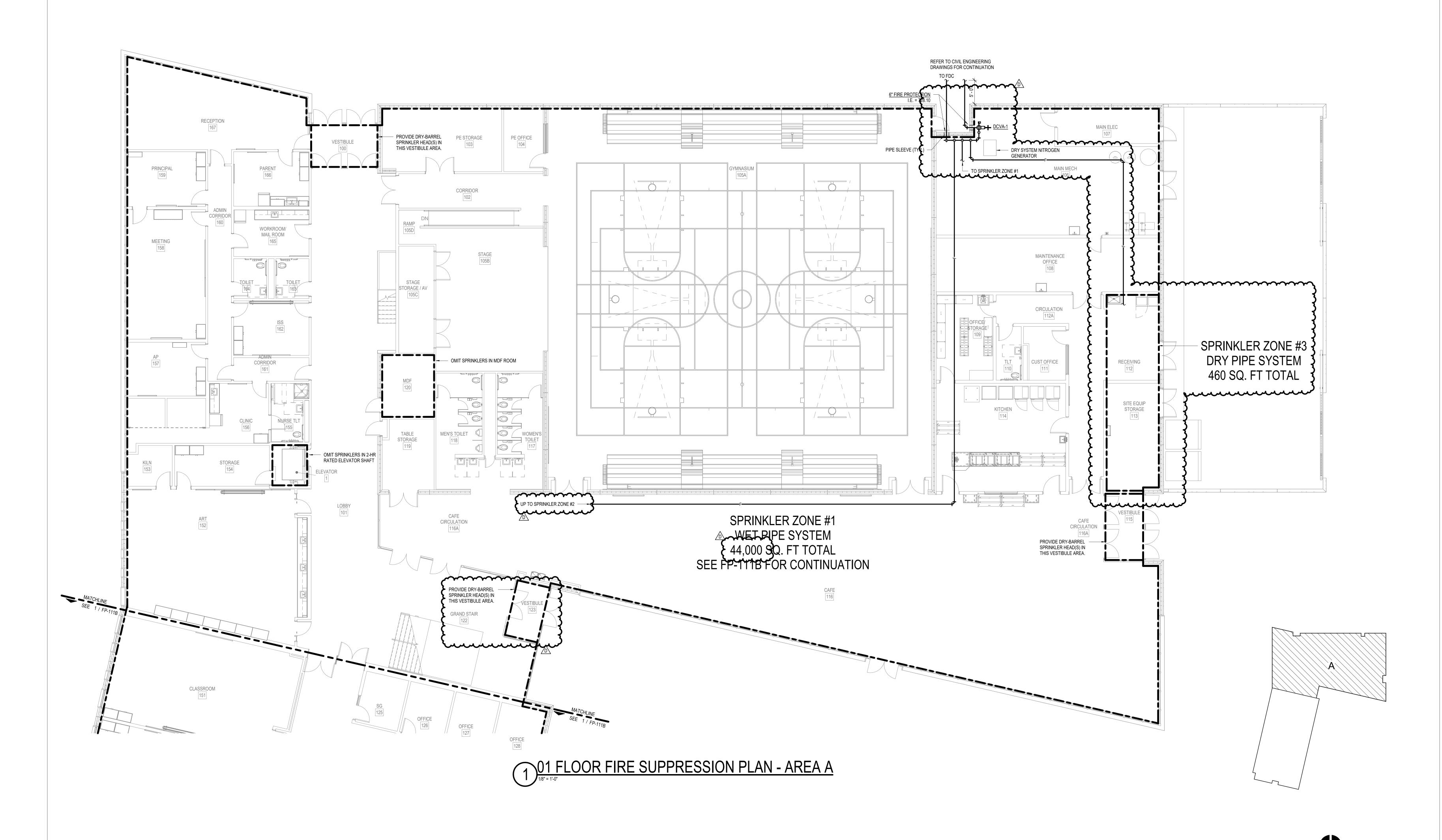
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REVISION NO.:

D

01 FLOOR FIRE SUPPRESSION PLAN -AREA A

FP-111A



CLASSROOM CLASSROOM - OMIT SPRINKLERS IN IDF ROOM RESOURCE ROOM 148 SENSORY SPRINKLER ZONE #1 WET PIPE SYSTEM 44,400 SQ. FT TOTAL SEE FP-111A FOR CONTINUATION CLASSROOM 138 PROVIDE DRY-BARREL SPRINKLER HEAD(S) IN THIS VESTIBULE AREA.

01 FLOOR FIRE SUPPRESSION PLAN - AREA B

GENERAL NOTES

- A AVOID ALL CONFLICTS BETWEEN FIRE PROTECTION SYSTEMS, AND CONDUIT, DUCT, EQUIPMENT, PIPING, STRUCTURAL MEMBERS, AND ANY OTHER OBSTRUCTIONS ENCOUNTERED. PIPING LAYOUTS ARE DIAGRAMMATIC AND SHOW SYSTEM INTENT. PIPING MAY REQUIRE ADDITIONAL OFFSETS, DROPS, RISERS, AND FITTINGS, ETC.
- RISERS, AND FITTINGS, ETC.

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ARCHITECTURE,
LANDSCAPE, INTERIOR
DESIGN, URBAN PLANNING

25 NORTH PINE STREET, SUITE B
INDIANAPOLIS, IN 45202

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PERKINS & WILL
410 N. MICHIGAN AVE
SUITE 1600
CHICAGO, IL 60611
v. (312) 755-0770

CIVIL & STRUCTURAL ENGINEER:

JQOL 8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032 v. (317) 344-8044

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100% CD SET

IPS 69 - JOYCE KILIV 3421 N KEYSTONE AVE.

 No.
 Description
 Date

 95% CD SET
 12-18-24

 100% CD SET
 01-17-25

BSC # OS No. 11300632

No. 11300632

STATE OF

JE DATE:

01.17.2025

WN:

JSM JSM

JECT NO.:

P23-0116

01 FLOOR FIRE SUPPRESSION PLAN -AREA B

FP-111B



- A AVOID ALL CONFLICTS BETWEEN FIRE PROTECTION SYSTEMS, AND CONDUIT, DUCT, EQUIPMENT, PIPING, STRUCTURAL MEMBERS, AND ANY OTHER OBSTRUCTIONS ENCOUNTERED. PIPING LAYOUTS ARE DIAGRAMMATIC AND SHOW SYSTEM INTENT. PIPING MAY REQUIRE ADDITIONAL OFFSETS, DROPS, RISERS, AND FITTINGS, ETC.
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LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820

ARCHITECTURAL PARTNER **PERKINS & WILL** 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611

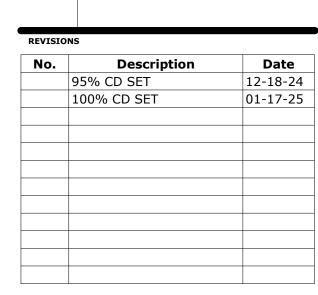
v. (312) 755-0770

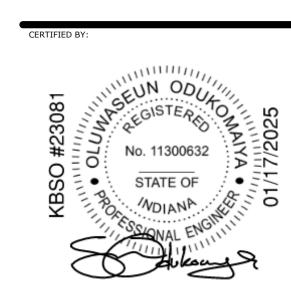
CIVIL & STRUCTURAL ENGINEER:

JQOL 8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

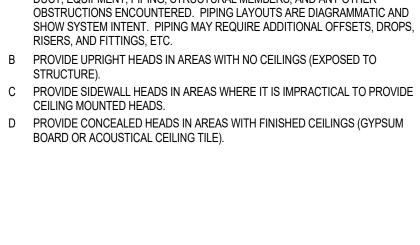
KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032 v. (317) 344-8044

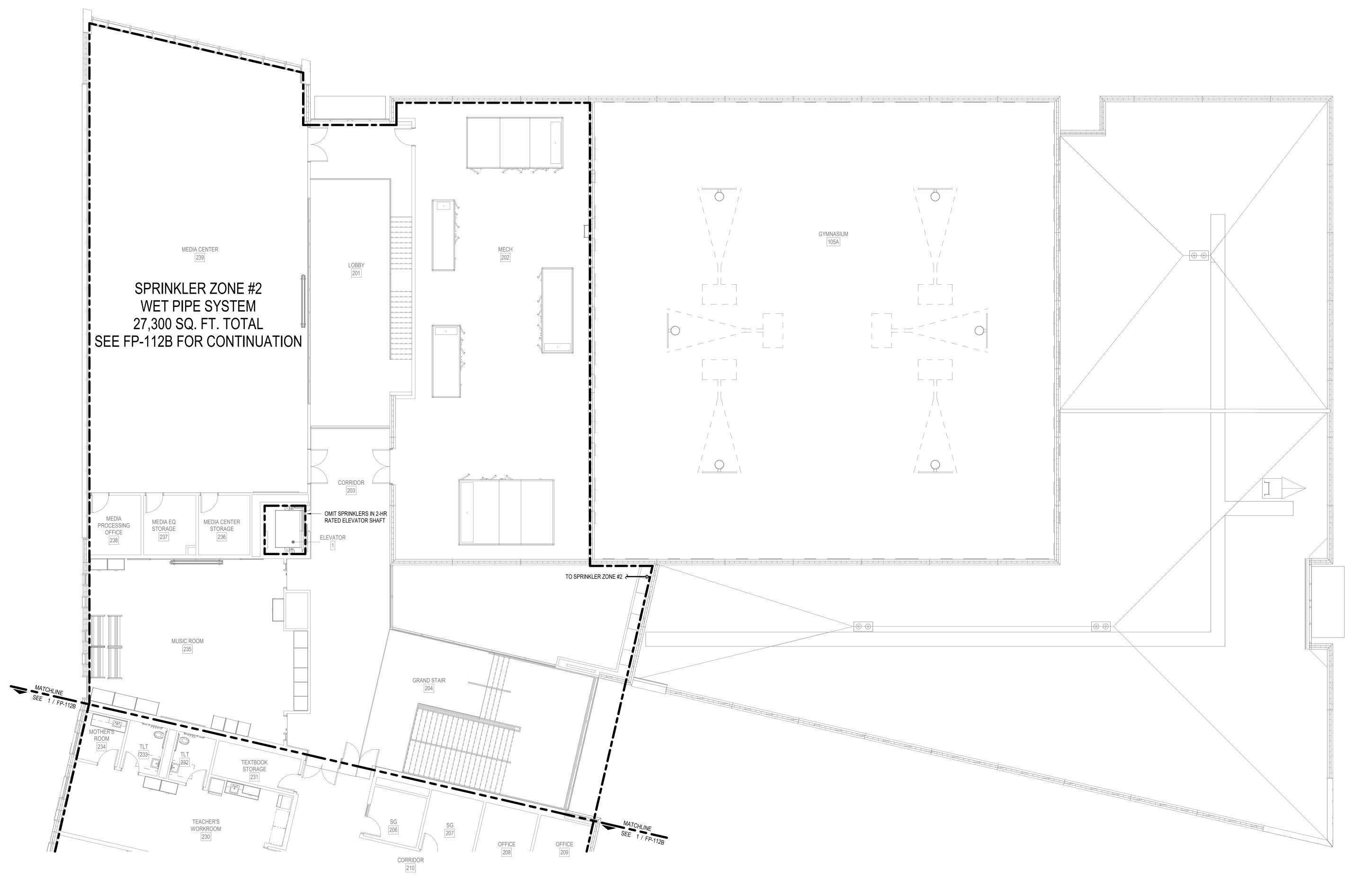




02 FLOOR FIRE SUPPRESSION PLAN -AREA A

FP-112A





02 FLOOR FIRE SUPPRESSION PLAN - AREA A

- A AVOID ALL CONFLICTS BETWEEN FIRE PROTECTION SYSTEMS, AND CONDUIT, DUCT, EQUIPMENT, PIPING, STRUCTURAL MEMBERS, AND ANY OTHER OBSTRUCTIONS ENCOUNTERED. PIPING LAYOUTS ARE DIAGRAMMATIC AND SHOW SYSTEM INTENT. PIPING MAY REQUIRE ADDITIONAL OFFSETS, DROPS, RISERS, AND FITTINGS, ETC.
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ARCHITECTURE, LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820

> ARCHITECTURAL PARTNER PERKINS & WILL 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611 v. (312) 755-0770

CIVIL & STRUCTURAL ENGINEER:

JQOL 8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032 v. (317) 344-8044

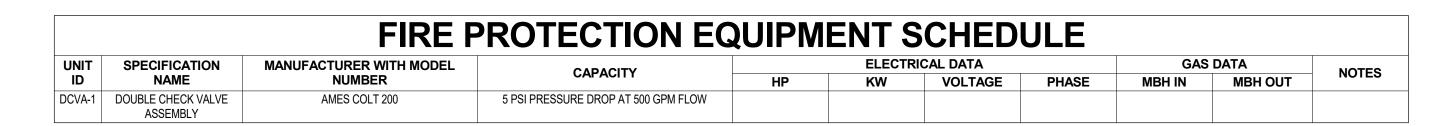
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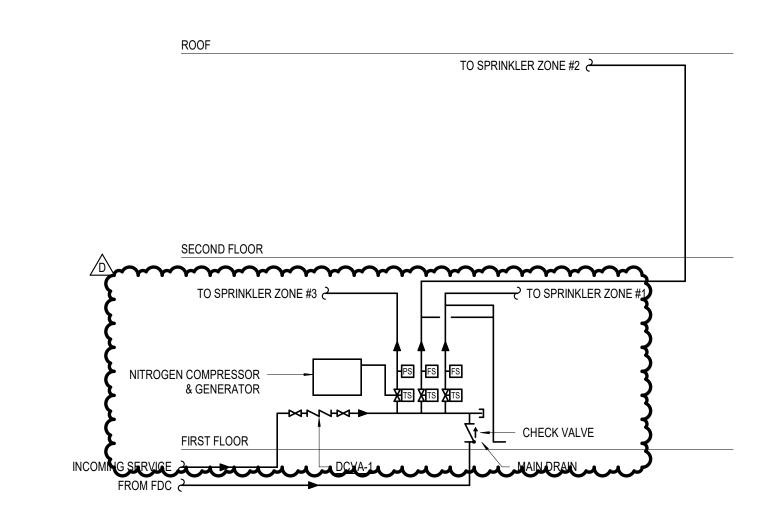
02 FLOOR FIRE SUPPRESSION PLAN -AREA B

FP-112B





PIPE			APPLICATION		JOI	NT CONSTRUCT	ION		LOCATION		
MATERIAL	SIZE	UNDERGROUND SERVICE	UNDERGROUND SERVICE	WET-PIPE SYSTEM	GROOVED MECHANICAL COUPLINGS	THREADED JOINTS	SOLVENT WELD JOINTS	BELOW GROUND	ABOVE GROUND (EXPOSED)	ABOVE GROUND (CONCEALED)	NOTE
DUCTILE IRON	4" & LARGER	X			Х			Х			1
SCH. 40 GALVANIZED STEEL	4" & LARGER		Х		Х	Х		Χ			1
SCH_40 BLACK STEEL	1"	~~~~	~~~~	~~~~	~~~~		~~~~	~~~	~~~~	~~~~	سمط
SCH. 10 BLACK STEEL	1-1/4" & LARGER		V V V V V	Х	X	V V V V	V	42 42 42 42	Х	X	1



1 FIRE SUPPRESSION PIPING DIAGRAM

NOT TO SCALE

ARCHITECTURE,
LANDSCAPE, INTERIOR
DESIGN, URBAN PLANNING

25 NORTH PINE STREET, SUITE B
INDIANAPOLIS, IN 45202

WWW.METICULOUSDA.COM
INFO@METICULOUSDA.COM
317.926.1820

ARCHITECTURAL PARTNER
PERKINS & WILL
410 N. MICHIGAN AVE
SUITE 1600
CHICAGO, IL 60611
v. (312) 755-0770

CIVIL & STRUCTURAL ENGINEER:

JQOL
8840 ALLISON BLVD
SUITE 425

INDIANAPOLIS, IN 46250

v. (317) 661-1964

MECH. / ELECT. / PLUMB. /

FIRE PROT. ENGINEER:

KBSO CONSULTING
275 VETERANS WAY
SUITE 300
CARMEL. IN 46032
v. (317) 344-8044

- JOYCE KILMEF

100% CD SET

 No.
 Description
 Date

 95% CD SET
 12-18-24

 100% CD SET
 01-17-25

 D
 ADDENDUM #6
 03-10-25

No. 11300632

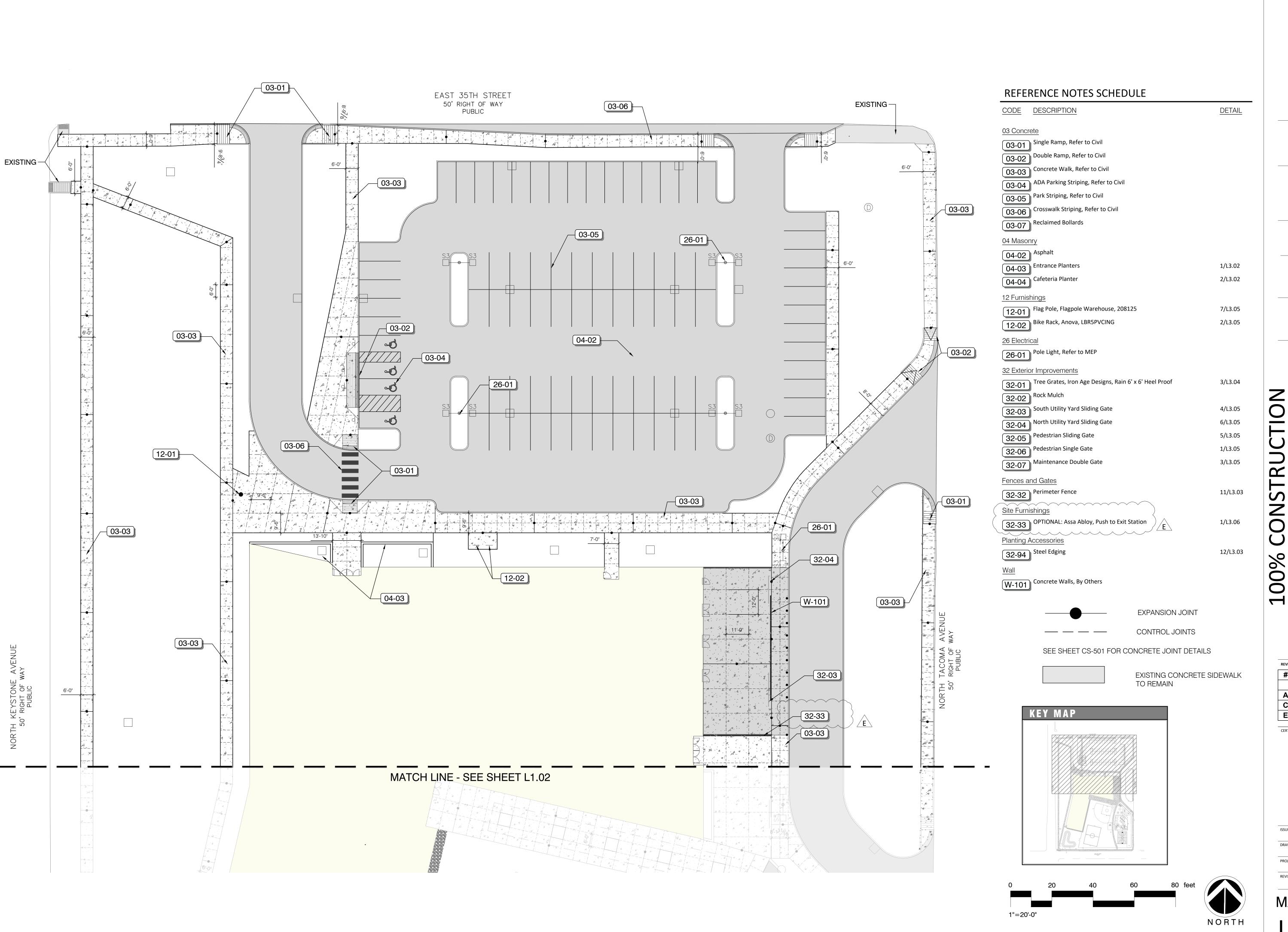
STATE OF

WOLANA

ISSUE DATE:	01.	.17.2025
DRAWN:	JSM	CHECKED: JSM
PROJECT NO.:		P23-0116
REVISION NO.:		D

FIRE PROTECTION DETAILS

FP-501



ARCHITECTURE

INTERIORS

PROJECT
MANAGEMENT

PLANNING

1828 North Illinois Street
Indianapolis, IN 46202
www.meticulousda.com
info@meticulousda.com
v. 317.926.1820
f. 317.926.1815

Blvd Suite 425, Indianapolis, IN 46, P: (317) 661-1964

CIVIL/STRUCTURAL ENGINEER:

, ation

/ce Kilmer 69 Renova 3421 North Keystone Avenue Indianapolis, IN 46218

Revision Date
100% CD SET 01-17-25
A ADDENDUM 01 02-10-25
C ADDENDUM 03 02-17-25
E ADDENDUM 05 03-10-25

NO.

* 10200269
STATE OF

WOLAND ENGLISH

OAME J COOLE

CHECKED:

DECEMBER 18, 2024

DRAWN:

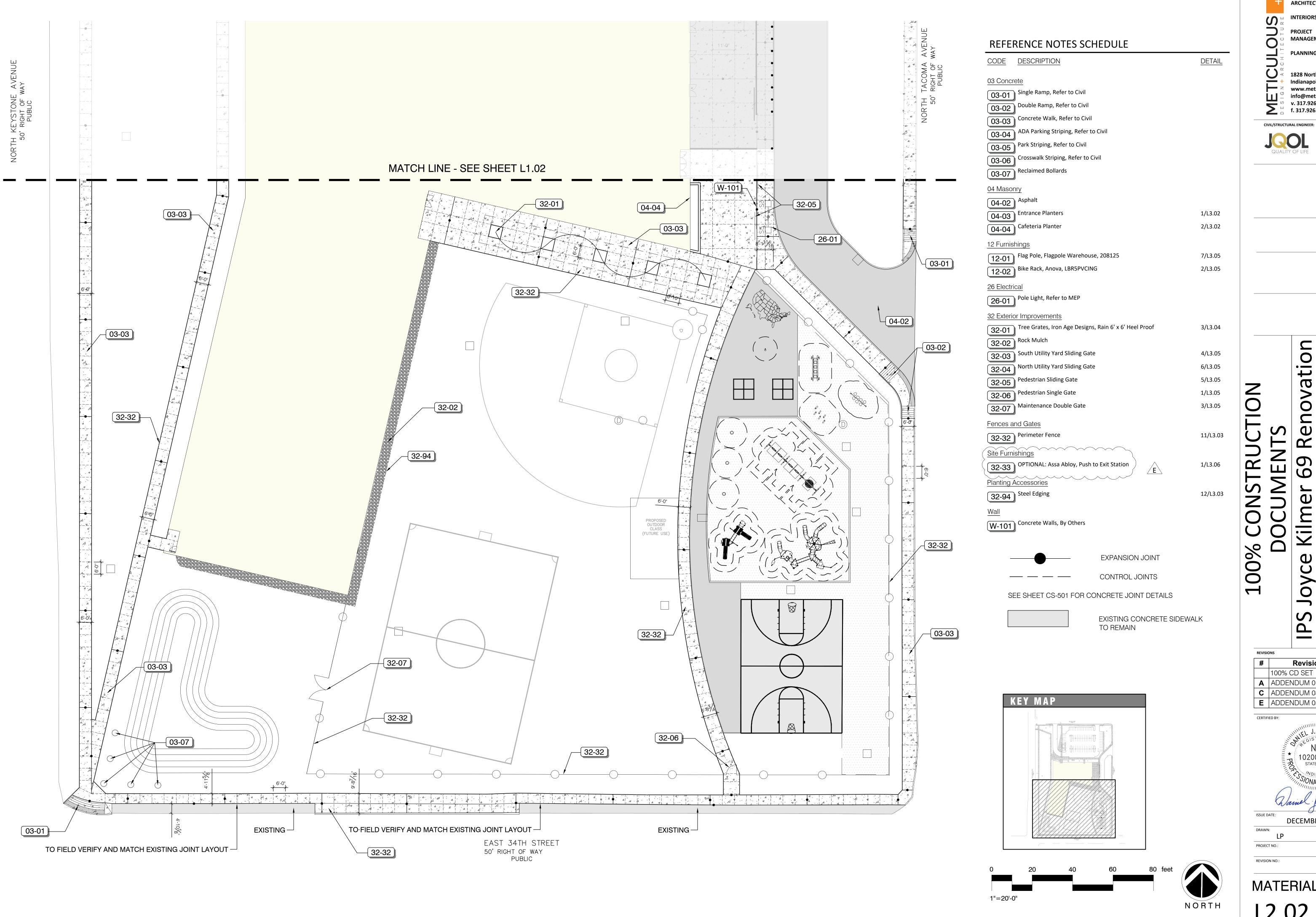
LP

PROJECT NO.:

REVISION NO.:

MATERIAL LAYOUT

L2.01

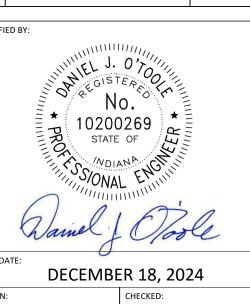


ARCHITECTURE PROJECT MANAGEMENT www.meticulousda.com info@meticulousda.com v. 317.926.1820 f. 317.926.1815

QUALITY OF LIFE P: (317) 661-1964

3421 North Keystone Avenu Indianapolis, IN 46218

REVISIONS Date Revision 01-17-25 100% CD SET 02-10-25 A ADDENDUM 01 02-17-25 C ADDENDUM 03 03-10-25 **E** ADDENDUM 05

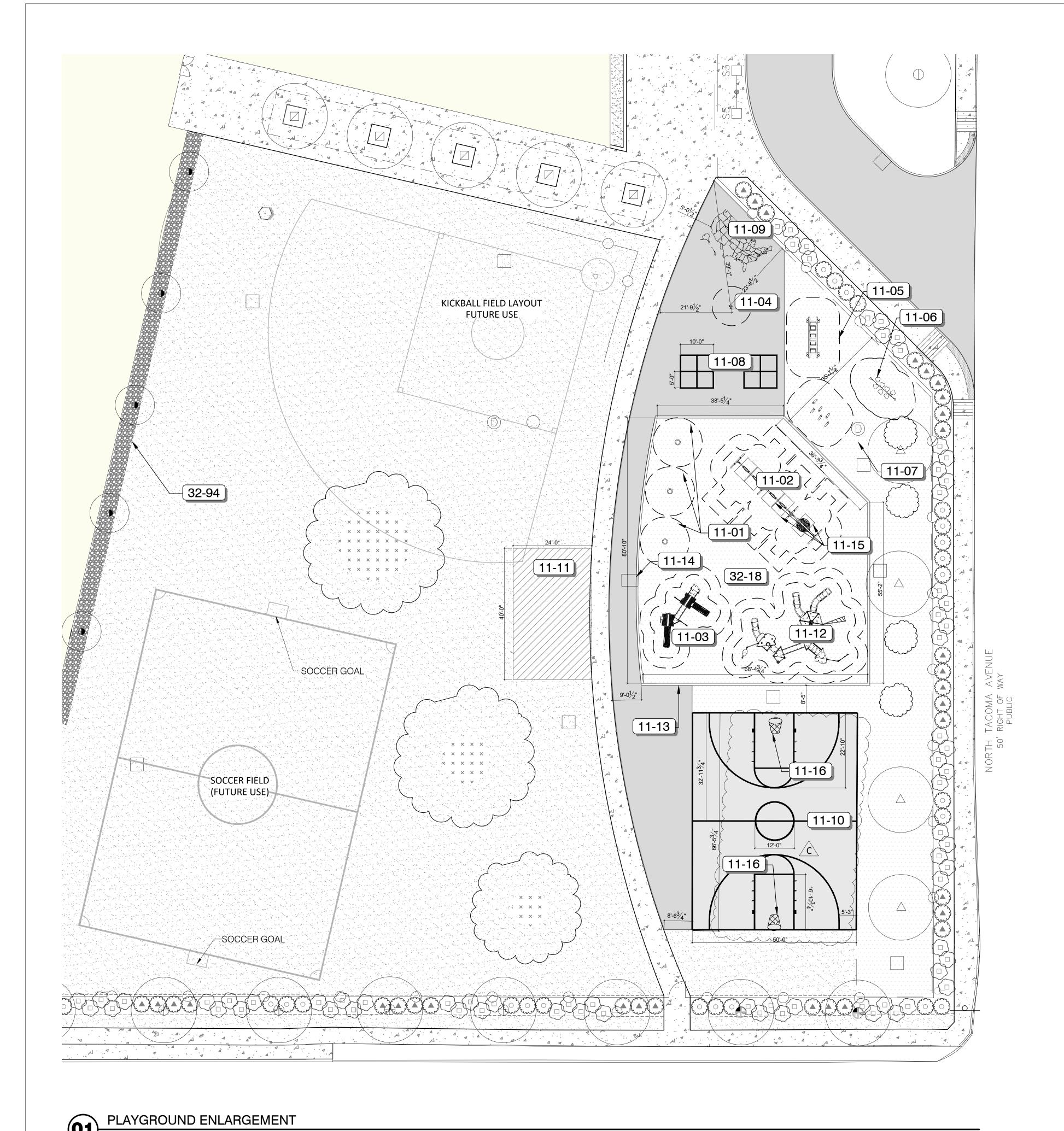


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REVISION NO.:

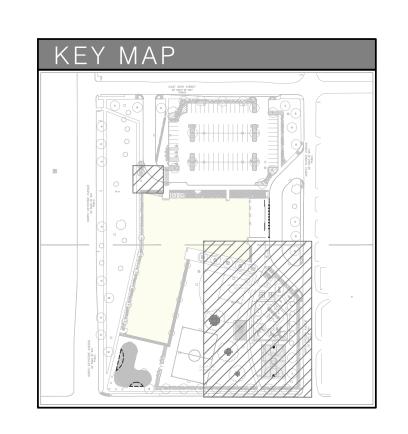
MATERIAL LAYOUT

L2.02



REFERENCE NOTES SCHEDULE

CODE DESCRIPTION	QTY	DETAIL
11 Equipment		
11-01 Kompan, ELE400024, Spinner Bowl		4/L3.03
11-02 Kompan, KSW926-CUSTOM_20326437		1/L3.03
11-03 Kompan, PCM201031, Two Towers with Curved Bridge		6/L3.03
PSS Performance Gared, Tetherball System		6/L3.02
11-05 Kompan, NRO806, Stilts		5/L3.03
11-06 Kompan, NRO832, Balance posts with rope		3/L3.03
11-07 Kompan, NRO810, Wobble Bridge		2/L3.03
11-08 Four Square (Striping)		
11-09 USA Map (Striping)		7/L3.02
11-10 Basketball Court		
Outdoor Classroom		
11-12 Kompan, PCE410132, Denali with Roof		7/L3.03
11-13 Landscape Structures, TuffTimbers, 119214		8/L3.03
11-14 Lanscape Structures, TuffTimbers Access Wedge,130799)	3/L3.02
11-15 Wear Mats		
11-16 Kompan, FRE3020, Basketball Hoop		5/L3.02
E		
32 Exterior Improvements Play Mulch		4/L3.02
32-18 Play Mulcii		7/ LJ.UZ
Planting Accessories		
32-94 Steel Edging		12/L3.03







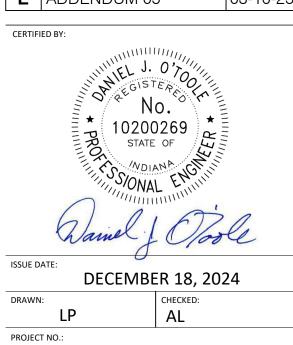


8840 Allison Pointe
Blvd Suite 425,
Indianapolis, IN 46250
P: (317) 661-1964

Joyce Kilmer 69 Renovat
3421 North Keystone Avenue
Indianapolis, IN 46218

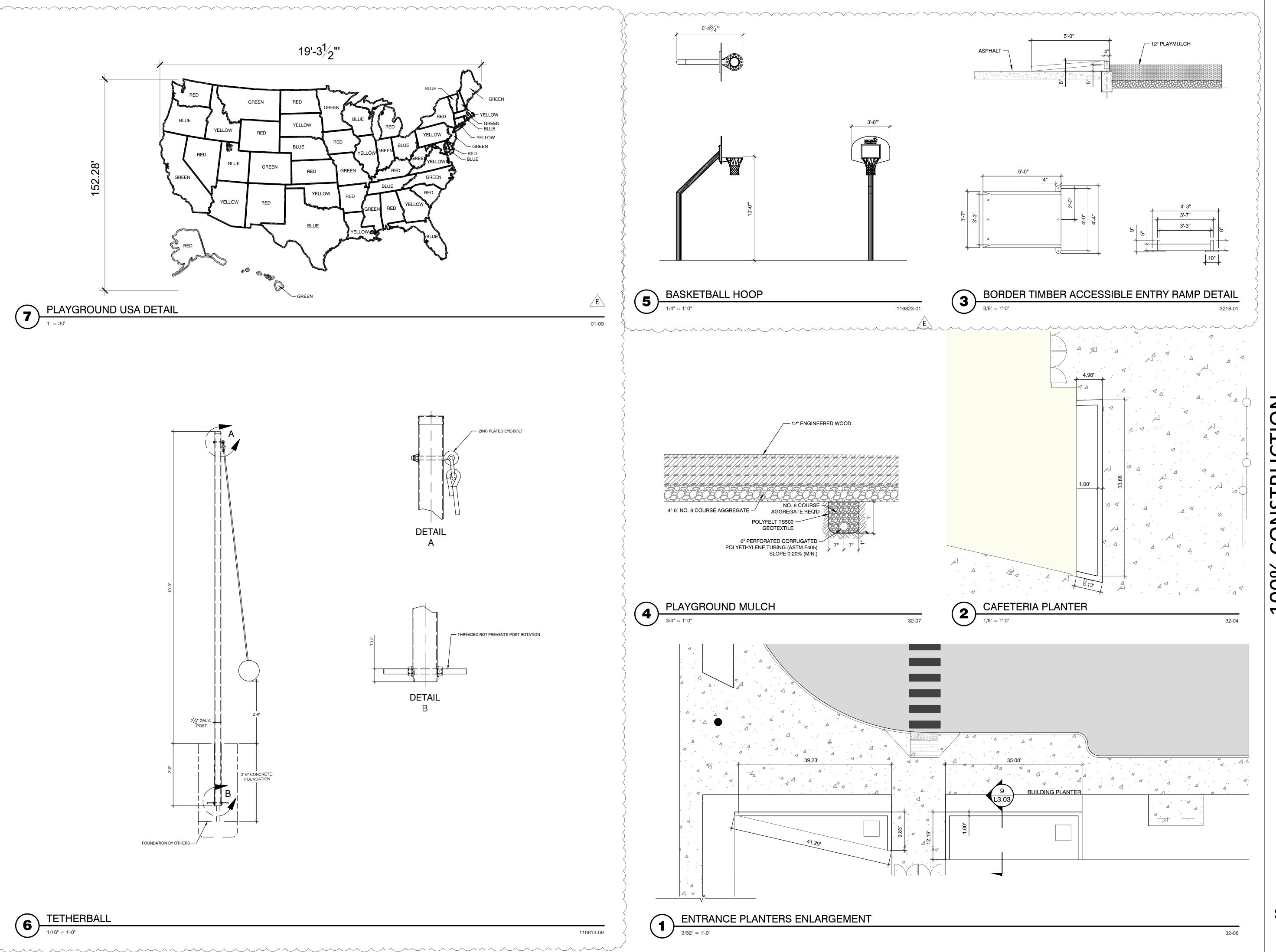
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Revision Date
100% CD SET 01-17-25
A ADDENDUM 01 02-10-25
C ADDENDUM 03 02-17-25
E ADDENDUM 05 03-10-25



PLAYGROUND EQUIP

L3.01



ARCHITECTURE

INTERIORS

PROJECT

MANAGEMENT

PLANNING

1828 North Illinois Street
Indianapolis, IN 46202

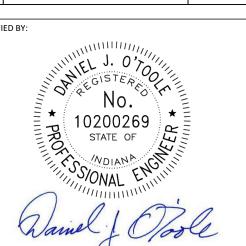
www.meticulousda.com
info@meticulousda.com
info@meticulousda.com
v. 317.926.1820
f. 317.926.1815

P: (317) 661-1964

CIVIL/STRUCTURAL ENGINEER:

100% CONSTRUCTION DOCUMENTS Joyce Kilmer 69 Renovatio

Revision Date
100% CD SET 01-17-25
A ADDENDUM 01 02-10-25
C ADDENDUM 03 02-17-25
E ADDENDUM 05 03-10-25



DECEMBER 18, 2024

DRAWN:

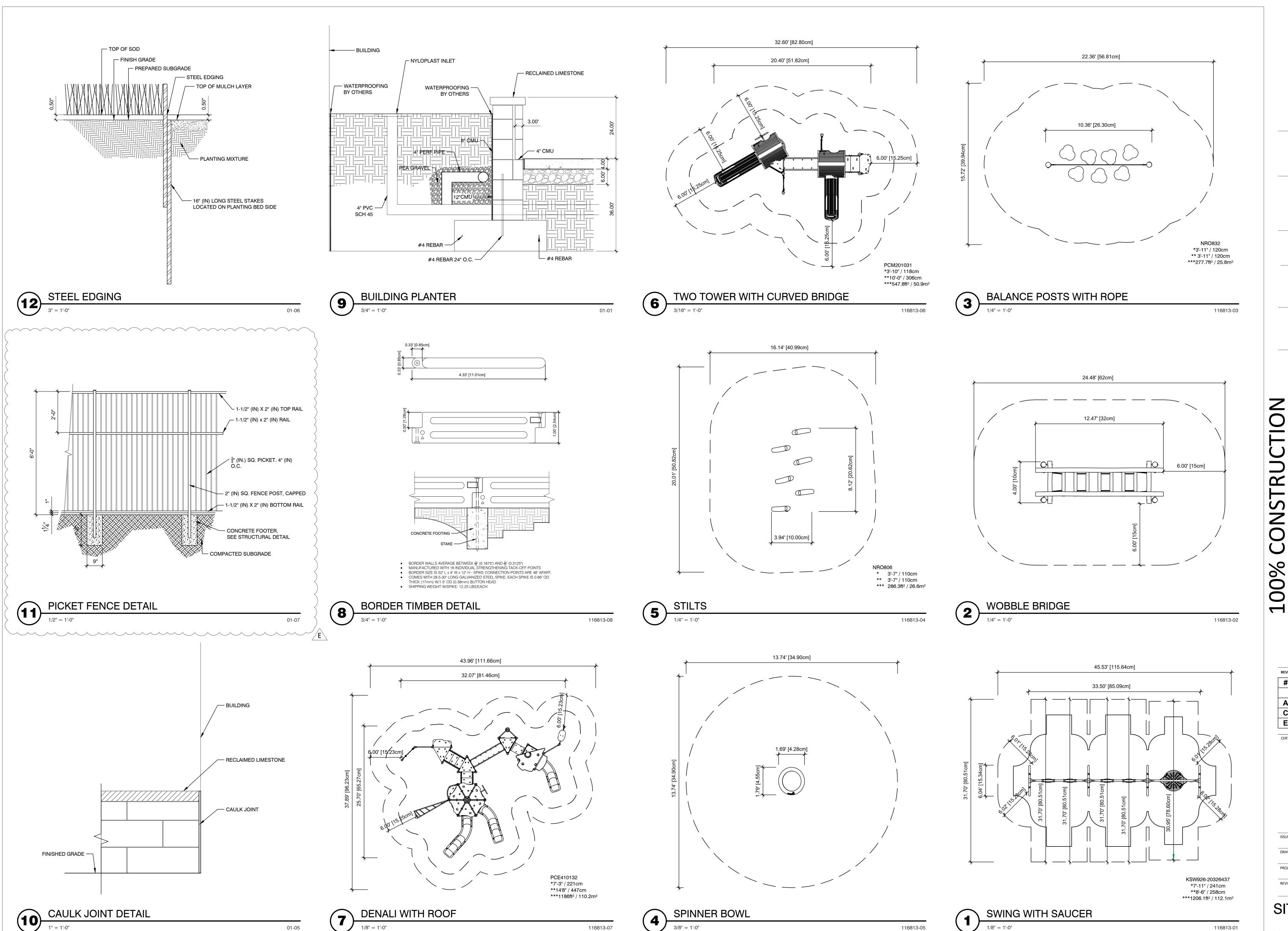
LP

PROJECT NO.:

SITE DETAILS

L3.02

REVISION NO.:



ARCHITECTURE

INTERIORS

PROJECT
MANAGEMENT

PLANNING

1828 North Illinois Street
Indianapolis, IN 46202
www.meticulousda.com
info@meticulousda.com
v. 317.926.1820
f. 317.926.1815

Blvd Suite 425, Indianapolis, IN 46, P: (317) 661-1964

MENTS r 69 Renovation

DOCUI IPS Joyce Kilme

REVISI	ONS	
#	Revision	Date
	100% CD SET	01-17-25
Α	ADDENDUM 01	02-10-25
С	ADDENDUM 03	02-17-25
Е	ADDENDUM 05	03-10-25
	•	·

CERTIFIED BY:

CERTIFIED BY:

NO.

10200269
STATE OF

NOINNEL STORE

NOINNEL STOR

DECEMBER 18, 2024

DRAWN:

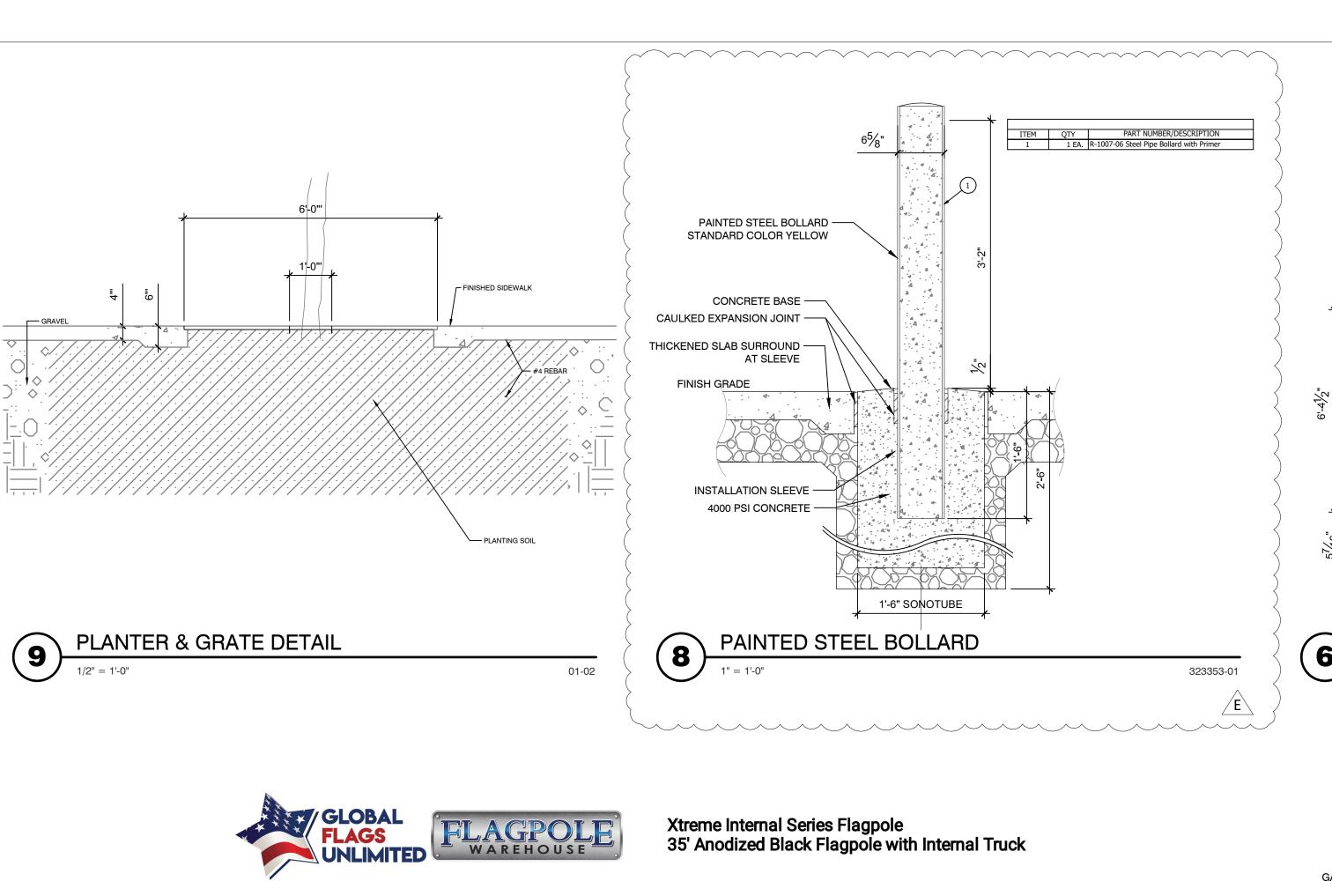
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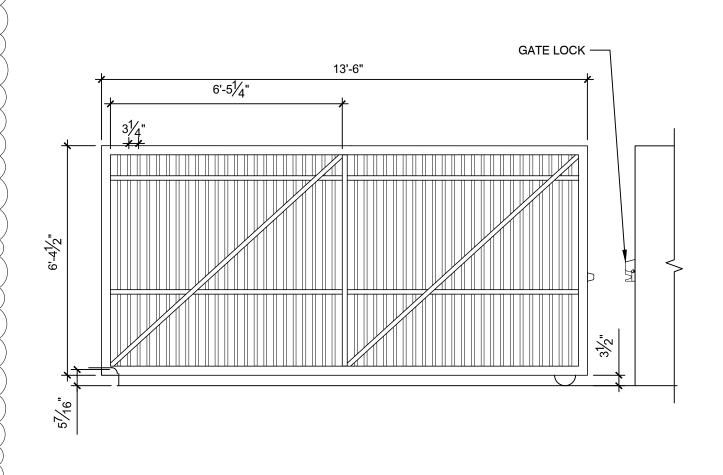
PROJECT NO.:

SITE DETAILS

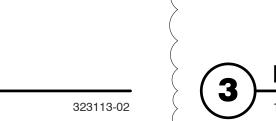
L3.03

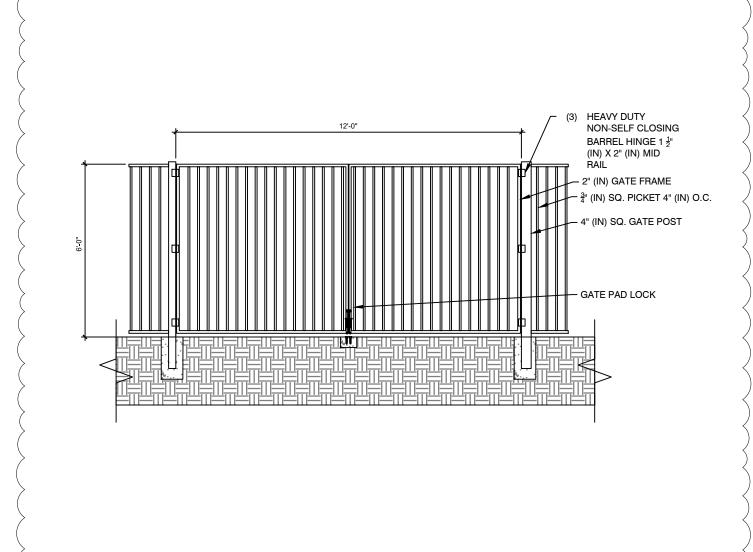
REVISION NO.:





NORTH UTILITY YARD SLIDING GATE





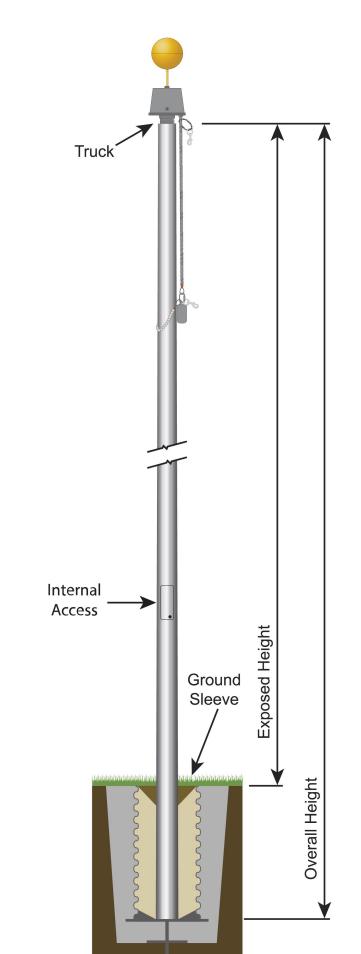


E

323113-03

ARCHITECTURE

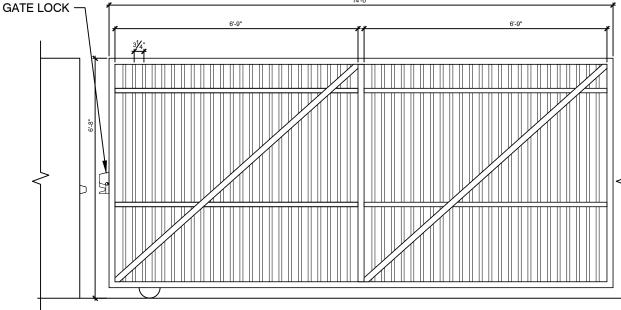
PROJECT MANAGEMENT



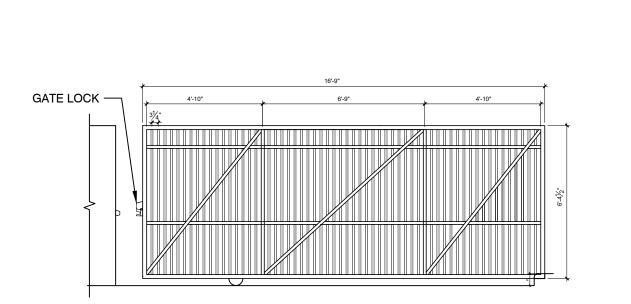
Flagpole Warehouse | 3600 Cantrell Industrial Court | Acworth, GA 30101 | 800-962-0956

SPECIFICATI	ONS
Xtreme Interna	Series
SKU	208125
Finish	Anodized Black
Exposed Height	35 ft
Overall Height	38.5 ft
Top Diameter	4 in
Bottom Diameter	8 in
Wall Thickness	0.312 in
Shipping	455 lbs
Max Windspeed	212 mph
Max Windspeed With Flag	144 mph
Recommended Flag Size	8' x 12'
Meets ASTM: B 241 - Standard Specification	on for Aluminum

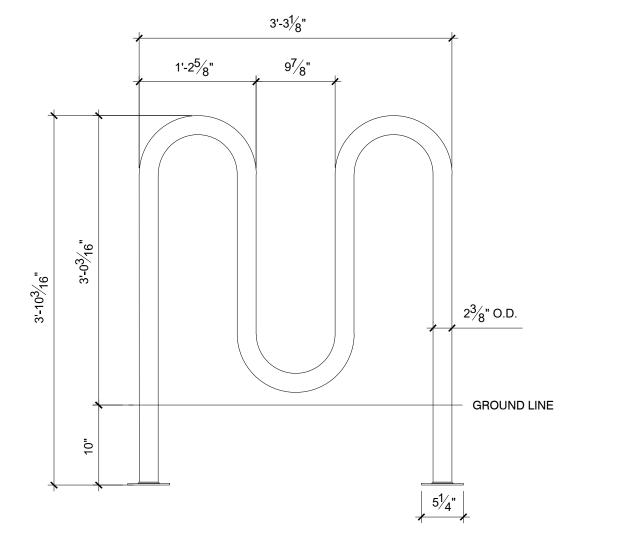
Meets ASTM: 3 241 - Standard Specification for Aluminum and Aluminum-Alloy Seamless Pipe and Seamless Extruded Tube. 3 597 - Standard Practice for Heat Treatment of Aluminum Alloys.	
Meets NAAMM: FP 1001 - Guide Specifications for Design of Metal Flagnoles	



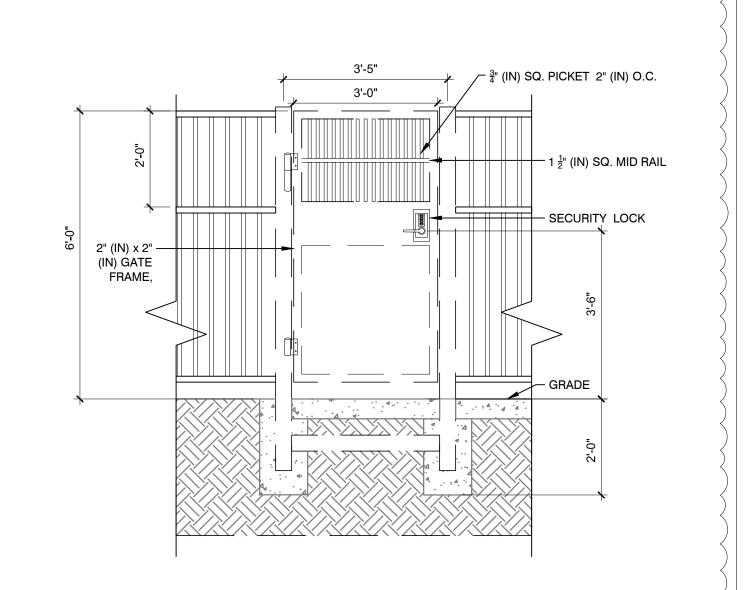












PEDESTRIAN GATE

323113-05

- 1 4	~	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		•	102 10 20
	С	ADD	ENDUM (3	02-17-25
	Е	ADD	ENDUM (15	03-10-25
	CERTIFII	ED BY:	* 1020 STANDARY	0.000 PM	
IS:	SSUE DA		DECEME	ER 18, 20	24
DF	RAWN	LP		CHECKED:	
PF	ROJECT	NO.:			
	FVISIO	N NO ·			

Revision

100% CD SET A ADDENDUM 01

100%

REVISIONS

3421 North Keyst Indianapolis, I

Date

01-17-25

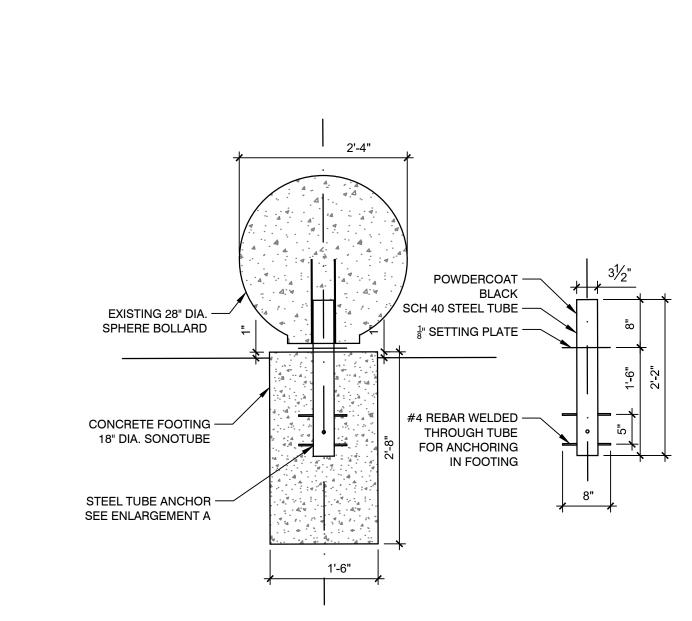
02-10-25

SITE DETAILS

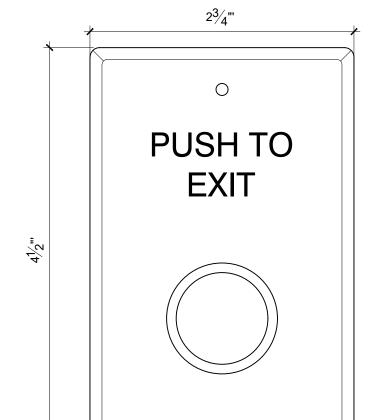
L3.05

323113-04

7 FLAG POLE







TS-12 SWITCH MOUNTED ON SINGLE GANG WALL PLATE WITH 430 STAINLESS STEEL FINISH.
 TIMER FOR TIMED ACCESS

P-02

P-CO-04

- (OPTIONAL) VANDAL RESISTANT ³/₄" PUSH BUTTON
 PLATE IS SCREENED "PUSH TO EXIT" FOR EASY TO FOLLOW ACCESS
- INSTRUCTIONS.MOMENTARY ACTION SWITCH.

CERTIFIED BY: ISSUE DATE: DECEMBER 18, 2024 DRAWN:

Revision

100% CD SET A ADDENDUM 01

C ADDENDUM 03

E ADDENDUM 05

REVISIONS #

PROJECT NO.:

REVISION NO.:

SITE DETAILS

L3.06 E

OPTIONAL- REQUEST TO EXIT STATION

1828 North Illinois Street
Indianapolis, IN 46202

www.meticulousda.com www.meticulousda.com info@meticulousda.com
v. 317.926.1820
f. 317.926.1815 CIVIL/STRUCTURAL ENGINEER: 8840 Allison Pointe Blvd Suite 425, Blvd Suite 425, Indianapolis, IN 46250 QUALITY OF LIFE P: (317) 661-1964

ARCHITECTURE

PROJECT MANAGEMENT

Kilmer 100%

3421 North Keystone Avenue Indianapolis, IN 46218

Date

01-17-25

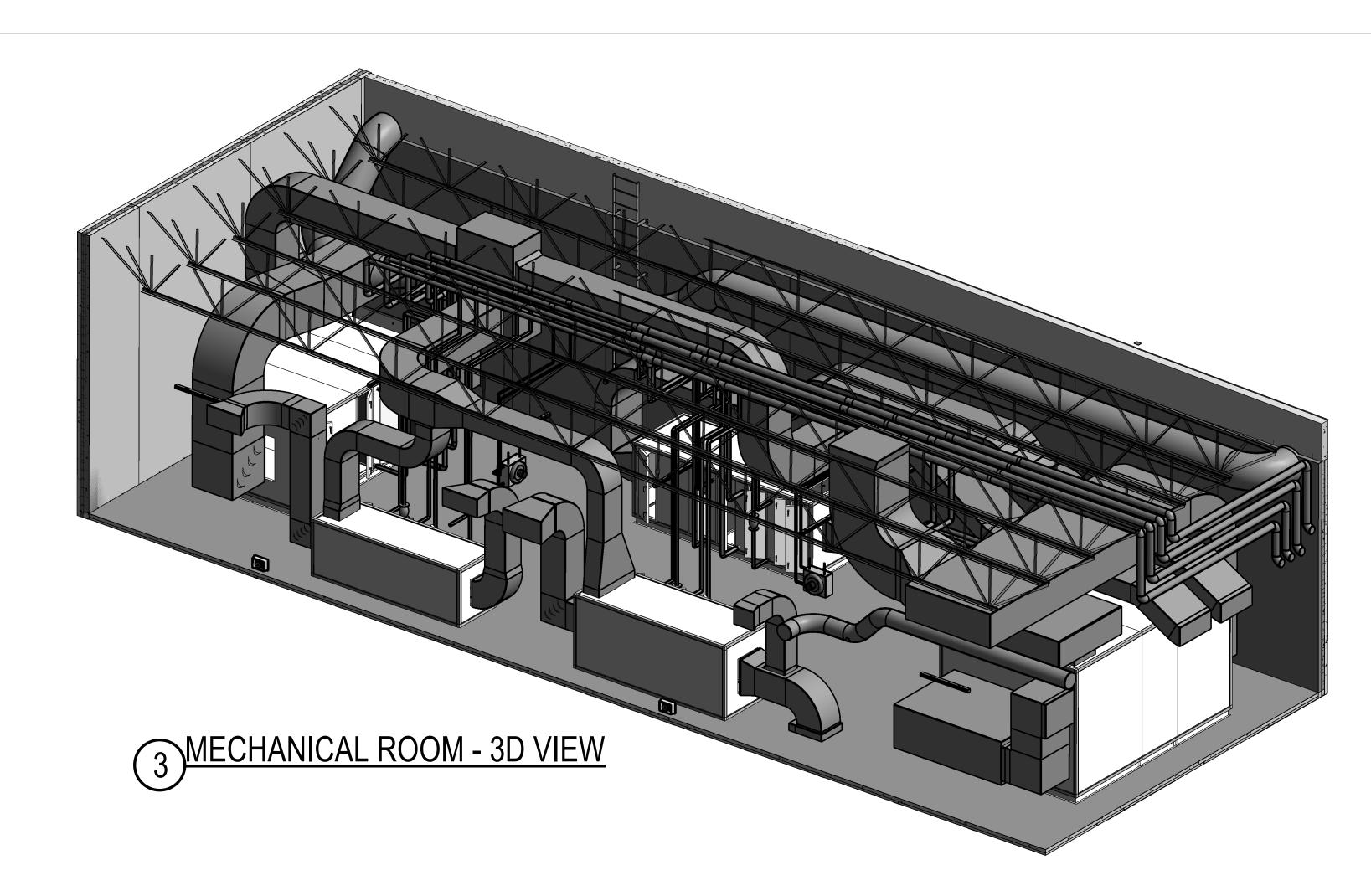
02-10-25

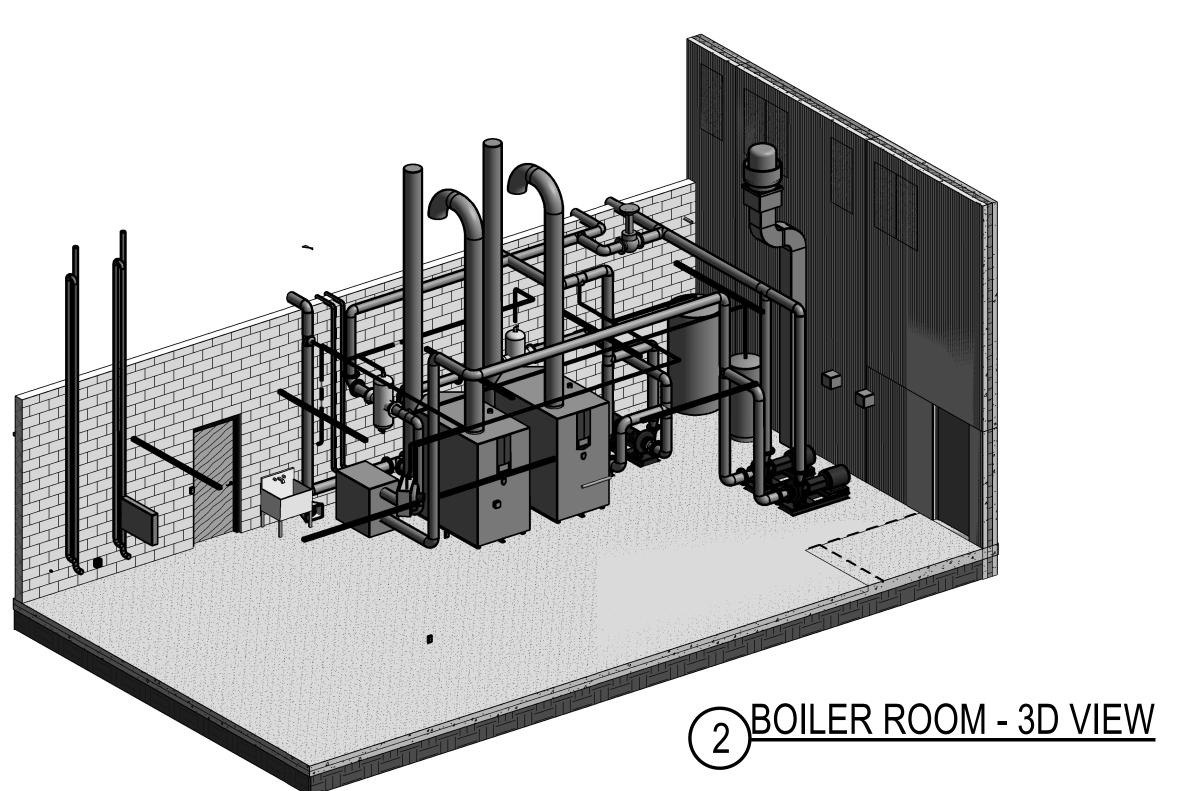
02-17-25

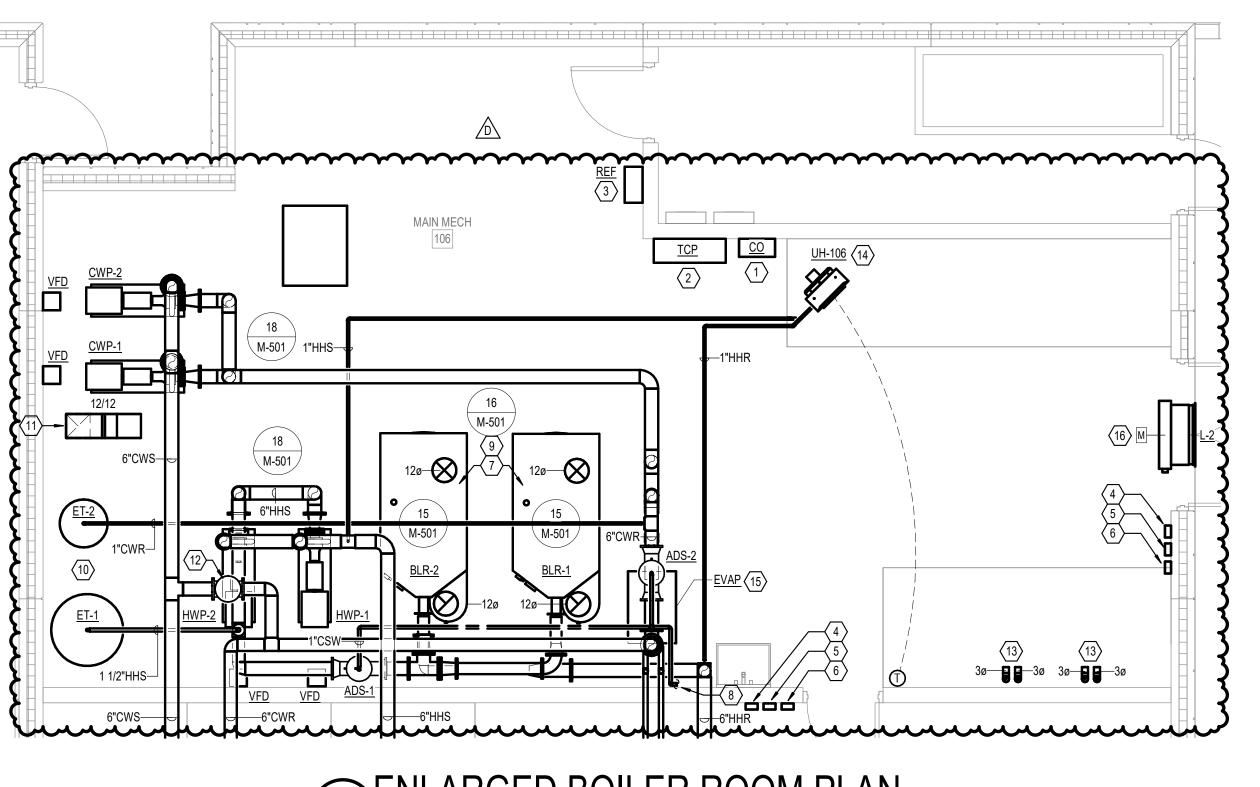
03-10-25

ENLARGED MECHANICAL ROOM PLAN

1/4" = 1'-0"







ENLARGED BOILER ROOM PLAN

GENERAL NOTES

- A REFER TO SHEET M-000 FOR GENERAL MECHANICAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B REFER TO DRAWING M-500 SERIES FOR MECHANICAL DETAILS. C REFER TO DRAWING M-600 SERIES FOR MECHANICAL SCHEDULES.
- D REFER TO DETAILS 3/M-501 & 12/M-501 FOR VAV DUCTWORK & PIPING
- INSTALLATION.
- E PROVIDE LOW VOLTAGE TRANSFORMERS FOR VAV POWER WHERE SHOWN ON ELECTRICAL PLANS.
- F INSTALL THERMOSTATS AT 48-INCHES A.F.F. OR ALIGNED WITH ADJACENT LIGHTSWITCHES.

SHEET KEYNOTES

1 CO DETECTOR CONTROL PANEL PROVIDED AND INSTALLED BY TCC. POWER PROVIDED BY EC. CONTROLLER TO CONNECT TO CO SENSORS AND ALARMS.

REFRIGERANT DETECTOR CONTROL PANEL PROVIDED AND INSTALLED BY TCC. POWER PROVIDED BY EC. CONTROLLER TO CONNECT TO REFRIGERANT

6 PROVIDE AND INSTALL MANUAL ON-ONLY BREAK-GLASS SWITCH TO OPERATE REFRIGERANT EXHAUST FAN. PROVIDE AND INSTALL STROBE CONNECTED TO REFRIGERANT MONITOR ALARM. PROVIDE AND INSTALL EMERGENCY SIGNS,

2 TEMPERATURE CONTROL PANEL PROVIDED AND INSTALLED BY TCC.

4 BOILER EMERGENCY STOP FURNISHED BY DIVISION 23, INSTALLED BY DIVISION 26. REFER TO ELECTRICAL PLANS FOR LOCATION.

5 PROVIDE AND INSTALL OFF-ONLY TAMPER-RESISTANT EMEERGENCY

7 PROVIDE AND INSTALL (2) BOILER CONDENSATE NEUTRALIZATION KITS. ROUTE CONDENSATE TO FLOOR DRAIN. TERMINATE WITH AIR GAP. 8 1" MAKE UP WATER LINE. SEE PLUMBING PLANS FOR CONTINUATION.

10 EXPANSION TANKS TO SIT ON 4" CONCRETE HOUSEKEEPING PADS. 11 TERMINATE EXHAUST DUCT 8-INCHES A.F.F. COVER OPEN END WITH

13 PROVIDE 3" COMBUSTION AND FLUE FOR GAS FIRE DOMESTIC WATER

15 REMOTE EVAPORATOR TO SIT ON 4" CONCRETE HOUSEKEEPING PADS. 16 MOUNT LOVER CENTERED OVER DOOR 9' A.F.F. INTERLOCK MOTORIZED

HEATER. TERMINATE COMBUSTION AIR 3' ABOVE FINISHED ROOF, TERMINATE

CHARTS, AND LABELS IN ACCORDANCE WITH NFPA 704.

9 BOILERS TO SIT ON 4" CONCRETE HOUSEKEEPING PAD.

14 UNIT HEATER HANGING FROM STRUCTURE 8-FEET A.F.F.

DAMPER TO OPEN WHEN EF-5 IS ENERGIZED.

12 PROVIDE AND INSTALL PICV BYPASS VALVE.

FLUE 5'-6" ABOVE FINISHED ROOF.

SENSORS AND ALARMS.

SHUTOFF FOR CHILLER.

HARDWARE CLOTH.

PERKINS & WILL 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611

8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032

v. (317) 344-8044



P23-0116

MECHANICAL **ENLARGED PLANS**

M-401



LANDSCAPE, INTERIOR

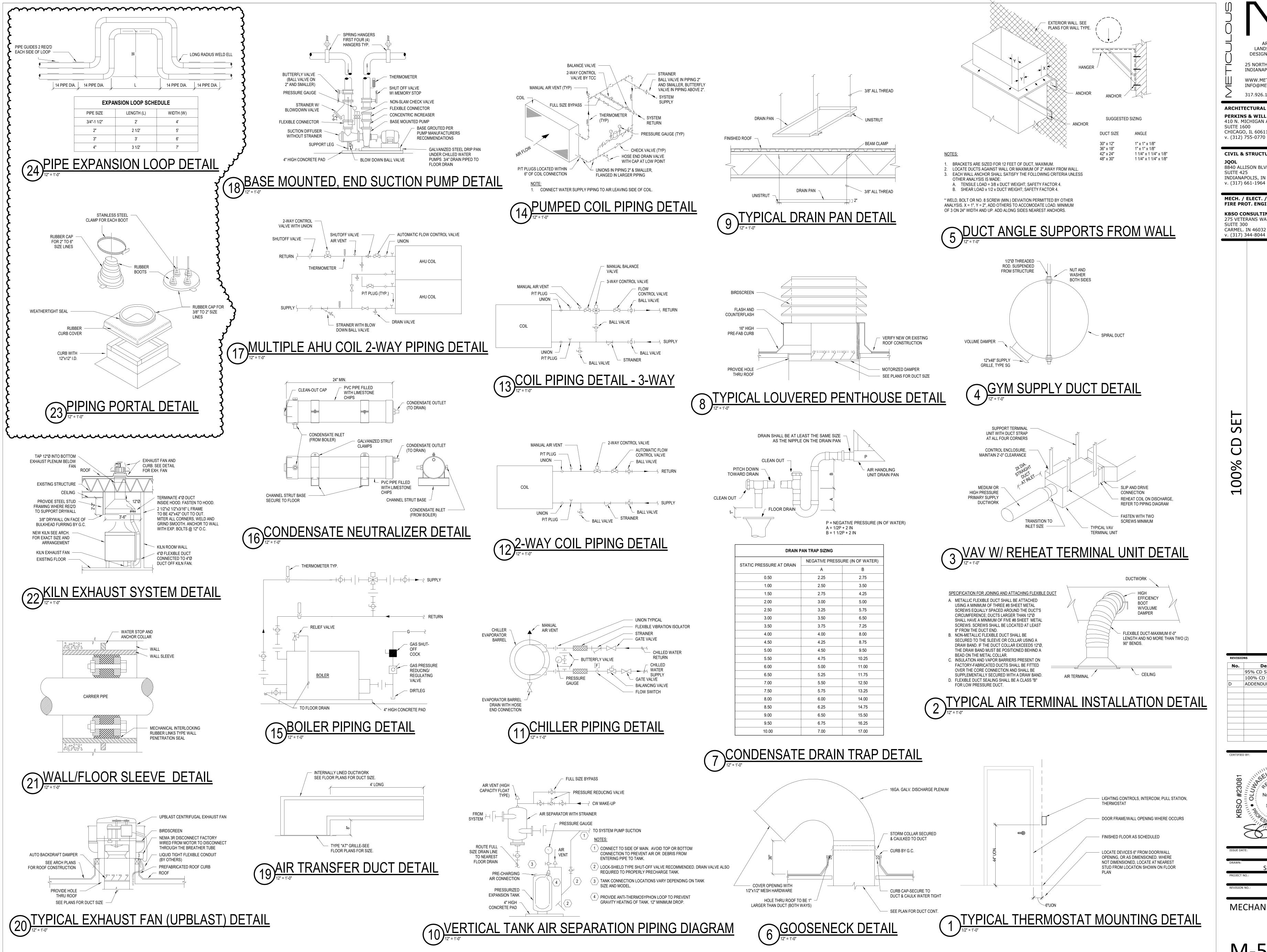
DESIGN, URBAN PLANNING

INDIANAPOLIS, IN 45202

WWW.METICULOUSDA.COM

INFO@METICULOUSDA.COM

25 NORTH PINE STREET, SUITE B



LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820

ARCHITECTURAL PARTNER **PERKINS & WILL** 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611

CIVIL & STRUCTURAL ENGINEER: 8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032

v. (317) 344-8044

95% CD SET 12-18-24 100% CD SET ADDENDUM #6 03-10-25

01.17.2025 P23-0116

MECHANICAL DETAILS

M-501

AIR HANDLING UNIT SCHEDULE

		А	IR CAPACI	TY		SUI	PPLY FAN I	DATA			FILTER I	DATA			HY	DRONIC PE	RE-HEAT	COIL DATA								Н	YDRONIC CO	OLING COIL	DATA							HY	DRONIC RE-H	EAT COIL D	ATA			ELEC	TRICAL DATA	A			
UNIT ID	AREA SERVE	CFM	MIN CFM	MIN OA CFM	TYPE	TSP (IN-WG)	ESP (IN-WG)	ВНР	RPM	HP	TYPE	MERV H	HEATING MBH	AT (°F)	LAT (°F)		MAX APD (IN-WG)	MAX VEL (FPM)	EWT (°F)	GPM N	MAX WPD (FT)	TOTAL MBH	SENS MBH	DB (°F)	T WB (°F)	DB (°F)	AT WB (°F)	ROWS FINS	MAX APD (IN-WG)	MAX VEL (FPS)	EWT (°F)	GPM N	MAX WPD (FT)	HEATING MBH	EAT L	LAT (°F)	FINS/ MAX A	APD MAX V	/EL EWT /I) (°F)	GPM	MAX WPD (FT)	FLA V	/OLTAGE P	PHASE	3HT MA	MANUFACTURER WITH MODEL NUMBER	NOTE
AH-1	CLASSROOMS	43000	32000	10000 2X	D PLENUM	4.98	2.50	52.30	1708	60	PLEATED	8	1827	47	70	2	0.11	479	140	186.0	4.7	1443	1018	79	66	55	55	4 12	0.57	479	42	238.0	3.00	b			0000	\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-		0.0	000	152	208	3 10342.0	2.00	PACE PAI-114X138	
AH-2	MEDIA CENTER	R 5000	3500	750 1X	D PLENUM	3.89	1.50	4.47	2054	5	PLEATED	8	251	20	65	2	0.10	471	140	25.6	1.9	172	129	77	64	55	55	6 8	0.45	471	42	28.4	7.80	217	50	90 2	8 0.1	471	140	23.3	3.00	14	208	3 2282.0	2.00	PACE PAI-51X48	
AH-3	GYMNASIUM	22000	14500	5000 1X	D PLENUM	4.27	1.50	24.13	1681	30	PLEATED	8	1001	40	80	2	0.11	489	140	101.9	3.2	994	674	80	66	55	55	6 12	0.83	489	42	164.6	6.90	904	50	90 2		489	140	92.1	2.60	76	208	3 7279.0	00.و	PACE PAI-78X108	
AH-4	CAFETERIA	10000	7300	2400 1X	D PLENUM	4.08	1.50	9.45	1773	10	PLEATED	8	285	45	70	1	0.05	485	140	28.9	7.1	437	298	80	66	55	55	6 9	0.63	485	42	86.2	7.60	373	50	90 2	8 0.11	485	140	37.9	4.00	30	208	3 4084.00	4.00	PACE PAI-66X66	
H-5	ADMINISTRATIO	N 8500	4000	1300 1X	D PLENUM	3.73	1.50	8.41	2465	10	PLEATED	8	236	45	70	2	0.11	464	140	23.9	4.7	281	202	76	64	55	55	6 8	0.43	464	42	55.9	4.80	0	0	0 0	0 0.00	0	0	0.0	0.00	30	208	3 3073.0	00.د	PACE PAI-66X60	
√H-6	BACK-OF-HOUSE	E 3300	1500	200 1X	D PLENUM	3.84	1.50	2.87	2548	5	PLEATED	8	86	45	70	2	0.11	469	140	8.7	0.8	70	60	76	64	55	55	6 8	0.29	469	42	14.0	1.50	0	0	0 0	0 0.00	0	0	0.0	0.00	14	208	3 1857.0	7.00	PACE PAI-48X39	

						00000000000	EAT:	00000			-			
	INLET	Alf	RFLOW DATA	4	DESIGN INLET	SPECIFICATION S	SECTION 2		RONIC HI	EATING CO	OIL DATA		MANUIFACTURER WITH	
UNIT ID	SIZE	DESIGN CFM	HEATING CFM	MIN CFM	PRESSURE IN.WG	MAX PRESSURE LOSS IN.WG	MIN. MBH	EAT	LAT	EWT	GPM	WPD	MANUFACTURER WITH MODEL NUMBER	NOTES
VAV-101	12	1200	900	360	1.0	0.47	47.2	55 °F	90 °F	140	4.80	5.82	PRICE SDV	
VAV-104 VAV-105B	16	150 2200	100	45 660	1.0	0.45 0.50	7.5 87.5	55 °F 55 °F	90 °F	140 140	0.75 8.89	0.11 8.36	PRICE SDV PRICE SDV	
VAV-105C	4	200	100	60	1.0	0.43	9.1	55 °F	90 °F	140	0.92	0.15	PRICE SDV	
VAV-108	8	430	300	130	1.0	0.21	16.8	55 °F	90 °F	140	1.70	0.58	PRICE SDV	
VAV-109	6	230	170	70	1.0	0.41	10.0	55 °F	90 °F	140	1.01	0.18	PRICE SDV	
VAV-111 VAV-112	9	125 650	100 400	40 195	1.0 1.0	0.47 0.33	6.5 34.4	55 °F 55 °F	90 °F 90 °F	140	0.66 3.50	0.08	PRICE SDV PRICE SDV	
VAV-114	14	1600	1200	480	1.0	0.33	59.0	55 °F	90 °F	140	5.99	3.86	PRICE SDV	
VAV-118	4	200	100	60	1.0	0.43	9.1	55 °F	90 °F	140	0.92	0.15	PRICE SDV	
VAV-124-1 VAV-124-2	8	600 600	400	180 180	1.0 1.0	0.44 0.44	23.4	55 °F 55 °F	90 °F 90 °F	140	2.37	1.05 1.05	PRICE SDV PRICE SDV	
VAV-124-2 VAV-124-3	8	400	300	120	1.0	0.33	16.0	55 °F	90 F 90 °F	140	1.62	0.54	PRICE SDV	
VAV-125	4	100	100	30	1.0	0.48	5.6	55 °F	90 °F	140	0.57	0.06	PRICE SDV	
VAV-126	4	100	100	30	1.0	0.48	5.6	55 °F	90 °F	140	0.57	0.06	PRICE SDV	
VAV-127 VAV-128	4	100 200	100	30 60	1.0	0.48 0.43	5.6 9.1	55 °F 55 °F	90 °F 90 °F	140	0.57 0.92	0.06	PRICE SDV PRICE SDV	
VAV-128 VAV-131	4	200	200	60	1.0	0.43	9.1	55 °F	90 F 90 °F	140	0.92	0.15	PRICE SDV PRICE SDV	
VAV-133	8	400	340	120	1.0	0.33	16.0	55 °F	90 °F	140	1.62	0.54	PRICE SDV	
VAV-135	6	200	100	60	1.0	0.43	9.1	55 °F	90 °F	140	0.92	0.15	PRICE SDV	
VAV-136 VAV-137	16 16	1800 1800	1200 1200	540 540	1.0	0.36 0.36	78.5 78.5	55 °F 55 °F	90 °F 90 °F	140 140	7.97 7.97	6.86	PRICE SDV PRICE SDV	
VAV-137 VAV-138	14	1500	1100	450	1.0	0.30	56.8	55 °F	90 °F	140	5.77	3.61	PRICE SDV PRICE SDV	
VAV-139	14	1500	1100	450	1.0	0.29	56.8	55 °F	90 °F	140	5.77	3.61	PRICE SDV	
VAV-140	14	1500	1100	450	1.0	0.29	56.8	55 °F	90 °F	140	5.77	3.61	PRICE SDV	
VAV-142 VAV-143	14	1500 1500	1100 1100	450 450	1.0	0.29 0.29	56.8 56.8	55 °F 55 °F	90 °F 90 °F	140 140	5.77 5.77	3.61	PRICE SDV PRICE SDV	
VAV-143	14	1500	1100	450	1.0	0.29	56.8	55 °F	90 °F	140	5.77	3.61	PRICE SDV	
VAV-145	14	1500	1100	450	1.0	0.29	56.8	55 °F	90 °F	140	5.77	3.61	PRICE SDV	
VAV-148	8	400	350	120	1.0	0.33	16.0	55 °F	90 °F	140	1.62	0.54	PRICE SDV	
VAV-149 VAV-150	10 14	750 1500	640 1100	225 450	1.0	0.36 0.29	31.3 56.8	55 °F 55 °F	90 °F 90 °F	140 140	3.18 5.77	2.27 3.61	PRICE SDV PRICE SDV	
VAV-151	14	1500	1100	450	1.0	0.29	56.8	55 °F	90 °F	140	5.77	3.61	PRICE SDV	
VAV-152	16	1900	1200	570	1.0	0.30	71.3	55 °F	90 °F	140	7.25	5.77	PRICE SDV	
VAV-156 VAV-157	8	640 400	480 300	190 120	1.0	0.50 0.33	24.2 16.0	55 °F 55 °F	90 °F 90 °F	140 140	2.46 1.62	1.12 0.54	PRICE SDV PRICE SDV	
VAV-157 VAV-158	12	1200	900	360	1.0	0.33	47.2	55 °F	90 °F	140	4.80	5.82	PRICE SDV	
VAV-159	8	400	300	120	1.0	0.33	16.0	55 °F	90 °F	140	1.62	0.54	PRICE SDV	
VAV-162	6	295	220	90	1.0	0.36	11.8	55 °F	90 °F	140	1.20	0.24	PRICE SDV	
VAV-165 VAV-166	6	165 300	120 225	50 90	1.0 1.0	0.45 0.36	8.0 11.9	55 °F 55 °F	90 °F 90 °F	140 140	0.81 1.20	0.12	PRICE SDV PRICE SDV	
VAV-167	14	1260	945	380	1.0	0.29	51.2	55 °F	90 °F	140	5.20	2.99	PRICE SDV	
VAV-201	12	1200	900	360	1.0	0.47	47.2	55 °F	90 °F	140	4.80	5.82	PRICE SDV	
VAV-203	12	1200	900	360	1.0	0.47	47.2	55 °F	90 °F	140	4.80	5.82	PRICE SDV	
VAV-204 VAV-205-1	12 8	1200 600	900 500	360 180	1.0	0.47 0.44	47.2 23.4	55 °F 55 °F	90 °F 90 °F	140 140	4.80 2.37	5.82 1.05	PRICE SDV PRICE SDV	
VAV-205-1	8	600	500	180	1.0	0.44	23.4	55 °F	90 °F	140	2.37	1.05	PRICE SDV	
VAV-205-3	8	400	300	120	1.0	0.33	16.0	55 °F	90 °F	140	1.62	0.54	PRICE SDV	
VAV-206 VAV-207	4 4	100 100	100 100	30 30	1.0	0.48 0.48	5.6 5.6	55 °F 55 °F	90 °F 90 °F	140 140	0.57 0.57	0.06	PRICE SDV PRICE SDV	
VAV-207 VAV-208	4	100	100	30	1.0	0.48	5.6	55 °F	90 F 90 °F	140	0.57	0.06	PRICE SDV PRICE SDV	
VAV-209	6	200	200	60	1.0	0.43	9.1	55 °F	90 °F	140	0.92	0.15	PRICE SDV	
VAV-210	4	200	100	60	1.0	0.43	9.1	55 °F	90 °F	140	0.92	0.15	PRICE SDV	
VAV-213 VAV-214	6	200 270	200 270	60 80	1.0	0.43 0.38	9.1	55 °F 55 °F	90 °F 90 °F	140 140	0.92 1.12	0.15	PRICE SDV PRICE SDV	
VAV-214 VAV-215	6	300	300	90	1.0	0.36	11.1	55 °F	90 F 90 °F	140	1.12	0.22	PRICE SDV PRICE SDV	
VAV-217	6	200	100	60	1.0	0.43	9.1	55 °F	90 °F	140	0.92	0.15	PRICE SDV	
VAV-218	16	1800	1200	540	1.0	0.36	78.5	55 °F	90 °F	140	7.97	6.86	PRICE SDV	
VAV-219 VAV-220	16 14	1800 1500	1200 1100	540 450	1.0 1.0	0.36 0.29	78.5 56.8	55 °F 55 °F	90 °F 90 °F	140 140	7.97 5.77	6.86 3.61	PRICE SDV PRICE SDV	
VAV-220	14	1500	1100	450	1.0	0.29	56.8	55 °F	90 °F	140	5.77	3.61	PRICE SDV	
VAV-222	14	1500	1100	450	1.0	0.29	56.8	55 °F	90 °F	140	5.77	3.61	PRICE SDV	
VAV-223	8	600	500	180	1.0	0.44	23.4	55 °F	90 °F	140	2.37	1.05	PRICE SDV	
VAV-224 VAV-225	14 14	1500 1500	1100 1100	450 450	1.0	0.29 0.29	56.8 56.8	55 °F 55 °F	90 °F 90 °F	140 140	5.77 5.77	3.61 3.61	PRICE SDV PRICE SDV	
VAV-225	14	1500	1100	450	1.0	0.29	56.8	55 °F	90 °F	140	5.77	3.61	PRICE SDV	
VAV-227	14	1500	1100	450	1.0	0.29	56.8	55 °F	90 °F	140	5.77	3.61	PRICE SDV	
VAV-228	14	1500	1100	450	1.0	0.29	56.8	55 °F	90 °F	140	5.77	3.61	PRICE SDV	
VAV-229 VAV-230	14 8	1500 600	1100 450	450 180	1.0	0.29 0.44	56.8 23.4	55 °F 55 °F	90 °F 90 °F	140 140	5.77 2.37	3.61 1.05	PRICE SDV PRICE SDV	
VAV-230 VAV-234	6	230	175	70	1.0	0.41	10.0	55 °F	90 °F	140	1.01	0.18	PRICE SDV	
VAV-235	16	1800	1350	540	1.0	0.28	69.0	55 °F	90 °F	140	7.02	5.45	PRICE SDV	

			DIFFU	JSE	RS & (GRILI	LES	SCI	HED	ULE		
OTES:												
		DIME	NSIONAL DATA		THROW	DATA			1447/110	ACCESSO	DRIES	
UNIT ID	MAX CFM	FACE SIZE	SLOT INFO	CONN. SIZE	DIRECTION	DISTANCE @ NOM. CFM	MOUNT	PRESS DROP (IN. WC)	MAX NC SOUND LEVEL	BALANCE DAMPER	PLENUM BOX	MANUFACTURER WITH MODEL NUMBER
EG1	400	12"x12"		12"x12"	-	-	CEILING	0.04	20	YES	NO	PRICE 80
LD1	250	48"x4"	2-SLOT	10" DIA	1-WAY	9-12-18	CEILING	0.07	20	YES	YES	PRICE TDB7
RG1	2200	24"x24"		24"x24"	-	-	CEILING	0.05	20	YES	YES	PRICE 80
RG2	1100	24"x12"		24"x12"	-	-	CEILING	0.05	20	YES	YES	PRICE 80
RG3	5000	24"x48"		24"x48"	-	-	CEILING	0.08	30	YES	YES	PRICE 80
SD1	150	12"x12"		6" DIA	4-WAY	4-6-10	CEILING	0.15	25	YES	NO	PRICE SPD
SD2	175	24"x24"		6" DIA	4-WAY	3-4-7	CEILING	0.05	25	YES	NO	PRICE SPD
SD3	250	12"x12"		8" DIA	4-WAY	5-7-12	CEILING	0.20	25	YES	NO	PRICE SPD
SD4	280	24"x24"		8" DIA	4-WAY	3-5-9	CEILING	0.07	25	YES	NO	PRICE SPD
SD5	440	24"x24"		10" DIA	4-WAY	4-6-11	CEILING	0.11	25	YES	NO	PRICE SPD
SD6	620	24"x24"		12" DIA	4-WAY	5-8-13	CEILING	0.16	25	YES	NO	PRICE SPD
SD9	1100	36"x12"		36"x12"	-	18-27-50	DUCT	0.01	20	YES	NO	PRICE SDG

					HE	AT	PUM	P SC	CHEC	UL	E			
NOTES:														
	CONNECT TO	NOMINAL	MIN AMRIENT	MIN	MIN		ELECTRIC	AL DATA		LIQUID	SUCTION	LINIT WEIGHT	MANUFACTURER	
UNIT ID	CONNECT TO UNIT(S)	NOMINAL TONS	MIN AMBIENT TEMP (°F)	MIN SEER	MIN HSPF	MCA (A)	VOLTAGE	PHASE	MOCP (A)	LIQUID LINE SIZE	SUCTION LINE SIZE	UNIT WEIGHT (LBS)	MANUFACTURER WITH MODEL NUMBER	NOTES
UNIT ID	-	_				MCA (A)			MOCP (A) 40	LINE				NOTES

		DUCT	LESS SP	LIT	Al	R CON	IDITION	NEF	RSC	H	EDULE	
OTES:												
UNIT ID	LOC	ATION	CONNECT TO	CF	M	COOLING MBH	HEATING MBH	ELEC.	TRICAL D	ATA	MANUFACTURER WITH	NOTES
טווווט	NAME	NUMBER	OUTDOOR UNIT ID	HIGH	LOW	COOLING WIDH	HEATING WIDH	AMPS	VOLTS	PH	MODEL NUMBER	NOTES
CAS-120	MDF	120	HP-1	900	670	35.5	37	1	208	1	LG ARNU363SVA4	
0/10 120												
CAS-132			HP-2	500	370	19	21.5	1	208	1	LG ARNU183SKS4	

							ΔIR-C	COOL	FD	CHII	I FR	SCHE	DUI F							
							, vii v O			O 1111										
NOTES:																				
1. PROVIDE WITH	H 65kA SCC	CR OPTION	N.																	
UNIT ID					CAPACIT	Y DATA				COMPRES	SOR DATA	CONDENSER DATA		ELE	CTRICAL D	ATA		UNIT WEIGHT	MANUFACTURER	NOTES
ONITID	MBH	MIN EER	DESIGN AMB TEMP (°F)	EWT (°F)	LWT (°F)	GPM	MAX WATER PRESSURE DROP (IN-WG)	STAGES	FLUID	QTY	TONS EACH	QUANITY FANS	DESIGN KW	MCA (A)	VOLTS	PH	MOCP (A)	(LBS)	WITH MODEL NUMBER	NOTES
CH-1	2538	10.57	95	54	42	420	12.50	6	WATER	6	37.5	12	240	477	460	3	500	10600.00	QUANTECH QTC3225THJ46XI	1
		•	•				•			•						•				

								FAN	SCHE	DUL	E							
NOTES:																		
				FAN DATA					MOTOR DATA				ACCESSORIES	3				
UNIT ID	DESCRIPTION	DRIVE TYPE	CFM	TSP	ВНР	RPM	SONES	HP	VOLTS	PH	ROOF CURB	DISCONNECT SWITCH	GRAVITY BACKDRAFT DAMPER	VIBRATION ISOLATORS	BIRD SCREEN	UNIT WEIGHT (LBS)	MANUFACTURERWITH MODEL NUMBER	NOTES
EF-1	UPBLAST	DIRECT	600 CFM	1	0.2	1681	9.9	1/4	120	1	YES	YES	YES	NO	YES	48.00	GREENHECK CUE-099-VG	1,2
EF-2	UPBLAST	DIRECT	240 CFM	1	0.12	1672	8.5	1/4	120	1	YES	YES	YES	NO	YES	55.00	GREENHECK CUE-100HP-VG	1,2
EF-3	UPBLAST	DIRECT	1500 CFM	1	0.44	1693	17.9	1/2	120	1	YES	YES	YES	NO	YES	64.00	GREENHECK CUE-120-VG	1,2
EF-4	UPBLAST	DIRECT	1550 CFM	1	0.44	1693	17.9	1/2	120	1	YES	YES	YES	NO	YES	64.00	GREENHECK CUE-120-VG	1,2
EF-5	UPBLAST	DIRECT	1400 CFM	1	0.39	1632	16.6	1/2	120	1	YES	YES	YES	NO	YES	64.00	GREENHECK CUE-120-VG	1,3
EF-6	UPBLAST	DIRECT	500 CFM	0.75	0.14	1725	9.3	1/6	120	1	YES	YES	YES	NO	YES	45.00	GREENHECK CUE-095-VG	1,2
EF-7	UPBLAST	DIRECT	240 CFM	1	0.12	1672	8.5	1/4	120	1	YES	YES	YES	NO	YES	55.00	GREENHECK CUE-100HP-VG	1,2

NOTES:
1. PROVIDE WITH 14" ROOF CURB.

2. PROVIDE WITH VARI-GREEN MOTOR CONTROLLER. TIE INTO BMS TO OPERATE PER OCCUPANCY SCHEDULE.
3. PROVIDE WITH TWO-SPEED VARI-GREEN MOTOR CONTROLLER. FAN TO OPERATE CONTINUOUSLY AT 550 CFM, AND SPEED UP TO 1400 CFM WHEN REFRIGERANT IS DETECTED IN THE MECHANICAL ROOM.

					PU	MP SC	HE	DUL	E.						
					S	SPECIFICATION	SECTION	232123				,			
	LOCATI	ON			DESIGN	DESIGN	MIN.	PU	MP		MOT	OR DATA		MANUEACTURED WITH MODEL	
UNIT ID	NAME	NUMBER	SYSTEM	TYPE	CAPACITY (GPM)	CAPACITY (FT. HD)	EFF.	SUCT. (IN)	DISCH (IN)	HP	RPM	VOLTS	PH	MANUFACTURER WITH MODEL NUMBER	NOTES
CWP-1	MAIN MECH-1	106-1	CHILLED WATER	BASE MOUNTED END SUCTION	500	75.00	84.7%	4	3	15	1714	208	3	BELL & GOSSETT E-1510-3BD-SS-254T-S	
CWP-2	MAIN MECH-1	106-1	CHILLED WATER	BASE MOUNTED END SUCTION	500	75.00	84.7%	4	3	15	1714	208	3	BELL & GOSSETT E-1510-3BD-SS-254T-S	
HCP-1	MECH	202	HOT WATER	INLINE	10	15.00	31.7%	1.5	1.5	1/6	3300	120	1	BELL & GOSSETT PL-36	
HCP-2	MECH	202	HOT WATER	INLINE	10	15.00	31.7%	1.5	1.5	1/6	3300	120	1	BELL & GOSSETT PL-36	
HCP-3	MECH	202	HOT WATER	INLINE	10	15.00	31.7%	1.5	1.5	1/6	3300	120	1	BELL & GOSSETT PL-36	
HCP-4	MECH	202	HOT WATER	INLINE	10	15.00	31.7%	1.5	1.5	1/6	3300	120	1	BELL & GOSSETT PL-36	
HCP-5	MECH	202	HOT WATER	INLINE	10	15.00	31.7%	1.5	1.5	1/6	3300	120	1	BELL & GOSSETT PL-36	
HCP-6	SITE EQUIP STORAGE	113	HOT WATER	INLINE	10	15.00	31.7%	1.5	1.5	1/6	3300	120	1	BELL & GOSSETT PL-36	
HWP-1	MAIN MECH-1	106-1	HOT WATER	BASE MOUNTED END SUCTION	600	100.00	82.6%	4	3	20	3462	208	3	BELL & GOSSETT E-1510-3AD-SS-254T-L	
HWP-2	MAIN MECH-1	106-1	HOT WATER	BASE MOUNTED END SUCTION	600	100.00	82.6%	4	3	20	3462	208	3	BELL & GOSSETT E-1510-3AD-SS-254T-L	

					GAS-F	IRED I	BOILE	R SCH	IEDUL	.E				
NOTES:														
	LOCA	ATION				HEATING DATA			STORAGE	ELECTRIC	AL DATA			
UNIT ID			FUEL TYPE	INPUT	MINIMUM	MIN OUTPUT	DELI	VERY	CAPACITY			UNIT WEIGHT	MANUFACTURER WITH	NOTES
	NAME	NUMBER	. 522 2	CAPACITY (MBH)	EFFICIENCY	CAPACITY (MBH)	GPM	RISE (°F)	(GAL)	VOLTS	PH	(LBS)	MODEL NUMBER	
BLR-1	MAIN MECH-1	106-1	NATURAL GAS	3999	96%	320	350	20	201.0	208	3	3874.00	LOCHINVAR CREST FCB4000	1,2
BLR-2	MAIN MECH-1	106-1	NATURAL GAS	3999	96%	320	350	20	201.0	208	3	3874.00	LOCHINVAR CREST FCB4000	1,2

NOTES:

1. FURNISH AND INSTALL 208V/3 TO 480V/3 TRANSFORMER FROM BOILER MANUFACTURER.
2. PROVIDE WITH 100kA SCCR OPTION.

	EXPANSION TANK SCHEDULE												
NOTES:													
	LOCA	TION			TANK	ACCEPTANCE	PRECHARGE	MAXIMUM	CONNE	CTIONS	MANUFACTURER		
UNIT ID	NAME	NUMBER	SYSTEM	CONFIGURATION	VOLUME(CF)	VOLUME (CF)	PRESSURE (PSIG)	PRESSURE	SYSTEM	DRAIN	WITH MODEL NUMBER	NOTES	
ET-1	MAIN MECH-1	106-1	HOT WATER	VERTICAL	264.00	264.00	20.00	125.00	1	1	BELL & GOSSETT B1000		
ET-2	MAIN MECH-1	106-1	CHILLED WATER	VERTICAL	80.00	80.00	20.00	125.00	1	1	BELL & GOSSETT B300		

				IN	ATI	KE/	REL	.IEF	НОО	D SCH	IEDUL	E		
-1							SP	ECIFICATI	ON SECTION 2	233723				
UNIT ID	CFM	H	100D SI	ZE	THRO	AT SIZE	CURE	B CAP	CURB	VELOCITY	PRESS DROP	MOTORIZED	MANUFACTURER	NOTES
טו וואט	CFIVI	L	W	Н	L	W	L	W	HEIGHT	(FPS)	(IN WC)	DAMPER	WITH MODEL NUMBER	NOTES
RIV-1	10000	5' - 10"	4' - 2"	4' - 6"	56	36	64	44	14	715	0.09	YES	GREENHECK WIH-36X56	2
RIV-2	10000	5' - 10"	4' - 2"	4' - 6"	56	36	64	44	14	715	0.09	YES	GREENHECK WIH-36X56	2
RRV-1	10000	4' - 10"	4' - 10"	3' - 3"	44	44	52	52	14	744	0.09	YES	GREENHECK WRH-44X44	1, 2
RRV-2	5000	3' - 8"	3' - 8"	2' - 4"	30	30	38	38	14	800	0.09	YES	GREENHECK WRH-30X30	1, 2
RRV-3	5000	3' - 8"	3' - 8"	2' - 4"	30	30	38	38	14	800	0.09	YES	GREENHECK WRH-30X30	1, 2

NOTES:

1. FURNISH AND INSTALL CATCH PAN BELOW RELIEF HOOD. EXTEND 4-INCHES BEYOND PERIMETER OF ROOF OPENING WITH 2-INCH HIGH WALLS.

2. PROVIDE WITH SWING-OPEN MOUNT FOR SERVICE.

OTES:			П	זטא	UNI	CU	INII F	7 <i>CP</i>	TER	SU	IEDU	JLC	I.	
LIMIT ID	TVDE	FAN DATA		HYDR	ONIC HEAT	TING COI	L SELECTIO	N DATA		ELE	ECTRICAL D	ATA	MANUFACTURER WITH	
UNIT ID	TYPE	CFM	MIN MBH	EAT (°F)	LAT (°F)	ROWS	EWT (°F)	GPM	MAX WPD (FT)	AMPS	VOLTS	PH	MODEL NUMBER	N
CUH-100	CABINET	260	20	20	96	4	140	3	3.10	1	115	1	MODINE C0030	
CUH-112	CABINET	260	20	20	96	4	140	3	3.10	1	115	1	MODINE C0030	
CUH-115	CABINET	260	20	20	96	4	140	3	3.10	1	115	1	MODINE C0030	
CUH-123	CABINET	260	20	20	96	4	140	3	3.10	1	115	1	MODINE C0030	
CUH-141	CABINET	260	20	20	96	4	140	3	3.10	1	115	1	MODINE C0030	
UH-106	HANGING	660	39	60	113	4	140	4	1.50	1	115	1	MODINE HCH39	
UH-113	HANGING	660	39	60	113	4	140	4	1.50	1	115	1	MODINE HCH39	
UH-202-1	HANGING	660	39	60	113	4	140	4	1.50	1	115	1	MODINE HCH39	
UH-202-2	HANGING	660	39	60	113	4	140	4	1.50	1	115	1	MODINE HCH39	

				LOU	VER S	CHED	ULE			
NOTES:										
	LOCA	ATION	WIDTH	HEIGHT	FREE AREA	MAX AIRFLOW	MAX AIR	PLENUM	MANUFACTURER	
UNIT ID	NAME	NUMBER	(IN)	(IN)	(SQ. FT.)	(CFM)	VELOCITY (FPM)	BOX	WITH MODEL NUMBER	NOTES
	MECH	202	66"	66"	16.53	22000	1400	~~~	GREENHECK ESJ-602	~~

	AIR &	DIRT	SEPA	RATO	R SCHEDULE	
OTES:						
UNIT ID	SYSTEM	SIZE	DESIGN FLOW (GPM)	INTEGRAL STRAINER	MANUFACTURER WITH MODEL NUMBER	NOTES
ADS-1	HHW	6"	600	YES	BELL & GOSSETT CRSN-6F-HV	
ADS-2	CHW	6"	500	YES	BELL & GOSSETT CRSN-6F-HV	

ARCHITECTURE, LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820

ARCHITECTURAL PARTNER **PERKINS & WILL** 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611 v. (312) 755-0770

CIVIL & STRUCTURAL ENGINEER: JQOL 8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300

100%

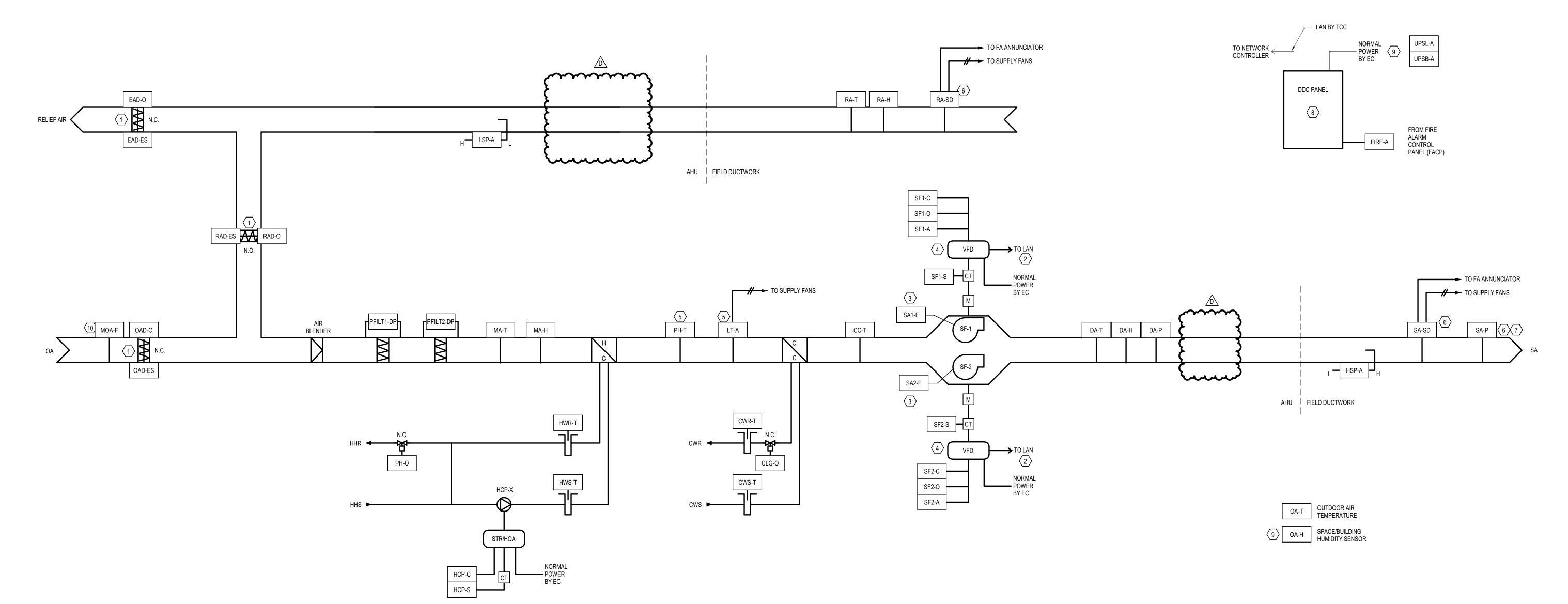
CARMEL. IN 46032 v. (317) 344-8044

95% CD SET 12-18-24 100% CD SET ADDENDUM #6



MECHANICAL SCHEDULES

M-601



PLAN NOTES:

AH-1 POINTS LIST

% OPEN

CLOSED/OPEN

OFF/ON

OFF/ON

OFF/ON

OFF/ON

OFF/ON

CLOSED/OPEN

% OPEN

% OPEN

OFF/ON

CLOSED/OPEN

% CLOSED

START/STOP

START/STOP

OFF/ON

OBJECT DESCRIPTION

COOLING COIL DISCHARGE TEMPERATURE

CHILLED WATER RETURN TEMPERATURE

CHILLED WATER SUPPLY TEMPERATURE

DISCHARGE SUPPLY AIR TEMPERATURE RELIEF AIR DAMPER END SWITCH

FIRE ALARM CONTROL PANEL RELAY

HIGH STATIC SHUTDOWN & ALARM

HOT WATER RETURN TEMPERATURE

HOT WATER SUPPLY TEMPERATURE

LOW STATIC SHUTDOWN & ALARM

TEMPERATURE LOW LIMIT ALARM

MIXED AIR HUMIDITY

MIXED AIR TEMPERATURE

OUTSIDE AIR HUMIDITY

MINIMUM OUTSIDE AIRFLOW

OUTDOOR TEMPERATURE

MAX OUTSIDE AIR DAMPER END SWITCH

MIXED AIR PRE-FILTER DIFFERENTIAL PRESSURE SENSOR

MIXED AIR FINAL FILTER DIFFERENTIAL PRESSURE SENSOR

LEAVING PRE-HEAT COIL TEMPERATURE SENSOR

MAX OUTSIDE AIR DAMPER OUTPUT

PRE-HEAT COIL VALVE OUTPUT

RETURN AIR SMOKE DETECTOR

RETURN AIR DAMPER END SWITCH

90% THROUGH SUPPLY AIR PRESSURE

RETURN AIR TEMPERATURE

RETURN AIR DAMPER OUTPUT

SUPPLY AIR SMOKE DETECTOR

SUPPLY FAN 1 VFD FAULT - ALARM

SUPPLY FAN 2 VFD FAULT - ALARM

SUPPLY AIRFLOW FAN 1

SUPPLY AIRFLOW FAN 2

SUPPLY FAN 1 COMMAND

SUPPLY FAN 1 STATUS

SUPPLY FAN 2 COMMAND

SUPPLY FAN 2 STATUS

SUPPLY FAN 2 VFD SPEED

UPS ON BATTERY ALARM

UPS LOW BATTERY ALARM

SUPPLY FAN 1 VFD SPEED

RETURN AIR HUMIDITY

COOLING COIL VALVE OUTPUT

DISCHARGE AIR HUMIDITY

DISCHARGE STATIC PRESSURE

RELIEF AIR DAMPER OUTPUT

HEATING COIL PUMP COMMAND

HEATING COIL PUMP STATUS

TREND

NOTES

ALARM, MANUAL RESET, SET TO 3.5" INITIALLY

ALARM, MANUAL RESET, SET TO 2.5" INITIALLY

SET TO 35 DEG F (ADJ) - MANUAL RESET

4-20mA = 0-1.5 IN WC

4-20mA = 0-1.5 IN WC

PROVIDED AND INSTALLED BY EC

PROVIDED AND INSTALLED BY EC

OBJECT ER POINT &

AO-9

|Al-10

BI-14

Al-14

AI-23

AI-24

BI-18

BI-16

OAD-ES

UPSB-A

- 1. DAMPERS TO BE INTEGRAL WITH AHU, FURNISHED, AND INSTALLED BY AHU MANUFACTURER. ACTUATORS FURNISHED AND INSTALLED BY TCC.
- 2. HARD WIRE START/STOP SIGNAL, SPEED CONTROL AND ALARM IN THE EVENT OF LOSS OF 3. AIRFLOW MEASURING STATION (AFMS) PIEZOMETER RINGS FURNISHED AND INSTALLED BY
- AHU MANUFACTURER. TRANSDUCER FURNISHED AND INSTALLED BY TCC. 4. VFD FURNISHED, INSTALLED, WIRED, AND STARTED BY EC
- WIRE INTERLOCKED TO THE SUPPLY FAN(S) SO THAT THE SUPPLY FAN IS DE-ENERGIZED UPON SWITCH ACTIVATION.
- 6. REFER TO PLANS FOR LOCATIONS.
- 7. DUCT STATIC SENSOR TO BE HARD WIRED TO THE SAME DDC CONTROLLER WHICH
- 8. TREND DATA AT A MINIMUM 15 MINUTE INTERVAL AND STORE DATA FOR A MINIMUM OF 30
- WITH MAINTENANCE BYPASS SWITCH FOR BATTERY MAINTENANCE. PROVIDE ALARMS AS

SEQUENCE OF OPERATION:

- 1. ALL SETPOINTS TO BE ADJUSTABLE. 2. AIR HANDLING UNIT TO BE STARTED BY DDC PANEL OR FROM BUILDING AUTOMATION SYSTEM OR OPERATOR WORKSTATION. AIR HANDLING UNIT TO RUN BASED ON SCHEDULE OCCUPANCY, INITIALLY FROM 5 AM TO 7 PM MONDAY THROUGH FRIDAY. SCHEDULE AS CONFIRMED BY OWNER.
- AHU AIR HANDLING UNIT
- 1. SAFETIES AND ALARMS (NOTE ALARMS SHALL BE GENERATED AT THE BAS AND SEND NOTIFICATIONS TO STAFF AS SPECIFIED BY CLIENT): A. UPON A SIGNAL FROM THE FIRE ALARM CONTROL PANEL RELAY, THE SUPPLY AND RETURN FAN(S) SHALL BE DE-ENERGIZED THROUGH HARDWIRE INTERLOCKS. ALL
- ASSOCIATED GENERAL/TOILET EXHAUST FANS SHALL ALSO BE DE-ENERGIZED. B. LOW LIMIT THERMOSTAT (AT COOLING COIL INLET ONLY) SHALL DE-ENERGIZE THE SUPPLY FAN(S) THROUGH HARDWIRE INTERLOCK SHOULD ANY 1 FT LENGTH OF THE ELEMENT FALL BELOW THE THERMOSTAT SETPOINT OF 38°F (ADJ).
- a. ANNUNCIATE AN ALARM ANY TIME A LOW LIMIT THERMOSTAT IS ACTIVATED. b. AFTER THE TEMPERATURE RISES BY 12°F (ADJ) AND A MANUAL RESET HAS OCCURRED, A NORMAL START UP SEQUENCE SHALL BE INITIATED.
- c. FULLY OPEN THE CHILLED WATER CONTROL VALVE. d. THE PRE-HEAT COIL CIRCULATION PUMP SHALL BE ENERGIZED.
- e. THE PRE-HEAT COIL CONTROL VALVE SHALL MODULATE TO MAINTAIN THE PRE-HEAT TEMPERATURE SETPOINT. . ANNUNCIATE AN ALARM WHEN HIGH STATIC PRESSURE LIMIT ON DISCHARGE SIDE OF SUPPLY FAN(S) EXCEEDS 3.0 IN WC (ADJ). D. ANY SMOKE DETECTED BY SUPPLY OR RETURN SMOKE DETECTOR SHALL DE-ENERGIZED THE SUPPLY FANS. OA DAMPER TO REMAIN OPEN. INITIATE ALARM AT OWS.
- E. A DIFFERENTIAL PRESSURE TRANSDUCER SHALL BE INSTALLED ACROSS ALL FILTERS. AN ALARM SHALL BE GENERATED AT THE OWS IF A HIGH LIMIT SETPOINT IS EXCEEDED WHEN THE FAN IS OPERATING. PREFILTER ALARM SET TO 1.0" W.G. (ADJ) AND FINAL FILTERS ALARM SET TO 1.5" W.G. (ADJ).
- F. ALL AHU'S SHALL INCORPORATE A FAN STARTUP DELAY FOR 3 MINUTES (ADJ) TO REDUCE RISK OF DUCTWORK COLLAPSE FOLLOWING RESET OF A CLOSED FIRE OR SMOKE G. ANNUNCIATE AN ALARM IF FAN OPERATION IS NOT CONFIRMED BY STATIC PRESSURE SENSOR WITHIN 2 MINUTES (ADJ) AFTER COMMANDED TO RUN.
- H. ANNUNCIATE AN ALARM IF A DAMPER IS CALLED TO OPEN AND NOT PROVED OPEN BY END SWITCH. 2. NORMAL OCCUPIED OPERATION:
- A. FOR COLD WEATHER STARTUP ANYTIME OUTDOOR AIR TEMPERATURE IS LESS THAN 40°F (ADJ), RUN SUPPLY FANS AT 25 AND 20 HZ (ADJ) RESPECTIVELY FOR 7 MIN (ADJ) BEFORE RAMPING FAN UP TO MAINTAIN STATIC PRESSURE. ACTIVATE SUPPLY AIR TEMPERATURE CONTROL LOOP WHILE DISABLING ECONOMIZER FOR 7 MIN (ADJ) BEFORE
- BEING ENABLED. THE PREHEAT CONTROL LOOP WILL BE ENERGIZED AS SOON AS THE AHU IS CALLED TO RUN AND SET TO 65°F (ADJ). ONCE SUPPLY FAN(S) STATUS IS PROVEN ON, THE PREHEAT SETPOINT WILL DECREASE 1°F (ADJ) EVERY 2 MINUTES (ADJ) UNTIL THE CONTROL SETPOINT IS REACHED. B. FOR STARTUP ANYTIME OUTDOOR AIR TEMPERATURE IS 40°F (ADJ) OR GREATER, SUPPLY FANS START AND RAMP UP OVER A PERIOD OF 5 MINUTES (ADJ.) TO CONTROL
- STATIC PRESSURE AND FAN TRACKING SETPOINTS. . MINIMUM OUTDOOR AIR DAMPER TO FULLY (ADJ) OPEN AFTER STARTUP, AND STATIC PRESSURE CONTROL ARE ENGAGED.
- D. THE SUPPLY AIR TEMPERATURE CONTROL LOOP SHALL OPERATE AS DESCRIBED: a. BELOW 70°F (ADJ) OUTDOOR AIR TEMPERATURE MODULATE ECONOMIZER DAMPERS TO MAINTAIN MIXED AIR TEMPERATURE SETPOINT. MIXED AIR TEMPERATURE SETPOINT TO BE TRACKED = SUPPLY AIR TEMPERATURE MINUS 5°F (ADJ).
- b. ECONOMIZER DAMPERS OPERATE AS DESCRIBED 1. DAMPER MIN % OPEN MAX % OPEN
- 2. MIN OAD 100 (ADJ) 0 (ADJ)
- MAX OAD 4. RAD 100 (ADJ)
- c. IF THE SUPPLY AIR TEMPERATURE RISES WHILE THE RELIEF AIR DAMPERS ARE 100% (ADJ) OPEN, THE COOLING COIL SHALL BE MODULATED TO MAINTAIN SUPPLY AIR
- d. A DROP IN SUPPLY AIR TEMPERATURE SHALL MODULATE CLOSE THE COOLING COIL CONTROL VALVE IN SEQUENCE WITH THE MODULATING ECONOMIZER DAMPERS TOWARDS MINIMUM POSITION.
- e. WHEN THE MAXIMUM OUTDOOR AIR DAMPER IS FULLY CLOSED OR AT MINIMUM POSITION, THE PREHEAT TEMPERATURE IS BELOW SETPOINT, START HEATING COIL PUMP AND MODULATE PREHEAT COIL CONTROL VALVE TO MAINTAIN PREHEAT AIR TEMPERATURE SETPOINT. PREHEAT COIL TEMPERATURE SETPOINT TO BE TRACKED
- f. THE BAS SHALL CALCULATE OUTSIDE AIR ENTHALPY AND RETURN AIR ENTHALPY USING THE OUTSIDE AIR AND RETURN AIR TEMEPRATURE AND HUMIDITIY SENSORS,
- RESPECTIVELY. AS THE RETURN AIR ENTHALPY FALLS BELOW THE CALCULATED OUTSIDE AIR ENTHALPY, THE ECONOMIZER DAMPER SHALL BE MODULATED TO CONTROL THE MIXED AIR TEMPERATURE AT THE MIXED AIR TEMPERATURE SETPOINT. UPON A RISE IN THE RETURN AIR ENTHALPY ABOVE THE OUTSIDE AIR ENTHALPY, THE ECONOMIZER DAMPER SHALL RETURN TO ITS MINIMUM POSITION.
- E. THE BAS SHALL CALCULATE THE OUTSIDE AND RETURN AIR ENTHALPY, USING THE OUTSIDE AND RETURN AIR TEMPERATURE AND HUMIDITY SENSORS. AS THE RETURN AIR ENTHALPY FALLS BELOW THE OUTSIDE AIR ENTHALPY, THE ECONOMIZER MODE SHALL BE ENABLED.
- a. DURING ECONOMIZER MODE, THE RETURN, OUTSIDE AIR AND EXHAUST AIR DAMPERS (RAD-O, OAD-O, AND EAD-O RESPECTIVELY) SHALL OPERATE IN UNISION TO CONTROL THE MIXED AIR TEMPERATURE AT THE MIXED AIR TEMPERATURE SETPOINT. b. AS THE RETURN AIR ENTHALPY RISES ABOVE THE OUTSIDE AIR ENTHALPY, THE ECONOMIZER MODE SHALL BE DISABLED AND THE ECONOMIZER DAMPER SHALL
- RETURN TO ITS MINIMUM POSITION (ADJ.) c. SUPPLY AIR TEMPERATURE SHALL BE RESET FROM 55°F TO 60°F (ADJ) AS OUTDOOR AIR TEMPERATURE VARIES FROM 70°F TO 30°F (ADJ). IF RETURN AIR HUMIDITY EXCEEDS 55% RH (ADJ), RESET THE UNIT SUPPLY TEMPERATURE TO 53°F (ADJ) AND NOTIFY OWNER ON BAS/OWS. INCREASE SUPPLY TEMPERATURE 1°F (ADJ) EVERY 10
- MINUTES AFTER 15 MINUTES OF THIS NOTIFICATION. F. SUPPLY FAN SPEED SHALL BE DETERMINED BY STATIC PRESSURE SENSOR LOCATED 90% THROUGH THE SUPPLY DUCTWORK SYSTEM IN CONJUNCTION WITH THE UNIT DISCHARGE STATIC PRESSURE. SUPPLY FAN VFD CONTROL LOOP TO MODULATE FAN SPEED TO ACHIEVE A DUCT STATIC PRESSURE SET AT INITIALLY 1.25" W.G. (ADJ),
- WHILE NOT EXCEEDING A UNIT DISCHARGE PRESSURE OF 3.9" W.G. (ADJ). TEST AND BALANCE CONTRACTOR TO DETERMINE FINAL SETPOINT AND APPROVE WITH a. IF ONE OR FEWER TERMINAL BOXES HAVE A DAMPER POSITION THAT IS IS 95% OR GREATER, THE STATIC PRESSURE SETPOINT SHALL DECREASE 0.01" W.G. (ADJ)
- EVERY 2 MINUTES (ADJ). b. IF TWO-THREE TERMINAL BOXES (ADJ.) HAVE A DAMPER POSITION THAT IS 95% OR GREATER, THE CURRENT STATIC PRESSURE SETPOINT SHALL BE MAINTAINED. c. IF FOUR OR MORE TERMINAL BOXES (ADJ.) HAVE A DAMPER POSITION THAT IS 95% OR GREATER, THE STATIC PRESSURE SETPOINT SHALL INCREASE 0.06" W.G. (ADJ)
- G. ON AHU SHUTDOWN ALL SUPPLY FANS STOP, OUTDOOR AIR AND RELIEF AIR DAMPERS FULLY CLOSE, AND RETURN AIR DAMPER FULLY OPENS. THE COOLING COIL CONTROL VALVE IS FULLY CLOSED, EXCEPT ON LOW LIMIT SAFETY. MODULATE THE PREHEAT COIL CONTROL VALVE TO MAINTAIN 50°F (ADJ) PREHEAT AIR SETPOINT.
- A. TRANSITIONING TO UNOCCUPIED MODE THE SUPPLY, RETURN FANS, AND DAMPERS SHALL OPERATE IN THE SEQUENCE DESCRIBED ABOVE. B. AIR HANDLING UNIT SHALL CYCLE TO MAINTAIN A MAXIMUM AND MINIMUM SPACE TEMPERATURE OF 80°F (ADJ) AND 65°F (ADJ) RESPECTIVELY WITH A 2°F (ADJ) HYSTERESIS
- TO PREVENT SHORT CYCLING OF AHU. RETURN FAN TRACKING SHALL BE SET TO ZERO CFM WHILE FULLY RECIRCULATING AIR. C. ANYTIME A SPACE OR BUILDING HUMIDITY (IF APPLICABLE) EXCEEDS 60% RH (ADJ) AND THE OUTDOOR EXCEEDS 65°F (ADJ), THE AIR HANDLING UNIT SHALL CYCLE WITH
- RETURN FAN TRACKING SET TO ZERO CFM WHILE FULLY RECIRCULATING AIR. DEHUMIDIFICATION CONTROL LOOP SHALL OCCUR BY MODULATING COOLING COIL CONTROL VALVE WITH SPACE REHEAT. HUMIDITY HYSTERESIS SHALL BE 10% RH (ADJ) TO PREVENT SHORT CYCLING OF AHU. D. TRANSITION TO OCCUPIED MODE IS BASED ON A SCHEDULE OR TERMINAL UNIT SEQUENCE.

5. LOCATE 3" FROM COOLING COIL INLET. LOW TEMPERATURE SWITCH(ES) SHALL BE HARD-

- CONTROLS THE AHU & FANS.

- 9. TCC TO PROVIDE AND INSTALL UPS ON CONTROLLER. UPS TO ALLOW FOR OPERATION FOR 4 MINUTES FOLLOWING AN ELECTRICAL GLITCH OR SHUTDOWN. UPS SHALL COME COMPLETE
- 10. OUTDOOR AIRFLOW MEASURING STATION FURNISHED AND INSTALLED BY TCC.

4 AH-1 CONTROL SCHEMATIC

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CIVIL & STRUCTURAL ENGINEER: 8840 ALLISON BLVD

INDIANAPOLIS, IN 46250

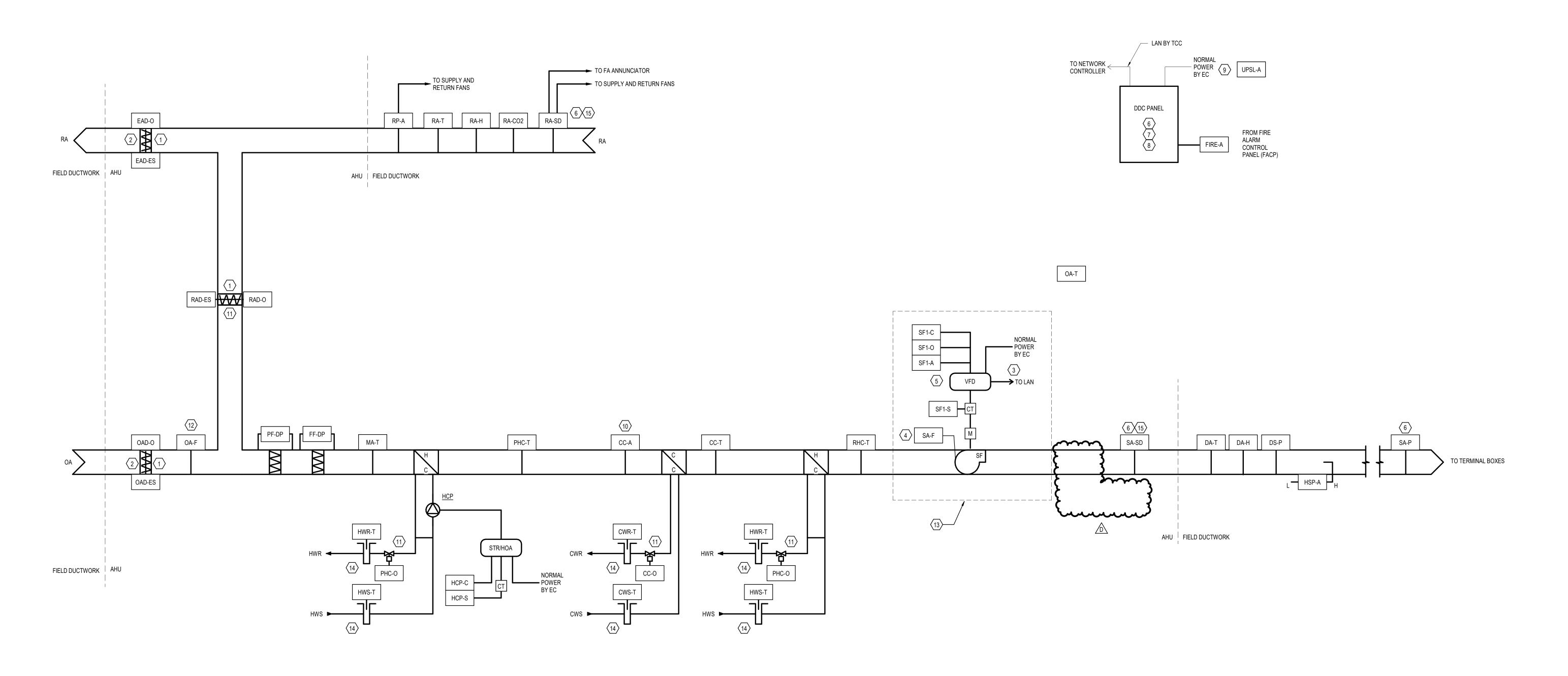
v. (317) 661-1964 MECH. / ELECT. / PLUMB. /

FIRE PROT. ENGINEER: **KBSO CONSULTING** 275 VETERANS WAY SUITE 300 CARMEL. IN 46032 v. (317) 344-8044

95% CD SET 12-18-24 100% CD SET ADDENDUM #6

P23-0116

TEMPERATURE CONTROL DIAGRAMS



AHU-2/3/4 POINTS LIST											
OBJECT NAME	CONTROLL ER POINT & TYPE	OBJECT DESCRIPTION	UNITS	TREND	ALARM	GRAPHIC	NOTES				
CC-A	Al-18	TEMPERATURE LOW LIMIT ALARM	DEG F	Yes	No	Yes	SET TO 38 DEG F (ADJ) - MANUAL RESET				
CC-O	AO-1	COOLING COIL VALVE OUTPUT	% OPEN	Yes	No	Yes	SET TO 30 DEGT (AD3) - MANOAL NESET				
CC-T	Al-6	LEAVING COOLING COIL TEMPERATURE SENSOR	DEG F	Yes	No	Yes					
CWR-T	Al-17	CHILLED WATER RETURN TEMPERATURE	DEG F	Yes	No	Yes					
CWS-T	Al-17 Al-16	CHILLED WATER SUPPLY TEMPERATURE	DEG F	Yes	No	Yes					
DA-H	Al-10	DISCHARGE SUPPLY AIR HUMIDITY	% RH	Yes	No	Yes					
DA-n DA-T	Al-7	DISCHARGE SUPPLY AIR TEMPERATURE	DEG F	Yes	No	Yes					
DS-P											
	Al-9	DISCHARGE STATIC PRESSURE	IN WC	Yes	No	Yes	AL ADM				
EAD-ES	BI-4	EXHAUST AIR DAMPER OUTPUT	0/ ODEN	Yes	Yes	Yes	ALARM				
EAD-O	BO-4	EXHAUST AIR DAMPER OUTPUT	% OPEN	Yes	No	Yes	4.00 4.005 NUMO				
FF-DP	Al-3	FINAL FILTER DIFFERENTIAL PRESSURE	IN WC	Yes	No	Yes	4-20 mA = 0-2.5 IN WC				
FIRE-A	BI-11	FIRE ALARM CONTROL PANEL RELAY	OFF/ON	No	Yes	Yes					
HCP-C	BO-7	HEATING COIL PUMP COMMAND	OFF/ON	Yes	No	Yes					
HCP-S	BI-10	HEATING COIL PUMP STATUS	OFF/ON	Yes	No	Yes					
HSP-A	BI-3	HIGH STATIC SHUTDOWN & ALARM	IN WC	No	Yes	Yes	ALARM, MANUAL RESET, SET TO 3.5" INITIALLY				
HWR-T	Al-14	HOT WATER RETURN TEMPERATURE	DEG F	Yes	No	Yes					
HWR-T	AI-14	HOT WATER RETURN TEMPERATURE	DEG F	Yes	No	Yes					
HWS-T	Al-15	HOT WATER SUPPLY TEMPERATURE	DEG F	Yes	No	Yes					
HWS-T	AI-15	HOT WATER SUPPLY TEMPERATURE	DEG F	Yes	No	Yes					
MA-T	Al-4	MIXED AIR TEMPERATURE	DEG F	Yes	No	Yes					
OA-F	Al-1	MIN. OUTSIDE AIRFLOW	CFM	Yes	No	Yes					
OA-T	Al-20	OUTDOOR AIR TEMPERATURE		Yes	No	Yes					
OAD-ES	BI-1	MIN. OUTSIDE AIR DAMPER END SWITCH		Yes	Yes	Yes	ALARM				
OAD-O	BO-1	MIN. OUTSIDE AIR DAMPER OUTPUT	% OPEN	Yes	No	Yes					
PF-DP	Al-2	PRE-FILTER DIFFERENTIAL PRESSURE SENSOR	IN WC	Yes	No	Yes	4-20mA = 0-1.5 IN WC				
PHC-O	AO-2	PRE-HEAT COIL VALVE OUTPUT	% OPEN	Yes	No	Yes					
PHC-O	AO-2	PRE-HEAT COIL VALVE OUTPUT	% OPEN	Yes	No	Yes					
PHC-T	AI-5	LEAVING PRE-HEAT COIL TEMPERATURE SENSOR	DEG F	Yes	No	Yes					
RA-CO2	Al-13	RETURN AIR CARBON DIOXIDE	PPM	Yes	No	Yes					
RA-H	Al-12	RETURN AIR HUMIDITY	% RH	Yes	No	Yes					
RA-SD		RETURN AIR SMOKE DETECTOR		No	Yes	Yes	PROVIDED AND INSTALLED BY EC				
RA-T	Al-11	RETURN AIR TEMPERATURE	DEG F	Yes	No	Yes					
RAD-ES	BI-5	RETURN AIR DAMPER END SWITCH		Yes	Yes	Yes	ALARM				
RAD-O	BO-3	RETURN AIR DAMPER OUTPUT	% OPEN	Yes	No	Yes	, <u> </u>				
RHC-T	AI-5	LEAVING RE-HEAT COIL TEMPERATURE SENSOR	DEG F	Yes	No	Yes					
RP-A	Al-19	RETURN AIR LOW STATIC ALARM	5201	No	Yes	Yes	ALARM				
SA-F	Al-21	SUPPLY AIRFLOW FAN 1	CFM	Yes	No	Yes	/ 16-7 tt 1/1/1				
SA-P	Al-10	90% THROUGH SUPPLY AIR PRESSURE	IN WC	Yes	No	Yes					
SA-SD		SUPPLY AIR SMOKE DETECTOR	IIA AAO	No	Yes	Yes	PROVIDED AND INSTALLED BY EC				
SF1-A	BI-7	SUPPLY FAN 1 VFD FAULT - ALARM		No	Yes	Yes	ALARM				
SF1-A SF1-C	BO-5	SUPPLY FAN 1 COMMAND	START/STOP	Yes	No	Yes	VEVIVIA				
			%								
SF1-0	AO-3	SUPPLY FAN 1 VFD SPEED	1.5	Yes	No	Yes					
SF1-S	BI-6	SUPPLY FAN 1 STATUS	OFF/ON	Yes	No	Yes					

BI-12 UPS LOW BATTERY ALARM

- 1. DAMPERS TO BE INTEGRAL WITH AHU; ACTUATORS FURNISHED AND INSTALLED BY TCC. 2. SPRING RETURN CLOSED UPON LOSS OF POWER.
- 3. HARD WIRE START/STOP SIGNAL AND SPEED CONTROL IN THE EVENT OF LOSS OF LAN. LAN 4. AIRFLOW MEASURING STATION (AFMS) FURNISHED AND INSTALLED BY AHU MANUFACTURER.
- TCC TO CONNECT TO CONTROLLER WITH LAN. PIEZOMETER AFMS BY AHU MANUF, TRANSMITTER BY TCC.
- 5. VFD FURNISHED, INSTALLED, WIRED, AND STARTED BY EC. 6. REFER TO PLANS FOR LOCATIONS.
- 7. TREND DATA AT A MINIMUM 15 MINUTE INTERVAL AND STORE DATA FOR A MINIMUM OF 30 DAYS. INCLUDE TRENDS FOR COMMANDS AND/OR SETPOINT. PROVIDE CHANGE OF VALUE AND INTERVAL TRENDS FOR BINARY POINTS.
- 8. NOTE THERE SHALL BE ONE DDC PANEL FOR EACH AHU. 9. TCC TO PROVIDE AND INSTALL UPS ON CONTROLLER. UPS TO ALLOW FOR OPERATION FOR 4 MINUTES FOLLOWING AN ELECTRICAL GLITCH OR SHUTDOWN. UPS SHALL COME COMPLETE WITH MAINTENANCE BYPASS SWITCH FOR BATTERY MAINTENANCE. PROVIDE ALARMS AS
- 10. LOCATE 3" FROM COOLING COIL INLET. 11. SPRINT RETURN OPEN UPON LOSS OF POWER.

NOTED BY POINTS.

- 12. OA AFMS PROVIDED AND INSTALLED BY TCC. 13. NOTE FAN & VFD QUANTITIES PER PLANS, TYPICAL PER FAN. PROVIDE DDC CONTROLLER
- CAPABLE OF ALL POINTS REQUIRED. 14. THERMOWELLS FURNISHED AND INSTALLED BY MC. 15. SMOKE DETECTOR PROVIDED AND INSTALLED BY EC.

SEQUENCE OF OPERATION:

1. ALL SETPOINTS TO BE ADJUSTABLE. 2. AIR HANDLING UNIT TO BE STARTED BY DDC PANEL OR FROM BUILDING AUTOMATION SYSTEM OR OPERATOR WORKSTATION. AIR HANDLING UNIT TO RUN BASED ON SCHEDULE OCCUPANCY, INITIALLY FROM 5 AM TO 7 PM MONDAY THROUGH FRIDAY. SCHEDULE AS CONFIRMED BY OWNER.

AHU – AIR HANDLING UNIT

- 1. SAFETIES AND ALARMS (NOTE ALARMS SHALL BE GENERATED AT THE BAS AND SEND NOTIFICATIONS TO STAFF AS SPECIFIED BY CLIENT): A. UPON A SIGNAL FROM THE FIRE ALARM CONTROL PANEL RELAY, THE SUPPLY FAN SHALL BE DE-ENERGIZED THROUGH HARDWIRE INTERLOCKS. ALL ASSOCIATED GENERAL/TOILET EXHAUST FANS SHALL ALSO BE DE-ENERGIZED.
- B. LOW LIMIT THERMOSTAT (AT COOLING COIL INLET ONLY) SHALL DE-ENERGIZE THE SUPPLY FAN THROUGH HARDWIRE INTERLOCK SHOULD ANY 1 FT LENGTH OF THE ELEMENT FALL BELOW THE THERMOSTAT SETPOINT OF 38°F (ADJ). a. ANNUNCIATE AN ALARM ANY TIME A LOW LIMIT THERMOSTAT IS ACTIVATED.
- b. AFTER THE TEMPERATURE RISES BY 12°F (ADJ) AND A MANUAL RESET HAS OCCURRED, A NORMAL START UP SEQUENCE SHALL BE INITIATED.
- c. FULLY OPEN THE CHILLED WATER CONTROL VALVE.
- d. THE PRE-HEAT COIL CIRCULATION PUMP SHALL BE ENERGIZED. e. THE PRE-HEAT COIL CONTROL VALVE SHALL MODULATE TO MAINTAIN THE PRE-HEAT TEMPERATURE SETPOINT.
- C. ANNUNCIATE AN ALARM WHEN HIGH STATIC PRESSURE LIMIT ON DISCHARGE SIDE OF SUPPLY FAN(S) EXCEEDS 3.0 IN WC (ADJ). D. ANY SMOKE DETECTED BY SUPPLY OR RETURN SMOKE DETECTOR SHALL DE-ENERGIZED THE SUPPLY FANS. OA DAMPER TO REMAIN OPEN. INITIATE ALARM AT OWS.
- E. A DIFFERENTIAL PRESSURE TRANSDUCER SHALL BE INSTALLED ACROSS ALL FILTERS. AN ALARM SHALL BE GENERATED AT THE OWS IF A HIGH LIMIT SETPOINT IS EXCEEDED WHEN THE FAN IS OPERATING. PREFILTER ALARM SET TO 1.0" W.G. (ADJ) AND FINAL FILTERS ALARM SET TO 1.5" W.G. (ADJ).
- F. ALL AHU'S SHALL INCORPORATE A FAN STARTUP DELAY FOR 3 MINUTES (ADJ) TO RÉDUCE RISK OF DUCTWORK COLLAPSE FOLLOWING RESET OF A CLOSED FIRE OR SMOKE G. ANNUNCIATE AN ALARM IF FAN OPERATION IS NOT CONFIRMED BY STATIC PRESSURE SENSOR WITHIN 2 MINUTES (ADJ) AFTER COMMANDED TO RUN.
- H. ANNUNCIATE AN ALARM IF A DAMPER IS CALLED TO OPEN AND NOT PROVED OPEN BY END SWITCH. 2. NORMAL OCCUPIED OPERATION: A. FOR COLD WEATHER STARTUP ANYTIME OUTDOOR AIR TEMPERATURE IS LESS THAN 40°F (ADJ), RUN SUPPLY FANS AT 25 AND 20 HZ (ADJ) RESPECTIVELY FOR 7 MIN (ADJ)
- BEFORE RAMPING FAN UP TO MAINTAIN STATIC PRESSURE. ACTIVATE SUPPLY AIR TEMPERATURE CONTROL LOOP WHILE DISABLING ECONOMIZER FOR 7 MIN (ADJ) BEFORE BEING ENABLED. THE PREHEAT CONTROL LOOP WILL BE ENERGIZED AS SOON AS THE AHU IS CALLED TO RUN AND SET TO 65°F (ADJ). ONCE SUPPLY FAN(S) STATUS IS
- PROVEN ON, THE PREHEAT SETPOINT WILL DECREASE 1°F (ADJ) EVERY 2 MINUTES (ADJ) UNTIL THE CONTROL SETPOINT IS REACHED. B. FOR STARTUP ANYTIME OUTDOOR AIR TEMPERATURE IS 40°F (ADJ) OR GREATER, SUPPLY FANS START AND RAMP UP OVER A PERIOD OF 5 MINUTES (ADJ.) TO CONTROL
- STATIC PRESSURE AND FAN TRACKING SETPOINTS. C. MINIMUM OUTDOOR AIR DAMPER TO FULLY (ADJ) OPEN AFTER STARTUP, RETURN FAN TRACKING, AND STATIC PRESSURE CONTROL ARE ENGAGED.
- D. THE SUPPLY AIR TEMPERATURE CONTROL LOOP SHALL OPERATE AS DESCRIBED: a. BELOW 70°F (ADJ) OUTDOOR AIR TEMPERATURE MODULATE ECONOMIZER DAMPERS TO MAINTAIN MIXED AIR TEMPERATURE SETPOINT. MIXED AIR TEMPERATURE
- b. ECONOMIZER DAMPERS OPERATE AS DESCRIBED 1. DAMPER MIN % OPEN MAX % OPEN

SETPOINT TO BE TRACKED = SUPPLY AIR TEMPERATURE MINUS 5°F (ADJ).

- 2. MIN OAD 100 (ADJ)
- 3. MAX OAD 0 (ADJ) 4. RAD
- c. IF THE SUPPLY AIR TEMPÉRATURE RISES WHILE THE RELIEF AIR DAMPERS ARE 100% (ADJ) OPEN, THE COOLING COIL SHALL BE MODULATED TO MAINTAIN SUPPLY AIR
- d. A DROP IN SUPPLY AIR TEMPERATURE SHALL MODULATE CLOSED THE COOLING COIL CONTROL VALVE IN SEQUENCE WITH THE MODULATING ECONOMIZER DAMPERS e. WHEN THE MAXIMUM OUTDOOR AIR DAMPER IS FULLY CLOSED OR AT MINIMUM POSITION, THE PREHEAT TEMPERATURE IS BELOW SETPOINT, START HEATING COIL
- PUMP AND MODULATE PREHEAT COIL CONTROL VALVE TO MAINTAIN PREHEAT AIR TEMPERATURE SETPOINT. PREHEAT COIL TEMPERATURE SETPOINT TO BE TRACKED
- f. THE BAS SHALL CALCULATE OUTSIDE AIR ENTHALPY AND RETURN AIR ENTHALPY USING THE OUTSIDE AIR AND RETURN AIR TEMPERATURE AND HUMIDITY SENSORS, RESPECTIVELY. AS THE RETURN AIR ENTHALPY FALLS BELOW THE CALCULATED OUTSIDE AIR ENTHALPY, THE ECONOMIZER DAMPER SHALL BE MODULATED TO
- CONTROL THE MIXED AIR TEMPERATURE AT THE MIXED AIR TEMPERATURE SETPOINT. UPON A RISE IN THE RETURN AIR ENTHALPY ABOVE THE OUTSIDE AIR ENTHALPY, THE ECONOMIZER DAMPER SHALL RETURN TO ITS MINIMUM POSITION.
- E. THE BAS SHALL CALCULATE THE OUTSIDE AND RETURN AIR ENTHALPY, USING THE OUTSIDE AND RETURN AIR TEMPERATURE AND HUMIDITY SENSORS. AS THE RETURN AIR ENTHALPY FALLS BELOW THE OUTSIDE AIR ENTHALPY, THE ECONOMIZER MODE SHALL BE ENABLED. a. DURING ECONOMIZER MODE, THE RETURN, OUTSIDE AIR AND EXHAUST AIR DAMPERS SHALL OPERATE IN UNISON TO CONTROL THE MIXED AIR TEMPERATURE AT THE
- b. AS THE RETURN AIR ENTHALPY RISES ABOVE THE OUTSIDE AIR ENTHALPY, THE ECONOMIZER MODE SHALL BE DISABLED AND THE ECONOMIZER DAMPER SHALL RETURN TO ITS MINIMUM POSITION (ADJ.)
- c. SUPPLY AIR TEMPERATURE SHALL BE RESET FROM 55°F TO 60°F (ADJ) AS OUTDOOR AIR TEMPERATURE VARIES FROM 70°F TO 30°F (ADJ). IF RETURN AIR HUMIDITY EXCEEDS 55% RH (ADJ), RESET THE UNIT SUPPLY TEMPERATURE TO 53°F (ADJ) AND NOTIFY OWNER ON BAS/OWS. INCREASE SUPPLY TEMPERATURE 1°F (ADJ) EVERY 10 F. SUPPLY FAN SPEED SHALL BE DETERMINED BY STATIC PRESSURE SENSOR LOCATED 90% THROUGH THE SUPPLY DUCTWORK SYSTEM IN CONJUNCTION WITH THE UNIT

DISCHARGE STATIC PRESSURE. SUPPLY FAN VED CONTROL LOOP TO MODULATE FAN SPEED TO ACHIEVE A DUCT STATIC PRESSURE SET AT INITIALLY 1.25" W.G. (ADJ).

- WHILE NOT EXCEEDING A UNIT DISCHARGE PRESSURE OF 3.9" W.G. (ADJ). TEST AND BALANCE CONTRACTOR TO DETERMINE FINAL SETPOINT AND APPROVE WITH a. IF ONE OR FEWER TERMINAL BOXES HAVE A DAMPER POSITION THAT IS IS 95% OR GREATER, THE STATIC PRESSURE SETPOINT SHALL DECREASE 0.01" W.G. (ADJ)
- b. IF TWO-THREE TERMINAL BOXES (ADJ.) HAVE A DAMPER POSITION THAT IS 95% OR GREATER, THE CURRENT STATIC PRESSURE SETPOINT SHALL BE MAINTAINED. c. IF FOUR OR MORE TERMINAL BOXES (ADJ.) HAVE A DAMPER POSITION THAT IS 95% OR GREATER, THE STATIC PRESSURE SETPOINT SHALL INCREASE 0.06" W.G. (ADJ)
- G. ON AHU SHUTDOWN ALL SUPPLY AND RETURN FANS STOP, OUTDOOR AIR AND RELIEF AIR DAMPERS FULLY CLOSE, AND RETURN AIR DAMPER FULLY OPENS. THE COOLING COIL CONTROL VALVE IS FULLY CLOSED, EXCEPT ON LOW LIMIT SAFETY. MODULATE THE PREHEAT COIL CONTROL VALVE TO MAINTAIN 50°F (ADJ) PREHEAT AIR SETPOINT. UNOCCUPIED OPERATION:
- A. TRANSITIONING TO UNOCCUPIED MODE THE SUPPLY, RETURN FANS, AND DAMPERS SHALL OPERATE IN THE SEQUENCE DESCRIBED ABOVE. B. AIR HANDLING UNIT SHALL CYCLE TO MAINTAIN A MAXIMUM AND MINIMUM SPACE TEMPERATURE OF 80°F (ADJ) AND 65°F (ADJ) RESPECTIVELY WITH A 2°F (ADJ) HYSTERESIS TO PREVENT SHORT CYCLING OF AHU. RETURN FAN TRACKING SHALL BE SET TO ZERO CFM WHILE FULLY RECIRCULATING AIR. C. ANYTIME A SPACE OR BUILDING HUMIDITY (IF APPLICABLE) EXCEEDS 60% RH (ADJ) AND THE OUTDOOR EXCEEDS 65°F (ADJ). THE AIR HANDLING UNIT SHALL CYCLE WITH
- RETURN FAN TRACKING SET TO ZERO CFM WHILE FULLY RECIRCULATING AIR. DEHUMIDIFICATION CONTROL LOOP SHALL OCCUR BY MODULATING COOLING COIL CONTROL VALVE WITH SPACE REHEAT. HUMIDITY HYSTERESIS SHALL BE 10% RH (ADJ) TO PREVENT SHORT CYCLING OF AHU. D. TRANSITION TO OCCUPIED MODE IS BASED ON A SCHEDULE OR TERMINAL UNIT SEQUENCE.

AH-2/3/4 CONTROL SCHEMATIC

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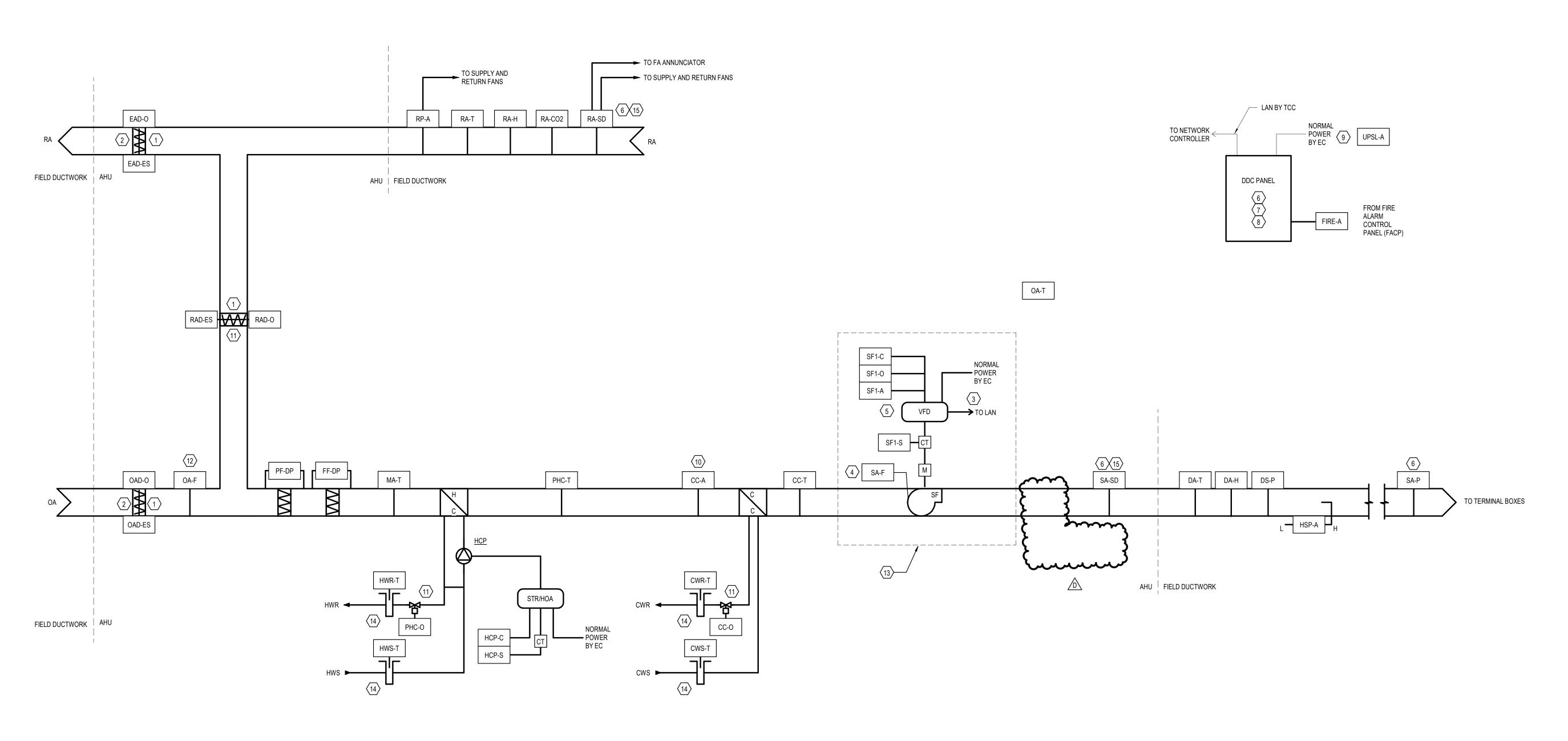
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95% CD SET 12-18-24 100% CD SET ADDENDUM #6

ISSUE DATE:	01.	17.2025
DRAWN:		CHECKED:
	SLL	SJO
PROJECT NO.:		P23-0116
REVISION NO.:		D

TEMPERATURE CONTROL DIAGRAMS



		Al	1-5/6 PO	INTS	LIST		
CONTROLL ER POINT & TYPE	OBJECT NAME	OBJECT DESCRIPTION	UNITS	TREND	ALARM	GRAPHIC	NOTES
	RA-SD	RETURN AIR SMOKE DETECTOR		No	Yes	Yes	PROVIDED AND INSTALLED BY EC
	SA-SD	SUPPLY AIR SMOKE DETECTOR		No	Yes	Yes	PROVIDED AND INSTALLED BY EC
Al-1	OA-F	MIN. OUTSIDE AIRFLOW	CFM	Yes	No	Yes	
Al-2	PF-DP	PRE-FILTER DIFFERENTIAL PRESSURE SENSOR	IN WC	Yes	No	Yes	4-20mA = 0-1.5 IN WC
Al-3	FF-DP	FINAL FILTER DIFFERENTIAL PRESSURE	IN WC	Yes	No	Yes	4-20 mA = 0-2.5 IN WC
Al-4	MA-T	MIXED AIR TEMPERATURE	DEG F	Yes	No	Yes	
AI-5	PHC-T	LEAVING PRE-HEAT COIL TEMPERATURE SENSOR	DEG F	Yes	No	Yes	
Al-6	CC-T	LEAVING COOLING COIL TEMPERATURE SENSOR	DEG F	Yes	No	Yes	
Al-7	DA-T	DISCHARGE SUPPLY AIR TEMPERATURE	DEG F	Yes	No	Yes	
Al-8	DA-H	DISCHARGE SUPPLY AIR HUMIDITY	% RH	Yes	No	Yes	
AI-9	DS-P	DISCHARGE STATIC PRESSURE	IN WC	Yes	No	Yes	
AI-10	SA-P	90% THROUGH SUPPLY AIR PRESSURE	IN WC	Yes	No	Yes	
Al-11	RA-T	RETURN AIR TEMPERATURE	DEG F	Yes	No	Yes	
Al-12	RA-H	RETURN AIR HUMIDITY	% RH	Yes	No	Yes	
Al-13	RA-CO2	RETURN AIR CARBON DIOXIDE	PPM	Yes	No	Yes	
Al-14	HWR-T	HOT WATER RETURN TEMPERATURE	DEG F	Yes	No	Yes	
AI-15	HWS-T	HOT WATER SUPPLY TEMPERATURE	DEG F	Yes	No	Yes	
Al-16	CWS-T	CHILLED WATER SUPPLY TEMPERATURE	DEG F	Yes	No	Yes	
Al-17	CWR-T	CHILLED WATER RETURN TEMPERATURE	DEG F	Yes	No	Yes	
Al-18	CC-A	TEMPERATURE LOW LIMIT ALARM	DEG F	Yes	No	Yes	SET TO 38 DEG F (ADJ) - MANUAL RESET
Al-19	RP-A	RETURN AIR LOW STATIC ALARM	DLO1	No	Yes	Yes	ALARM
Al-20	OA-T	OUTDOOR AIR TEMPERATURE		Yes	No	Yes	/ i.a. ii iiii
Al-21	SA-F	SUPPLY AIRFLOW FAN 1	CFM	Yes	No	Yes	
AO-1	CC-O	COOLING COIL VALVE OUTPUT	% OPEN	Yes	No	Yes	
AO-2	PHC-O	PRE-HEAT COIL VALVE OUTPUT	% OPEN	Yes	No	Yes	
AO-3	SF1-0	SUPPLY FAN 1 VFD SPEED	%	Yes	No	Yes	
BI-1	OAD-ES	MIN. OUTSIDE AIR DAMPER END SWITCH	70	Yes	Yes	Yes	ALARM
BI-3	HSP-A	HIGH STATIC SHUTDOWN & ALARM	IN WC	No	Yes	Yes	ALARM, MANUAL RESET, SET TO 3.5" INITIALLY
BI-4	EAD-ES	EXHAUST AIR DAMPER END SWITCH	IIV VVO	Yes	Yes	Yes	ALARM
BI-5	RAD-ES	RETURN AIR DAMPER END SWITCH		Yes	Yes	Yes	ALARM
BI-6	SF1-S	SUPPLY FAN 1 STATUS	OFF/ON	Yes	No	Yes	ALAINI
BI-7	SF1-A	SUPPLY FAN 1 VFD FAULT - ALARM	OI I /OIN	No	Yes	Yes	ALARM
BI-10	HCP-S	HEATING COIL PUMP STATUS	OFF/ON	Yes	No	Yes	ALAINW
BI-10	FIRE-A	FIRE ALARM CONTROL PANEL RELAY	OFF/ON OFF/ON	No	Yes	Yes	
BI-11	UPSL-A	UPS LOW BATTERY ALARM	OI I /OIN	No	Yes	Yes	
BO-1	OAD-O	MIN. OUTSIDE AIR DAMPER OUTPUT	- % OPEN	Yes	No	Yes	
BO-1 BO-3	RAD-O	RETURN AIR DAMPER OUTPUT	% OPEN	Yes	No	Yes	
BO-4 BO-5	EAD-O	EXHAUST AIR DAMPER OUTPUT	% OPEN	Yes	No No	Yes	
	SF1-C	SUPPLY FAN 1 COMMAND	START/STOP	Yes	No	Yes	
BO-7	HCP-C	HEATING COIL PUMP COMMAND	OFF/ON	Yes	No	Yes	

- 1. DAMPERS TO BE INTEGRAL WITH AHU; ACTUATORS FURNISHED AND INSTALLED BY TCC. 2. SPRING RETURN CLOSED UPON LOSS OF POWER.
- 3. HARD WIRE START/STOP SIGNAL AND SPEED CONTROL IN THE EVENT OF LOSS OF LAN. LAN
- 4. AIRFLOW MEASURING STATION (AFMS) FURNISHED AND INSTALLED BY AHU MANUFACTURER. TCC TO CONNECT TO CONTROLLER WITH LAN. PIEZOMETER AFMS BY AHU MANUF,
- TRANSMITTER BY TCC. 5. VFD FURNISHED, INSTALLED, WIRED, AND STARTED BY EC. 6. REFER TO PLANS FOR LOCATIONS.
- 7. TREND DATA AT A MINIMUM 15 MINUTE INTERVAL AND STORE DATA FOR A MINIMUM OF 30 DAYS. INCLUDE TRENDS FOR COMMANDS AND/OR SETPOINT. PROVIDE CHANGE OF VALUE AND INTERVAL TRENDS FOR BINARY POINTS. 8. NOTE THERE SHALL BE ONE DDC PANEL FOR EACH AHU.
- 9. TCC TO PROVIDE AND INSTALL UPS ON CONTROLLER. UPS TO ALLOW FOR OPERATION FOR 4 MINUTES FOLLOWING AN ELECTRICAL GLITCH OR SHUTDOWN. UPS SHALL COME COMPLETE WITH MAINTENANCE BYPASS SWITCH FOR BATTERY MAINTENANCE. PROVIDE ALARMS AS
- NOTED BY POINTS. 10. LOCATE 3" FROM COOLING COIL INLET.
- 11. SPRINT RETURN OPEN UPON LOSS OF POWER. 12. OA AFMS PROVIDED AND INSTALLED BY TCC.
- 13. NOTE FAN & VFD QUANTITIES PER PLANS, TYPICAL PER FAN. PROVIDE DDC CONTROLLER CAPABLE OF ALL POINTS REQUIRED.
- 14. THERMOWELLS FURNISHED AND INSTALLED BY MC.

15. SMOKE DETECTOR PROVIDED AND INSTALLED BY EC.

SEQUENCE OF OPERATION:

1. ALL SETPOINTS TO BE ADJUSTABLE. 2. AIR HANDLING UNIT TO BE STARTED BY DDC PANEL OR FROM BUILDING AUTOMATION SYSTEM OR OPERATOR WORKSTATION. AIR HANDLING UNIT TO RUN BASED ON SCHEDULE OCCUPANCY, INITIALLY FROM 5 AM TO 7 PM MONDAY THROUGH FRIDAY. SCHEDULE AS CONFIRMED BY OWNER.

AHU – AIR HANDLING UNIT

- 1. SAFETIES AND ALARMS (NOTE ALARMS SHALL BE GENERATED AT THE BAS AND SEND NOTIFICATIONS TO STAFF AS SPECIFIED BY CLIENT): A. UPON A SIGNAL FROM THE FIRE ALARM CONTROL PANEL RELAY, THE SUPPLY AND RETURN FAN(S) SHALL BE DE-ENERGIZED THROUGH HARDWIRE INTERLOCKS. ALL
- ASSOCIATED GENERAL/TOILET EXHAUST FANS SHALL ALSO BE DE-ENERGIZED. B. LOW LIMIT THERMOSTAT (AT COOLING COIL INLET ONLY) SHALL DE-ENERGIZE THE SUPPLY FAN(S) THROUGH HARDWIRE INTERLOCK SHOULD ANY 1 FT LENGTH OF THE ELEMENT FALL BELOW THE THERMOSTAT SETPOINT OF 38°F (ADJ).
- a. ANNUNCIATE AN ALARM ANY TIME A LOW LIMIT THERMOSTAT IS ACTIVATED. b. AFTER THE TEMPERATURE RISES BY 12°F (ADJ) AND A MANUAL RESET HAS OCCURRED, A NORMAL START UP SEQUENCE SHALL BE INITIATED.
- c. FULLY OPEN THE CHILLED WATER CONTROL VALVE. d. THE PRE-HEAT COIL CIRCULATION PUMP SHALL BE ENERGIZED.
- e. THE PRE-HEAT COIL CONTROL VALVE SHALL MODULATE TO MAINTAIN THE PRE-HEAT TEMPERATURE SETPOINT. ANNUNCIATE AN ALARM WHEN HIGH STATIC PRESSURE LIMIT ON DISCHARGE SIDE OF SUPPLY FAN(S) EXCEEDS 3.0 IN WC (ADJ).
- D. ANY SMOKE DETECTED BY SUPPLY OR RETURN SMOKE DETECTOR SHALL DE-ENERGIZED THE SUPPLY FANS. OA DAMPER TO REMAIN OPEN. INITIATE ALARM AT OWS. E. A DIFFERENTIAL PRESSURE TRANSDUCER SHALL BE INSTALLED ACROSS ALL FILTERS. AN ALARM SHALL BE GENERATED AT THE OWS IF A HIGH LIMIT SETPOINT IS EXCEEDED WHEN THE FAN IS OPERATING. PREFILTER ALARM SET TO 1.0" W.G. (ADJ) AND FINAL FILTERS ALARM SET TO 1.5" W.G. (ADJ).
- F. ALL AHU'S SHALL INCORPORATE A FAN STARTUP DELAY FOR 3 MINUTES (ADJ) TO REDUCE RISK OF DUCTWORK COLLAPSE FOLLOWING RESET OF A CLOSED FIRE OR SMOKE
- G. ANNUNCIATE AN ALARM IF FAN OPERATION IS NOT CONFIRMED BY STATIC PRESSURE SENSOR WITHIN 2 MINUTES (ADJ) AFTER COMMANDED TO RUN. H. ANNUNCIATE AN ALARM IF A DAMPER IS CALLED TO OPEN AND NOT PROVED OPEN BY END SWITCH.
- NORMAL OCCUPIED OPERATION: A. FOR COLD WEATHER STARTUP ANYTIME OUTDOOR AIR TEMPERATURE IS LESS THAN 40°F (ADJ), RUN SUPPLY FANS AT 25 AND 20 HZ (ADJ) RESPECTIVELY FOR 7 MIN (ADJ) BEFORE RAMPING FAN UP TO MAINTAIN STATIC PRESSURE. ACTIVATE SUPPLY AIR TEMPERATURE CONTROL LOOP WHILE DISABLING ECONOMIZER FOR 7 MIN (ADJ) BEFORE BEING ENABLED. THE PREHEAT CONTROL LOOP WILL BE ENERGIZED AS SOON AS THE AHU IS CALLED TO RUN AND SET TO 65°F (ADJ). ONCE SUPPLY FAN(S) STATUS IS PROVEN ON, THE PREHEAT SETPOINT WILL DECREASE 1°F (ADJ) EVERY 2 MINUTES (ADJ) UNTIL THE CONTROL SETPOINT IS REACHED.
- B. FOR STARTUP ANYTIME OUTDOOR AIR TEMPERATURE IS 40°F (ADJ) OR GREATER, SUPPLY FANS START AND RAMP UP OVER A PERIOD OF 5 MINUTES (ADJ.) TO CONTROL STATIC PRESSURE AND FAN TRACKING SETPOINTS.
- C. MINIMUM OUTDOOR AIR DAMPER TO FULLY (ADJ) OPEN AFTER STARTUP, AND STATIC PRESSURE CONTROL ARE ENGAGED. D. THE SUPPLY AIR TEMPERATURE CONTROL LOOP SHALL OPERATE AS DESCRIBED: a. BELOW 70°F (ADJ) OUTDOOR AIR TEMPERATURE MODULATE ECONOMIZER DAMPERS TO MAINTAIN MIXED AIR TEMPERATURE SETPOINT. MIXED AIR TEMPERATURE
 - SETPOINT TO BE TRACKED = SUPPLY AIR TEMPERATURE MINUS 5°F (ADJ). b. ECONOMIZER DAMPERS OPERATE AS DESCRIBED 1. DAMPER MIN % OPEN MAX % OPEN

D. TRANSITION TO OCCUPIED MODE IS BASED ON A SCHEDULE OR TERMINAL UNIT SEQUENCE.

- MIN OAD 100 (ADJ) 3. MAX OAD 0 (ADJ)
- 4. RAD
- c. IF THE SUPPLY AIR TEMPERATURE RISES WHILE THE RELIEF AIR DAMPERS ARE 100% (ADJ) OPEN, THE COOLING COIL SHALL BE MODULATED TO MAINTAIN SUPPLY AIR d. A DROP IN SUPPLY AIR TEMPERATURE SHALL MODULATE CLOSED THE COOLING COIL CONTROL VALVE IN SEQUENCE WITH THE MODULATING ECONOMIZER DAMPERS
- e. WHEN THE MAXIMUM OUTDOOR AIR DAMPER IS FULLY CLOSED OR AT MINIMUM POSITION, THE PREHEAT TEMPERATURE IS BELOW SETPOINT, START HEATING COIL PUMP AND MODULATE PREHEAT COIL CONTROL VALVE TO MAINTAIN PREHEAT AIR TEMPERATURE SETPOINT. PREHEAT COIL TEMPERATURE SETPOINT TO BE TRACKED f. THE BAS SHALL CALCULATE OUTSIDE AIR ENTHALPY AND RETURN AIR ENTHALPY USING THE OUTSIDE AIR AND RETURN AIR TEMPERATURE AND HUMIDITY SENSORS,
- CONTROL THE MIXED AIR TEMPERATURE AT THE MIXED AIR TEMPERATURE SETPOINT. UPON A RISE IN THE RETURN AIR ENTHALPY ABOVE THE OUTSIDE AIR ENTHALPY, THE ECONOMIZER DAMPER SHALL RETURN TO ITS MINIMUM POSITION. E. THE BAS SHALL CALCULATE THE OUTSIDE AND RETURN AIR ENTHALPY, USING THE OUTSIDE AND RETURN AIR TEMPERATURE AND HUMIDITY SENSORS. AS THE RETURN AIR ENTHALPY FALLS BELOW THE OUTSIDE AIR ENTHALPY, THE ECONOMIZER MODE SHALL BE ENABLED.
- a. DURING ECONOMIZER MODE, THE RETURN, OUTSIDE AIR AND EXHAUST AIR DAMPERS SHALL OPERATE IN UNISON TO CONTROL THE MIXED AIR TEMPERATURE AT THE MIXED AIR TEMPERATURE SETPOINT. b. AS THE RETURN AIR ENTHALPY RISES ABOVE THE OUTSIDE AIR ENTHALPY, THE ECONOMIZER MODE SHALL BE DISABLED AND THE ECONOMIZER DAMPER SHALL

RESPECTIVELY. AS THE RETURN AIR ENTHALPY FALLS BELOW THE CALCULATED OUTSIDE AIR ENTHALPY, THE ECONOMIZER DAMPER SHALL BE MODULATED TO

- c. SUPPLY AIR TEMPERATURE SHALL BE RESET FROM 55°F TO 60°F (ADJ) AS OUTDOOR AIR TEMPERATURE VARIES FROM 70°F TO 30°F (ADJ). IF RETURN AIR HUMIDITY EXCEEDS 55% RH (ADJ), RESET THE UNIT SUPPLY TEMPERATURE TO 53°F (ADJ) AND NOTIFY OWNER ON BAS/OWS. INCREASE SUPPLY TEMPERATURE 1°F (ADJ) EVERY 10 MINUTES AFTER 15 MINUTES OF THIS NOTIFICATION. F. SUPPLY FAN SPEED SHALL BE DETERMINED BY STATIC PRESSURE SENSOR LOCATED 90% THROUGH THE SUPPLY DUCTWORK SYSTEM IN CONJUNCTION WITH THE UNIT
- DISCHARGE STATIC PRESSURE. SUPPLY FAN VFD CONTROL LOOP TO MODULATE FAN SPEED TO ACHIEVE A DUCT STATIC PRESSURE SET AT INITIALLY 1.25" W.G. (ADJ), WHILE NOT EXCEEDING A UNIT DISCHARGE PRESSURE OF 3.9" W.G. (ADJ). TEST AND BALANCE CONTRACTOR TO DETERMINE FINAL SETPOINT AND APPROVE WITH a. IF ONE OR FEWER TERMINAL BOXES HAVE A DAMPER POSITION THAT IS IS 95% OR GREATER, THE STATIC PRESSURE SETPOINT SHALL DECREASE 0.01" W.G. (ADJ)
- b. IF TWO-THREE TERMINAL BOXES (ADJ.) HAVE A DAMPER POSITION THAT IS 95% OR GREATER, THE CURRENT STATIC PRESSURE SETPOINT SHALL BE MAINTAINED. c. IF FOUR OR MORE TERMINAL BOXES (ADJ.) HAVE A DAMPER POSITION THAT IS 95% OR GREATER, THE STATIC PRESSURE SETPOINT SHALL INCREASE 0.06" W.G. (ADJ)
- G. ON AHU SHUTDOWN ALL SUPPLY AND RETURN FANS STOP, OUTDOOR AIR AND RELIEF AIR DAMPERS FULLY CLOSE, AND RETURN AIR DAMPER FULLY OPENS. THE COOLING COIL CONTROL VALVE IS FULLY CLOSED, EXCEPT ON LOW LIMIT SAFETY. MODULATE THE PREHEAT COIL CONTROL VALVE TO MAINTAIN 50°F (ADJ) PREHEAT AIR SETPOINT.
- 3. UNOCCUPIED OPERATION: A. TRANSITIONING TO UNOCCUPIED MODE THE SUPPLY, RETURN FANS, AND DAMPERS SHALL OPERATE IN THE SEQUENCE DESCRIBED ABOVE. B. AIR HANDLING UNIT SHALL CYCLE TO MAINTAIN A MAXIMUM AND MINIMUM SPACE TEMPERATURE OF 80°F (ADJ) AND 65°F (ADJ) RESPECTIVELY WITH A 2°F (ADJ) HYSTERESIS
- TO PREVENT SHORT CYCLING OF AHU. RETURN FAN TRACKING SHALL BE SET TO ZERO CFM WHILE FULLY RECIRCULATING AIR. C. ANYTIME A SPACE OR BUILDING HUMIDITY (IF APPLICABLE) EXCEEDS 60% RH (ADJ) AND THE OUTDOOR EXCEEDS 65°F (ADJ), THE AIR HANDLING UNIT SHALL CYCLE WITH RETURN FAN TRACKING SET TO ZERO CFM WHILE FULLY RECIRCULATING AIR. DEHUMIDIFICATION CONTROL LOOP SHALL OCCUR BY MODULATING COOLING COIL CONTROL VALVE WITH SPACE REHEAT. HUMIDITY HYSTERESIS SHALL BE 10% RH (ADJ) TO PREVENT SHORT CYCLING OF AHU.

AH-5/6 CONTROL SCHEMATIC

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MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032 v. (317) 344-8044

v. (317) 661-1964

95% CD SET 12-18-24 100% CD SET ADDENDUM #6

ISSUE DATE:	01.17.2025						
DRAWN:		CHECKED:					
	SLL	SJO					
PROJECT NO.:		P23-0116					
REVISION NO.:		D					

TEMPERATURE CONTROL DIAGRAMS

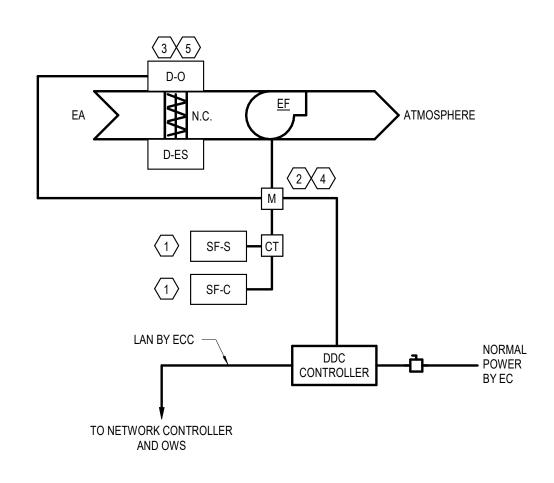
M-903

SEQUENCE OF OPERATION:

SPACE THERMOSTAT CYCLES UNIT FAN AND HEATING HOT WATER CONTROL VALVE TO MAINTAIN SPACE TEMPERATURE TO 60°F (ADJ).
 HOT WATER CONTROL VALVE FULLY CLOSES WHEN FAN IS NOT OPERATIVE.

	UNIT HEATER POINTS LIST									
CONTROLL ER POINT & TYPE	ER POINT & OBJECT									
Al-1	T	SPACE TEMP	DEG F	Yes	No	Yes				
AO-1	HC-O	HEATNIG COIL VALVE OUTPUT	% OPEN	Yes	No	Yes				

HOT WATER UNIT HEATER CONTROL SCHEMATIC NO SCALE



SCHEMATIC NOTES:

- 1. UNLESS NOTED OTHERWISE, WIRE BAS FAN STATUS AND FAN ENABLE/DISABLE TO THE NEAREST DDC SYSTEM PANEL.
- TCC TO PROVIDE CURRENT SENSOR AND CONTROL LOGIC FOR FAN FAULT DETERMINATION.
 MOTORIZED FAN INLET ISOLATION DAMPER AND ACUATOR FURNISHED BY THE FAN MANUFACTURER AND OPERATED BY THE FAN. TCC TO
- WIRE DAMPER TO CONTROLLER.

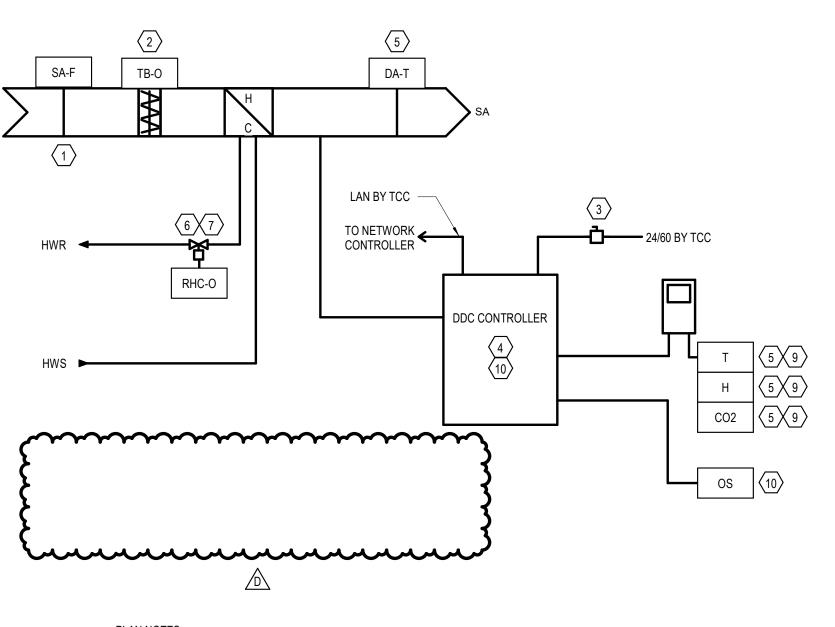
 4. ELECTRO-COMMUTATED MOTOR WITH INTEGRAL SPEED CONTROLLER FURNISHED BY THE FAN MANUFACTURER. FAN SPEED IS MANUALLY
- SET BY TAB ADJUSTMENT OF THE ECM CONTROLLER.
 5. COMMISSIONING BY CXA.

SEQUENCE OF OPERATION:

- NORMAL OPERATION:
 ALL SETPOINTS TO BE ADJUST
- a. ALL SETPOINTS TO BE ADJUSTABLE.b. SETPOINTS AND OPERATION TO BE VISIBLE ON BUILDING MANAGEMENT SYSTEM.
- c. ENABLE: FAN ISOLATION DAMPER OPENS FROM INTEGRAL CONTROLLER ON FAN, UPON PROVEN SIGNAL DAMPER IS OPEN EXHAUST FAN IS STARTED FROM COMMAND OF BMS.
- IS STARTED FROM COMMAND OF BMS.
 d. DISABLE: FAN IS COMMANDED OFF FROM BMS AND DAMPER CLOSES. DISABLING THE FAN CLOSES THE ISOLATION DAMPER.
 e. TAB TO MANUALLY BALANCE EXHAUST FAN WITH INTEGRAL SPEED CONTROLLER.

	EXHAUST FAN POINTS LIST										
CONTROLL ER POINT & TYPE	OBJECT NAME	OBJECT DESCRIPTION	UNITS	TREND	ALARM	GRAPHIC	NOTES				
BI	SF-S	SUPPLY FAN STATUS	OFF/ON	Yes	No	Yes					
BI-	D-ES	EXHAUST AIR DAMPER END SWITCH	N/A	Yes	Yes	Yes	ALARM				
ВО	D-O	EXHAUST AIR DAMPER OUTPUT	% OPEN	Yes	No	Yes					
ВО	SF-C	SUPPLY FAN COMMAND	START/STOP	Yes	Yes	Yes					





PLAN NOTES:

- FLOW SENSOR INTEGRAL WITH TERMINAL BOX.
 TERMINAL BOX ACTUATOR FURNISHED BY TCC; INSTALLED BY TERMINAL BOX SUPPLIER.
- COMMISSIONED BY CXA.

 3. TERMINAL BOX DISCONNECT PROVIDED BY TERMINAL BOX MANUFACTURER.
- TERMINAL BOX DISCONNECT PROVIDED BY TERMINAL BOX MANOFACTORER.

 DDC CONTROLLER FURNISHED BY TCC; INSTALLED BY BOX SUPPLIER. COMMISSIONED BY CXA

CONTROLLER IS FURNISHED AND INSTALLED BY TCC. COMMISSIONED BY CXA.

- 5. FURNISHED, INSTALLED, AND WIRED BY TCC. COMMISSIONED BY CXA.6. FURNISHED BY TCC AND INSTALLED BY MC.
- 6. FURNISHED BY TCC AND INSTALLED BY MC.
 FAIL IN LAST POSITION.
 THIS NOTE IS NO LONGER USED.
 8. REFER TO PLANS FOR LOCATIONS AND QUANTITIES.
 10. OCCUPANCY SENSOR RELAYS ARE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. WIRING FROM THE OCCUPANCY SENSOR RELAY TO THE TERMINAL UNIT

SEQUENCE OF OPERATION - VAV BOXES:

- 1. THE VARIABLE AIR VOLUME (VAV) TERMINAL UNIT IS CONTROLLED INDEPENDENT OF SYSTEM PRESSURE FLUCTUATIONS AND CHANGES IN SPACE TEMPERATURE BY MODULATING SUPPLY AIR VOLUME FROM SCHEDULED MINIMUM TO SCHEDULE MAXIMUM AIRFLOW VALUES WHILE MODULATING RE-HEAT VALVE TO MAINTAIN SPACE TEMPERATURE.
- WHEN THE ZONE STATE IS COOLING, THE COOLING LOOP OUTPUT SHALL MODULATE FROM SCHEDULED MINIMUM TO SCHEDULED MAXIMUM AIRFLOWS.

 WHEN THE ZONE STATE IS DEADLAND, THE AIRFLOW STATE ON THE AIRFLOW.
- WHEN THE ZONE STATE IS DEADBAND, THE AIRFLOW SETPOINT SHALL BE AT MINIMUM SCHEDULED AIRFLOW WITH HEATING COIL DISABLED.
 WHEN THE ZONE STATE IS HEATING, THE HEATING LOOP SHALL MAINTAIN SPACE TEMPERATURE
- AS FOLLOWS:

 A. STAGE 1: FOR AN OUTPUT OF 0-50%, THE HEATING LOOP SHALL MODULATE THE TERMINAL UNIT REHEAT CONTROL VALVE TO MAINTAIN SPACE TEMPERATURE AT THE SCHEDULED MINIMUM
- AIRFLOW NOT EXCEEDING 90°F (ADJ) DISCHARGE AIR TEMPERATURE.

 B. STAGE 2: IF ADDITIONAL HEAT IS REQUIRED; FOR AN OUTPUT OF 51-100%, THE HEATING LOOP
- SHALL MODULATE THE AIRFLOW FROM SCHEDULED MINIMUM TO SCHEDULED HEATING MAX WHILE NOT EXCEEDING 90°F (ADJ) DISCHARGE AIR TEMPERATURE.

 5. ANYTIME THE CO2 LEVEL EXCEEDS 800 PPM (ADJ) AS SENSED BY THE SPACE CO2 SENSOR, THE TERMINAL BOX DAMPER SHALL MODULATE TO INCREASE THE SUPPLY AIR VOLUME FROM ITS
- TERMINAL BOX DAMPER SHALL MODULATE TO INCREASE THE SUPPLY AIR VOLUME FROM ITS SCHEDULED MINIMUM FLOW TO THE SCHEDULED MAXIMUM COOLING FLOW TO LOWER PPM BACK TO 600 PPM (ADJ). REHEAT COIL VALVE MODULATES TO MAINTAIN SPACE TEMPERATURE. INITIATE AN ALARM TO THE BAS IN THE EVENT CO2 EXCEEDS 900 PPM (ADJ) FOR LONGER THAN 15 MINUTES.

 6. WHEN THE ASSOCIATED AHU SUPPLY FAN IS DE-ENERGIZED, EACH TERMINAL UNIT AND HEATING COIL CONTROL VALVE SHALL BE INDEXED TO THE FULLY CLOSED POSITION.

AN ALARM TO THE BAS IN THE EVENT CO2 EXCEEDS 900 PPM (ADJ) FOR LONGER THAN 15 MINUTE. 6. WHEN THE ASSOCIATED AHU SUPPLY FAN IS DE-ENERGIZED, EACH TERMINAL UNIT AND HEATING COIL CONTROL VALVE SHALL BE INDEXED TO THE FULLY CLOSED POSITION. 7. TEMPERATURE CONTROL BASED ON HIME SCHEDULE AND/OR OCCUPANCY SENSORS AS FOLLOW A. OCCUPIED MODE (ROOM OCCUPANCY SENSED OR OPERATOR SCHEDULE) HEATING SETPOINT = 70°F (ADJ)

- COOLING SETPOINT = 75°F (ADJ)
 TERMINAL BOX AIR DAMPER CONTROLS TO AIRFLOW SETPOINT

 B. STANDBY MODE (BUILDING OCCUPANCY SCHEDULE ON, ROOM OCCUPANCY NOT SENSED FOR 30 MINUTES)
 HEATING SETPOINT = 67 °F (ADJ)
- COOLING SETPOINT = 78 °F (ADJ)
 TERMINAL BOX AIR DAMPER REMAINS FULLY CLOSED UNTIL THE SPACE TEMPERATURE
 SURPASSES THE STANDBY HEATING OR COOLING SETPOINT. THE DAMPER IS THEN OPENED TO
 MINIMUM POSITION UNTIL THE ASSOCIATED STANDBY SETPOINT IS SATISFIED.
- C. UNOCCUPIED MODE (BUILDING OCCUPANCY SCHEDULE OFF)
 HEATING SETPOINT = 60°F (ADJ)
- COOLING SETPOINT = 80°F (ADJ)
 TERMINAL BOX AIRFLOW DAMPER FULLY CLOSED UNTIL UNOCCUPIED SETPOINTS ARE
 REACHED, THEN CONTROL TO STANDBY SETPOINTS

	VAV BOX POINTS LIST									
CONTROLL ER POINT & TYPE	OBJECT NAME	OBJECT DESCRIPTION	UNITS	TREND	ALARM	GRAPHIC	NOTES			
Al	DA-T	DISCHARGE AIR TEMPERATURE	DEG F	Yes	No	Yes				
Al	TB-O	TB DAMPER OUTPUT	% OUTPUT	Yes	No	Yes				
Al	Т	SPACE TEMP	DEG F	Yes	No	Yes				
Al	Н	SPACE HUMIDITY	% RH	Yes	No	Yes				
Al	CO2	SPACE CARBON DIOXIDE	PPM	Yes	No	Yes				
Al	SA-F	SUPPLY AIRFLOW	CFM	Yes	No	Yes				
Al	OS	SPACE OCCUPANCY SENSOR		Yes	No	Yes				
AO _	RHC-O	RE-HEAT COIL VALVE OUTPUT	% OPEN	Yes	No _	Yes				

TERMINAL BOX CONTROL SCHEMATIC

NO SCALE

ARCHITECTURE,
LANDSCAPE, INTERIOR
DESIGN, URBAN PLANNING

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FIRE PROT. ENGINEER:

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3421 N KFYSTONF AVE

S

00

 No.
 Description
 Date

 95% CD SET
 12-18-24

 100% CD SET
 01-17-25

 D
 ADDENDUM #6
 03-10-25

WDIANA WILLIAM ON STATE OF WOLLD SONAL ENGINEERS ON ALL E

O1.17.2025

DRAWN: CHECKED: SJO

PROJECT NO.: P23-0116

REVISION NO.: D

TEMPERATURE CONTROL DIAGRAMS

M-906

SHEET KEYNOTES

PROTECT FROM WIND EFFECTS.

3 PROVIDE FIRE RATED BLANKET FOR KILN EXHAUST, THICKNESS AS REQUIRE

1 INTERLOCK EF-1 ON ROOF TO OPERATE WHEN KILN IS ACTIVATED.
 2 PROVIDE DIFFERENTIAL PRESSURE SENSOR. INDOOR BARB SHALL BE OPEN TO CAFETERIA AND OUTDOOR BARB SHALL BE PROVIDED WITH A SHIELD TO

KEYNOTES GENERAL NOTES

A REFER TO SHEET M-000 FOR GENERAL MECHANICAL NOTES, SYMBOLS AND ABBREVIATIONS.

B REFER TO DRAWING M-500 SERIES FOR MECHANICAL DETAILS.
 C REFER TO DRAWING M-600 SERIES FOR MECHANICAL SCHEDULES.

REFER TO DRAWING M-600 SERIES FOR MECHANICAL SCHEDULES.
 REFER TO DETAILS 3/M-501 & 12/M-501 FOR VAV DUCTWORK & PIPING INSTALLATION.

E PROVIDE LOW VOLTAGE TRANSFORMERS FOR VAV POWER WHERE SHOWN ON ELECTRICAL PLANS.
 F INSTALL THERMOSTATS AT 48-INCHES A.F.F. OR ALIGNED WITH ADJACENT LIGHTSWITCHES.

ARCHITECTURE,
LANDSCAPE, INTERIOR
DESIGN, URBAN PLANNING

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JOYCE KILMER
N KEYSTONE AVE.

No. Description Date
95% CD SET 12-18-24
100% CD SET 01-17-25
ADDENDUM #6 03-10-25

VDIANA

WOLLAND

WOLL

O1.17.2025

DRAWN:

SLL

PROJECT NO.:

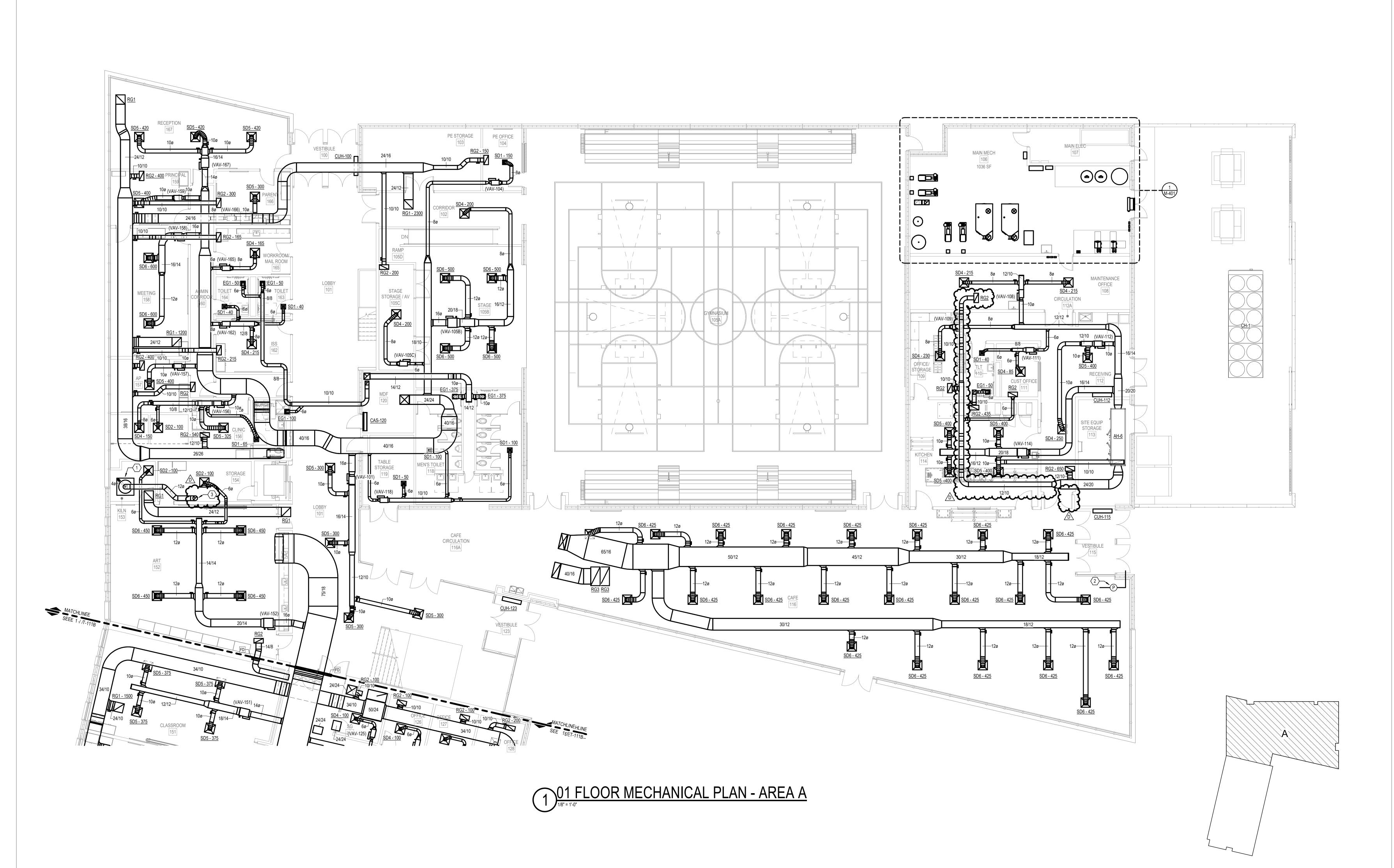
P23-0116

REVISION NO.:

D

01 FLOOR MECHANICAL HVAC PLAN - AREA A

MH-111A



- A REFER TO SHEET M-000 FOR GENERAL MECHANICAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B REFER TO DRAWING M-500 SERIES FOR MECHANICAL DETAILS. C REFER TO DRAWING M-600 SERIES FOR MECHANICAL SCHEDULES.
- D REFER TO DETAILS 3/M-501 & 12/M-501 FOR VAV DUCTWORK & PIPING INSTALLATION.
- E PROVIDE LOW VOLTAGE TRANSFORMERS FOR VAV POWER WHERE SHOWN ON ELECTRICAL PLANS. F INSTALL THERMOSTATS AT 48-INCHES A.F.F. OR ALIGNED WITH ADJACENT LIGHTSWITCHES.

DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820

LANDSCAPE, INTERIOR

ARCHITECTURAL PARTNER **PERKINS & WILL** 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611 v. (312) 755-0770

CIVIL & STRUCTURAL ENGINEER: 8840 ALLISON BLVD

SUITE 425 INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. /

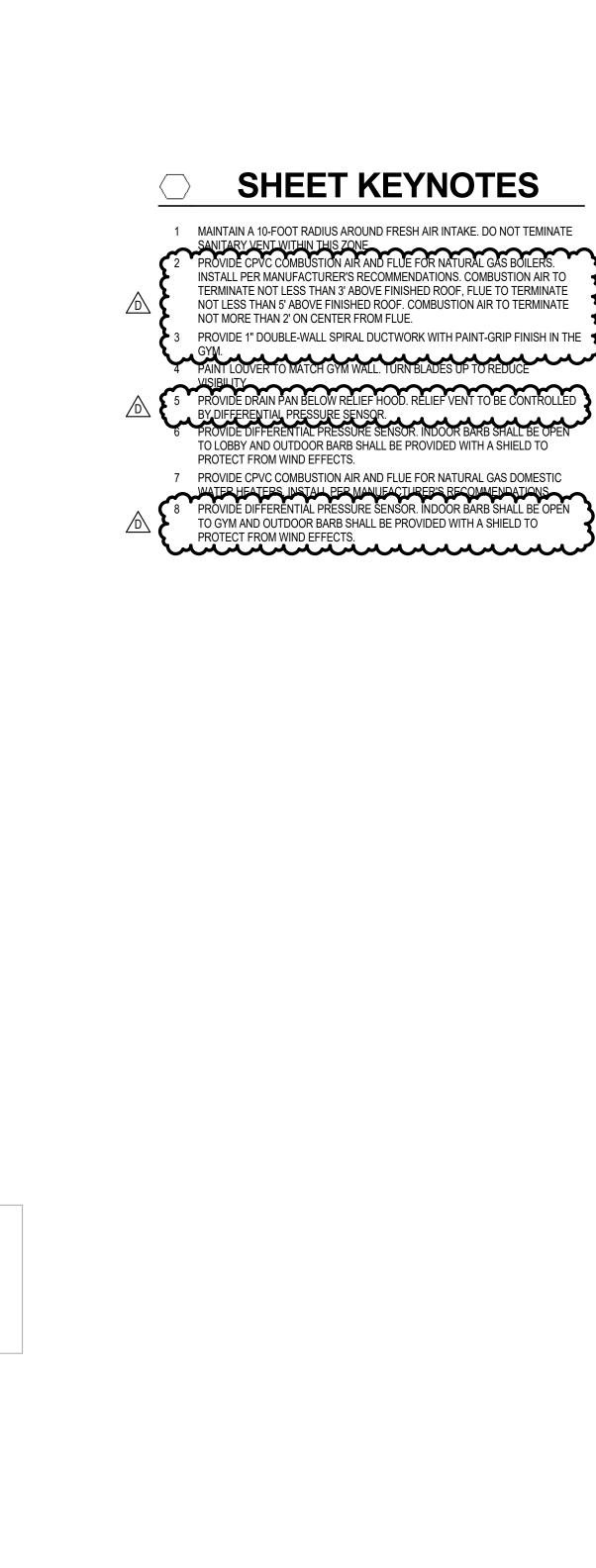
FIRE PROT. ENGINEER: **KBSO CONSULTING** 275 VETERANS WAY SUITE 300 CARMEL. IN 46032

v. (317) 344-8044

P23-0116

02 FLOOR MECHANICAL HVAC PLAN - AREA A

MH-112A



1)02 FLOOR MECHANICAL PLAN - AREA A

<u>SD6 - 500</u>

SD6 - 500

PROCESSING

40/14

<u>SD9 - 1100</u> <u>SD9 - 1100</u> <u>SD9 - 1100</u> <u>SD9 - 1100</u>

<u>SD9 - 1100</u> <u>SD9 - 1100</u> <u>SD9 - 1100</u> <u>SD9 - 1100</u> <u>SD9 - 1100</u> <u>SD9 - 1100</u>

02 FLOOR MECHANICAL PLAN - AREA B

GENERAL NOTES

- A REFER TO SHEET M-000 FOR GENERAL MECHANICAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B REFER TO DRAWING M-500 SERIES FOR MECHANICAL DETAILS.C REFER TO DRAWING M-600 SERIES FOR MECHANICAL SCHEDULES.
- D REFER TO DETAILS 3/M-501 & 12/M-501 FOR VAV DUCTWORK & PIPING
- INSTALLATION.

 E PROVIDE LOW VOLTAGE TRANSFORMERS FOR VAV POWER WHERE SHOWN
- ON ELECTRICAL PLANS.

 F INSTALL THERMOSTATS AT 48-INCHES A.F.F. OR ALIGNED WITH ADJACENT LIGHTSWITCHES.

ARCHITECTURE,
LANDSCAPE, INTERIOR
DESIGN, URBAN PLANNING

25 NORTH PINE STREET, SUITE B
INDIANAPOLIS, IN 45202

WWW.METICULOUSDA.COM
INFO@METICULOUSDA.COM
317.926.1820

ARCHITECTURAL PARTNER
PERKINS & WILL
410 N. MICHIGAN AVE
SUITE 1600
CHICAGO, IL 60611
v. (312) 755-0770

CIVIL & STRUCTURAL ENGINEER:

JQOL 8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032 v. (317) 344-8044

SHEET KEYNOTES

1 PROVIDE DIFFERENTIAL PRESSURE SENSOR. INDOOR BARB SHALL BE OPEN TO CORRIDOR AND OUTDOOR BARB SHALL BE PROVIDED WITH A SHIELD TO PROTECT FROM WIND EFFECTS.

2 PROVIDE DRAIN PAN BELOW RELIEF HOOD. RELIEF VENT TO BE CONTROLLED BY DIFFERENTIAL PRESSURE SENSOR.

 Description
 Date

 D SET
 12-18-24

 CD SET
 01-17-25

 IDUM #6
 03-10-25

D ADDENDUM #6 03-10-



O1.17.2025

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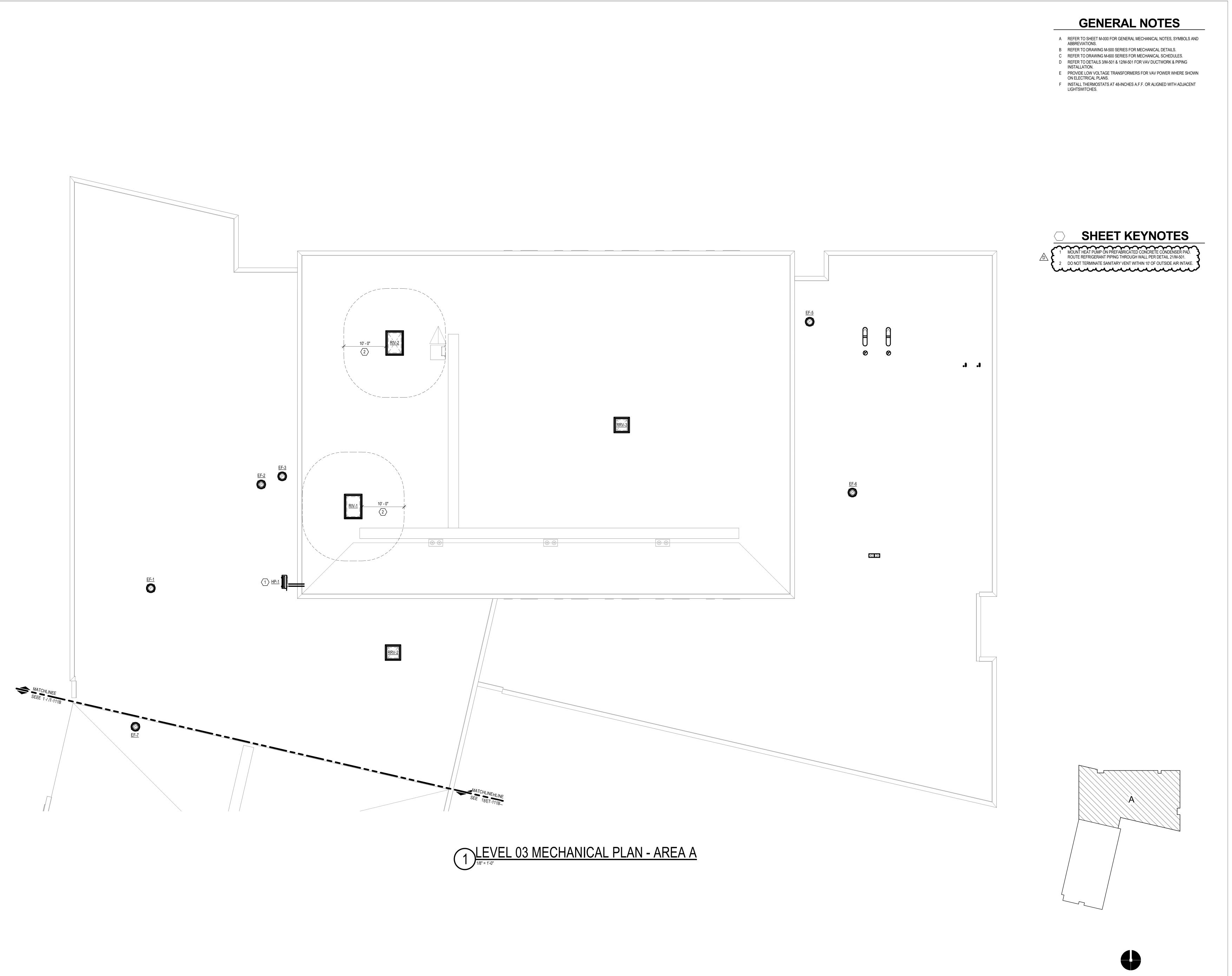
PROJECT NO.: P23-0116

REVISION NO.: D

02 FLOOR MECHANICAL HVAC PLAN - AREA B

MH-112B

4



25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202

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ARCHITECTURAL PARTNER
PERKINS & WILL
410 N. MICHIGAN AVE

ARCHITECTURE, LANDSCAPE, INTERIOR

DESIGN, URBAN PLANNING

410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611 v. (312) 755-0770

CIVIL & STRUCTURAL ENGINEER:

JQOL
8840 ALLISON BLVD
SUITE 425

SUITE 425 INDIANAPOLIS, IN 46250 v. (317) 661-1964

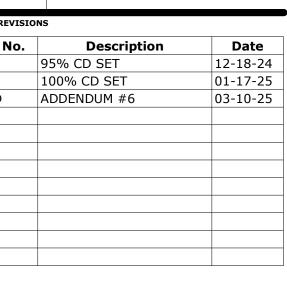
MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING
275 VETERANS WAY
SUITE 300
CARMEL. IN 46032

v. (317) 344-8044

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WO. 11300632
STATE OF

No. 11300632
STATE OF

No. 11300632

ISSUE DATE:	01.	17.2025
DRAWN:		CHECKED:
	SLL	SJO
PROJECT NO.:		P23-0116
REVISION NO.:		D

03 FLOOR MECHANICAL HVAC PLAN - AREA A

MH-113A **

1 LEVEL 03 MECHANICAL PLAN - AREA B

GENERAL NOTES

- A REFER TO SHEET M-000 FOR GENERAL MECHANICAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B REFER TO DRAWING M-500 SERIES FOR MECHANICAL DETAILS.C REFER TO DRAWING M-600 SERIES FOR MECHANICAL SCHEDULES.
- D REFER TO DETAILS 3/M-501 & 12/M-501 FOR VAV DUCTWORK & PIPING INSTALLATION.
- E PROVIDE LOW VOLTAGE TRANSFORMERS FOR VAV POWER WHERE SHOWN ON ELECTRICAL PLANS.
- ON ELECTRICAL PLANS.

 F INSTALL THERMOSTATS AT 48-INCHES A.F.F. OR ALIGNED WITH ADJACENT LIGHTSWITCHES.

SHEET KEYNOTES

1 MOUNT HEAT PUMP ON PREFABRICATED CONCRETE CONDENSER PAD.
ROUTE REFRIGERANT PIPING THROUGH ROOF PER DETAIL 23/M-501.

Community of the second

ARCHITECTURAL PARTNER
PERKINS & WILL
410 N. MICHIGAN AVE
SUITE 1600
CHICAGO, IL 60611
v. (312) 755-0770

317.926.1820

LANDSCAPE, INTERIOR

DESIGN, URBAN PLANNING

INDIANAPOLIS, IN 45202

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25 NORTH PINE STREET, SUITE B

CIVIL & STRUCTURAL ENGINEER:

JQOL 8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING
275 VETERANS WAY
SUITE 300
CARMEL. IN 46032

CARMEL. IN 46032 v. (317) 344-8044

CD 3E1

IPS 69 - JOYCE KILM

No. Description Date
95% CD SET 12-18-24
100% CD SET 01-17-25
D ADDENDUM #6 03-10-25

No. 11300632
STATE OF

VOIANA

O1.17.2025

DRAWN: CHECKED: SJO

PROJECT NO.: P23-0116

REVISION NO.: D

03 FLOOR MECHANICAL HVAC PLAN - AREA B

MH-113B



- 1 THERMOSTAT TO CONTROL VAV-201 ON 2ND FLOOR.
- PROTECTIVE CAGES.

LIGHTSWITCHES.

- A REFER TO SHEET M-000 FOR GENERAL MECHANICAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B REFER TO DRAWING M-500 SERIES FOR MECHANICAL DETAILS. C REFER TO DRAWING M-600 SERIES FOR MECHANICAL SCHEDULES.
- D REFER TO DETAILS 3/M-501 & 12/M-501 FOR VAV DUCTWORK & PIPING INSTALLATION.
- E PROVIDE LOW VOLTAGE TRANSFORMERS FOR VAV POWER WHERE SHOWN ON ELECTRICAL PLANS.
- F INSTALL THERMOSTATS AT 48-INCHES A.F.F. OR ALIGNED WITH ADJACENT

ARCHITECTURAL PARTNER **PERKINS & WILL** 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611 v. (312) 755-0770

CIVIL & STRUCTURAL ENGINEER:

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LANDSCAPE, INTERIOR

DESIGN, URBAN PLANNING

INDIANAPOLIS, IN 45202

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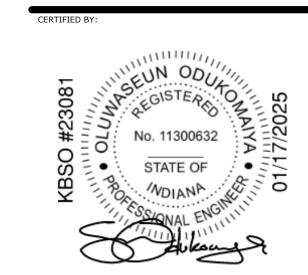
25 NORTH PINE STREET, SUITE B

8840 ALLISON BLVD INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

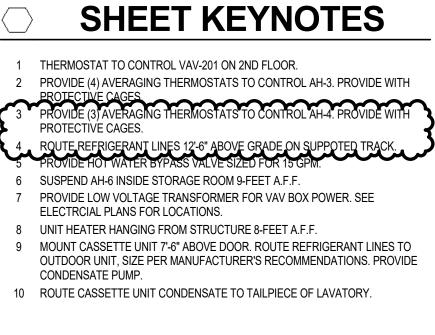
KBSO CONSULTING 275 VETERANS WAY

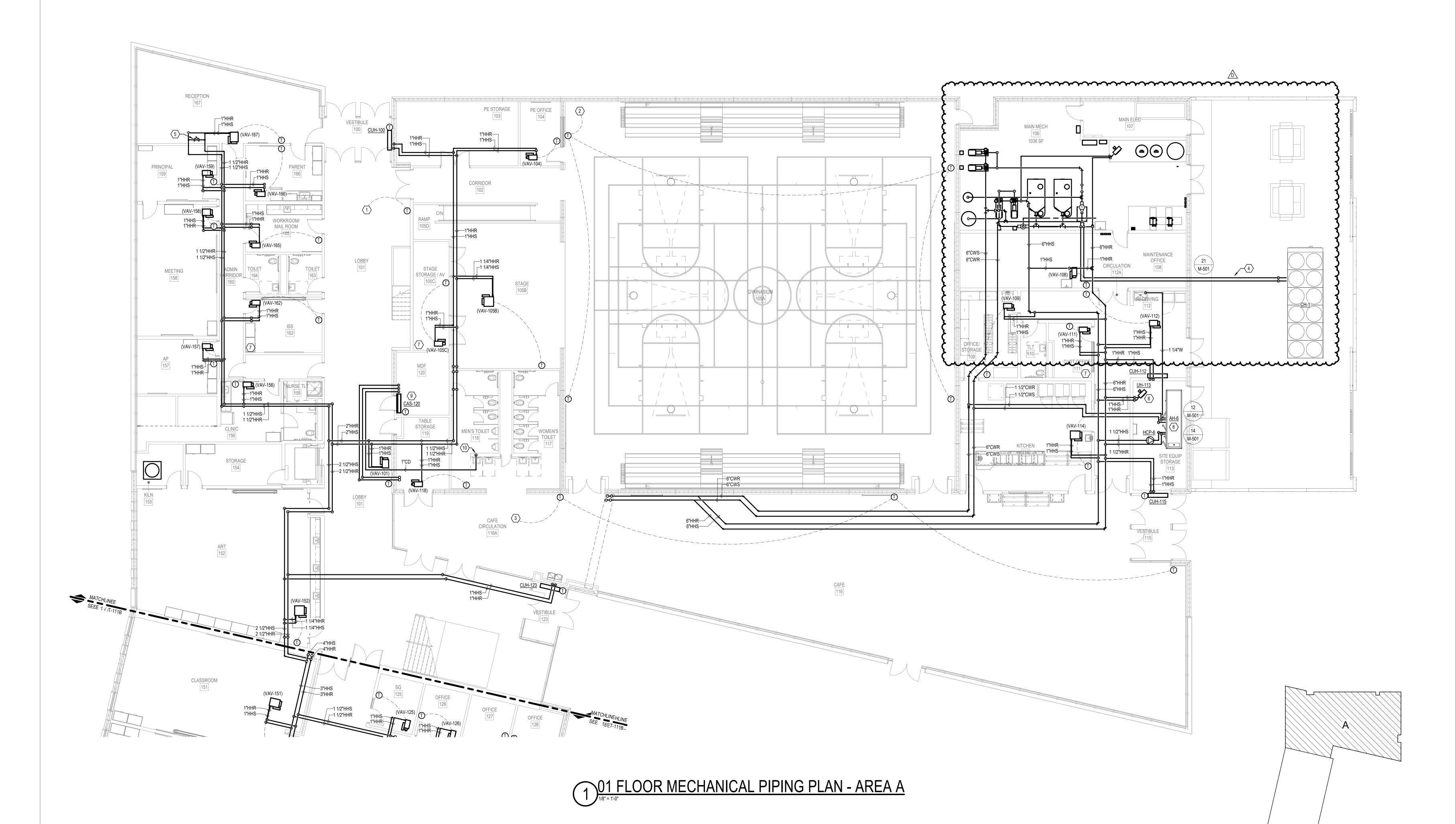
SUITE 300 CARMEL. IN 46032 v. (317) 344-8044



01 FLOOR MECHANICAL PIPING PLAN - AREA A

MP-111A





1)01 FLOOR MECHANICAL PIPING PLAN - AREA B

GENERAL NOTES

A REFER TO SHEET M-000 FOR GENERAL MECHANICAL NOTES, SYMBOLS AND ABBREVIATIONS.

SHEET KEYNOTES

1 PROVIDE HOT WATER BYPASS VALVE SIZED FOR 45 GPM.

ELECTRCIAL PLANS FOR LOCATIONS.

4 ROUTE CASSETTE UNIT CONDENSATE TO MOP SINK
5 PROVIDE THERMOSTAT WITH LOCKABLE CAGE.

2 PROVIDE LOW VOLTAGE TRANSFORMER FOR VAV BOX POWER. SEE

3 MOUNT CASSETTE UNIT 7'-6" ABOVE DOOR. ROUTE REFRIGERANT LINES TO OUTDOOR UNIT, SIZE PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE CONDENSATE PUMP.

- B REFER TO DRAWING M-500 SERIES FOR MECHANICAL DETAILS. C REFER TO DRAWING M-600 SERIES FOR MECHANICAL SCHEDULES.
- D REFER TO DETAILS 3/M-501 & 12/M-501 FOR VAV DUCTWORK & PIPING INSTALLATION.
- E PROVIDE LOW VOLTAGE TRANSFORMERS FOR VAV POWER WHERE SHOWN ON ELECTRICAL PLANS.
- F INSTALL THERMOSTATS AT 48-INCHES A.F.F. OR ALIGNED WITH ADJACENT LIGHTSWITCHES.

LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820

ARCHITECTURAL PARTNER PERKINS & WILL 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611 v. (312) 755-0770

CIVIL & STRUCTURAL ENGINEER:

JQOL 8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032

v. (317) 344-8044

100%

01 FLOOR MECHANICAL PIPING PLAN - AREA B

MP-111B

- A REFER TO SHEET M-000 FOR GENERAL MECHANICAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B REFER TO DRAWING M-500 SERIES FOR MECHANICAL DETAILS. C REFER TO DRAWING M-600 SERIES FOR MECHANICAL SCHEDULES.
- D REFER TO DETAILS 3/M-501 & 12/M-501 FOR VAV DUCTWORK & PIPING INSTALLATION.
- E PROVIDE LOW VOLTAGE TRANSFORMERS FOR VAV POWER WHERE SHOWN
- ON ELECTRICAL PLANS. F INSTALL THERMOSTATS AT 48-INCHES A.F.F. OR ALIGNED WITH ADJACENT LIGHTSWITCHES.

LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820 ARCHITECTURAL PARTNER

PERKINS & WILL 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611 v. (312) 755-0770

CIVIL & STRUCTURAL ENGINEER:

JQOL 8840 ALLISON BLVD INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

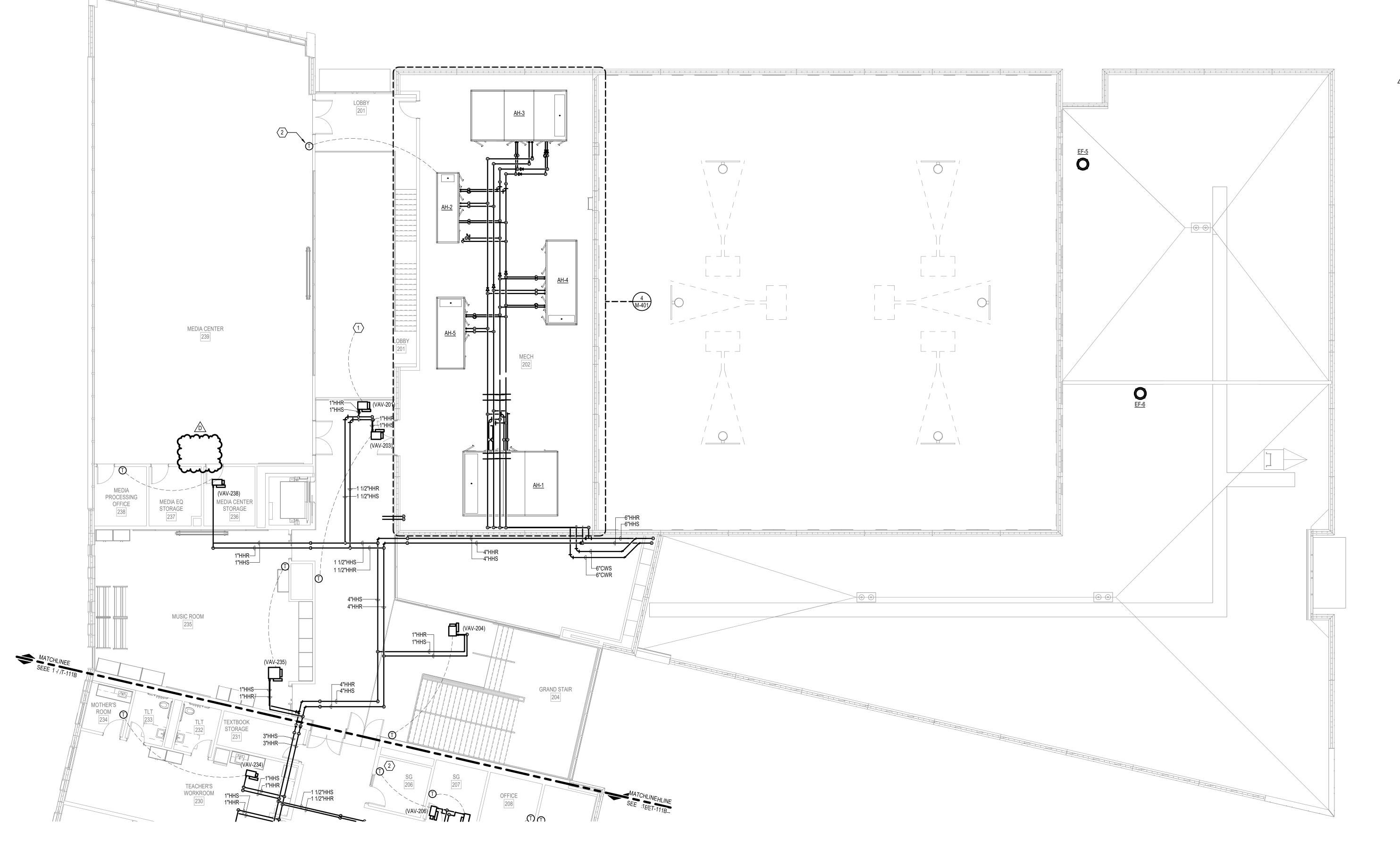
KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032

v. (317) 344-8044

02 FLOOR MECHANICAL PIPING PLAN - AREA A

MP-112A

SHEET KEYNOTES



02 FLOOR MECHANICAL PIPING PLAN - AREA A

02 FLOOR MECHANICAL PIPING PLAN - AREA B

GENERAL NOTES

- A REFER TO SHEET M-000 FOR GENERAL MECHANICAL NOTES, SYMBOLS AND ABBREVIATIONS.
- B REFER TO DRAWING M-500 SERIES FOR MECHANICAL DETAILS. C REFER TO DRAWING M-600 SERIES FOR MECHANICAL SCHEDULES.
- D REFER TO DETAILS 3/M-501 & 12/M-501 FOR VAV DUCTWORK & PIPING INSTALLATION.
- E PROVIDE LOW VOLTAGE TRANSFORMERS FOR VAV POWER WHERE SHOWN
- ON ELECTRICAL PLANS. F INSTALL THERMOSTATS AT 48-INCHES A.F.F. OR ALIGNED WITH ADJACENT LIGHTSWITCHES.

LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820

ARCHITECTURAL PARTNER PERKINS & WILL 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611 v. (312) 755-0770

CIVIL & STRUCTURAL ENGINEER:

JQOL 8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032 v. (317) 344-8044

SHEET KEYNOTES

3 MOUNT CASSETTE UNIT 7'-6" ABOVE DOOR. ROUTE REFRIGERANT LINES TO OUTDOOR UNIT, SIZE PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE CONDENSATE PUMP. 4 ROUTE CASSETTE UNIT CONDENSATE TO MOP SINK.
5 PROVIDE THERMOSTAT WITH LOCKABLE CAGE.

2 PROVIDE LOW VOLTAGE TRANSFORMER FOR VAV BOX POWER. SEE

1 PROVIDE HOT WATER BYPASS VALVE SIZED FOR 45 GPM.

ELECTRCIAL PLANS FOR LOCATIONS.

100%

95% CD SET
100% CD SET

MP-112B

02 FLOOR MECHANICAL PIPING PLAN - AREA B

- A AVOID ALL CONFLICTS BETWEEN PLUMBING SYSTEMS, AND UNDERGROUND CONDUIT, PIPING, STRUCTURAL MEMBERS, AND ANY OTHER OBSTRUCTIONS ENCOUNTERED. PIPING LAYOUTS ARE DIAGRAMMATIC AND SHOW SYSTEM
- INTENT. PIPING MAY REQUIRE ADDITIONAL OFFSETS, DROPS, FITTINGS, ETC.

 B SLEEVE ALL PIPING PASSING THROUGH FOUNDATION WALLS AND BELOW
- B SLEEVE ALL PIPING PASSING THROUGH FOUNDATION WALLS AND BELOW FOOTINGS. SLEEVE SHALL BE 2 PIPE DIAMETERS LARGER THAN PIPE. SLEEVE
- SHALL EXTEND BEYOND THE ANGLE OF REPOSE.

 C INSTALL UNDERGROUND PVC DWV PIPING ACCORDING TO ASTM D 2321.

ARCHITECTURAL PARTNER

ARCHITECTURE,
LANDSCAPE, INTERIOR
DESIGN, URBAN PLANNING

25 NORTH PINE STREET, SUITE B
INDIANAPOLIS, IN 45202

WWW.METICULOUSDA.COM
INFO@METICULOUSDA.COM
317.926.1820

ARCHITECTURAL PARTNER
PERKINS & WILL
410 N. MICHIGAN AVE
SUITE 1600
CHICAGO, IL 60611
v. (312) 755-0770

CIVIL & STRUCTURAL ENGINEER:
JQOL

8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING
275 VETERANS WAY
SUITE 300
CARMEL. IN 46032
v. (317) 344-8044

100% CD SET

IPS 69 - JOYCE KIL

No. Description Date
95% CD SET 12-18-24
100% CD SET 01-17-25
ADDENDUM #6 03-10-25

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PROJECT NO.:

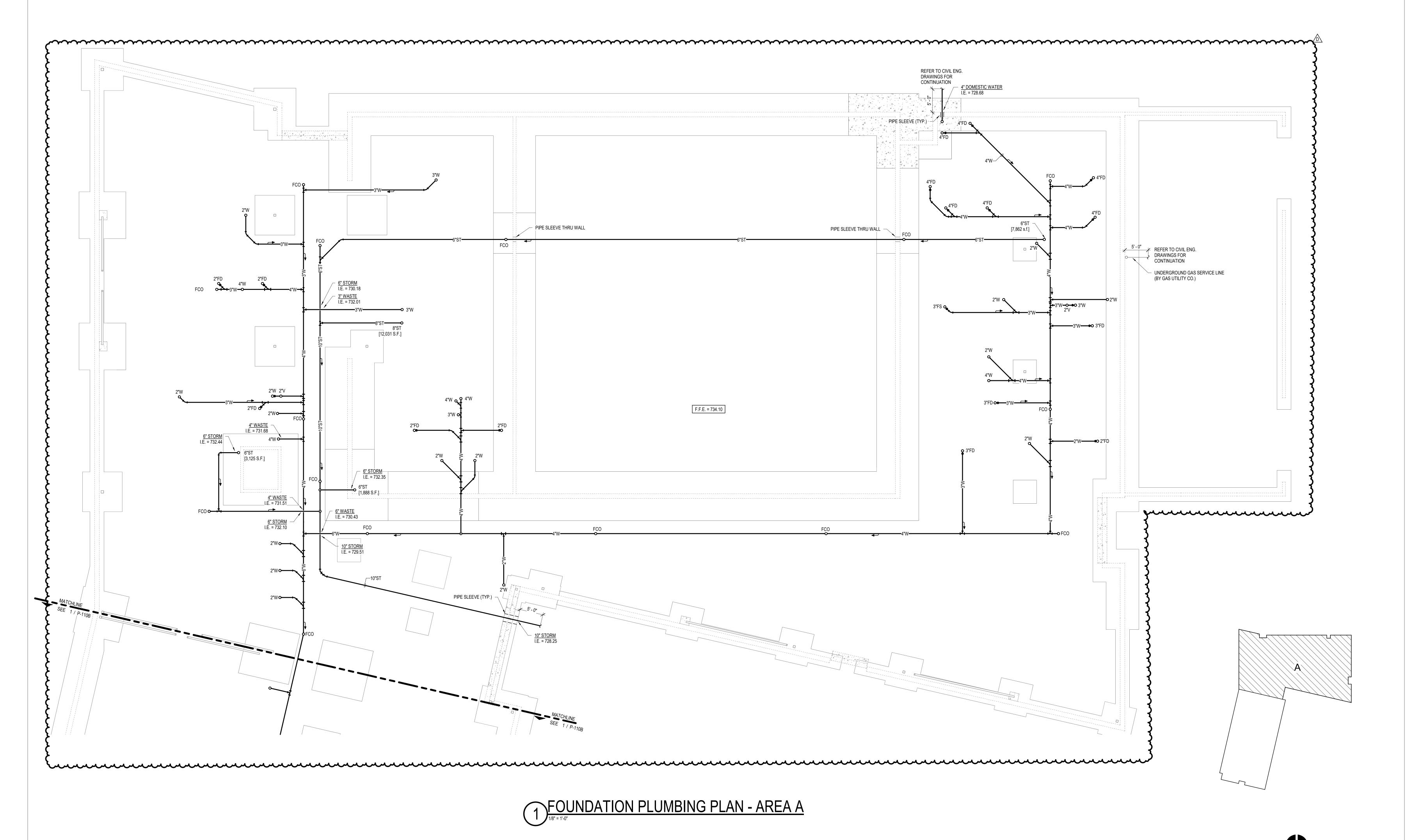
P23-0116

REVISION NO.:

D

FOUNDATION
PLUMBING PLAN AREA A

P-110A



[3,915 S.F.] 12" STORM I.E. = 728.25 REFER TO CIVIL ENG. DRAWINGS FOR PIPE SLEEVE F.F.E. = 734.10 CONTINUATION [3,890 S.F.] 6" WASTE -I.E. = 732.10 REFER TO CIVIL ENG. DRAWINGS FOR CONTINUATION PIPE SLEEVE

FOUNDATION PLUMBING PLAN - AREA B

GENERAL NOTES

- A AVOID ALL CONFLICTS BETWEEN PLUMBING SYSTEMS, AND UNDERGROUND CONDUIT, PIPING, STRUCTURAL MEMBERS, AND ANY OTHER OBSTRUCTIONS ENCOUNTERED. PIPING LAYOUTS ARE DIAGRAMMATIC AND SHOW SYSTEM
- INTENT. PIPING MAY REQUIRE ADDITIONAL OFFSETS, DROPS, FITTINGS, ETC. B SLEEVE ALL PIPING PASSING THROUGH FOUNDATION WALLS AND BELOW
- FOOTINGS. SLEEVE SHALL BE 2 PIPE DIAMETERS LARGER THAN PIPE. SLEEVE SHALL EXTEND BEYOND THE ANGLE OF REPOSE. C INSTALL UNDERGROUND PVC DWV PIPING ACCORDING TO ASTM D 2321.

LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820

ARCHITECTURAL PARTNER PERKINS & WILL 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611 v. (312) 755-0770

CIVIL & STRUCTURAL ENGINEER:

JQOL 8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032 v. (317) 344-8044

100%

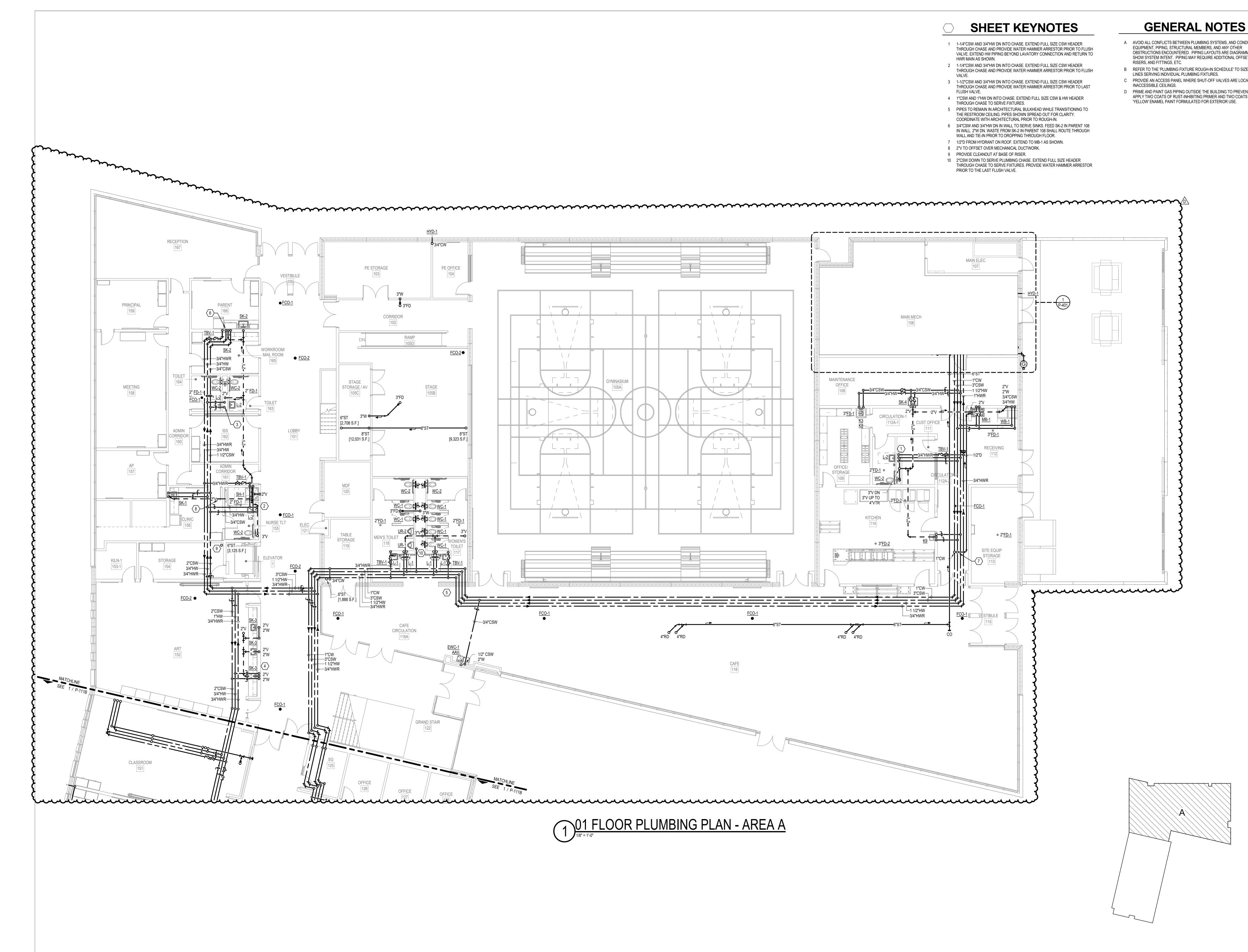
Date 12-18-24 01-17-25 03-10-25 95% CD SET 100% CD SET ADDENDUM #6

ISSUE DATE:	01.	17.2025
DRAWN:	CYC	CHECKED:
PROJECT NO.:		P23-0116
REVISION NO.:		D

FOUNDATION PLUMBING PLAN -AREA B

P-110B





- A AVOID ALL CONFLICTS BETWEEN PLUMBING SYSTEMS, AND CONDUIT, DUCT, OBSTRUCTIONS ENCOUNTERED. PIPING LAYOUTS ARE DIAGRAMMATIC AND SHOW SYSTEM INTENT. PIPING MAY REQUIRE ADDITIONAL OFFSETS, DROPS,
- B REFER TO THE 'PLUMBING FIXTURE ROUGH-IN SCHEDULE' TO SIZE BRANCH
- C PROVIDE AN ACCESS PANEL WHERE SHUT-OFF VALVES ARE LOCATED ABOVE
- D PRIME AND PAINT GAS PIPING OUTSIDE THE BUILDING TO PREVENT RUSTING. APPLY TWO COATS OF RUST-INHIBITING PRIMER AND TWO COATS OF

317.926.1820 ARCHITECTURAL PARTNER **PERKINS & WILL**

LANDSCAPE, INTERIOR

DESIGN, URBAN PLANNING

INDIANAPOLIS, IN 45202

WWW.METICULOUSDA.COM

INFO@METICULOUSDA.COM

25 NORTH PINE STREET, SUITE B

410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611 v. (312) 755-0770

CIVIL & STRUCTURAL ENGINEER:

8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032

v. (317) 344-8044

SET

100%



01 FLOOR PLUMBING PLAN - AREA A

P-111A

- A AVOID ALL CONFLICTS BETWEEN PLUMBING SYSTEMS, AND CONDUIT, DUCT, EQUIPMENT, PIPING, STRUCTURAL MEMBERS, AND ANY OTHER OBSTRUCTIONS ENCOUNTERED. PIPING LAYOUTS ARE DIAGRAMMATIC AND SHOW SYSTEM INTENT. PIPING MAY REQUIRE ADDITIONAL OFFSETS, DROPS,
- RISERS, AND FITTINGS, ETC. B REFER TO THE 'PLUMBING FIXTURE ROUGH-IN SCHEDULE' TO SIZE BRANCH LINES SERVING INDIVIDUAL PLUMBING FIXTURES.
- C PROVIDE AN ACCESS PANEL WHERE SHUT-OFF VALVES ARE LOCATED ABOVE INACCESSIBLE CEILINGS.
- D PRIME AND PAINT GAS PIPING OUTSIDE THE BUILDING TO PREVENT RUSTING. APPLY TWO COATS OF RUST-INHIBITING PRIMER AND TWO COATS OF 'YELLOW' ENAMEL PAINT FORMULATED FOR EXTERIOR USE.

SHEET KEYNOTES

- 1 1-1/4"CSW AND 3/4"HW DN IN CHASE. EXTEND FULL SIZE CSW HEADER THROUGH CHASE AND PROVIDE WATER HAMMER ARRESTOR PRIOR TO FLUSH VALVE. EXTEND HW PIPING BEYOND LAVATORY CONNECTION AND RETURN TO HWR MAIN AS SHOWN. PROVIDE TBV-1 ON HWR IN AN ACCESSIBLE LOCATION. 2 3/4"CSW AND 3/4"HW UP TO MOP BASIN ON SECOND FLOOR. 3/4"CSW AND 3/4"HW DN TO MOP BASIN ON THIS FLOOR. PROVIDE ISOLATION VALVE AND CHECK VALVE ON CSW AND HW PIPES TO EACH MOP BASIN.
- 3 2"CSW UP AND DOWN TO SERVE PLUMBING CHASES ON EACH FLOOR. EXTEND FULL SIZE HEADER THROUGH CHASE TO SERVE FIXTURES. PROVIDE WATER HAMMER ARRESTOR PRIOR TO THE LAST FLUSH VALVE. 4 3/4"CSW UP TO FEED WATER COOLERS ON SECOND FLOOR. 3/4"CSW DN IN
- WALL. RUN FULL SIZE CSW THROUGH WALL TO FEED WATER COOLERS. 5 3/4"CSW AND 3/4"HW UP TO FEED LAVATORIES ON SECOND FLOOR. 3/4"CSW AND 3/4"HW DN IN WALL. RUN FULL SIZE CSW AND HW THROUGH WALL TO
- 6 1"CW, 3"CSW, 1-1/2"HW, 3/4"HWR TO OFFSET OVER MECHANICAL DUCTWORK AS SHOWN. PIPES TO DROP BACK TO AVOID STEEL.

FEED LAVATORIES.

LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820

> ARCHITECTURAL PARTNER **PERKINS & WILL** 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611

v. (312) 755-0770

CIVIL & STRUCTURAL ENGINEER: 8840 ALLISON BLVD SUITE 425

INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. /

FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032

v. (317) 344-8044

SET

100%

95% CD SET 100% CD SET ADDENDUM #6

01 FLOOR PLUMBING PLAN - AREA B

P-111B

1)01 FLOOR PLUMBING PLAN - AREA B



- A AVOID ALL CONFLICTS BETWEEN PLUMBING SYSTEMS, AND CONDUIT, DUCT, EQUIPMENT, PIPING, STRUCTURAL MEMBERS, AND ANY OTHER OBSTRUCTIONS ENCOUNTERED. PIPING LAYOUTS ARE DIAGRAMMATIC AND SHOW SYSTEM INTENT. PIPING MAY REQUIRE ADDITIONAL OFFSETS, DROPS, RISERS, AND FITTINGS, ETC.
- RISERS, AND FITTINGS, ETC.

 B REFER TO THE 'PLUMBING FIXTURE ROUGH-IN SCHEDULE' TO SIZE BRANCH
- LINES SERVING INDIVIDUAL PLUMBING FIXTURES.

 C PROVIDE AN ACCESS PANEL WHERE SHUT-OFF VALVES ARE LOCATED ABOVE INACCESSIBLE CEILINGS.
- D PRIME AND PAINT GAS PIPING OUTSIDE THE BUILDING TO PREVENT RUSTING.
 APPLY TWO COATS OF RUST-INHIBITING PRIMER AND TWO COATS OF
 'YELLOW' ENAMEL PAINT FORMULATED FOR EXTERIOR USE.

ARCHITECTURE,
LANDSCAPE, INTERIOR
DESIGN, URBAN PLANNING

25 NORTH PINE STREET, SUITE B
INDIANAPOLIS, IN 45202

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ARCHITECTURAL PARTNER

PERKINS & WILL

410 N. MICHIGAN AVE

SUITE 1600

CHICAGO, IL 60611

v. (312) 755-0770

CIVIL & STRUCTURAL ENGINEER:

SUITE 425
INDIANAPOLIS, IN 46250
v. (317) 661-1964

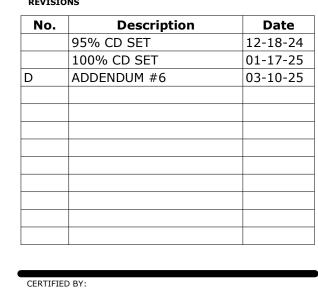
MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING
275 VETERANS WAY
SUITE 300
CARMEL. IN 46032
v. (317) 344-8044

100% CD SET

Description
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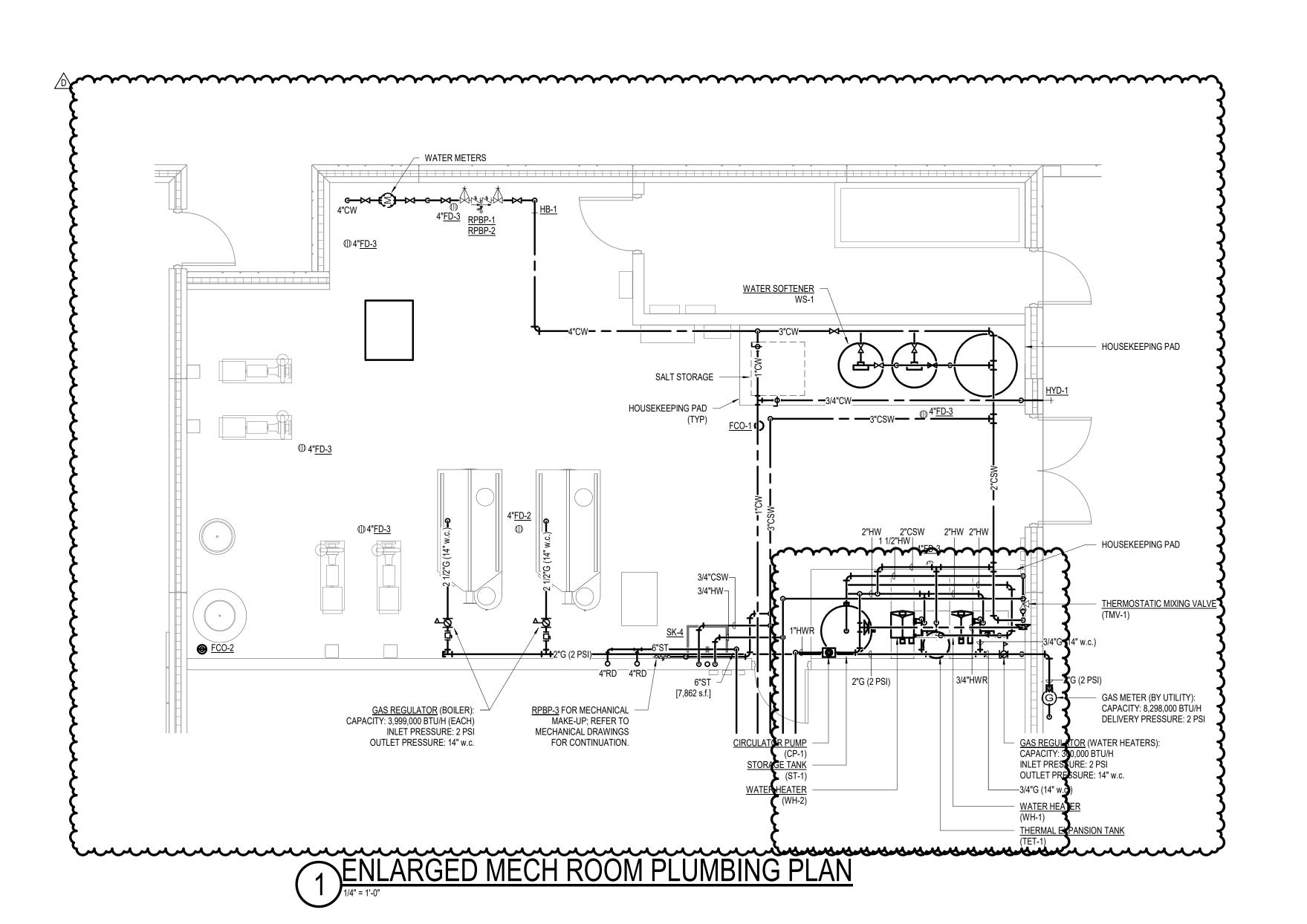
CD SET
12-18

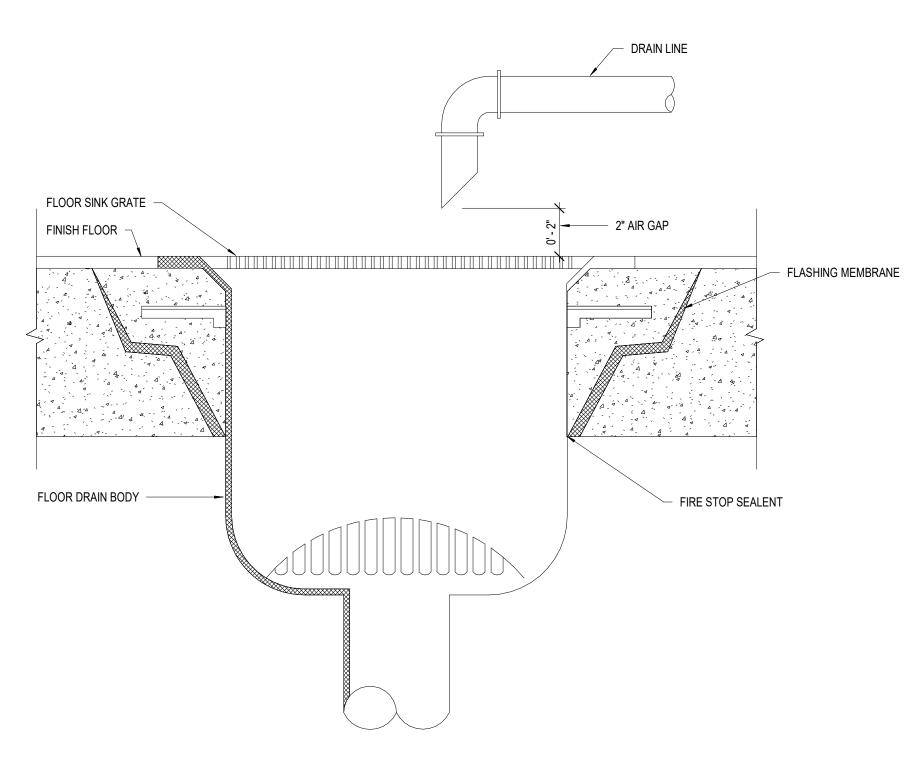


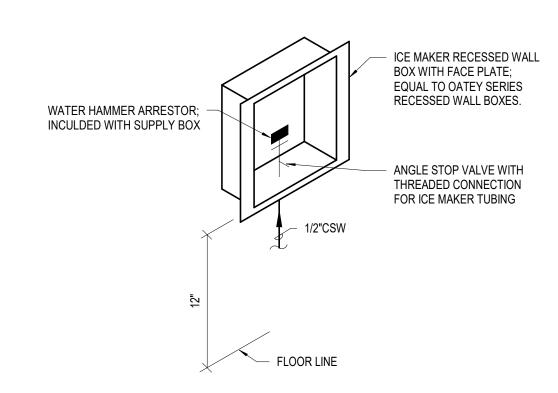


ISSUE DATE:						
	01.17.2025					
DRAWN:		CHECKED:				
	CYC	JSM				
PROJECT NO.:		D22 0446				
		P23-0116				
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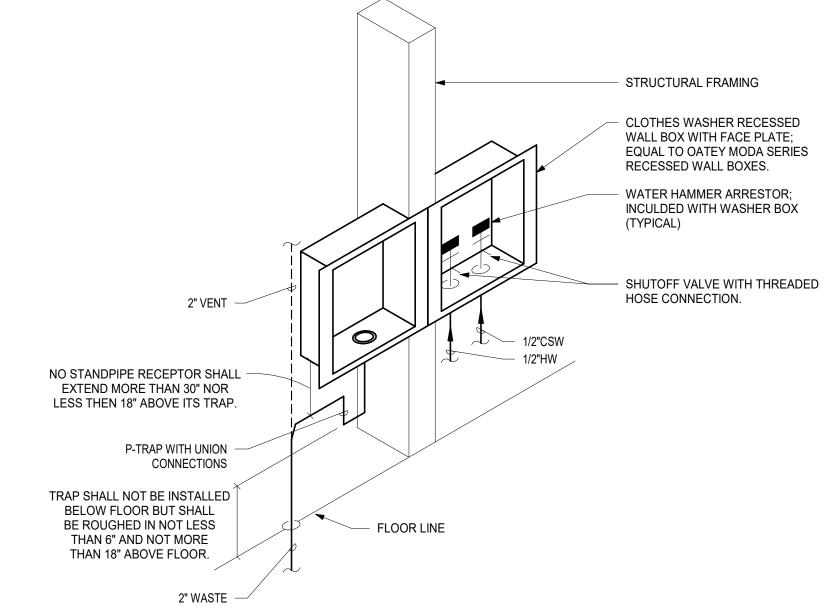
PLUMBING ENLARGED PLANS





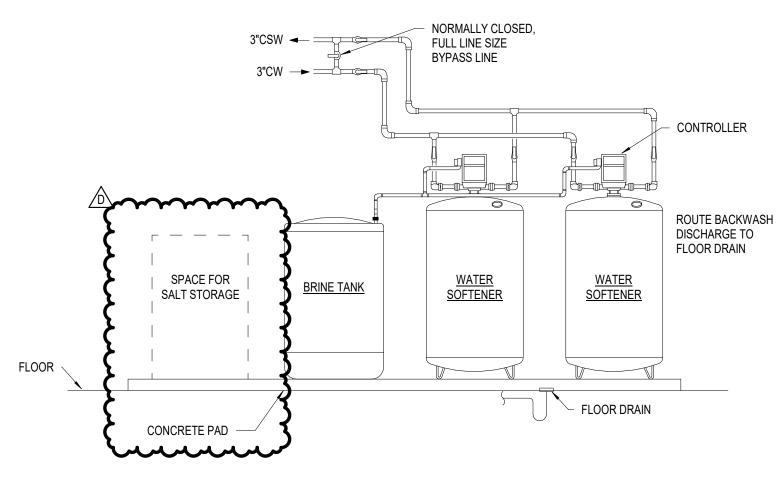


5 ICE MAKER RECESSED WALL BOX DETAIL 5 NOT TO SCALE

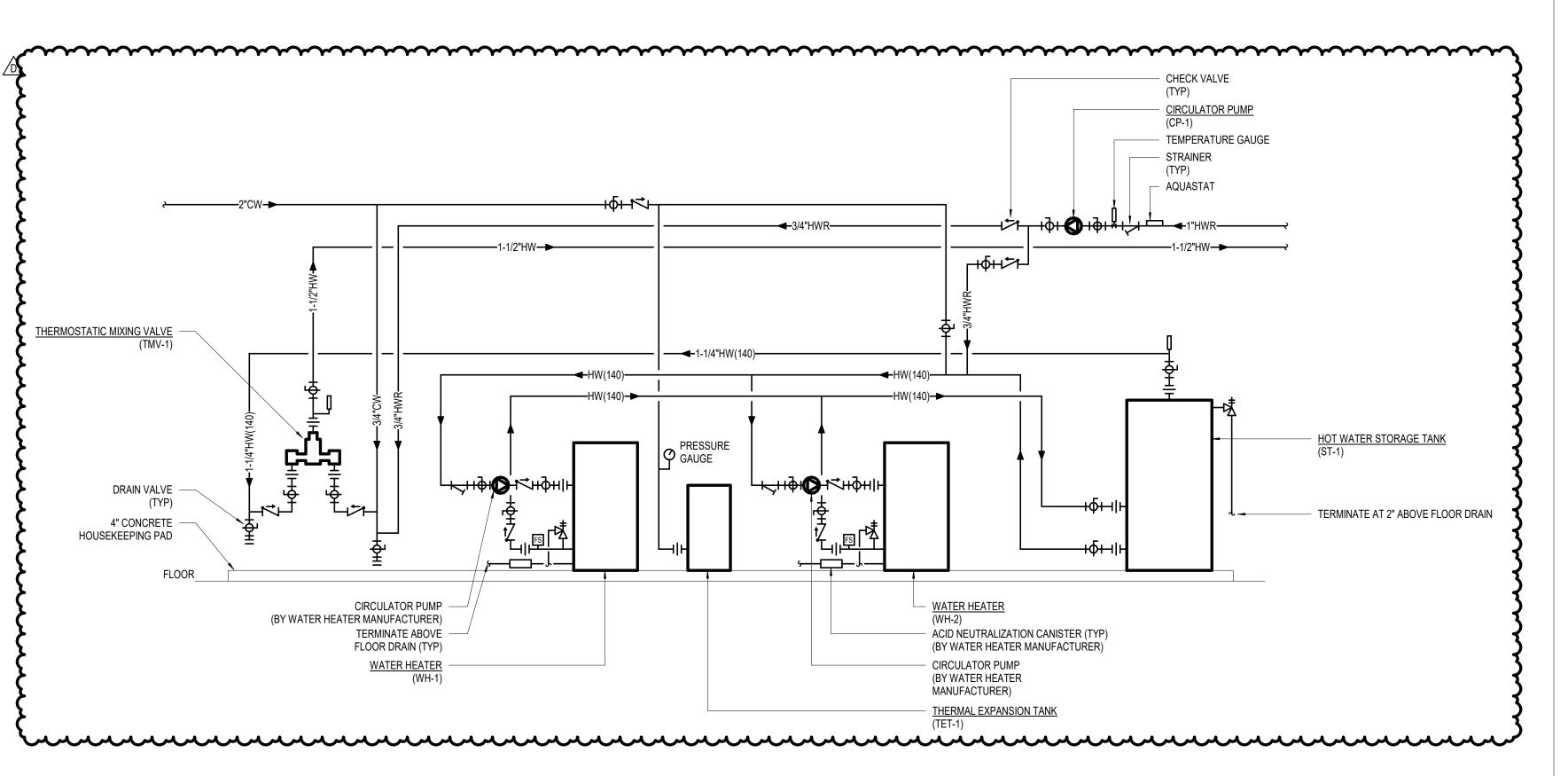


CLOTHES WASHER BOX PIPING DETAIL

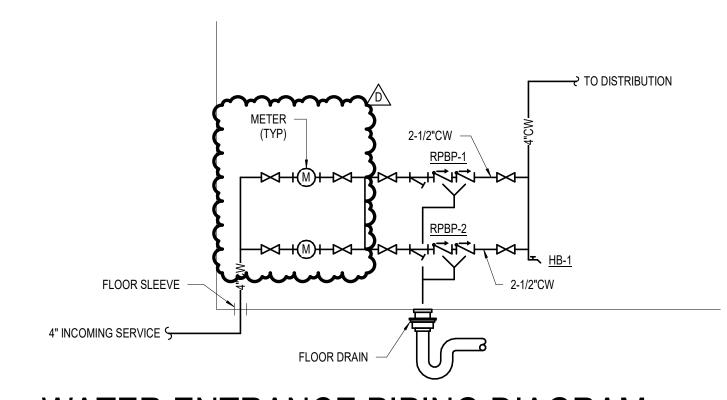
A SCALE



WATER SOFTENER PIPING DETAIL NOT TO SCALE



WATER HEATER PIPING DIAGRAM NOT TO SCALE



WATER ENTRANCE PIPING DIAGRAM

NOT TO SCALE

LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820

ARCHITECTURAL PARTNER **PERKINS & WILL** 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611

v. (312) 755-0770 CIVIL & STRUCTURAL ENGINEER:

8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032 v. (317) 344-8044

S

CD

100%

95% CD SET 12-18-24 100% CD SET 03-10-25 ADDENDUM #6

P23-0116

PLUMBING DETAILS

AAV	AIR ADMITTANCE VALVE, SILICONE MEMBRANE, SWEET SPOT TECHNOLOGY OPENS AT -0.0 PSI AND SEALS AT 0 PSI, SCREENING ON AIR INLETS, ASSE 1050 & 1051.	1 OATEY PRODUCT MODEL 39228
	MOUNT ABOVE CEILING HEIGHT. PROVIDE WITH LOUVERED ACCESS PANEL IN CEILING. COORDINATE LOCATION WITH ARCHITECTURAL PLANS.	
ECO	EXTERIOR CLEANOUT: ROUND FLANGED HOUSING WITH CAST IRON COVER.	EXTERIOR CLEANOUT: JAY R. SMITH 4880
5005	ELEODEREANOLITATION	EMODALEANOUR
	ROUND FLANGED HOUSING WITH CAST IRON COVER, COVER CAST WITH 'WASTE'.	JAY R. SMITH 4880
FCO-2	FLOOR CLEANOUT: ROUND FLANGED HOUSING WITH CAST IRON COVER, COVER CAST WITH 'STORM'.	FLOOR CLEANOUT: JAY R. SMITH 4880
FD-1	FLOOR DRAIN: CAST IRON, EPOXY COATED, REVERSIBLE CLAMPING COLLAR, WEEP HOLES, NO-HUB BOTTOM OUTLET, NICKEL BRONZE STRAINER, ROUND, ADJUSTABLE, FLAT.	FLOOR DRAIN: WATTS FD-100-A-NH
	TRAP PRIMER: HDPE HOUSING WITH HEAVY DUTY PROPRIETARY SILICONE DIAPHRAGM AND SOFT EDPM RUBBER SEALING GASKET, ASSE 1072 AFGW.	TRAP SEALER: SURESEAL SS#009V (# - INDICATES SIZE)
FD-2	FLOOR DRAIN: CAST IRON, EPOXY COATED, REVERSIBLE CLAMPING COLLAR, WEEP HOLES, NO-HUB BOTTOM OUTLET, NICKEL BRONZE STRAINER, HEAVY DUTY, ADJUSTABLE, HEEL-PROOF.	FLOOR DRAIN: WATTS FD-100-B-NH
~~	TRAP SEALER: HDPE HOUSING WITH HEAVY DUTY PROPRIETARY SILICONE DIAPHRAGM AND SOFT EDPM THOBBER SEALING GREEN, ASSE 1072 A. GW	TRAP SEALER: SURESEAL SS#009V (# - INDICATES SIZE)
FD-3	FLOOR DRAIN: 6" DEEP 14 GAUGE TYPE 304 STAINLESS STEEL FLOOR SINK WITH LOOSE SET STAINLESS STEEL GRATE, STAINLESS STEEL DOME BOTTOMG STRAINER, NO-HUB OUTLET. HEAVY DUTY RIM AND GRATE. TRAP SEALER: HDPE HOUSING WITH HEAVY DUTY PROPRIETARY SILICONE DIAPHRAGM AND SOFT EDPM	FLOOR DRAIN: WATTS FS-780 TRAP SEALER: SURESEAL SS#009V (# - INDICATES SIZE)
AFQ.4	RUBBER SEALING GASKET, ASSE 1072 AFGW.	
	12' SQUARE BY 8" DEEP FLOOR SINK WITH WHITE ACID RESISTANT PORCELAIN ENAMEL COATED INTERIOR, LOOSE SET PORCELAIN ENAMEL COATED CAST IRON GRATE, POLYPROPYLENE DOME BOTTOM STRAINER, NO-HUB OUTLET. TRAP SEALER: HDPE HOUSING WITH HEAVY DUTY PROPRIETARY SILICONE DIAPHRAGM AND SOFT EDPM RUBBER SEALING GASKET, ASSE 1072 AFGW.	WATTS FS-740-2-NH TRAP SEALER: SURESEAL SS#009V (# - INDICATES SIZE)
RD-1	ROOF DRAIN: COATED CAST IRON BODY, MEMBRANE FLASHING CLAMP, LOW PROFILE ALUMINUM DOME STRAINER.	ROOF DRAIN: SIOUX CHIEF 868 SERIES
RD-2	ROOF DRAIN: COATED CAST IRON DRAIN BODY, MEMBRANE FLASHING CLAMP, LOW PROFILE ALUMINUM DOME STRAINER, 2" HIGH WATER DAM.	ROOF DRAIN: SIOUX CHIEF 868 SERIES

K	KITCHEN PLUMBING FIXTURES ROUGH-IN SCHEDULE									
UNIT ID	FIXTURE DISCRIPTION	HW	CSW	TRAP SIZE	W	V	NOTES			
К3	SINGLE COMPARTMENT SINK - REFER TO FOODSERVICE PLANS FOR FIXTURE SELECTIONS	-	-	-	2"	-	PROVIDE FLOOR SINK FOR FOODSERVICE EQUIPMENT TO DRAIN TO; REFER TO FOODSERVICE PLANS FOR LOCATION.			
K8	SPLASH MOUNTE FAUCET - REFER TO FOODSERVICE PLANS FOR FIXTURE SELECTION	1/2"	1/2"	-	-	-				
K9	WALL MOUNT HAND SINK - REFER TO FOODSERVICE PLANS FOR FIXTURE SELECTION	1/2"	1/2"	1-1/2"	2"	2"	CSW & HW FEEDS ROUGH-INS: 21" A.F.F. WASTE ROUGH-IN: 24"A.F.F.			

			1					
UNIT ID	FIXTURE DISCRIPTION	HW	CSW	cw	TRAP SIZE	W	V	MOUNTING HEIGHT
HYD-1	WALL HYDRANT	-	-	3/4"	-	-	-	18" A.F.G.
WC-1	WATER CLOSET - WALL HUNG, FLUSH VALVE	-	1"	-	INTEGRAL	4"	2"	15" A.F.F. TO SEAT
WC-2	WATER CLOSET - WALL HUNG, FLUSH VALVE, ADA	-	1"	-	INTEGRAL	4	2"	17" A.F.F. TO SEAT
UR-1	URINAL - WALL HUNG, FLUSH VALVE	-	3/4"	-	INTEGRAL	2"	2"	24" A.F.F. TO RIM
UR-2	URINAL - WALL HUNG, FLUSH VALVE, ADA	-	3/4"	-	INTEGRAL	2"	2"	17" A.F.F. TO RIM
L-1	LAVATORY - WALL HUNG	1/2"	1/2"	-	1-1/4"	2"	2"	34" A.F.F. TO RIM
L-2	LAVATORY - WALL HUNG , ADA	1/2"	1/2"	-	1-1/4"	2"	2"	34" A.F.F. TO RIM
SH-1	SHOWER	1/2"	1/2"	-	2"	2"	2"	42" A.F.F. TO VALVE 84" A.F.F. TO SHOWER HEAD ARM 42" A.F.F. TO HAND SHOWER
SK-1	SINK - SINGLE BOWL	1/2"	1/2"	-	2"	2"	2"	REFER TO ARCHITECTURAL DRAWINGS
SK-2	SINK - SINGLE BOWL	1/2"	1/2"	-	2"	2"	2"	REFER TO ARCHITECTURAL DRAWINGS
SK-3	SINK - SINGLE BOWL, ART CLASSROOM	1/2"	1/2"	-	2"	2"	2"	REFER TO ARCHITECTURAL DRAWINGS
SK-4	SINK - UTILITY	1/2"	1/2"	-	2"	2"	2"	33-1/2" A.F.F. TO FAUCET DECK
MB-1	MOP BASIN	3/4"	3/4"	-	3"	3"	2"	36" A.F.F. TO FAUCET
WB-1	WASHER BOX	1/2"	1/2"	-	2"	2"	2"	REFER TO DETAIL ON DRAWING P501
WSB-1	WATER SUPPLY BOX	-	1/2"	-	-	-	-	REFER TO DETAIL ON DRAWING P501
HB-1	HOSE BIB	-	-	3/4"	-	-	-	18" A.F.F.
HYD-1	WALL HYDRANT	-	-	3/4"	-	-	-	18" A.F.G.
HYD-2	WALL HYDRANT	-	-	1"	-	1/2"	-	
EWC-1	DRINKING FOUNTAIN	-	1/2"	-	2"	2"	2"	34-5/16" A.F.F. TO STANDARD HEIGHT BUBBLER

LINIT ID	PLUMBING FIXTURE SC DESCRIPTION	<u></u>	TRIM AND ACCESSORIES
HYD-1	WALL HYDRANT: FREEZELESS WALL HYDRANT WITH SINGLE CHECK HOSE CONNECTION ANTI-SIPHON VACUUM BREAKERS, BRASS VALVE BODY WITH HEMISPHERICAL SEATING SURFACE, ONE-PIECE VALVE PLUNGER, LOOSE TEE KEY, CHROME BOX AND DOOR		TRIM AND ACCESSORIES
	WATER CLOSET: VITREOUS CHINA, ELONGATED BOWL, 1-1/2" TOP SPUD, 11"x8-1/4" WATER SURFACE, WALL-MOUNT.	WATER CLOSET: KOHLER K-84323-L	FLUSH VALVE: SLOAN ROYAL 111-1.6-SF
	FLUSH VAVE: 1.6 GPF, BRUSHED STAINLESS STEEL FINISH, TOP SPUD CONNECTION, SINGLE FLUSH ROYAL EXPOSED MANUAL WATER CLOSET FLUSHOMETER.		SEAT: BEMIS 1955SSCT
WC-1	SEAT: OPEN FRONT, LESS COVER, ELONGATED, HEAVY-DUTY, INJECTION MOLDED SOLID PLASTIC, MOLDED IN BUMPERS, SELF-SUSTAINING CHECK HINGES, STAINLESS STEEL POSTS AND PINTLES, STA-TITE COMMERCIAL FASTENING SYSTEM.		CARRIER: (BACK-TO-BACK HORIZONTAL) WATTS ISCA-103-D CARRIER: (SINGLE VERTICAL)
	CARRIER:		WATTS ASCA-133-L/R/2
	ADJUSTABLE WATER CLOSET CARRIER WITH EXPOXY COATED CAST IRON FITTING, 4" NO-HUB WASTE AND 2" NO-HUB VENT CONNECTIONS, EPOXY COATED CAST IRON PATENTED COMPRESSION SEAL FACEPLATE ASSEMBLY, AND EPOXY COATED CAST IRON FOOT SUPPORTS WITH INCERMENTAL HEIGHT MARKINGS, ADJUSTABLE ABS NIPPE WITH INTEGRAL TEST CAP AND NEOPRENE BOWL GASKET, STAINLESS STEEL RODS AND HARDWARE, CHROME PLATED CAP NUTS, ASME A112.6 1M, 750lb STATIC LOAD.		CARRIER: (SINGLE HORIZONTAL) WATTS ASCA-103-L/R/2
	WATER CLOSET: VITREOUS CHINA, ELONGATED BOWL, 1-1/2" TOP SPUD, 11"x8-1/4" WATER SURFACE, WALL-MOUNT.	WATER CLOSET: KOHLER K-84323-L	FLUSH VALVE: SLOAN ROYAL 111-1.6-SF
	FLUSH VAVE: 1.6 GPF, BRUSHED STAINLESS STEEL FINISH, TOP SPUD CONNECTION, SINGLE FLUSH ROYAL EXPOSED MANUAL WATER CLOSET FLUSHOMETER.		SEAT: BEMIS 1955SSCT
WC-2	SEAT: OPEN FRONT, LESS COVER, ELONGATED, HEAVY-DUTY, INJECTION MOLDED SOLID PLASTIC, MOLDED IN BUMPERS,		CARRIER: (BACK-TO-BACK HORIZONTAL) WATTS ISCA-103-D
	SELF-SUSTAINING CHECK HINGES, STAINLESS STEEL POSTS AND PINTLES, STA-TITE COMMERCIAL FASTENING SYSTEM. CARRIER:		CARRIER: (SINGLE VERTICAL) WATTS ASCA-133-L/R/2
	ADJUSTABLE WATER CLOSET CARRIER WITH EXPOXY COATED CAST IRON FITTING, 4" NO-HUB WASTE AND 2" NO-HUB VENT CONNECTIONS, EPOXY COATED CAST IRON PATENTED COMPRESSION SEAL FACEPLATE ASSEMBLY, AND EPOXY COATED CAST IRON FOOT SUPPORTS WITH INCERMENTAL HEIGHT MARKINGS, ADJUSTABLE ABS NIPPE WITH INTEGRAL TEST CAP AND NEOPRENE BOWL GASKET, STAINLESS STEEL RODS AND HARDWARE, CHROME PLATED CAP NUTS, ASME A112.6 1M, 750lb STATIC LOAD.		CARRIER: (SINGLE HORIZONTAL) WATTS ASCA-103-L/R/2
	URINAL: VITREOUS CHINA, BLOW-OUT FLUSH ACTION, 3/4" TOP SPUD, 0.5 GALLONS PER FLUSH.	URINAL: KOHLER K-25048-ET-0	FLUSH VALVE: SLOAN ROYAL 186-0.5-SF
UR-1	FLUSH VALVE: 0.5 GPM, BRUSHED STAINLESS FINISH, DIAPHRAGM VALVE, SEMI-RED BRASS VALVE BODY, TOP SPUD URINAL CONNECTION, EXPOSED MANUAL FLUSHOMETER.		CARRIER: WATTS CA-321
	CARRIER: EPOXY COATED, FLOOR MOUNTED, HEAVY GAUGE STEEL OFFSET UPRIGHTS WITH WELDED FEET, UNIVERSAL STEEL HANGER SUPPORT PLATE, UNIVERSAL STEEL HANGER SUPPORT PLATE AND BOTTOM BEARING PLATE WITH INTEGRAL MOUNTING BRACKETS, AND PLATE HARDWARE.		
	URINAL: VITREOUS CHINA, BLOW-OUT FLUSH ACTION, 3/4" TOP SPUD, 0.5 GALLONS PER FLUSH.	URINAL: KOHLER K-25048-ET-0	FLUSH VALVE: SLOAN ROYAL 186-0.5-SF
UR-2	FLUSH VALVE: 0.5 GPM, BRUSHED STAINLESS FINISH, DIAPHRAGM VALVE, SEMI-RED BRASS VALVE BODY, TOP SPUD URINAL CONNECTION, EXPOSED MANUAL FLUSHOMETER.		CARRIER: WATTS CA-321
	CARRIER: EPOXY COATED, FLOOR MOUNTED, HEAVY GAUGE STEEL OFFSET UPRIGHTS WITH WELDED FEET, UNIVERSAL STEEL HANGER SUPPORT PLATE, UNIVERSAL STEEL HANGER SUPPORT PLATE AND BOTTOM BEARING PLATE WITH INTEGRAL MOUNTING BRACKETS, AND PLATE HARDWARE.		
	LAVATORY: WALL-HUNG, VITREOUS CHINA, FRONT OVERFLOW, D-SHAPED BOWL, SLEF-DRAINING DECK AREA WITH CONTOURED BACK AND SIDE SPLASH SHIELDS, FAUCET LEDGE, ADA COMPLIANT.	LAVATORY: AMERICAN STANDARD 0355.012	FAUCET: CHICAGO FAUCETS 802-VE2805-1000AB DRAIN:
	FAUCET: 4" FIXED CENTERS, VANDAL PROOF PRESSURE COMPENSATING ECONO-FLO NON-AERATING LAMINAR SPREAY, 0.5 GPM, VANDAL-PROOF 2" CANOPY SINGLE-WING HANDLE, CAST BRASS CONSTRUCTION.		McGUIRE 155A P-TRAP:
	DRAIN/TAILPIECE: CAST BRASS, CHROME PLATED, OPEN GRID P.O. PLUG, 17 GA 1-1/4" DIA x 6" SEAMLESS BRASS TAILPIECE, BRASS LOCKNUT, HEAVY RUBBER WASHER AND FIBER FRICTION WASHER, CERTIFIED BY RECOGNIZED AUTHORITY, BEAR BOTH		McGUIRE 8902C SUPPLIES: McGUIRE LFBV2165
L-1	MANUFACTURER AND TESTING MARK. P-TRAP: CURDOME DI ATER CAST PRASS PORV. MITHOUT CLEANOUT 47 CALLOS SEAMI ESS TURNI AR MANUEL REND. CAST PRASS.		PROTECTIVE COVERING: McGUIRE PW2000WC
	CHROME PLATED, CAST BRASS BODY, WITHOUT CLEANOUT, 17 GAUGE SEAMLESS TUBULAR WALL BEND, CAST BRASS SLIP NUTS, REDUCING WASHERS, CAST BRASS NUT, FLANGE, CERTIFIED RECOGNIZED AUTHORITY, BEAR BOTH MANUFACTURER AND TESTING MARK.		
	SUPPLIES: LEAD FREE, CHROME PLATED, COMMERCIAL PATTERN QUARTER-TURN BRASS BALL VALVES WITH CONVERTIBLE LOOSE KEY HANDLES, BRAIDED STAINLESS STEEL RISERS, FLANGES, 1/2"IPS INLETS, 3/8" COMPRESSION OUTLETS, CERTIFIED BY RECOGNIZED AUTHORITY, BEAR MANUFACTURER AND TESTING MARK.		
	PROTECTIVE COVERING: MOLDED CLOSED CELL VINYL, ANTIMICROBIAL, GLOSSY WHITE, ASTM D 635, ASTM C177, ASTM G-21, ASTM G-22, SEAMLESS P-TRAP AND SUPPLY INSULATION.		

		PL	UMBING EQUIP	MENT	SCH	EDULE				
PLUI PRO PRO LEAI PUM OPE SET O. AD 1. RO 2. RO	VIDE AN AIR GAP FITTIN RED WATER TEMPERATIVIDE T&P VALVE, TEMPED-FREE BRONZE CONSTIP ON/OFF: CONTROLLED RATION SCHEDULE: 24-HOUTLET TEMPERATURE JUST TANK PRESURE TOUTE BACKWASH DRAIN INTE VENT DRAIN LINE A	RATURE AND PRESSURE RELIEF AND G - PLUMB DRAIN LINE AND TERMINAT URE: 140°F (MINIMUM) ERATURE GAUGE, AND DRAIN VALVE. RUCTION. D BY AQUASTAT. HR, 7-DAY PROGRAMMABLE TIME CLO	CK. R PRESSURE. R DRAIN.							
UNIT	SPECIFICATION	MANUFACTURER WITH MODEL			ELECTR	RICAL DATA		GAS	GAS DATA	
ID	NAME	NUMBER	CAPACITY	HP	KW	VOLTAGE	PHASE	MBH IN	MBH OUT	NOTES
VBP-1	VENTED DOUBLE CHECK BACKFLOW PREVENTER	WATTS SD3-MN	10 PSI DROP AT 1 GPM FLOW							12
CP-1	CIRCULATOR PUMP	ARMSTRONG E7.2B	4 GPM FLOW AT 19ft TOTAL DYNAMIC HEAD (110°F)	1/6		208	1			6,7,8
RPBP-1	REDUCED PRESSURE BACKFLOW PREVENTER	WILKINS 375 - 2-1/2"	12 PSI PRESSURE DROP AT 100 GPM							3
PBP-2	REDUCED PRESSURE	WILKINS 375 - 2-1/2"	12 PSI PRESSURE DROP AT 100 GPM	~~~	~~~	~~~~	~~~	$\sim\sim$	$\sim\sim$	~~~
RPBP-3	REDUCED PRESSURE BACKFLOW PREVENTER	WILKINS 375XL - 1"	13 PSI PRESSURE DROP AT 15 GPM							13
ST-1	INSULATED HOT WATER STORAGE TANK	LOCHINVAR RGA0257	257 GALLON STORAGE CAPACITY							4,5
TBV-1	THERMOSTATIC BALANCE VALVE	MORRIS GROUP INTERNATIONAL TZV-3110	SET AT 105°F							
JET-1	THERMAL EXPANSION TANK	CALEFACTIO HGTEV-60	30 GALLON TANK VOLUME	ww	www	m	mm	mm	mm	10.
ΓMV-1	THERMOSTATIC MIXING VALVE	POWERS LFSH1435	5 PSI PRESSURE DROP AT 67 GPM							9
WH-1	GAS-FIRED WATER HEATER	LOCHINVAR AWN151PM	175 GPH AT 100°F TEMPERATURE RISE			120	1	150		1,2
VH-2	GAS-FIRED WATER HEATER	LOCHINVAR AWN151PM	175 GPH AT 100°F TEMPERATURE RISE			120	1	150		1,2
		AQUA SYSTEMS GEN II SERIES MODEL 1000	10 CUBIC FOOT, 250,000 GRAINS OF CAPACITY AT			120	1			11

	LAVATORY: WALL-HUNG, VITREOUS CHINA, FRONT OVERFLOW, D-SHAPED BOWL, SLEF-DRAINING DECK AREA WITH CONTOURED	FIXTURE LAVATORY: AMERICAN STANDARD 0355.012	FAUCET: CHICAGO FAUCETS 802-VE2805-1000
	BACK AND SIDE SPLASH SHIELDS, FAUCET LEDGE, ADA COMPLIANT. FAUCET:		DRAIN: McGUIRE 155A
L-2	4" FIXED CENTERS, VANDAL PROOF PRESSURE COMPENSATING ECONO-FLO NON-AERATING LAMINAR SPREAY, 0.5 GPM, VANDAL-PROOF 2" CANOPY SINGLE-WING HANDLE, CAST BRASS CONSTRUCTION.		P-TRAP: McGUIRE 8902C
	DRAIN/TAILPIECE: CAST BRASS, CHROME PLATED, OPEN GRID P.O. PLUG, 17 GA 1-1/4" DIA x 6" SEAMLESS BRASS TAILPIECE, BRASS LOCKNUT, HEAVY RUBBER WASHER AND FIBER FRICTION WASHER, CERTIFIED BY RECOGNIZED AUTHORITY, BEAR BOTH		SUPPLIES: McGUIRE LFBV2165
	MANUFACTURER AND TESTING MARK. P-TRAP:		PROTECTIVE COVERING: McGUIRE PW2000WC
	CHROME PLATED, CAST BRASS BODY, WITHOUT CLEANOUT, 17 GAUGE SEAMLESS TUBULAR WALL BEND, CAST BRASS SLIP NUTS, REDUCING WASHERS, CAST BRASS NUT, FLANGE, CERTIFIED RECOGNIZED AUTHORITY, BEAR BOTH MANUFACTURER AND TESTING MARK.		
	SUPPLIES: LEAD FREE, CHROME PLATED, COMMERCIAL PATTERN QUARTER-TURN BRASS BALL VALVES WITH CONVERTIBLE LOOSE KEY HANDLES, BRAIDED STAINLESS STEEL RISERS, FLANGES, 1/2"IPS INLETS, 3/8" COMPRESSION OUTLETS, CERTIFIED BY RECOGNIZED AUTHORITY, BEAR MANUFACTURER AND TESTING MARK.		
	PROTECTIVE COVERING: MOLDED CLOSED CELL VINYL, ANTIMICROBIAL, GLOSSY WHITE, ASTM D 635, ASTM C177, ASTM G-21, ASTM G-22, SEAMLESS P-TRAP AND SUPPLY INSULATION.		
	SHOWER ENCLOSURE: 38"x37" ONE-PIECE FIBERGLASS COMPOSITE CONSTRUCTION, SANITARY GRADE POLYESTER GELCOAT SURFACE, 3-3/8" DIA. CENTER DRAIN, 1/2" CONTOURED THRESHOLD, 1" FLOOR FLANGE, TEXTURES FLOOR PATTERN, FACTORY APPLIED REINFORCEMENT PACKAGE.	SHOWER ENCLOSURE: OASIS SHFW-3837	SHOWER TRIM: DELTA T24876-PRO-LHP-H559PR SHOWER HEAD:
SH-1	SHOWER TRIM: PRESSURE BALANCED SINGLE HANDLE MIXING VALVE TRIM, THREE FUNCTION DIVERTER, FIELD ADJUSTABLE TO LIMIT HANDLE ROTATION INTO HOT WATER ZONE, 120° MAXIMUM HANDLE ROTATION, ALL PARTS REPLACEABLE FROM FRONT OF VALVE, RED/BLUE INDICATOR MARKINGS, 5.0 GPM MAXIMUM FLOW, STRYKE CHROME DIVERTER HANDLE.		DELTA RP101842-PR SHOWER ARM: DELTA RP6023
	SHOWER HEAD: ROUND SHOWER HEAD, 1.75 GPM, 1/2" PIPE FITTING, METAL BALL CONNECTOR, CHROME SHOWER ARM, CHROME SHOWER FLANGE.		SHOWER FLANGE: DELTA RP100370 HAND SHOWER:
	HAND SHOWER: 9 SPRAY SETTING HAND SHOWER, PUSH BUTTON SELECTION, SLIDE/GRAB BAR, 1.75 GPM MAX FLOW, 60"-82" STRETCHABLE METAL HOSE, ONE-HANDED CONTROL, DUAL CHECK VALVES, PAUSE BUTTON, SOFT TOUCH NON-SLIP		DELTA 51900-PR WALL ELBOW: DELTA 50560
	GRIP, ADA COMPLIANT ADJUSTABLE MOUNT, HAND SHOWER, HOSE, AND GRAB BAR, CHROME ELBOW.		ROUGH VALVE: DELTA R22000
	SINK: STAINLESS STEEL 15"x17-1/2"x5-1/2" SINGLE BOWL DROP-IN ADA SINK, 18 GAUGE 304 STAINLESS STEEL WITH LUSTROUS SATIN FINISH, CENTER DRAIN, BOTTOM PADS.	SINK: ELKAY LRAD151755	FAUCET: CHICAGO FAUCETS 350-GN2FCABCP
	FAUCET: 1.5 GPM, SINGLE HOLE, DECK MOUNTED, 5-1/4" GOOSENECK, VANDAL-PROOF 2-3/8" LEVER HANDLE.		DRAIN/TAILPIECE: McGUIRE 155A
	DRAIN/TAILPIECE: CAST BRASS, CHROME-PLATED, OPEN GRID P.O. PLUG, 17 GAUGE 1-1/4" DIA x 6" SEAMLESS BRASS TAILPIECE, BRASSLOCK NUT, HEAVY RUBBER WASHER AND FIBER FRICTION WASHER, CERTIFIED BY RECOGNIZED AUTHORITY,		P-TRAP: McGUIRE 8902C SUPPLIES:
SK-1	P-TRAP: CHROME-PLATED, CAST BRASS BODY, WITH CLEANOUT, 17 GAUGE SEAMLESS TUBULAR WALL BEND, CAST BRASS SLIP NUTS, REDUCING WASHERS, CAST BRASS NUT, FLANGE, CERTIFIED BY RECOGNIZED AUTHORITY, BEAR BOTH		McGUIRE LFBV2165
	MANUFACTURER AND TESTING MARK. SUPPLIES: LEAD FREE, CHROME-PLATED, COMMERCIAL PATTERN QUARTER-TURN BRASS BALL VALVES WITH CONVERTIBLE LOOSE KEY HANDLES, BRAIDED STAINLESS STEEL RISERS, FLANGES, 1/2" IPA INLETS, 3/8" COMPRESSION OUTLETS, CERTIFIED		
	BY RECOGNIZED AUTHORITY, BEAR MANUFACTURER AND TESTING MARK. SINK: STAINLESS STEEL 15"x15"x6-1/8" SINGLE BOWL DROP-IN ADA SINK, 20 GAUGE 304 STAINLESS STEEL WITH LUSTROUS	SINK: ELKAY BCR15	FAUCET: CHICAGO FAUCETS 350-GN2FCABCP
	SATIN FINISH, CENTER DRAIN, BOTTOM PADS. FAUCET: 1.5 GPM, SINGLE HOLE, DECK MOUNTED, 5-1/4" GOOSENECK, VANDAL-PROOF 2-3/8" LEVER HANDLE.		DRAIN/TAILPIECE: McGUIRE 155A
SK-2	DRAIN/TAILPIECE: CAST BRASS, CHROME-PLATED, OPEN GRID P.O. PLUG, 17 GAUGE 1-1/4" DIA x 6" SEAMLESS BRASS TAILPIECE, BRASSLOCK NUT, HEAVY RUBBER WASHER AND FIBER FRICTION WASHER, CERTIFIED BY RECOGNIZED AUTHORITY, BEAR BOTH MANUFACTURER AND TESTING MARK.		P-TRAP: McGUIRE 8902C SUPPLIES: McGUIRE LFBV2165
	P-TRAP: CHROME-PLATED, CAST BRASS BODY, WITH CLEANOUT, 17 GAUGE SEAMLESS TUBULAR WALL BEND, CAST BRASS SLIP NUTS, REDUCING WASHERS, CAST BRASS NUT, FLANGE, CERTIFIED BY RECOGNIZED AUTHORITY, BEAR BOTH MANUFACTURER AND TESTING MARK.		
	SUPPLIES: LEAD FREE, CHROME-PLATED, COMMERCIAL PATTERN QUARTER-TURN BRASS BALL VALVES WITH CONVERTIBLE LOOSE KEY HANDLES, BRAIDED STAINLESS STEEL RISERS, FLANGES, 1/2" IPA INLETS, 3/8" COMPRESSION OUTLETS, CERTIFIED BY RECOGNIZED AUTHORITY, BEAR MANUFACTURER AND TESTING MARK.		
	SINK: STAINLESS STEEL 15"x17-1/2" x5-1/2" SINGLE BOWL DROP-IN ADA SINK, 18 GAUGE 304 STAINLESS STEEL WITH LUSTROUS SATIN FINISH, CENTER DRAIN, BOTTOM PADS.	SINK: ELKAY LRAD151755	FAUCET: CHICAGO FAUCETS 350-GN2FCABCP DRAIN/TAILPIECE:
	FAUCET: 1.5 GPM, SINGLE HOLE, DECK MOUNTED, 5-1/4" GOOSENECK, VANDAL-PROOF 2-3/8" LEVER HANDLE.		McGUIRE 151A SOLIDS INTERCEPTOR:
	DRAIN/TAILPIECE: CAST BRASS, CHROME-PLATED, OPEN GRID P.O. PLUG, 17 GAUGE 1-1/4" DIA x 6" SEAMLESS BRASS TAILPIECE, BRASSLOCK NUT, HEAVY RUBBER WASHER AND FIBER FRICTION WASHER, CERTIFIED BY RECOGNIZED AUTHORITY,		STREIM SIDEKICK SUPPLIES:
3N-3	BEAR BOTH MANUFACTURER NAD TESTING MARK. SOLIDS INTERCEPTOR: 2" PVC SOCKET INLET AND OUTLET CONNECTIONS, PVC HOUSING, POLYCARBONATE PERFORATED BASKET WITH O-RING, 23 GPM MAX. FLOW RATE, 0.17 GALLONS SOLIDS CAPACITY, MAXIMUM OPERATING TEMPERATURE 140°F, SIDE		McGUIRE LFBV2165
	ACCESS MAINTENANCE. SUPPLIES: LEAD FREE, CHROME-PLATED, COMMERCIAL PATTERN QUARTER-TURN BRASS BALL VALVES WITH CONVERTIBLE LOOSE KEY HANDLES, BRAIDED STAINLESS STEEL RISERS, FLANGES, 1/2" IPA INLETS, 3/8" COMPRESSION OUTLETS, CERTIFIED		
	BY RECOGNIZED AUTHORITY, BEAR MANUFACTURER AND TESTING MARK. SINK: STEEL PAINTED ANGLE LEGS, LEVELING DEVICES, 23"x21-1/2"x33-1/2" OUTSIDE DIMENSIONS, 4" FAUCET CENTERS, FLOOR	SINK: FIAT FL-1	FAUCET: CHICAGO FAUCETS 891-317ABCP
SK-4	MOUNTED SERVICE SINK. FAUCET: DECK MOUNTED FAUCET WITH 4" CENTERS, COLOR-CODED INDEXED HANDLES, 6" S-TYPE SWING FAUCET, VANDAL-PROOF 4" WRISTBLADE HANDLES, ADA COMPLIANT.		
	MOB BASIN: MOLDED STONE, 24"x24"x10" BASIN, STAINLESS STEEL DRAIN BODY WITH CONNECTION FOR 3" DRAIN PIPE, STAINLESS STEEL STRAINER.	MOP BASIN: FIAT MSB2424	FAUCET: CHICAGO FAUCETS 897-244XKCABRO
MB-1	FAUCET: WALL-MOUNTED MANUAL WALL FAUCET WITH 8" CENTERS, COLOR-CODED INDEXED HANDLES, INTEGRAL SUPPLY STOPS, VANDAL-PROOF 2-3/8" LEVER HANDLES, KLO-SELF SELF-CLOSING CARTRIDGE, CAM AND CAP DESIGN, VACUUM		HOSE & HOSE BRACKET: FIAM 832AA STAINLESS STEEL WALL GUARD:
WB-1	BREAKER ASSEMBLY, ADA COMPLIANT. WASHER BOX: WASHING MACHINE OUTLET BOXES, VALVE BOX AND DRAIN BOX CONNECTED BY INTERLOCKING WING FLANGES, WATER		MSG2424
WSB-1	HAMMER ARRESTORS ON VALVES, REMOVABLE QUARTER TURN PLUG FOR DWV TESTING. WATER SUPPLY BOX: ICE MAKER SUPPLY BOX WITH PRE-INSTALLED 1/4" OD COMPRESSION VALVE, PVC BOX, INTERLOCKING WING FLANGES	BOX WATER SUPPLY BOX: OATEY MODA WASHING MACHINE	
	ON EACH SIDE, WATER HAMMER ARRESTOR INCLUDED. HOSE BIBB:	OUTLET BOX HOSE BIBB:	
HB-1	BACKFLOW PROTECTED WALL FAUCET, ADJUSTABLE BRASS NUT WITH DEEP STEM GUARD, STANDARD 'O' SIZE WASHER POLYCARBONATE WHEEL HANDLE AND LOOSE TEE KEY. WALL HYDRANT:	WALL HYDRANT:	
HYD-1	FREEZELESS WALL HYDRANT WITH SINGLE CHECK HOSE CONNECTION ANTI-SIPHON VACUUM BREAKERS, BRASS VALVE BODY WITH HEMISPHERICAL SEATING SURFACE, ONE-PIECE VALVE PLUNGER, LOOSE TEE KEY, CHROME BOX AND DOOR ROOF HYDRANT:	WOODOFRD MFG. B65	
HYD-2	BACKFLOW PROTECTED WITH ASSE 1052 DOUBLE CHECK BACKFLOW PREVENTER, BUILT-IN DRAIN DOWN VALVE, ADJUSTABLE LINK FOR EASY ADJUSTMENT AND POSITIVE LEVER LOCK TENSION, ONE-PIECE VARIABLE FLOW PLUNGER, 1" NPT FEMALE INLET CONNECTION. ELECTRIC WATER COOLER:	WOODFORD MFG. RHY2-1-MS WATER COOLER:	CARRIER:
	BI-LEVEL ADA WATER COOLER WITH OTTLE FILLING STATION, FILTERED, CHILLING CAPACIY OF 8.0 GPH OF 50°F ASED ON 80°F INLET WATER AND 90°F AMBIENT, ANTIMICROBIAL, GREEN TICKER, HANDS-FREE OPERATION, LAMINAR FLOW, REAL		ELKAY MLP200

ARCHITECTURE,
LANDSCAPE, INTERIOR
DESIGN, URBAN PLANNING

25 NORTH PINE STREET, SUITE B
INDIANAPOLIS, IN 45202

WWW.METICULOUSDA.COM
INFO@METICULOUSDA.COM
317.926.1820

ARCHITECTURAL PARTNER
PERKINS & WILL
410 N. MICHIGAN AVE
SUITE 1600
CHICAGO, IL 60611
v. (312) 755-0770

CIVIL & STRUCTURAL ENGINEER:

JQOL
8840 ALLISON BLVD
SUITE 425

SUITE 425 INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING
275 VETERANS WAY
SUITE 300
CARMEL. IN 46032
v. (317) 344-8044

OYCE KILMER

SE

100%

 No.
 Description
 Date

 95% CD SET
 12-18-24

 100% CD SET
 01-17-25

 D
 ADDENDUM #6
 03-10-25

WDIANA

WORLD BY:

CERTIFIED BY:

LEGISTER BY:

No. 11300632

STATE OF

WDIANA

O1.17.2025

DRAWN:

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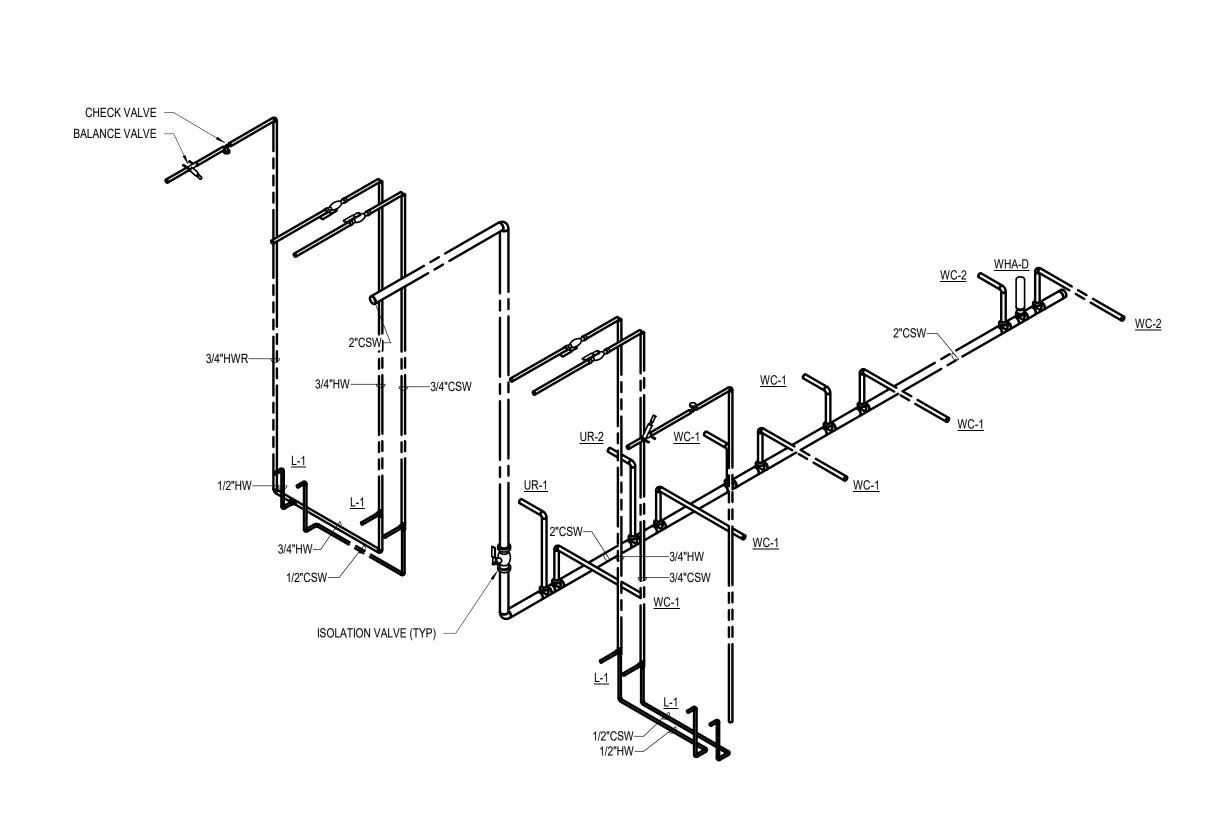
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P23-0116

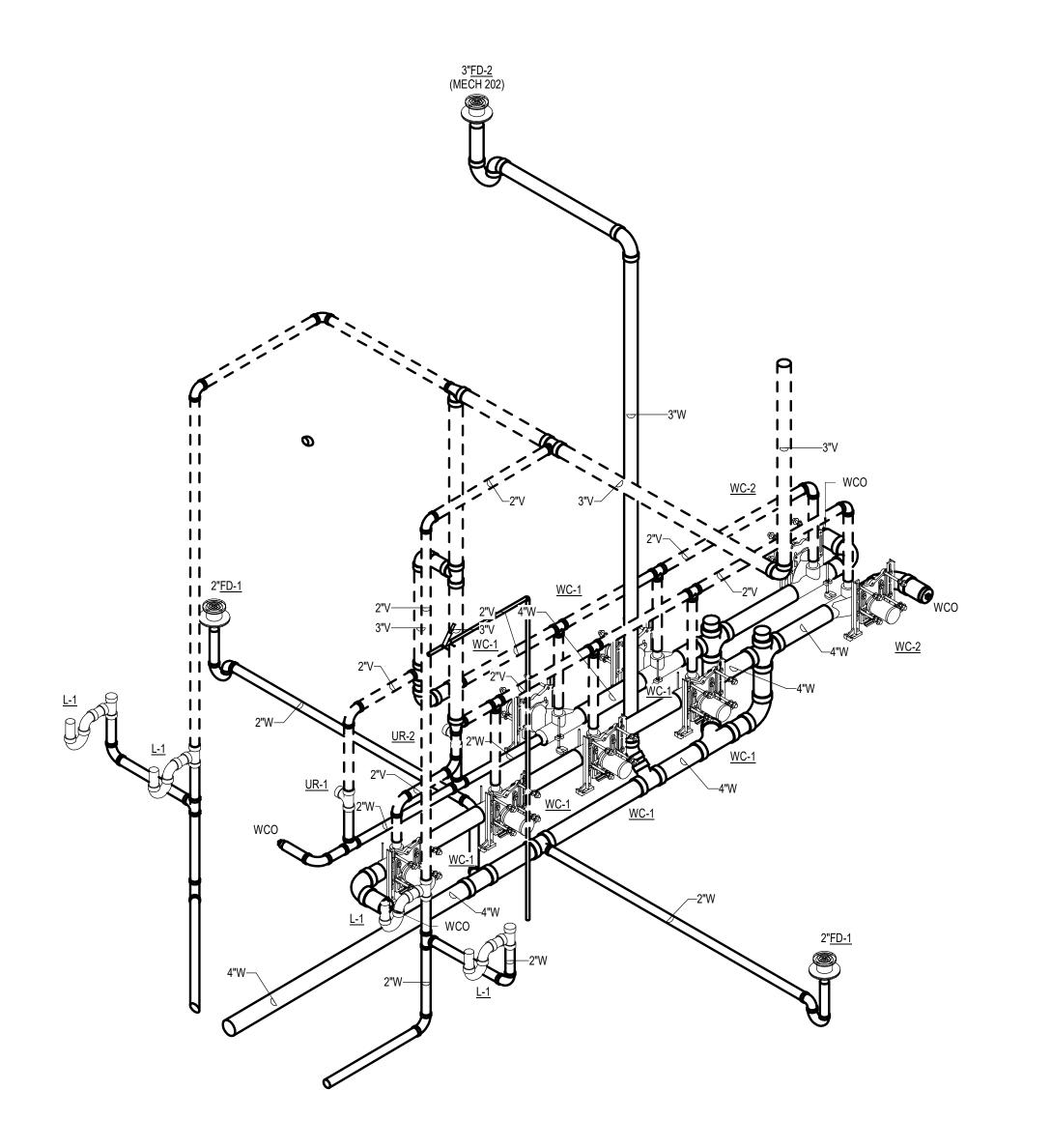
REVISION NO.:

D

PLUMBING SCHEDULES



2 RESTROOM 117/118 DOMESTIC WATER PIPING DIAGRAM



(1) RESTROOM 117/118 SANITARY WASTE PIPING DIAGRAM

LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820

> ARCHITECTURAL PARTNER **PERKINS & WILL** 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611 v. (312) 755-0770

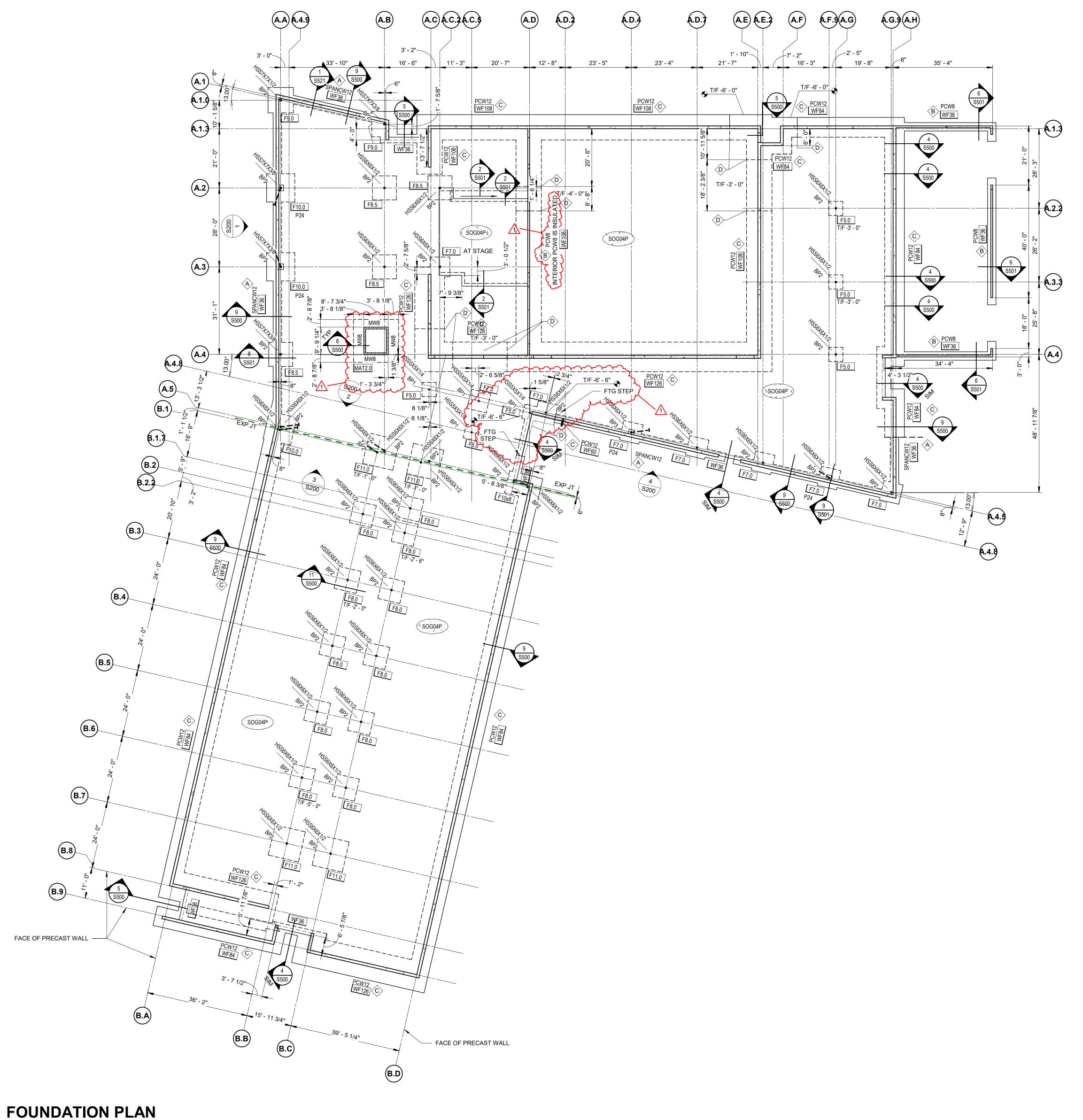
CIVIL & STRUCTURAL ENGINEER:

8840 ALLISON BLVD INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032 v. (317) 344-8044

PLUMBING DIAGRAMS



SCALE: 1/16" = 1'-0"

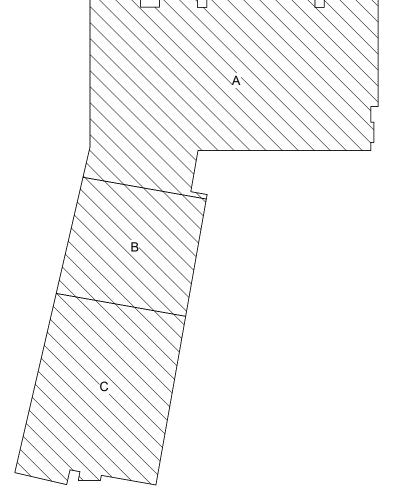
FOUNDATION PLAN NOTES:

 ELEVATIONS ±, ARE FROM NOMINAL FIRST FLOOR ELEV +0'-0", SEE CIVIL DRAWINGS.
 SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES IMMEDIATELY.

3. TOP OF EXTERIOR FOOTING (T/F) -2'-0", UNO.
4. TOP OF INTERIOR FOOTING (T/F) = -1'-0", UNO.
5. TOP OF PIER (T/P) = -1'-0", U.N.O.
6. PRECAST ARE NOT INSULATED BELOW GRADE. The same of the sa

S100 Key Note Schedule

- SPANCW12 IS A PRECAST SANDWICH PANEL AT THE RIBBON WINDOWN CONDITION A THAT DOESN'T GO FULL HEIGHT. B PCW8 IS AN 8 INCH SOLID PRECAST PANEL.
- PCW12 IS A 12 INCH PRECAST SANDWICH PANEL. THE OUTER WIDTH OF CONCRETE IS 4". THE INSULATION WIDTH IS 4". THE INNER WIDTH OF THE CONCRETE IS 4". FOOTING STEP TO ALLOW FOR PIPES TO PASS OVER FOUNDATION. SEE TYP FOOTING STEP DETAIL.



LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820

ARCHITECTURAL PARTNER PERKINS & WILL 410 N. MICHIGAN AVE SUITE 1600 CHICAGO, IL 60611 v. (312) 755-0770

CIVIL & STRUCTURAL ENGINEER:

JQOL 8840 ALLISON BLVD INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032

v. (317) 344-8044

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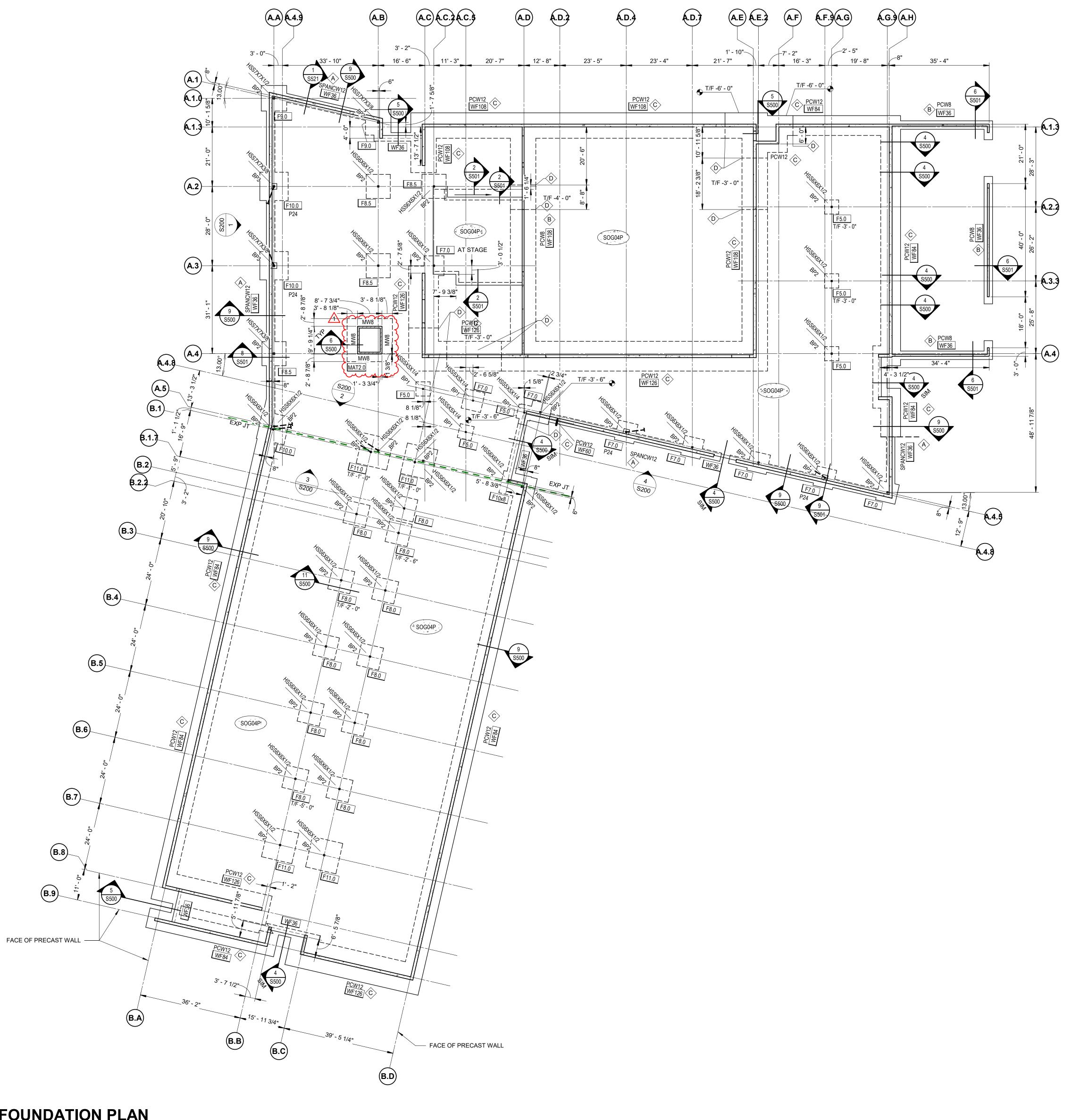
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01/17/2025 P23-0116

FOUNDATION PLAN

S100





FOUNDATION PLAN

SCALE: 1/16" = 1'-0"

FOUNDATION PLAN NOTES:

1. ELEVATIONS ±, ARE FROM NOMINAL FIRST FLOOR ELEV +0'-0", SEE CIVIL DRAWINGS.
2. SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES IMMEDIATELY.

2. TOP OF EXTERIOR FOOTING (T/E) 21 JUNE 1990.

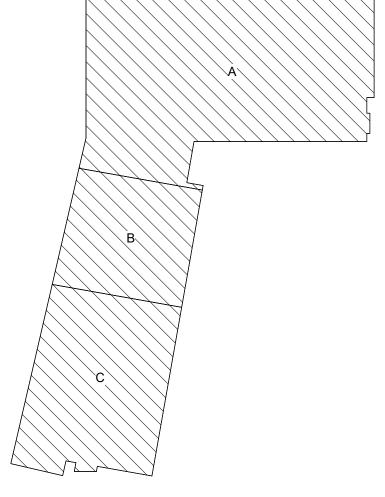
TOP OF EXTERIOR FOOTING (T/F) -2'-0", UNO.
 TOP OF INTERIOR FOOTING (T/F) = -1'-0", UNO.
 TOP OF PIER (T/P) = -1'-0", U.N.O.

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LANDSCAPE, INTERIOR DESIGN, URBAN PLANNING 25 NORTH PINE STREET, SUITE B INDIANAPOLIS, IN 45202 WWW.METICULOUSDA.COM INFO@METICULOUSDA.COM 317.926.1820

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CIVIL & STRUCTURAL ENGINEER:

JQOL 8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250 v. (317) 661-1964

MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING 275 VETERANS WAY SUITE 300 CARMEL. IN 46032

v. (317) 344-8044

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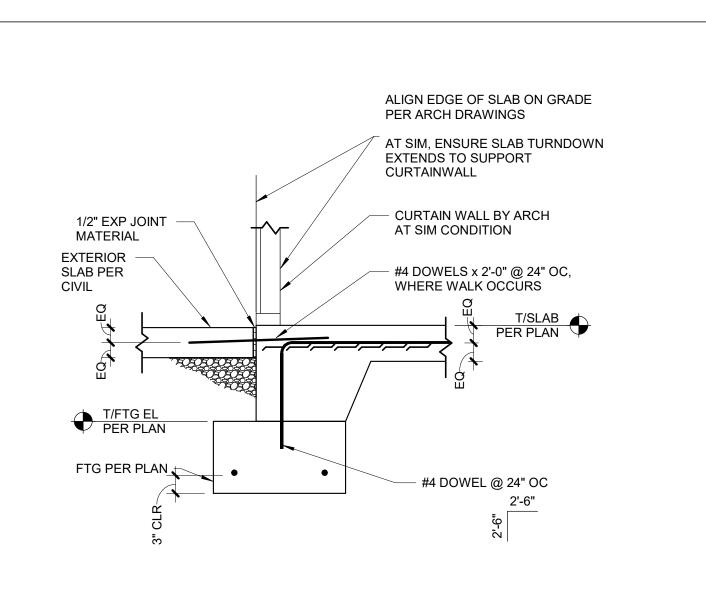
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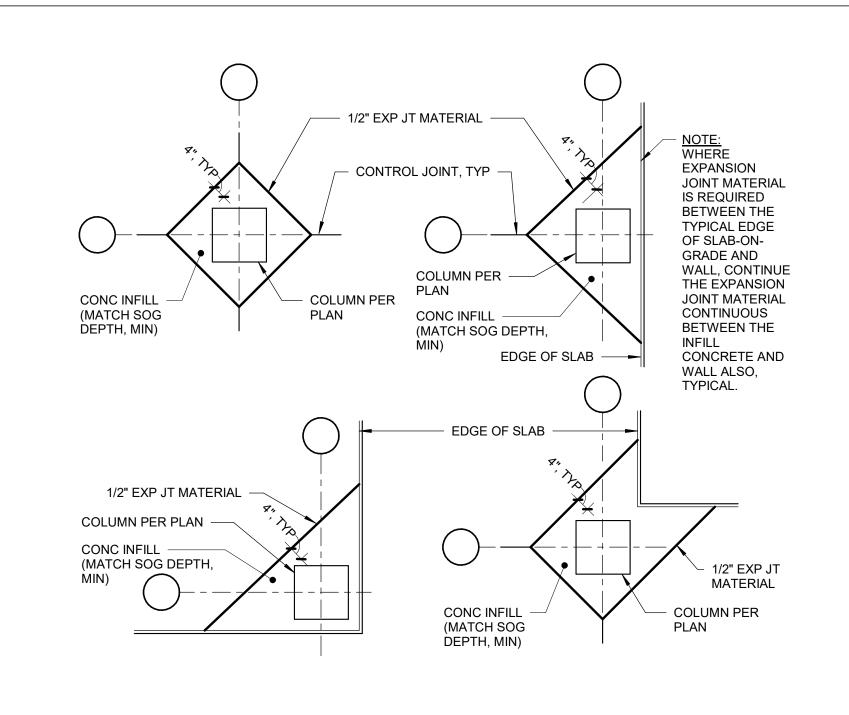
ISSUE DATE:	01 /	17/2025
	01/.	1//2025
DRAWN:	NRT	CHECKED: DJS
PROJECT NO.:		P23-0116
REVISION NO.:		1

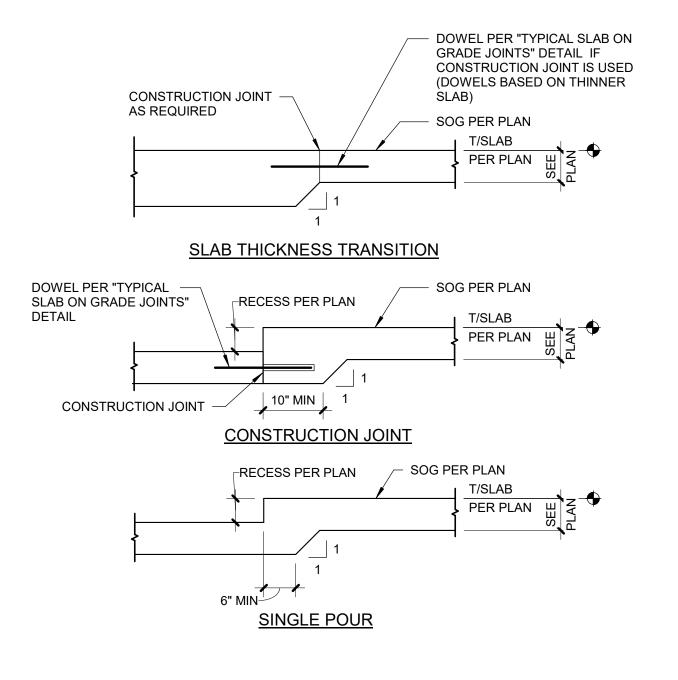
FOUNDATION PLAN

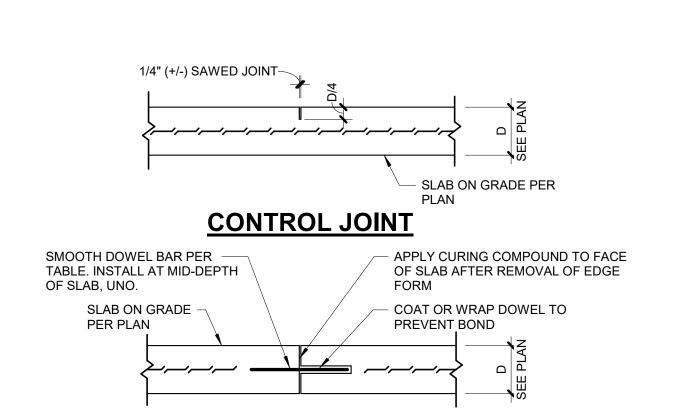
S100











CONSTRUCTION JOINT

DOWEL SIZE AND SPACING					
SLAB DEPTH (IN)	DOWEL BAR DIAMETER (IN)	TOTAL BAR LENGTH (IN)	BAR SPACING (CTR - CTR) (IN)	MAX JT SPACING (CTR - CTR) (IN)	JOINT DEPTH
4	3/4	16	24	12'-0"	1"
5-6	3/4	16	12	15'-0"	1 1/4"-1 1/2"

TYPICAL SLAB ON GRADE JOINTS

MECH. / ELECT. / PLUMB. /

INDIANAPOLIS, IN 46250

275 VETERANS WAY SUITE 300 CARMEL. IN 46032 v. (317) 344-8044

FIRE PROT. ENGINEER: **KBSO CONSULTING**

LANDSCAPE, INTERIOR

DESIGN, URBAN PLANNING

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317.926.1820

CIVIL & STRUCTURAL ENGINEER:

ARCHITECTURAL PARTNER

PERKINS & WILL

CHICAGO, IL 60611

v. (312) 755-0770

8840 ALLISON BLVD

v. (317) 661-1964

SUITE 1600

SUITE 425

S

%00

410 N. MICHIGAN AVE

25 NORTH PINE STREET, SUITE B

TYPICAL TRANSITION TO EXTERIOR/SITE SLAB \$500 SCALE: 3/4" = 1'-0"

SELF EXPANDING

STRIP WATERSTOP

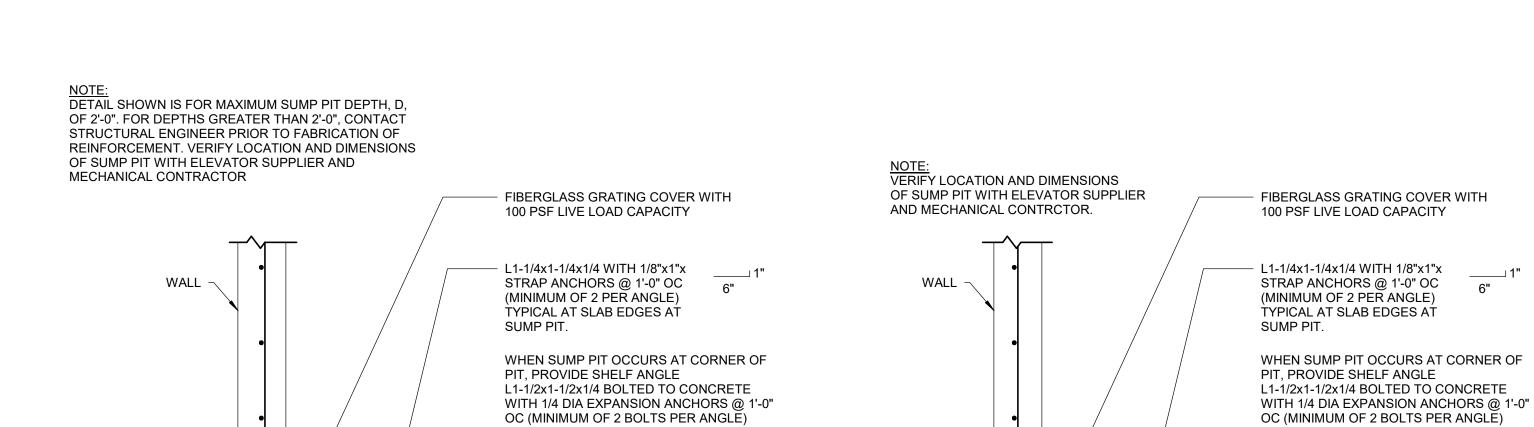
(4) CONT BARS, MATCH TYP PIT SLAB REINF



1-1/2" EMBEDMENT.

NOTE: GALVANIZE STEEL EMBEDS AND FASTENERS.





SELF EXPANDING

18" X 18" X 6" DEEP -

SUMP DEPRESSION

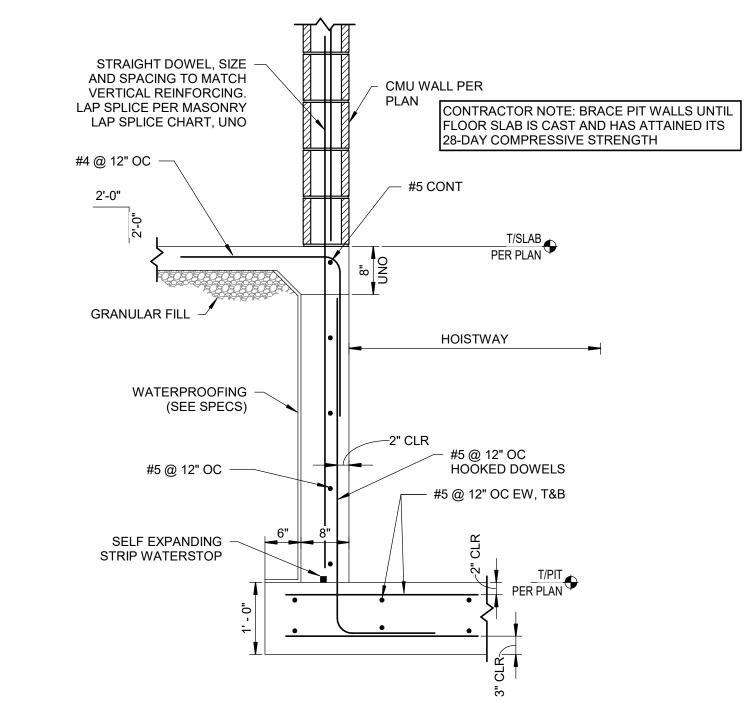
STRIP WATERSTOP

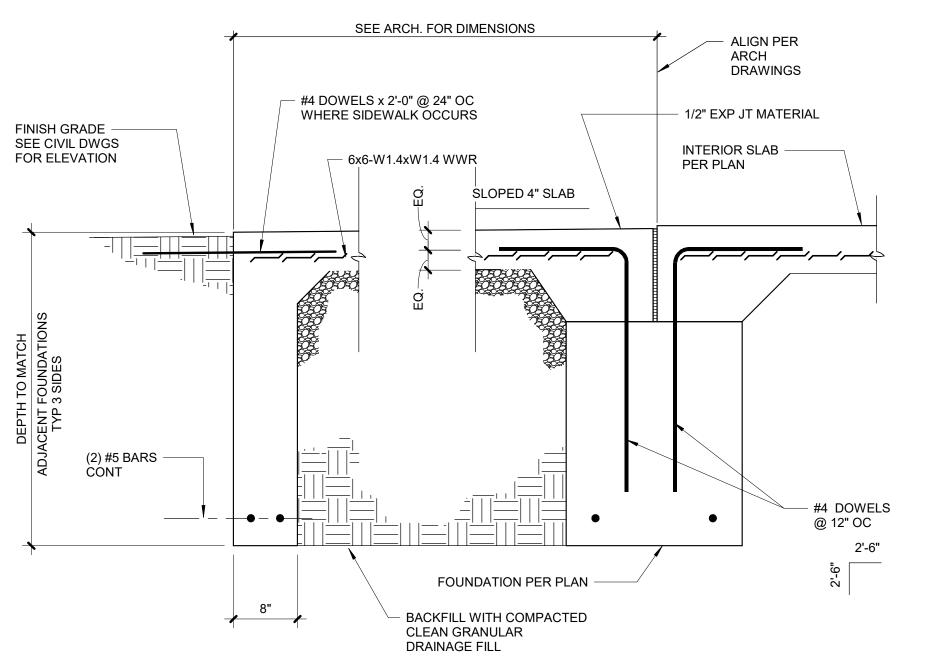
1-1/2" EMBEDMENT.

STD 90 DEG HOOK, TYP

NOTE: GALVANIZE STEEL EMBEDS

AND FASTENERS.





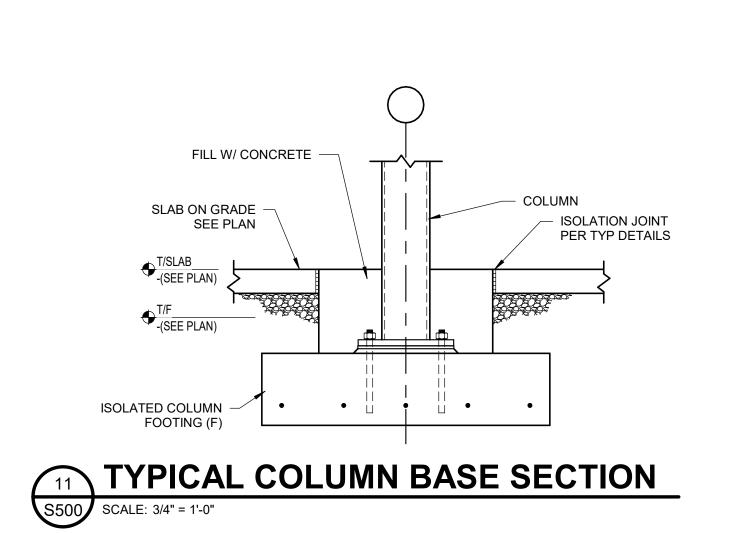
7 TYPICAL SUMP PIT AT ELEVATOR PIT S500 SCALE: 3/4" = 1'-0"

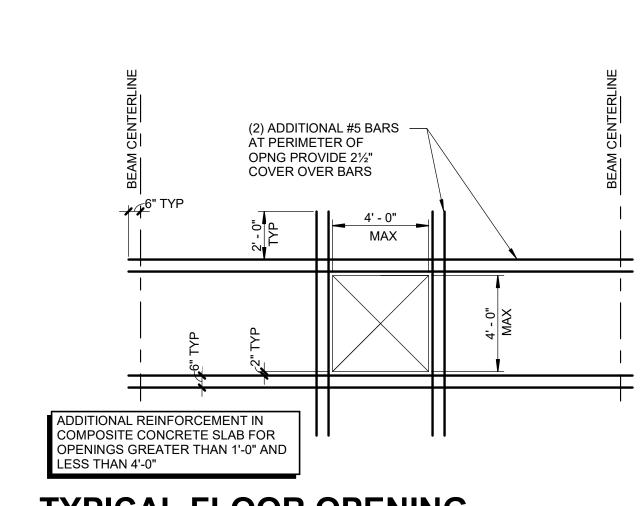
└─ #5 ∐ BENT BARS @ 8" OC EW

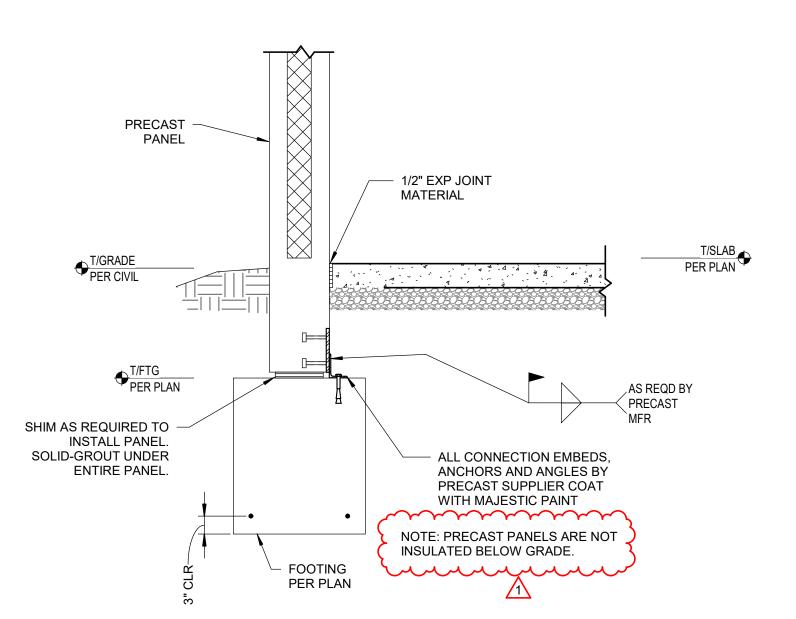


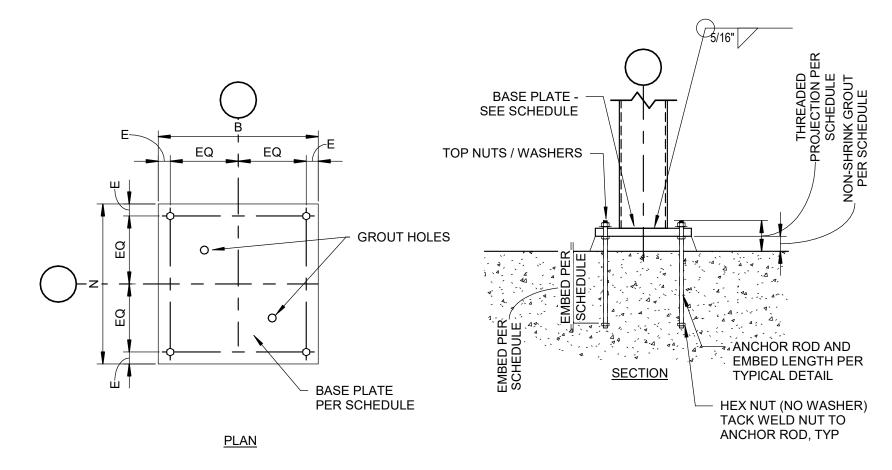












1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE SUFFICIENT TEMPORARY SUPPORT OF COLUMN BASE PLATES USING LEVELING PLATES, LEVELING NUTS / WASHERS OR STEEL SHIMS (OR COMBINATION THEREOF) PRIOR TO PLACEMENT AND CURING OF NON-SHRINK GROUT.



9 T		TYPICAL PRECAST WALL FOUNDATION
	S500	SCALE: 3/4" = 1'-0"

8	TYPICAL HSS COLUMN BASE DETAIL
S500	SCALE: 1" = 1'-0"

01/17/2025	No. PE11 STATE	- • • • • • • • • • • • • • • • • • • •	
SSUE DATE:	01/1	17/2025	
DRAWN:	•	CHECKED:	
	NRT	DJS	
PROJECT NO.:		P23-0116	
REVISION NO.:		1	

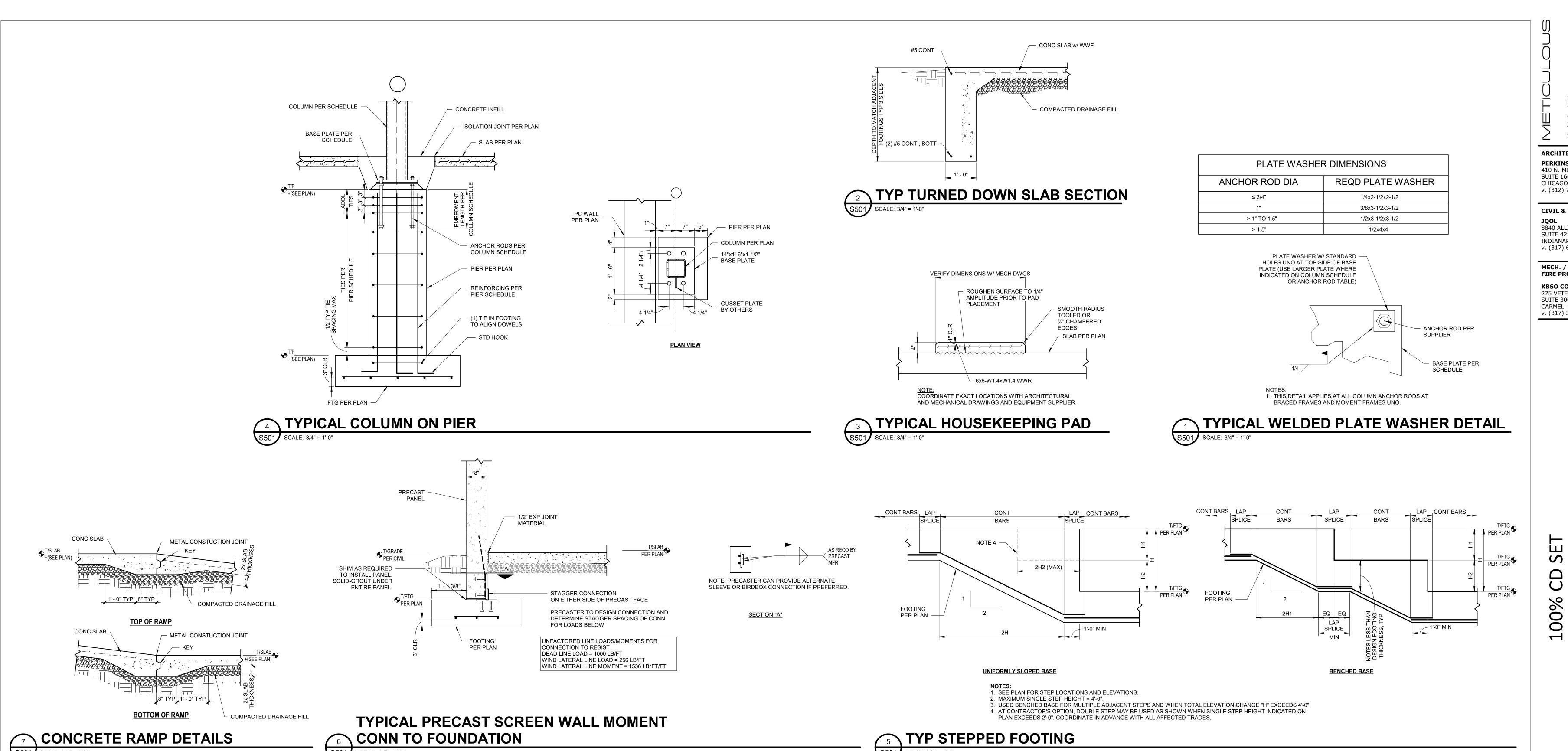
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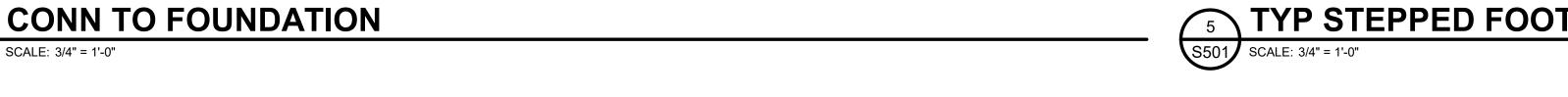
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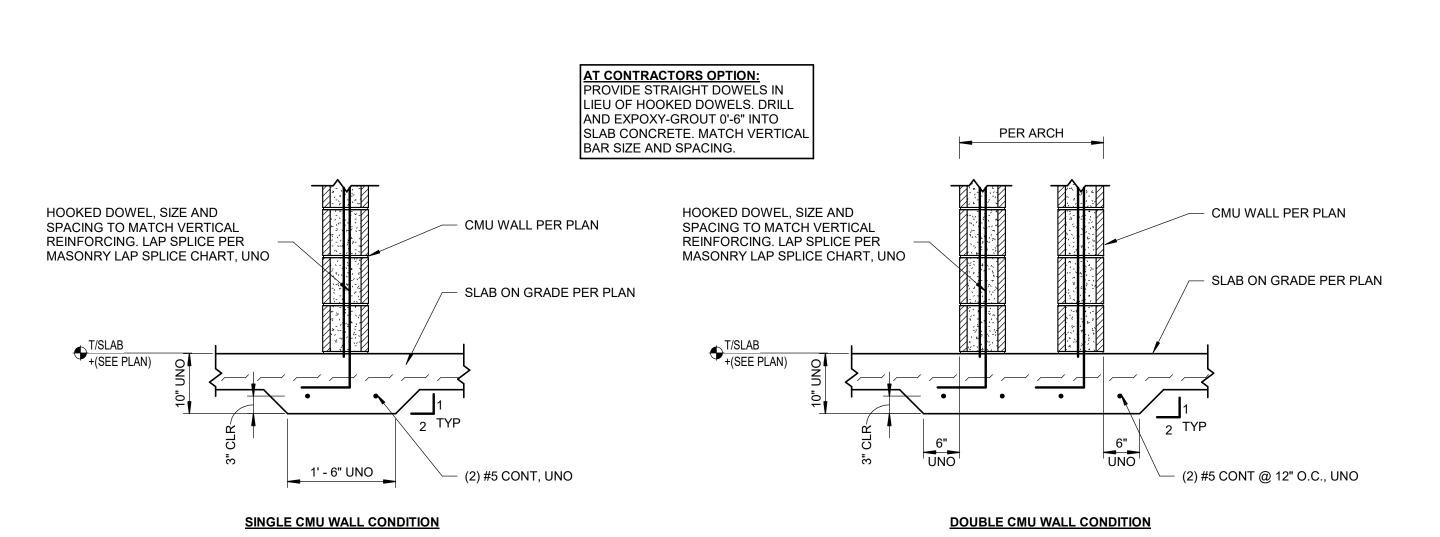
Addendum #5

CERTIFIED BY:

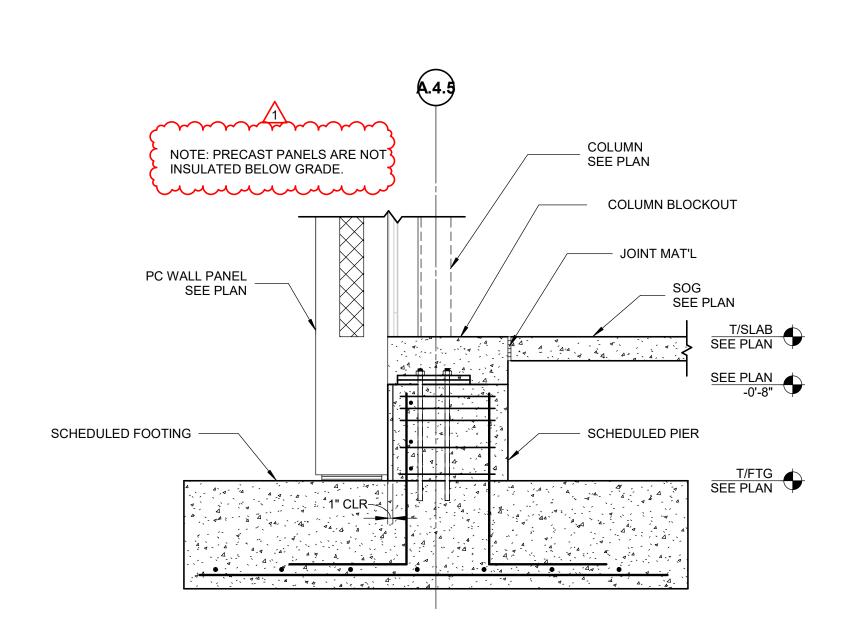
FOUNDATION SCHEDULES, SECTIONS, & DETAILS S500



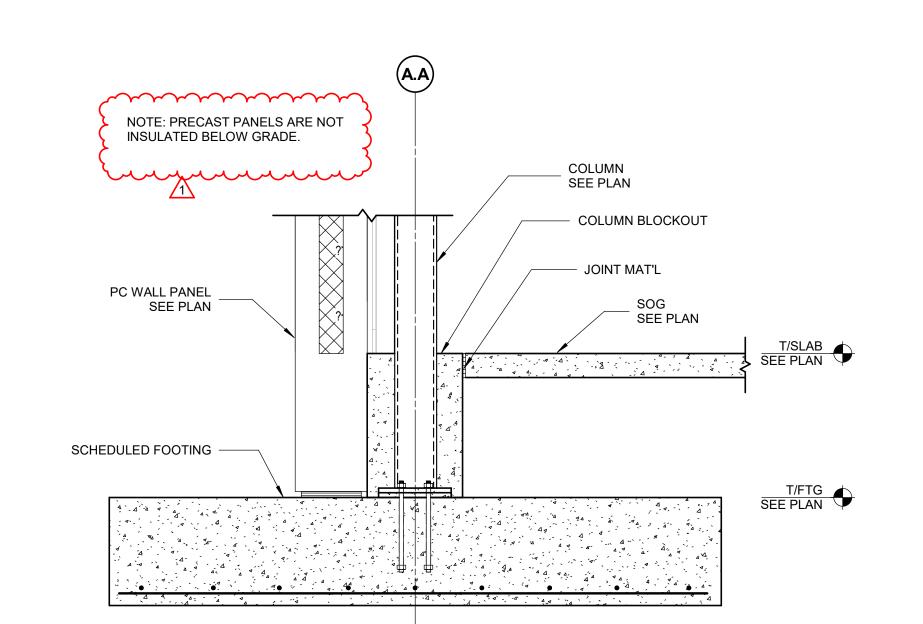












PERIMETER COLUMN ON SPREAD FOOTING

8 S501 SCALE: 3/4" = 1'-0"

ARCHITECTURE,
LANDSCAPE, INTERIOR
DESIGN, URBAN PLANNING

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CIVIL & STRUCTURAL ENGINEER:

8840 ALLISON BLVD SUITE 425 INDIANAPOLIS, IN 46250 v. (317) 661-1964

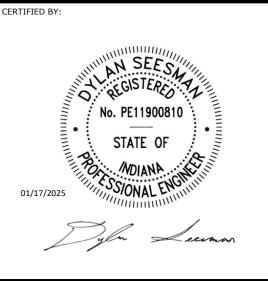
MECH. / ELECT. / PLUMB. / FIRE PROT. ENGINEER:

KBSO CONSULTING
275 VETERANS WAY
SUITE 300
CARMEL. IN 46032

SUITE 300 CARMEL. IN 46032 v. (317) 344-8044

69 - JOYCE KILMER

REVISIO	DNS	
No.	Description	Date
	95% CD SET	12-18-24
	100% CD SET	01-17-25
1	Addendum #5	03-10-25



01/17/2025

DRAWN: CHECKED: DJS

PROJECT NO.: P23-0116

REVISION NO.: 1

FOUNDATION
SCHEDULES,
SECTIONS, & DETAILS

S501